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FIRST AND SECOND ORDER
TRIANGULATION AND TRAVERSE
IN NORTH CAROLINA
(1927 DATUM)

By

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FIRST AND SECOND ORDER TRIANGULATION AND TRAVERSE IN NORTH CAROLINA

GENERAL STATEMENT

The purpose of this publication is to present to the engineer or surveyor the results of the first-order and second-order triangulation and first-order traverse in the State of North Carolina. The eastern oblique arc extends from Maine to Louisiana and the portion within this State is the oldest first-order control in the State. It serves as the backbone for most of the remaining triangulation within the State. The results given in this publication supersede those given in Special Publications No. 7 and No. 101. The positions are computed on the North American datum of 1927 and they should be used in all cases as the final positions of the stations.

READJUSTMENT OF THE TRIANGULATION NET

The triangulation of the United States has been built up by continually adding new arcs to those already measured, and for many years in adjusting this triangulation, the plan had to be followed of fitting the new arcs of triangulation to the old ones which had been previously adjusted. This method was the only one that could be followed until a comprehensive net had been built up and it led to no serious difficulty until the point was reached where the new arcs formed closed loops with the old arcs. It then developed that the last arc to close the loop received excessive corrections when adjusted to the previous triangulation because the entire error of closure of the loop had to be absorbed by it.

It was realized that the only way to overcome this difficulty was to adjust the entire network at one time. It was impracticable, however, to readjust the network each time a new arc was added or an additional loop was closed, as the time required to do so was too great, and, if this were done, the geographic positions of the triangulation stations would be in a continual state of change, a condition very disturbing to those using the data.

In 1926 the triangulation net west of the ninety-eighth meridian had become so extended that it could serve as a frame-work for all future triangulation in that area and it was found desirable to adjust this portion of the United States net in one piece. In preparation for this adjustment a method was devised, in 1924, at the office of the Coast and Geodetic Survey,¹ by means of which a large network of triangulation could be adjusted within a reasonable time and at a comparatively small cost. This method was applied first to the triangulation west of the ninety-eighth meridian involving 12,500 miles of arcs in 16 closed loops. Later it was applied to the eastern

¹ For a description of the method used see Special Publication No. 159.

half of the net involving 13,000 miles of arcs forming 26 loops. The adjusted net of the country is now of such extent and strength that all new arcs hereafter can be fitted to it without having to disturb the old work and without causing excessive corrections to the new work.

ARCS INCLUDED IN THIS PUBLICATION

This volume contains the results of all of the first-order triangulation and traverse in the State of North Carolina that has been executed by the Coast and Geodetic Survey. In addition, three small second-order arcs are included so as to give the results for all the work that has been adjusted to date on the new datum.

Portions of several general arcs are included only so far as they lie within the limits of the State. These are the eastern oblique arc; the Tennessee loop; the Atlantic Coast arc; Augusta, Ga., to Richmond, Va., arc; Charlotte to Augusta, Ga., arc; and Boone to Bluefield, W.Va., arc. Besides these, the complete results of the following first-order arcs are given: Oblique arc to Jacksonville; Newport to Core Sound; Oblique arc to Sanford; Washington to Pamlico Sound; western North Carolina arc; Goldsboro to Little River and Marietta to Lincolnton arcs; and North Carolina and Virginia boundary arc. The three second-order arcs are the Chowan River arc, the New River arc and the Boone northward arc. The first-order traverses within the limits of the State are the following: Sanford to Wilmington; Sanford to Norfolk, Va.; and Sanford to Osborne. All of this work forms a pretty complete control survey system for the State and it is about as near an ideal layout for the whole State as is found in any of the 48 States at the present time.

COMPUTATIONS

The eastern oblique arc and the Tennessee loop are the only portions of this State system of triangulation that were included in the readjustment of the triangulation of the eastern part of the United States. A subsequent adjustment with junction figures was made for the main arcs and the subsidiary arcs were then fitted in, in the usual way. Much of this adjustment computation was made under the direction of H. P. Kaufman. The descriptions of stations and the sketches were prepared for this publication under the direction of H. C. Mitchell. Both of these men were ably assisted by the other members of the Division of Geodesy. In the preparation of the data for publication, much valuable aid was rendered by C. N. Claire of the Division of Geodesy.

NORTH AMERICAN DATUM OF 1927

The original adjustment of the triangulation included in this publication was computed upon the Clarke spheroid of 1866, on what was called at that time the North American datum. In the readjustment of the triangulation in the western part of the United States the same spheroid was used as surface of reference, but only one station was held in position. The station Meades Ranch, in Kansas, was assigned the same position that it had in the original United States standard datum, later called the North American datum. This position of Meades Ranch is as follows:

$$\begin{aligned}\phi &= 39^{\circ} 13' 26'' .686 \\ \lambda &= 98^{\circ} 32' 30'' .506\end{aligned}$$

This position was held in the new datum because it had been found to be best in accord with the country as a whole in the extensive investigation that was carried out at the time of the adoption of the original datum. If any are interested in the procedure followed in the establishment of this former datum, an account of it can be found in any one of the following publications, which contain triangulation and traverse data based on the datum in use prior to 1927: Special Publications Nos. 11, 13, 16, 17, 19, 24, 30, 31, 43, 46, 54, 62, 70, 74, 76, 78, 79, 86, 88, 101, and 114.

The orientation in the new adjustment is controlled by the various Laplace azimuths distributed throughout the network of arcs. The position of Meades Ranch, together with the Laplace azimuths included in the arcs, serve to define the North American datum of 1927. The date is appended to the name of the new datum to distinguish it from the old North American datum. A station is said to be on this North American datum of 1927 when it is rigidly adjusted to the scheme of the readjusted triangulation.

GENERAL DESCRIPTION OF TABLES AND SKETCHES

The tables of geographic positions, on pages 14 to 132, also contain the distances between contiguous triangulation stations in meters and feet, the logarithms of the distances in meters, and the azimuths of the lines joining these stations. The distances are corrected for elevation above mean sea level, and the azimuths are referred to the true south. Anyone who wishes to obtain the actual distances between the triangulation stations should use the formula given on page 13, by which the true distance at the mean elevation of the stations can be derived from the distance at sea level. The descriptions of the stations, given on pages 136 to 370, are designed to enable the engineer to recover and identify the station mark after he has visited the general locality of the station. There will be times when the description, so far as witness and other marks are concerned, will have become out of date from changes by nature or by the work of man. Any engineer who may visit a station and find that the description does not truly represent the present conditions, or who finds the mark destroyed or mutilated, should report the facts to the Director of the Coast and Geodetic Survey, at Washington, D.C., in order that the files of this office may be kept up to date. The engineer should realize that the triangulation extended over the country by the Coast and Geodetic Survey is a public survey, made for the use of the people. The stations really belong to the States in which they are located, and the engineer who is so fortunate as to find one of these stations located near his work should help to perpetuate the monuments in order that they may be of continuous service and value to his locality. The Coast and Geodetic Survey officials will, from time to time, visit the stations established and will re-mark and redescribe them if necessary.

At most of the stations there are reference and witness marks that were established to assist in locating the station. The distance and azimuth from the station to each of these additional marks are usually given in the description of the station, and the measurements are supposed to be so carefully made, at least to the reference marks, that if the station mark becomes lost or destroyed the station can

be relocated accurately enough for use in third-order and local surveys.

Near the back of this publication will be found a number of sketches which show graphically the approximate locations of the stations, especially with reference to State and county boundaries, and the lines over which the main-scheme observations were made. It is suggested that if one should wish to learn whether there are triangulation stations in the vicinity of his work he should first consult the sketches. He can obtain from them the names of the stations that may be of help to him; then he should turn to the index on page 395 of this volume, from which he can find the pages upon which the descriptions and geographic positions of the stations appear.

OTHER PUBLICATIONS OF VALUE TO THE ENGINEER

If an engineer wishes to compute geographic positions for the stations of any triangulation that he may execute, he should procure a copy of Coast and Geodetic Survey Special Publication No. 8 from the Superintendent of Documents, Washington, D.C. The cost of this publication is 30 cents. If he is interested in knowing the length in meters of the degrees, minutes, and seconds of latitude and longitude in the region in which he is working, he can obtain them from Special Publication No. 5, which can be purchased at a cost of 20 cents from the Superintendent of Documents. Condensed tables for the latitude of North Carolina are shown on pages 10 and 11.

In order to make geodetic control data of greater use to engineers and surveyors, one or more plane-coordinate systems have been established in each of the 48 States. It is planned to have the data for each triangulation station in a State include its x and y coordinates as well as its latitude and longitude. A brief explanation of plane-coordinate systems is contained in Serial No. 562 of this Bureau. A more detailed publication will be issued in the near future.

The Coast and Geodetic Survey has issued a number of manuals on the various classes of its work. The ones that would be of value to an engineer in connection with triangulation, including base measurements, are Special Publication No. 120, Manual of First-Order Triangulation, cost 40 cents; Special Publication No. 145, Manual of Second- and Third-Order Triangulation and Traverse, cost 60 cents; and Special Publication No. 137, Manual of First-Order Traverse, cost 30 cents. An engineer, interested in the determination of azimuth to a high degree of accuracy, should procure a copy of Special Publication No. 14, Determination of Time, Longitude, Latitude, and Azimuth, cost 35 cents. If he is interested only in the determination of approximate azimuths, he should secure a copy of Serial No. 166, Directions for Magnetic Measurements, cost 15 cents.

In computing his triangulation the engineer will find that Special Publication No. 138, Manual of Triangulation Computation and Adjustment, cost 50 cents, will be of great assistance to him.

The reader can secure from the Director of the United States Coast and Geodetic Survey, free of charge, several leaflets which describe geodetic surveying and which also show how triangulation can be used in connection with the boundary surveys of private and public property.

CLASSIFICATION OF TRIANGULATION

Triangulation is divided into different classes according to accuracy. Four classes of triangulation are now defined by the Federal Board of Surveys and Maps, viz, first, second, third, and fourth orders. The first three of these are, respectively, equal in accuracy to the classes primary, secondary, and tertiary as formerly defined and used by the Coast and Geodetic Survey.

The ultimate criterion applied in classifying the different grades of triangulation is the actual error in the length of any line. This is indicated by the discrepancy between the measured length of a base line and its length as computed through the triangulation from the last preceding base. In first-order triangulation such discrepancies must not exceed 1 part in 25,000, in second-order triangulation 1 part in 10,000, and in third-order triangulation 1 part in 5,000. Before making the comparison between the computed and measured lengths the adjustment of the triangulation should be carried to the point where the side and angle equations have been satisfied. It is also necessary to take into consideration the maximum actual error in the measurement of the base lines.

To secure the accuracy indicated above, certain standards are adopted for the field work, the most important one of which relates to the closing errors of the triangles or the discrepancy between the sum of the measured angles in a triangle and 180° plus the spherical excess of the triangle. In first-order triangulation the average closing error of the triangles must not be greatly in excess of 1 second, in second-order it should not be more than 3 seconds, and in third-order not more than about 5 seconds. The shape of the figures in the triangulation scheme, the frequency of bases, the size and type of instrument, and the number and kind of observations are all selected with due regard to the accuracy desired.

Under certain conditions the proportionate error in the length of a line as specified above may be found to be exceeded in any class of triangulation. Where two points are fairly close together as compared with the size of the triangulation scheme, the distance between those points may be in error in excess of that indicated by the class of triangulation of the scheme. The accuracy of the computed length of any line can be estimated by computing the ΣR_i in accordance with the formula for the strength of figures as given in Coast and Geodetic Survey Special Publication No. 145. In any class of triangulation the subsidiary stations will be located with a less degree of accuracy than the main-scheme station.

CHARACTERISTICS OF FIRST-ORDER TRIANGULATION

First-order triangulation is done with such accuracy that the average closing errors of the triangles are of the order of 1 second. In order that the angles may have this high degree of accuracy, large theodolites are used. The theodolite, as is well known, is similar in its appearance to the surveyor's transit. The main differences are in the excellence of the workmanship, the accuracy of graduation of the circle, in having micrometer microscopes for reading this circle, and in having a telescope with a high resolving power. Observations are made either on heliotropes, by which the light of the sun is reflected toward the observer, or on acetylene or electric

signal lamps. The heliotope, or lamp, and the theodolite must be centered directly over the station marks.

At certain intervals, depending upon the shape of the triangles, base lines are measured. A base is necessarily a side of one of the triangles. The ends of the base must be intervisible from the ground or from towers that may be erected over them. In the early years of the Coast and Geodetic Survey's existence the base lines were measured with metal bars, but near the beginning of the present century steel tape lines began to be used in the measurements. Since 1907 all of the bases of the survey have been measured with invar tapes. The probable error of a measured base is about 1 part in 1,000,000 of its length. This accuracy meets all the requirements of engineering and science.

The azimuths of the triangulation depend upon what are called Laplace azimuths, or azimuths determined by observations on Polaris, which have been corrected for the deflection of the vertical at each Laplace station. These deflections are due to the attraction of mountain or plateau masses that are comparatively near the place at which the observations are made. The probable error of a Laplace azimuth is about ± 0.3 second.

If one is interested in the accuracy with which the triangulation of the Coast and Geodetic Survey is done and the reliability of the geographic positions which are given in this publication, he should refer to Special Publication No. 159, *The Bowie Method of Triangulation Adjustment as Applied to the First-Order Net in the Western Part of the United States*.

CHARACTERISTICS OF SECOND-ORDER TRIANGULATION

In second-order triangulation the same general principles apply as in first-order triangulation, but the details of the work will vary with the circumstances. The angles are nearly always determined with a smaller number of measures. The accuracy of second-order triangulation is represented by an average closing error of a triangle of not more than 3 seconds of arc.

Second-order triangulation has been used principally for three purposes: First, for the main scheme of an isolated region of moderate extent such as the Philippine Islands; second, to connect third-order with first-order triangulation when the latter lies at a considerable distance from the area requiring the detailed third-order control; and third, as the detailed control over areas of economic importance. The increasing demand for second-order horizontal control, under the last set of conditions, and the growing economic importance of the entire coastal region of the United States, led the Director of the Coast and Geodetic Survey to decide, early in 1928, to make the entire coastal main-scheme triangulation of first- or second-order accuracy.

SECONDARY STATIONS

In addition to the stations which form the main network of triangulation in North Carolina, a number of objects, such as mountain peaks, church spires, and schoolhouse cupolas, were observed upon from stations of the main scheme. The geographic positions of these secondary stations have been computed and the data are included in the tables on pages 14 to 132. These stations are shown on the

sketches and in the index, but only a few of them are given in the descriptions of stations, as in most cases the name of the object is all the description that is available. Ordinarily the name of the secondary station is sufficient for its accurate identification by the engineer who may wish to use it.

In the readjustment of the triangulation of the western part of the United States (see p. 1) each of the unoccupied or intersection stations was computed by means of a single triangle, even though several additional lines to the station had been observed. If the lengths and azimuths of any of these additional lines are needed at any time, the data may be obtained by writing to the Director, Coast and Geodetic Survey, Washington, D.C.

In the list of geographic positions will be found a table of positions of mountain peaks. These positions were obtained by applying mean corrections to the old positions that had been based on the North American datum in use previous to 1927. The mean corrections were obtained for each peak by noting how much change had been made by the change of datum in the positions of the main-scheme stations from which the peak was determined.

Usually a mountain peak is rather an indefinite object on which to point, and therefore the geographic position obtained for it is somewhat uncertain. It should not be used as a basis for local surveys except as a last resort. For this reason it seemed to be unnecessary to go to the trouble and expense of computing the lengths and azimuths of the lines to the mountain peaks. If for any special reason the data for any of these lines should be needed, they may be obtained in the manner noted in the second paragraph above.

USE OF HORIZONTAL CONTROL DATA

The plan or map for any extensive engineering project, whether or not map construction is the primary object, should have all of its parts properly correlated and should be on the same datum as adjacent surveys. Federal and State mapping organizations have long been aware of the necessity for having all surveys based upon a common datum, but local engineers and surveyors in this country have too often in the past been content, and in many cases compelled to use a local datum for their surveys. The future economic disadvantage of such a system is now becoming recognized, with the result that city and county surveys are being more generally placed upon a permanent basis by connecting them to stations on the North American datum of 1927.

One other factor must be taken into consideration by the engineer of today. As the States develop industrially they will undoubtedly follow the lead of one of the Eastern States, Massachusetts, which with splendid foresight has extended its triangulation control over the entire State for the purpose of defining property boundaries in terms of latitude and longitude. The advantage of such a system is well stated in the following extracts from the report on the Maryland oyster survey:

The difficulties of accurately locating and permanently defining the boundaries of a farmer's plantation on land, even with the aid of monuments, public roads, streams of water, and other points of reference, are often great, judging from the disputes frequently arising in connection with boundaries. * * *

There is only one point on the earth's surface at the intersection of any one parallel of latitude and any one meridian of longitude, and therefore there can

be no dispute as to the meaning of such a geographic definition of the location of a point, even though all the original triangulation station marks used in its determination, together with the chart on which its position was originally plotted, have been totally destroyed.

In the case of the destruction of an original triangulation station mark, or any other point defined by a geographic position, a competent geodetic engineer can reestablish its exact location by means of a new system of triangulation connecting with other distant triangulation marks which have not been destroyed.

There are a number of instances where corporations owning large tracts of land have attempted to make surveys of their boundaries and of subdivisions of property by means of traverse. This method can be used if certain precautions are taken, but most of these corporations have found it advisable to use the method of triangulation for the determination of relative positions of their boundary monuments and of other points which lie within those boundaries. If the triangulation in question is connected with the triangulation system of the Coast and Geodetic Survey, then true geographic positions can be obtained as well as the relative ones.

In a section of the country covered by adequate geodetic control the data are available to the engineer for any of the following operations, in addition to their possible future use as a basis for cadastral surveys:

1. Extensive mapping.—The topographer needs as initial data for beginning a topographic survey the distance and direction between two points and the geographic position of one of them in latitude and longitude. His local triangulation or traverse, based on this control, will prevent the accumulation of excessive errors as he carries on his mapping operations. In the event that the available first-order triangulation in that region has lines of too great length to join to conveniently, he can measure a base and azimuth at some place visible from a first- or second-order triangulation station and connect his base to the station by triangulation, thus obtaining proper geographic positions for his local surveys.

2. Boundary lines.—If it is desired to locate or to delimit accurately and permanently the boundaries of political subdivisions, such as States, counties, or cities, the methods indicated in the preceding paragraph may be followed. Whenever possible, a line of the adjusted triangulation or traverse should be used as a basis for local surveys rather than a point, since a line gives the three essentials of position, length, and direction.

3. Local intensive surveys.—The necessity for such surveys arises most frequently in connection with extensive improvements over a considerable area or as a basis for city planning, where the needs of a city are being anticipated for a number of years. Here the requirements are somewhat different from those in the two preceding operations, for it is often necessary to extend first- or second-order control in considerable detail over the entire area affected, third-order triangulation or traverse then being used to furnish additional points for the survey. Such a control survey should invariably be started from a line of adjusted triangulation or traverse.

While it may be noted in the preceding paragraphs that the azimuth and length of one line and the geographic position of one end of that line constitute the essential data for the complete utilization of old work as a basis for new work, there is always grave danger in depending upon this minimum of data. There may be failure to identify the

true station mark, or the mark, though genuine, may have been tampered with or otherwise disturbed in position. This will, of course, introduce an error into the new work based on these stations. It is the present practice in this survey, unless unusual conditions render it unnecessary, to establish the integrity of the recovered points by using at least three old stations as a basis for new work, the third station serving as a check for the two stations on which the new work may actually depend.

In local surveys where the area is of limited extent it is usually desirable to use a system of plane coordinates, the origin being connected to some point of the first- or second-order triangulation or traverse scheme. Tables for computing plane coordinates from geographic positions are found in Coast and Geodetic Survey Special Publication No. 71. The Coast and Geodetic Survey will be glad to give advice on any problem arising out of the use of its control points or on any proposed extension of triangulation or traverse from them.

EXPLANATION OF TABLE FOR POLYCONIC MAP PROJECTION

The engineer or surveyor who makes use of the data in this publication may find it desirable to construct a map covering the territory he is surveying. He may wish to show on this map the meridians and parallels so as to be able to plot the positions of the triangulation stations included in the area and show the details of his survey in the correct geographic positions. To enable him to do this with the least possible difficulty, the following table, reprinted in an abbreviated form from Coast and Geodetic Survey Special Publication No. 5, has been inserted. This table may also be used to interpret in terms of degrees, minutes, and seconds of arc any relatively short distance measured along a meridian or parallel. The method of using the table is described below.

To make a projection for a large-scale map (1 to 20,000 and larger), first draw a straight line for a central meridian and a construction line *ab* perpendicular thereto, each to be as central to the sheet as the selected interval of latitude and longitude will permit. (See fig. 1 above.) On the central meridian lay off, on the desired scale, the distances m_2 and m_4 , using the length of 1 minute along the meridian for the latitude of m , as given in the table in the column headed "Arc of the meridian, 1'," and multiplying this length by the number of minutes for the interval between the central parallel and the extreme parallels. Through m_2 and m_4 draw straight lines, *cd* and *ef*, parallel to the line *ab*. On the lines *ef*, *ab*, and *cd* lay off to the scale of the map the distances $m_4 x_2$, $m x_2$, and $m_2 x_2$ on both

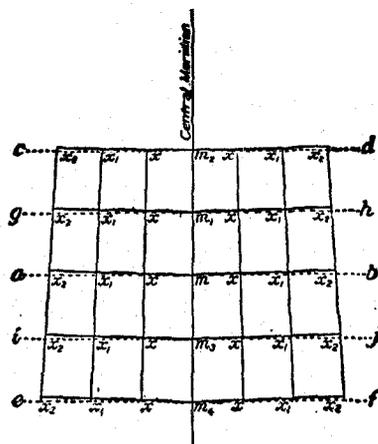


FIGURE 1.—Sketch showing construction of polyconic projection.

NOTE.—In this figure the angles made at the central meridian by the parallels are grossly exaggerated. In an actual projection the parallels appear practically as straight lines.

sides of the central meridian, taking the values from the column headed "Arc of the parallel, 1'," corresponding to the latitude of m_1 , m , and m_2 , respectively. The value of 1 minute as taken from the table must be multiplied by the number of minutes out from the central meridian. Draw straight lines through the points thus determined for the extreme meridians—that is, through the x_2 points.

At the two points designated x_2 on the line ab lay off along the meridians the value of Y as given in the table under "Y coordinate of curvature," using as argument the interval in minutes between the central meridian and the extreme meridian. Draw straight lines from these points to the point m for the middle parallel, and from the points of intersection with the extreme meridians lay off distances along these meridians, above and below, equal to the distances $m m_2$ and $m m_1$ to locate points in the extreme parallels.

Subdivide each of the three meridians and three parallels already determined into parts corresponding with the projection interval and join the corresponding points of subdivision by straight lines to complete the projection.

The method outlined above may be used for all large-scale maps regardless of the number of meridians and parallels shown. For small-scale maps the method is somewhat more complicated, and it becomes necessary to make use of Special Publication No. 5, which may be obtained for 20 cents from the Superintendent of Documents, Washington, D.C.

Polyconic map projection table

Latitude	Arc of the parallel		Arc of the meridian		Interval of longitude from central meridian	Y coordinate of curvature latitude 33°
	1''	1'	1''	1'		
° /	<i>Meters</i>	<i>Meters</i>	<i>Meters</i>	<i>Meters</i>	° /	<i>Meters</i>
33 00	25.940	1,557.0	30.806	1,848.35	0 01	0.1
05	25.935	1,556.1	30.806	1,848.38	03	1.1
10	25.911	1,554.7	30.807	1,848.40	05	3.1
15	25.886	1,553.2	30.807	1,848.43	07	6.0
20	25.862	1,551.7	30.808	1,848.45	10	12.3
25	25.837	1,550.2	30.808	1,848.48	15	27.8
30	25.812	1,548.7	30.808	1,848.50	20	49.4
35	25.788	1,547.3	30.809	1,848.53	25	77.1
40	25.763	1,545.8	30.809	1,848.55	30	111.0
45	25.738	1,544.3	30.809	1,848.58	40	197.4
50	25.713	1,542.8	30.810	1,848.60	50	308.4
55	25.688	1,541.3	30.810	1,848.63	1 00	444.2

Latitude	Arc of the parallel		Arc of the meridian		Interval of longitude from central meridian	Y coordinate of curvature latitude 34°
	1''	1'	1''	1'		
° /	<i>Meters</i>	<i>Meters</i>	<i>Meters</i>	<i>Meters</i>	° /	<i>Meters</i>
34 00	25.663	1,539.8	30.811	1,848.65	0 01	0.1
05	25.638	1,538.3	30.811	1,848.68	03	1.1
10	25.613	1,536.8	30.812	1,848.70	05	3.1
15	25.588	1,535.3	30.812	1,848.73	07	6.1
20	25.562	1,533.7	30.813	1,848.75	10	12.5
25	25.537	1,532.2	30.813	1,848.78	15	28.2
30	25.512	1,530.7	30.813	1,848.81	20	50.1
35	25.486	1,529.2	30.814	1,848.83	25	78.3
40	25.461	1,527.6	30.814	1,848.86	30	112.7
45	25.435	1,526.1	30.815	1,848.88	40	200.4
50	25.410	1,524.6	30.815	1,848.91	50	313.1
55	25.384	1,523.0	30.816	1,848.93	1 00	450.8

Polyconic map projection table—Continued

Latitude	Arc of the parallel		Arc of the meridian		Interval of longitude from central meridian	Y coordinate of curvature latitude 35°
	1"	1'	1"	1'		
° /	<i>Meters</i>	<i>Meters</i>	<i>Meters</i>	<i>Meters</i>	° /	<i>Meters</i>
35 00	25.358	1,521.5	30.816	1,848.96	0 01	0.1
05	25.333	1,520.0	30.816	1,848.99	03	1.1
10	25.307	1,518.4	30.817	1,849.01	05	3.2
15	25.281	1,516.9	30.817	1,849.04	07	6.2
20	25.255	1,515.3	30.818	1,849.06	10	12.7
25	25.229	1,513.7	30.818	1,849.09	15	28.6
30	25.203	1,512.2	30.819	1,849.11	20	50.8
35	25.177	1,510.6	30.819	1,849.14	25	79.3
40	25.151	1,509.1	30.819	1,849.17	30	114.2
45	25.125	1,507.5	30.820	1,849.19	40	203.1
50	25.099	1,505.9	30.820	1,849.22	50	317.3
55	25.072	1,504.3	30.821	1,849.24	1 00	456.9

Latitude	Arc of the parallel		Arc of the meridian		Interval of longitude from central meridian	Y coordinate of curvature	
	1"	1'	1"	1'		Lat. 36°	Lat. 37°
° /	<i>Meters</i>	<i>Meters</i>	<i>Meters</i>	<i>Meters</i>	° /	<i>Meters</i>	<i>Meters</i>
36 00	25.046	1,502.8	30.821	1,849.27	0 01	0.1	0.1
05	25.020	1,501.2	30.822	1,849.30	03	1.2	1.2
10	24.993	1,499.6	30.822	1,849.32	05	3.2	3.3
15	24.967	1,498.0	30.822	1,849.35	07	6.3	6.4
20	24.940	1,496.4	30.823	1,849.37	10	12.8	13.0
25	24.914	1,494.8	30.823	1,849.40	15	28.9	29.2
30	24.887	1,493.2	30.824	1,849.43	20	51.4	51.9
35	24.860	1,491.6	30.824	1,849.45	25	80.3	81.2
40	24.834	1,490.0	30.825	1,849.48	30	115.0	116.9
45	24.807	1,488.4	30.825	1,849.51	40	205.0	207.8
50	24.780	1,486.8	30.826	1,849.53	50	321.2	324.6
55	24.753	1,485.2	30.826	1,849.56	1 00	462.5	467.5

CONVERSION TABLE

In a number of triangulation publications of this bureau complete tables have been printed for the conversion of feet to meters and meters to feet. As these tables require eight pages, it seemed advisable in the interests of economy to substitute for them the condensed table shown below. This table can be used readily for converting a rather large number of one unit to the corresponding number in the other unit by simply taking the conversion value for each digit of the first number, moving the decimal point if necessary, and adding the values together. For example, to convert 24.6 feet to meters we take from the table the value in meters corresponding to 2 feet and move the decimal point one number to the right. We then take the value for 4 feet as given in the table, and next the value for 6 feet, and move the decimal point one number to the left. This gives, by rounding off the third decimal place, 6.096+1.219+0.183=7.498 meters.

Meters	Feet	Feet	Meters
1	3.280833	1	0.3048006
2	6.561667	2	0.6096012
3	9.842500	3	0.9144018
4	13.123333	4	1.2192024
5	16.404167	5	1.5240030
6	19.685000	6	1.8288037
7	22.965833	7	2.1336043
8	26.246667	8	2.4384049
9	29.527500	9	2.7432055
10	32.808333	10	3.0480061

EXPLANATION OF TABLES OF POSITIONS

In the tables of positions the latitude and longitude of each point are given on the North American datum of 1927, and there are also given for all except the intersection points, the length and azimuth of each line observed over, whether in one or both directions. Along with the latitude and longitude of each point the lengths and azimuths are given of lines from that point to other points of the scheme. No lengths and azimuths are repeated, and for a given line the length and azimuth will be found opposite the position of one or the other of the two stations involved.

To aid in the use of the tables, a column of the logarithms of the lengths in meters is given. It must be remembered that it is the logarithm which is derived first from the computation, the lengths given in the table being then derived from the corresponding logarithms. A final column gives these lengths reduced to feet, the reduction being made from the lengths in meters.

The rule followed in recent publications of this office has been to give the latitudes and longitudes of the stations to thousandths of seconds for all points, the positions of which are fixed by fully adjusted triangulation. The positions of points not occupied, and observed from two stations only, are given to hundredths of seconds only and are marked by footnotes as being without check. The positions of several mountain peaks, although fully adjusted, are listed to hundredths of seconds because a mountain peak is a rather indefinite object on which to point and its position is somewhat uncertain. The positions of points determined by measured distance and azimuth from a fixed station are listed to thousandths of seconds although the points are without check. These points are considered to be more accurately determined than the unoccupied points observed from two stations only. Being without check, however, they should be used with caution.

In the columns giving azimuths, distances, and logarithms of distances the accuracy is indicated to a certain extent by the number of decimal places given, it being understood that in each case some of the final figures are doubtful. In some cases there is very little doubt of the correctness of the second figure from the right, while in a few cases some doubt may exist as to the correctness of even the third figure from the right.

It will be noted in the following tables of geographic positions that some of the stations, especially mountain peaks, have two names, the second one being in parentheses. The first name in each case is the name given to the station when it was established. This name may now be wrong, because the observer did not identify the peak correctly or because the name of the geographic feature has since been changed. The name in parentheses is considered at the present time to be the correct one. The original name has been retained, however, in order to prevent confusion if at any time it should become necessary to look up the station in the old field records.

The tables may be conveniently consulted by using as finders the sketches and the index at the end of this publication. In the third column of the index will be found for each point a reference to the page on which its description is given, in the fourth column the page on which the elevation of the station is given, and finally in the fifth column the number of the sketch on which it appears.

EXPLANATION OF LENGTHS

The lengths as given in the tables are all reduced to sea level. If the actual length of a line on the ground reduced only to the horizontal is desired—that is, its length in its actual elevation on the surface of the earth—it may be obtained by adding to the sea-level length as given in meters the following correction,

$$\text{Cor.} = \frac{Sh_m}{6,370,000}$$

in which S is the length of the line in meters and h_m is the mean elevation of the two ends of the line in meters. The correction for the length in feet can also be found by the same formula if S is taken in feet, but h_m must still be kept in meters, since the denominator is the approximate length of the radius of the earth in meters.

AZIMUTH AND BACK AZIMUTH

The azimuth of a line of triangulation is its true direction reckoned clockwise from true south. The cardinal points of the compass on this system are as follows: South is 0° (or 360°), west 90° , north 180° , and east 270° .

Because of the convergence of the meridians, the azimuth and the back azimuth of a line do not differ by exactly 180° , the amount of the divergence varying with the latitude and the difference of longitude of the two ends of the line. To illustrate from the tables on page 25 the azimuth from Duck Creek to Truesdale is $166^\circ 03' 01''.65$ while the back azimuth, or the azimuth from Truesdale to Duck Creek, is $346^\circ 01' 39''.43$.

The azimuths of the triangulation lines offer a very convenient and accurate means of testing the deflection of the magnetic needle on a surveyor's transit, and even the azimuth over such short distances as those between a station mark and its reference mark may be used for this purpose with fair accuracy, provided the distance is greater than 100 feet. On all recent triangulation, a special azimuth mark has been set for each station at a distance of not less than one-fourth mile. The azimuth of the line from the station to this mark has been very accurately determined and may be used as the starting azimuth for traverse lines and other local surveys.

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Crowder Mountain, 1877.....	35 13 55.840	186 48 38.4	6 52 49.6	Poore.....	4.959009	90,993.2	298,534						
	81 16 35.621	225 20 38.6	45 42 32.9	Young.....	4.903004	79,984.2	262,415						
Spencer Mountain, 1877.....	35 17 49.677	121 09 19.1	300 50 21.5	Benn.....	4.761522	57,746.0	189,455						
	81 06 55.528	177 25 51.6	357 24 24.7	Poore.....	4.920243	83,222.9	273,040						
Silver Creek Knob, 1877.....	35 35 00.838	10 19 54.4	190 15 06.9	Wofford.....	4.847815	70,439.3	231,100						
	81 47 49.107	44 29 58.2	224 12 49.0	Hogback.....	4.807385	64,177.8	210,557						
Blackstock Knob, 1877.....	35 44 15.484	302 29 41.1	123 04 42.3	King.....	5.035769	108,584.8	356,249						
	82 19 06.692	337 55 44.8	158 09 03.0	Wofford.....	4.969223	93,158.6	305,638						
Hanging Bluff, 1877.....	36 23 44.937	156 03 01.0	335 55 06.4	Buffalo.....	4.686860	48,625.0	159,531						
	80 15 23.160	221 45 20.6	42 10 06.6	Smith Mountain.....	4.965129	92,284.6	302,770						
Benton, tree (Tenn.), 1874.....	35 07 24.20	216 56 30	36 58 40	Bean.....	3.979037	9,528.8	31,262						
	84 37 16.39	350 33 50	170 35 27	Cohutta.....	4.419572	26,276.8	86,210						
Hangover tree (Geological Survey), 1884.....	35 23 09.01	109 39 12	289 22 36	Roy.....	4.662075	45,927.7	150,681						
	83 58 10.44	152 28 35	332 16 51	Melton.....	4.816731	65,573.9	215,137						
Little Bald (N.C.-Tenn.), 1885.....	35 31 14.08	90 35 48	270 15 34	Roy.....	4.721353	52,644.5	172,718						
	83 51 57.77	99 53 48	279 31 52	Owen.....	4.761929	57,800.2	189,633						
Big Fodderstack (N.C.-Tenn.), 1887.....	35 24 44.02	108 12 27	287 57 52	Roy.....	4.801943	39,989.2	131,198						
	84 01 39.41	180 30 28	0 30 32	Cockspur.....	4.278380	18,983.7	62,282						
Little Fodderstack (Tenn.), 1885.....	35 27 01.87	112 08 44	291 52 04	Owen.....	4.669970	46,770.3	153,446						
	84 00 58.92	176 41 35	356 41 15	Cockspur.....	4.169662	14,759.2	48,422						
Caesars Head Hotel, largest building, east end of roof (S.C.), 1875-76.....	35 06 17.678	256 23 56.6	76 35 19.6	Hogback.....	4.489935	30,898.3	101,372						
	82 37 13.406	313 29 05.3	133 36 17.5	Paris.....	4.420590	26,338.4	86,412						
		54 25 41.2	234 21 30.1	Pinnacle.....	4.134049	13,616.0	44,672						
Anderson, 1878.....	35 33 56.928	90 05 18.5	269 45 25.7	Benn.....	4.713019	51,643.9	169,435						
	81 05 27.098	173 38 26.3	353 36 07.4	Poore.....	4.729665	53,661.8	176,055						
		244 30 58.9	64 46 29.0	Young.....	4.047558	44,417.9	145,728						
Simonton College, center of cupola, 1379.....	35 46 57.544	36 33 08.6	216 26 15.9	Anderson.....	4.476056	29,926.5	98,184						
	80 53 39.351	141 04 56.3	320 55 41.9	Poore.....	4.675908	37,662.4	123,564						
		282 39 16.1	102 47 55.0	Young.....	4.359209	22,867.0	75,023						
Statesville longitude, 1879 ¹	35 46 56.149	207 30 41	27 30 42	Simonton College, center of cupola.....	1.68543	48.466	159.01						
	80 53 40.242												
Fisher's Peak, 1877 ¹	36 33 34.22	350 06 32	170 12 46	Young.....	4.966605	92,598.7	303,801						
	80 49 24.43	27 50 32	207 38 41	Poore.....	4.808361	64,322.2	211,030						
Bull Head Mountain, 1877 ¹	36 26 47.60	334 14 06	154 28 56	Young.....	4.941016	87,300.4	286,418						
	81 04 01.56	10 19 20	190 16 09	Poore.....	4.654377	45,120.8	148,034						
Bakers Knob, 1877 ¹	35 39 37.84	65 48 53	245 39 50	Benn.....	4.410608	25,740.0	84,449						
	81 24 05.46	207 13 48	27 22 24	Poore.....	4.682867	48,191.1	158,107						
Dallas, courthouse, cupola, 1877 ¹	35 18 57.23	45 54 55	225 50 12	King.....	4.236835	17,251.8	56,600						
	81 10 35.98	122 19 55	302 03 05	Benn.....	4.715285	51,914.1	170,322						
Mona Mountain, 1874-75.....	34 59 53	281 59 30	102 05 55	Rabun.....	4.241429	17,435.3	57,202						
	83 29 12	21 36 50	201 28 46	Skitt.....	4.768965	58,748.3	192,743						
Rocky Mountain, near Daytonville (S.C.), 1876-77.....	35 02 48	72 55 33	252 43 39	Wofford.....	4.518873	33,027.3	108,357						
	81 35 23	173 37 27	363 34 59	Benn.....	4.762496	57,875.7	189,881						
Spartanburg, Baptist Church (S.C.), 1875-76.....	34 57 02.523	88 44 12.4	268 27 45.9	Paris.....	4.040632	43,715.2	143,422						
	81 55 58.094	165 28 10.6	345 28 05.5	Wofford.....	2.958044	903.7	2,965						
		243 05 48.3	63 27 11.3	King.....	4.801497	63,313.6	207,721						
Spartanburg, St. Johns College, east turret (S.C.), 1876 ¹	34 56 41.88	126 53 02	306 40 25	Hogback.....	4.620015	41,688.4	136,773						
	81 55 28.98	147 56 53	327 56 31	Wofford.....	3.259817	1,818.9	5,968						
Mount Cllngman, 1876 ¹	35 44 04.19	339 34 10	159 46 20	Wofford.....	4.962689	91,767.5	301,074						
	82 17 09.60	0 23 41	180 23 31	Hogback.....	4.796817	62,635.0	205,495						
Thicketty (S.C.), 1875-76.....	35 06 47.855	41 34 21.8	221 28 38.2	Wofford.....	4.359522	22,883.5	75,077						
	81 46 08.525	72 09 17.8	251 47 10.9	Paris.....	4.789797	61,630.7	202,260						
		97 40 55.1	277 22 54.1	Hogback.....	4.680859	47,957.8	157,342						

¹No check on this position

Eastern oblique arc—Continued

Station	Latitude and longitude	Station	Latitude and longitude
<i>Supplementary points—Continued</i>		<i>Supplementary points—Continued</i>	
Devils Courthouse Mountain.....	35 19 40 82 52 29	Hawksbill Mountain.....	35 54 48 81 53 11
Warrior Mount.....	36 29 13 80 51 45	Table Rock Mountain.....	35 53 28 81 52 59
Hibriten Mountain.....	35 54 25 81 29 22	Big Yellow Mountain.....	36 05 57 82 04 40
Carleton Knob.....	35 29 23 81 49 47	Grassy Ridge.....	36 05 45 82 04 37
East Drowning Creek Mountain.....	35 41 51 81 30 24	Bright Yellow Mountain.....	35 59 16 82 03 34
West Drowning Creek Mountain.....	35 42 33 81 31 32	Mount Hallback.....	35 44 53 82 15 07
Hickory Knob.....	35 37 00 81 44 16	Mount Gibbs.....	35 44 56 82 16 34
Propst Mountain.....	35 36 55 81 45 06	Cold Mountain 1.....	35 09 58 82 59 09
Little Pisgah Mountain.....	35 30 01 82 19 56	Cold Mountain 2.....	35 24 37 82 51 24
Mount Pisgah.....	35 25 32 82 45 23	Mount Hardy (Tennessee Bald Mountain).....	35 18 11 82 55 40
Sugarloaf Mountain.....	35 24 24 82 16 07	Richland Balsam Mountain.....	35 21 26 82 59 53
High Pinnacle (Blue Ridge).....	35 42 16 82 16 32	Humpback Mountain (Blue Ridge).....	35 55 50 81 57 04
Pinnacle Mountain (Bald Mountain).....	35 28 05 82 14 33	Flat Top Mountain (Blue Ridge).....	36 09 44 81 40 37
Big Craggy Mountain.....	35 42 22 82 21 59	Elk Knob (Smoky Range).....	36 20 40 81 42 31
Bowlens Pyramid (one of the northernmost summits of the Black Mountains).....	35 50 35 82 14 04	Sauratown Mountain.....	36 22 33 80 22 17
Long Ridge, middle summit.....	35 49 03 82 14 56	Tryon Mountain.....	35 15 58 82 14 29
Tryon Mountain, northeast summit.....	35 16 53 82 12 51	Fodderstack Mountain (Terrapin Mountain).....	35 03 06 83 05 28
Great Hogback Mountain.....	35 07 55 82 59 00	Saddleback Mountain.....	35 02 10 83 11 31
Chimney Top Mountain.....	35 06 10 83 03 46	Black Brother Mountain.....	35 47 23 82 15 23
Whitesides Mountain.....	35 04 53 83 08 17	Balsam Cone.....	35 46 38 82 15 44
Little Bald Mountain (Nantahala).....	35 07 15 83 30 35	Bear Wallow Mountain.....	35 27 38 82 21 25
Pickens Nose.....	35 01 18 83 27 27	Sitting Bull Mountain (Ridge Pole), middle summit of Nantahala.....	34 59 53 83 31 22
Standing Indian Mountain, north summit of Nantahala.....	35 02 07 83 32 17		

Coastal control arc

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points</i>													
Blossom (Va.), 1931	36 38 04.041	76 02 23.072	128 13 59.11	191 03 32.57	199 52 28.2	308 08 12.90	11 04 21.98	Fentress	4.2625483	18,304.10	60,052.7		
								Pungo	4.0293848	10,700.02	35,105.0		
								Azimuth mark, R.M. no. 2					
Hickory (Va.), 1931	36 38 29.012	76 12 16.017	181 48 46.10	239 49 31.88	272 56 31.26	1 48 54.14	59 58 15.54	Fentress	4.0233030	10,551.23	34,616.8		
								Pungo	4.2876526	19,393.34	63,626.3		
								Blossom	4.1688070	14,750.51	48,394.0		
								Azimuth mark, R.M. no. 3					
Old, 1931	36 33 01.553	76 05 31.848	135 10 07.38	206 41 56.80	11 58 33.8	315 06 06.42	26 43 49.33	Hickory	4.1535419	14,241.05	46,722.5		
								Blossom	4.0186253	10,438.19	34,246.0		
								Azimuth mark, R.M. no. 3					
Moyock, 1931	36 32 28.776	76 14 57.310	199 50 24.16	241 04 30.11	265 50 39.92	19 52 00.30	61 11 59.68	Hickory	4.0720911	11,805.68	38,732.5		
								Blossom	4.3305943	21,408.60	70,239.0		
								Old	4.1492375	14,100.60	46,261.7		
								Azimuth mark, R.M. no. 1					
Guinea, 1931	36 28 44.608	76 07 45.335	122 46 09.11	202 44 26.98	12 57 38.0	302 41 52.09	22 45 46.41	Moyock	4.1064784	12,778.46	41,924.0		
								Old	3.9339081	8,588.32	28,176.8		
								Azimuth mark, R.M. no. 2					
Tar, 1931	36 28 37.791	76 17 08.484	204 37 06.63	244 48 52.53	269 05 41.24	24 38 24.66	64 55 47.04	Moyock	3.8938961	7,832.42	25,696.9		
								Old	4.2820789	19,146.04	62,815.0		
								Guinea	4.1467672	14,020.62	45,999.3		
								Azimuth mark, R.M. no. 3					
Gregory, 1931	36 23 09.746	76 07 29.492	125 04 56.87	177 48 42.25	330 43 32.5	304 59 13.03	357 48 32.84	Tar	4.2458470	17,613.55	57,787.1		
								Guinea	4.0140639	10,329.13	33,888.2		
								Azimuth mark, R.M. no. 1					
Burnt, 1931	36 23 38.024	76 15 56.116	168 58 02.34	232 15 11.53	273 54 26.11	348 57 19.36	52 20 03.02	Tar	3.9737754	9,414.03	30,885.9		
								Guinea	4.1889529	15,460.87	50,691.7		
								Gregory	4.1023046	12,656.24	41,523.0		
								Azimuth mark, R.M. no. 1					
Camden, 1931	36 16 52.925	76 07 16.635	133 59 12.33	178 25 10.93	257 20 25.7	313 54 04.51	358 25 03.31	Burnt	4.2551031	17,992.98	59,032.0		
								Gregory	4.0661738	11,619.13	38,120.4		
								Azimuth mark, R.M. no. 2					
Elizabeth, 1931	36 17 24.794	76 15 43.748	178 27 55.00	229 10 42.65	274 23 47.90	358 27 47.67	49 15 35.52	Burnt	4.0610066	11,508.18	37,756.4		
								Gregory	4.2116080	16,278.26	53,406.3		
								Camden	4.1035735	12,693.27	41,644.5		
								Azimuth mark, R.M. no. 3					
Toxey, 1931	36 14 15.538	76 07 53.290	116 27 11.08	190 40 44.97	27 01 26.0	296 22 32.80	10 41 06.65	Elizabeth	4.1176922	13,112.70	43,020.6		
								Camden	3.6934277	4,936.60	16,196.2		
								Azimuth mark, R.M. no. 3					
Weeks, 1931	36 11 01.473	76 10 36.521	147 01 42.41	204 43 25.27	214 16 02.45	326 58 40.80	24 45 23.42	Elizabeth	4.1488223	14,087.12	46,217.5		
								Camden	4.0765441	11,927.35	39,131.6		
								Toxey	3.8506833	7,239.08	23,750.2		
								Azimuth mark, R.M. no. 3					
Woodville, 1931	36 13 42.229	76 21 05.385	229 27 49.97	287 27 14.47	233 45 17.7	49 31 00.20	107 33 25.94	Elizabeth	4.0236943	10,560.74	34,648.0		
								Weeks	4.2167558	16,472.36	54,043.1		
								Azimuth mark, R.M. no. 2					
Durant, 1931	36 08 11.117	76 17 53.939	154 54 02.55	190 46 41.12	244 18 42.37	334 52 09.53	10 47 58.04	Woodville	4.0519698	11,271.19	36,978.9		
								Elizabeth	4.2398668	17,372.68	56,996.9		
								Weeks	4.0838202	12,128.87	39,792.8		
								Azimuth mark, R.M. no. 3					
Hertford, 1931	36 10 57.766	76 29 29.653	248 02 18.69	286 23 55.29	163 16 36.2	68 07 16.55	106 30 45.78	Woodville	4.1328597	13,578.75	44,549.6		
								Durant	4.2584665	18,132.45	59,489.5		
								Azimuth mark, R.M. no. 3					
Yeopin, 1931	36 06 20.246	76 24 50.799	140 50 31.09	202 26 57.69	251 48 59.96	320 47 46.62	22 29 10.71	Hertford	4.0427650	11,034.81	36,203.4		
								Woodville	4.1685510	14,741.82	48,365.5		
								Durant	4.0402272	10,970.52	35,992.4		
								Azimuth mark, R.M. no. 1					
Barber, 1931	36 07 18.468	76 35 33.856	233 22 45.23	276 18 50.19	97 44 28.0	53 26 20.09	96 25 09.20	Hertford	4.0545781	11,339.09	37,201.7		
								Yeopin	4.2090511	16,182.71	53,092.8		
								Azimuth mark, R.M. no. 2					
Byrum, 1931	36 01 51.207	76 31 31.609	149 00 59.28	190 15 13.37	230 23 08.01	328 58 36.63	10 16 25.24	Barber	4.0706977	11,767.86	38,608.4		
								Hertford	4.2334995	17,119.83	56,167.3		
								Yeopin	4.1144085	13,013.93	42,696.5		
								Azimuth mark, R.M. no. 1					
Mavaton, 1931	36 10 25.198	76 38 37.560	265 45 43.24	321 23 49.71	326 02 32.12	85 51 06.67	141 25 38.07	Hertford	4.1376302	13,728.72	45,041.6		
								Barber	3.8670611	7,363.11	24,157.1		
								Byrum	4.2808439	19,091.67	62,636.6		
								Azimuth mark, R.M. no. 1					
Edenton, 1931	36 03 37.490	76 40 04.928	189 51 23.91	224 51 13.59	284 15 37.26	9 52 15.41	44 53 53.27	Mavaton	4.1056751	12,754.84	41,846.5		
								Barber	3.9827813	9,611.28	31,533.0		
								Byrum	4.1225602	13,260.20	43,504.5		
								Azimuth mark, R.M. no. 2					

Coastal control arc—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Perry, 1931	36	09	12.998	260	52	19.27	80	57	47.93	Mavaton	4.1491484	14,097.70	46,252.2
	76	47	54.527	311	19	20.18	131	23	56.91	Edenton	4.1944908	15,649.15	51,342.3
				362	05	23.1				Azimuth mark, R. M. no. 1.			
Capehart, 1931	36	03	12.029	176	13	08.17	356	12	50.84	Perry	4.0472740	11,149.98	36,581.2
	76	47	25.113	224	37	05.58	44	42	16.51	Mavaton	4.2734787	18,770.62	61,583.3
				265	53	22.71	85	57	41.79	Edenton	4.0431614	11,044.89	36,236.4
				200	05	54.8				Azimuth mark, R. M. no. 2.			
White, 1931	36	08	09.301	252	04	18.94	72	06	42.28	Perry	3.8051427	6,384.73	20,947.2
	76	51	57.541	323	20	07.90	143	22	48.39	Capehart	4.0576310	11,419.08	37,464.1
				48	18	05.3				Azimuth mark, R. M. no. 3.			
Askew, 1931	36	06	18.717	237	29	18.55	57	31	24.69	White	3.8024045	6,344.60	20,815.6
	76	55	31.527	244	47	08.68	64	51	38.13	Perry	4.1012962	12,626.88	41,426.7
				295	15	51.07	115	20	37.52	Capehart	4.1291164	13,462.21	44,167.3
				323	49	33.1				Azimuth mark, R. M. no. 2.			
Cooper, 1931	35	57	07.727	153	45	07.34	333	41	50.37	Askew	4.2773589	18,939.08	62,136.0
	76	49	56.661	198	39	53.07	18	41	22.15	Capehart	4.0738057	11,852.38	38,885.7
				75	36	46.9				Azimuth mark, R. M. no. 2.			
Windsor, 1931	36	00	42.217	202	33	19.74	22	35	01.12	Askew	4.0504417	11,231.60	36,849.0
	76	58	23.767	254	18	11.69	74	24	39.14	Capehart	4.2336096	17,124.17	55,181.5
				297	27	00.19	117	31	58.13	Cooper	4.1559746	14,321.04	46,984.9
				317	10	34.1				Azimuth mark, R. M. no. 3.			
Jamesville, 1931	35	48	33.808	162	20	20.42	342	17	32.99	Windsor	4.3722415	23,563.59	77,308.2
	76	53	38.298	199	19	21.77	19	21	31.67	Cooper	4.2249631	16,786.61	55,074.1
				296	47	06.2				Azimuth mark, R. M. no. 2.			
Williamston, 1931	35	50	20.975	203	23	22.07	23	26	36.14	Windsor	4.3194317	20,865.64	68,456.7
	77	03	54.535	239	06	41.80	59	14	53.05	Cooper	4.3386075	24,468.51	80,277.1
				262	00	11.05	102	06	11.73	Jamesville	4.1991289	15,817.17	51,893.5
				16	58	39.1				Azimuth mark, R. M. no. 2.			
Green, 1931	35	45	46.792	186	01	35.85	6	01	56.65	Williamston	3.9292852	8,497.38	27,878.5
	77	04	30.083	252	29	24.89	72	35	46.03	Jamesville	4.2344889	17,168.88	56,266.4
				209	31	50.4				Azimuth mark, R. M. no. 1.			
Woolard, 1931	35	41	36.538	174	23	13.28	354	22	55.65	Green	3.8892993	7,749.96	25,426.3
	77	03	59.908	180	28	40.95	0	28	44.09	Williamston	4.2085409	16,163.71	53,030.4
				230	28	48.23	50	34	51.41	Jamesville	4.3060178	20,231.02	66,374.6
				249	31	10.8				Azimuth mark, R. M. no. 1.			
Carson, 1931	35	45	03.036	237	37	01.79	57	43	02.37	Williamston	4.2629577	18,321.36	60,109.3
	77	14	11.034	264	40	25.89	84	46	05.36	Green	4.1660519	14,667.23	48,087.9
				292	27	24.24	112	33	21.05	Woolard	4.2207901	16,626.09	54,547.4
				293	50	40.2				Azimuth mark, R. M. no. 1.			
Shaw, 1931	35	36	40.252	136	03	30.15	315	57	43.18	Carson	4.3331982	21,537.64	70,661.4
	77	04	16.179	182	33	54.56	2	34	04.04	Woolard	3.9609702	9,140.50	29,988.5
				115	20	04.9				Azimuth mark, R. M. no. 3.			
Boyd, 1931	35	35	17.656	180	47	42.21	0	47	48.02	Carson	4.2563049	18,042.84	59,195.6
	77	14	20.999	233	10	48.68	53	16	50.59	Woolard	4.2901912	19,507.03	63,999.3
				260	27	32.62	80	33	24.70	Shaw	4.1885314	15,435.88	50,642.5
				274	19	37.5				Azimuth mark, R. M. no. 2.			
Smaw, 1931	35	32	44.586	102	16	59.96	282	08	36.55	Boyd	4.3432873	22,299.10	73,159.6
	76	59	55.533	137	55	14.33	317	52	42.68	Shaw	3.9907291	9,788.79	32,115.4
				117	39	59.7				Azimuth mark, R. M. no. 3.			
Chocowinity, 1931	35	25	46.403	160	15	27.05	330	11	34.90	Boyd	4.3071292	20,282.86	66,544.7
	77	07	41.312	194	22	11.10	14	24	10.28	Shaw	4.3181278	20,803.09	68,251.5
				222	17	46.99	42	22	17.39	Smaw	4.2413962	17,433.97	57,197.9
				125	54	57.2				Azimuth mark, R. M. no. 2.			
Orr, 1931	35	22	13.519	112	51	30.71	292	45	32.58	Chocowinity	4.2286005	16,923.90	55,524.5
	76	57	23.087	168	49	53.46	348	48	25.02	Smaw	4.2972066	19,824.70	65,041.5
				165	14	17.0				Azimuth mark, R. M. no. 3.			
Vance, 1931	35	20	18.405	175	48	15.26	355	47	58.24	Chocowinity	4.0058432	10,135.45	33,252.7
	77	07	11.914	205	32	27.82	25	36	40.87	Smaw	4.4064402	25,494.13	83,642.0
				266	31	54.13	76	37	34.85	Orr	4.1842497	15,284.45	50,145.7
				1	44	06.1				Azimuth mark, R. M. no. 1.			
Turnstall, 1931	35	16	54.391	111	24	17.80	291	18	09.86	Vance	4.2372053	17,266.54	56,648.6
	76	56	35.347	173	00	50.53	353	00	22.93	Orr	3.9960051	9,908.44	32,507.9
				234	10	08.9				Azimuth mark, R. M. no. 1.			
Askin, 1931	35	11	46.532	159	27	08.46	339	24	53.25	Vance	4.2265588	16,848.40	55,276.8
	77	03	17.747	204	51	20.06	24	54	44.92	Orr	4.3283711	21,299.58	69,880.4
				226	58	08.96	47	02	01.14	Turnstall	4.1433737	13,911.49	45,641.3
				342	28	24.3				Azimuth mark, R. M. no. 1.			
Pipkin, 1931	35	07	56.474	118	19	13.12	298	14	13.21	Askin	4.1750673	14,964.68	49,096.6
	76	54	37.007	169	46	25.44	349	45	17.21	Turnstall	4.2264744	16,845.13	55,266.1
				272	31	55.5				Azimuth mark, R. M. no. 2.			

Coastal control arc—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
New Bern north base, 1931	35	04	27.740	170	28	14.00	350	27	22.35	Askin	4.1370687	13,711.62	44,985.5
	77	01	48.015	198	56	59.66	18	59	59.79	Turnstall	4.3861714	24,331.64	79,828.1
				239	27	21.34	59	31	29.19	Pipkin	4.1027832	12,670.19	41,568.8
Arapahoe, 1931	35	01	23.341	107	00	30.90	286	53	28.41	New Bern north base	4.2898471	19,491.58	63,948.6
	76	49	32.325	147	31	16.95	327	28	21.85	Pipkin	4.1573063	14,365.02	47,129.2
				323	20	43.0				Azimuth mark, R.M. no. 3.			
New Bern south base, 1931	34	59	44.202	155	37	30.64	335	36	00.93	New Bern north base	3.9819792	9,593.547	31,474.83
	76	59	11.740	204	37	40.88	24	40	18.71	Pipkin	4.2224828	16,691.02	54,760.5
				258	12	23.78	78	17	56.20	Arapahoe	4.1762554	15,005.67	49,231.1
Temple, 1931	34	54	52.528	113	46	26.31	293	38	44.16	New Bern south base	4.3493315	22,352.78	73,335.7
	76	45	45.109	154	26	30.43	334	24	20.21	Arapahoe	4.1255310	13,351.53	43,804.1
				2	56	47.0				Azimuth mark, R.M. no. 2.			
Havelock, 1931	34	52	58.635	155	33	29.41	335	31	21.11	New Bern south base	4.1376725	13,730.06	45,046.0
	76	55	27.721	210	04	35.40	30	07	59.01	Arapahoe	4.2547403	17,977.95	58,982.7
				256	36	22.73	76	41	56.06	Temple	4.1819281	15,202.96	49,878.4
Harlowe, 1931	34	50	47.499	105	07	10.22	285	01	32.63	Havelock	4.1914416	15,539.66	50,983.0
	76	46	36.973	178	25	59.53	358	26	54.88	Temple	3.8781473	7,553.48	24,781.7
				147	36	11.1				Azimuth mark, R.M. no. 2.			
Newport, 1931	34	46	32.540	154	02	07.87	333	59	57.55	Havelock	4.1217335	13,235.29	43,422.8
	76	51	39.638	210	16	32.76	30	19	55.27	Temple	4.2515322	17,845.64	58,548.6
				229	31	16.64	49	34	43.62	Harlowe	4.0831337	12,109.71	39,729.9
Knoll, 1931	34	43	30.480	183	14	56.65	3	15	18.99	Havelock	4.2439285	17,535.92	57,532.4
	76	56	06.858	230	27	10.55	50	29	42.92	Newport	3.9452229	8,815.01	28,920.6
				257	13	02.4				Azimuth mark, R.M. no. 2.			
Verona, 1932	34	38	37.376	192	14	32.9				Azimuth mark, R.M. no. 1.			
	77	28	42.850										
Truesdale, 1932	34	43	01.984	57	30	37.06	237	25	51.32	Verona	4.1807895	15,163.15	49,747.8
	77	20	20.650	149	25	43.4				Azimuth mark, R.M. no. 3.			
Duck Creek, 1932	34	35	01.282	112	03	13.89	291	57	06.48	Verona	4.2497634	17,773.11	58,310.6
	77	17	56.046	196	03	01.65	346	01	39.43	Truesdale	4.1836495	15,263.34	50,076.5
				58	23	05.6				Azimuth mark, R.M. no. 3.			
Grant, 1932	34	31	48.382	154	40	48.00	334	38	35.06	Verona	4.1443939	13,944.21	45,748.6
	77	24	48.689	198	11	16.60	18	13	48.89	Truesdale	4.3394645	21,850.66	71,688.4
				240	30	01.71	60	33	55.77	Duck Creek	4.0821799	12,083.14	39,642.8
Bryan, 1931	34	50	26.083	230	49	05.97	50	51	15.84	Havelock	3.8717837	7,443.61	24,421.2
	76	59	14.931	301	50	05.59	121	54	25.54	Newport	4.1344891	13,629.79	44,717.1
				359	30	37.52	159	32	24.81	Knoll	4.1357798	13,670.36	44,850.2
Simkins, 1932	34	41	51.319	201	50	04.04	21	52	26.71	Bryan	4.2327573	17,090.60	56,071.4
	77	03	25.111	254	38	34.56	74	42	44.12	Knoll	4.0630817	11,563.30	37,937.3
				314	06	51.1				Azimuth mark, R.M. no. 2.			
Pelletier, 1932	34	47	15.285	244	39	54.66	64	44	34.11	Bryan	4.1386100	13,759.73	45,143.4
	77	07	24.407	291	50	46.12	111	57	12.38	Knoll	4.2688723	18,572.58	60,933.5
				328	36	29.69	148	38	45.46	Simkins	4.0679022	11,692.36	38,360.7
Russell, 1932	34	39	27.717	204	31	55.86	24	34	23.21	Pelletier	4.1997598	15,840.17	51,969.0
	77	11	43.098	250	43	09.95	70	47	53.28	Simkins	4.1279974	13,427.57	44,053.6
				49	11	53.05	229	08	21.16	Duck Creek	4.0988734	12,556.64	41,196.2
Hubert, 1932	34	45	15.015	17	43	56.86	197	41	41.90	Truesdale	4.1683774	14,735.93	48,346.1
	77	13	58.793	249	03	47.1	296	34	40.74	Azimuth mark, R.M. no. 1			
				67	09	04.19	247	05	26.61	Pelletier	4.0290462	10,691.69	35,077.7
Bryant (S.C.), 1932	33	40	33.534	53	54	05.06	233	50	30.46	Simkins	4.2380796	17,301.33	56,762.8
	78	40	48.510	63	44	13.09	243	40	39.21	Russell	4.0509657	11,245.16	36,893.5
				97	13	50.11	277	06	55.05	Duck Creek	4.2978267	19,853.03	65,134.5
Leon (S.C.), 1932	33	55	28.884	324	58	19.28	145	01	05.57	Truesdale	4.0229984	10,543.83	34,592.5
	78	45	46.853	9	27	53.32	189	26	55.34	Azimuth mark, R.M. no. 3.			
				53	25	14.97	233	21	05.71	Kettle	4.0895114	12,288.86	40,317.7
Little River (S.C.), 1932	33	53	25.510	50	14	47.03	230	11	40.97	Vaught	4.0624209	11,545.72	37,879.6
	78	35	14.551	103	13	09.44	283	07	16.71	Vina	4.2859446	19,317.22	63,376.6
				75	00	20.9				Azimuth mark, R.M. no. 2.			

Coastal control arc—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Hughes, 1932.....	33	59	50.859	4	08	12.45	184	07	53.79	Little River.....	4.0756857	11,903.80	39,054.4
	78	34	41.132	26	25	08.81	206	21	43.84	Bryant.....	4.3270079	21,232.83	69,661.4
				64	46	23.01	244	40	11.12	Leon.....	4.2765127	18,902.21	62,015.0
				213	14	01.4				Azimuth mark, R.M. no. 1.			
Pigott, 1932.....	33	54	01.378	85	13	39.93	265	08	55.00	Little River.....	4.1197207	13,174.09	43,222.0
	78	26	43.636	131	19	34.34	311	15	07.68	Hughes.....	4.2126728	16,318.22	53,537.4
				170	11	38.5				Azimuth mark, R.M. no. 2.			
Piver, 1932.....	34	00	35.525	343	16	48.39	163	18	07.69	Pigott.....	4.1030948	12,679.29	41,598.6
	78	29	05.610	35	35	42.35	215	32	16.31	Little River.....	4.2118577	16,287.62	53,437.0
				80	56	42.02	260	53	34.38	Hughes.....	3.9404879	8,719.43	28,607.0
				124	56	00.0				Azimuth mark, R.M. no. 3.			
Boon, 1932.....	33	55	16.302	76	38	16.55	256	34	45.97	Pigott.....	3.9985792	9,967.34	32,701.2
	78	20	26.197	126	27	05.30	306	22	15.10	Piver.....	4.2193200	16,569.90	54,363.1
				188	12	44.8				Azimuth mark, R.M. no. 2.			
Gore, 1932.....	34	02	03.233	7	47	45.88	187	47	08.54	Boon.....	4.1022501	12,654.65	41,517.8
	78	19	19.370	37	34	03.29	217	29	55.07	Pigott.....	4.2723435	18,721.62	61,422.5
				79	51	36.22	259	46	08.21	Piver.....	4.1841703	15,281.65	50,136.5
				229	07	42.7				Azimuth mark, R.M. no. 3.			
Howell, 1932.....	33	57	04.168	74	48	30.11	254	44	04.76	Boon.....	4.1021333	12,651.24	41,506.6
	78	12	30.887	131	20	44.12	311	16	55.74	Gore.....	4.1448186	13,957.85	45,793.4
				314	38	51.9				Azimuth mark, R.M. no. 2.			
Supply, 1932.....	34	02	14.247	348	00	28.62	168	01	12.81	Howell.....	3.9897624	9,767.03	32,044.0
	78	13	49.919	38	20	14.35	218	16	32.88	Boon.....	4.2151141	16,410.21	53,839.2
				87	43	34.36	267	40	29.96	Gore.....	3.9272665	8,467.98	27,749.2
				268	12	50.8				Azimuth mark, R.M. no. 2.			
Southport west base, 1932.....	33	58	37.753	60	32	24.76	240	30	33.74	Howell.....	3.7679483	5,860.68	19,227.9
	78	09	12.158	133	07	25.27	313	04	49.92	Supply.....	3.9895375	9,761.97	32,027.4
				283	44	59.1				Azimuth mark, R.M. no. 2.			
Harvell, 1932.....	34	02	10.298	358	07	19.84	178	07	24.51	Southport west base.....	3.8163880	6,552.21	21,496.7
	78	09	20.522	27	23	51.08	207	22	04.65	Howell.....	4.0262330	10,622.65	34,851.1
				91	01	46.43	270	59	15.64	Supply.....	3.8395802	6,911.63	22,675.9
				0	50	49.8				Azimuth mark, R.M. no. 3.			
Southport east base, 1932.....	33	57	06.474	89	46	09.65	269	40	46.90	Howell.....	4.1714069	14,839.08	48,684.5
	78	02	52.994	106	08	37.82	286	05	05.98	Southport west base.....	4.0057235	10,132.661	33,243.57
				133	17	42.96	313	14	06.29	Harvell.....	4.1353971	13,658.31	44,810.6
				112	18	36.3				Azimuth mark, R.M. no. 3.			
Mill, 1932.....	34	05	43.961	346	33	43.25	166	35	06.26	Southport east base.....	4.2146399	16,392.30	53,780.4
	78	05	21.351	42	59	29.25	222	57	15.28	Harvell.....	3.9541176	8,997.41	29,619.0
				215	32	52.3				Azimuth mark, R.M. no. 1.			
Cypress, 1932.....	34	01	06.622	47	41	14.26	227	38	17.40	Southport east base.....	4.0408483	10,986.22	36,044.0
	77	57	36.604	96	15	18.18	276	08	44.27	Harvell.....	4.2592386	18,165.13	59,596.8
				125	40	28.11	305	36	07.84	Mill.....	4.1662982	14,665.54	48,115.2
				240	12	04.8				Azimuth mark, R.M. no. 2.			
Johnson, 1932.....	34	10	42.320	350	51	18.82	170	52	21.21	Cypress.....	4.2544504	17,965.96	58,943.3
	77	59	27.890	44	35	55.16	224	32	36.81	Mill.....	4.1107413	12,904.50	42,337.6
				195	36	20.7				Azimuth mark, R.M. no. 1.			
Keyes, 1932.....	34	06	27.966	34	39	54.00	214	37	24.57	Cypress.....	4.0804381	12,034.78	39,484.1
	77	53	09.816	85	55	16.34	265	48	26.19	Mill.....	4.2741573	18,799.98	61,679.6
				129	00	19.90	308	56	47.70	Johnson.....	4.0955053	12,459.64	40,878.0
				4	03	47.8				Azimuth mark, R.M. no. 2.			
Wilmington, 1932.....	34	15	28.455	341	24	23.93	161	26	26.73	Keyes.....	4.2447414	17,568.77	57,640.2
	77	56	48.375	24	51	46.30	204	50	16.60	Johnson.....	3.9874879	9,716.01	31,876.6
Pilgrim, 1932.....	34	13	14.735	23	54	18.22	203	52	16.52	Keyes.....	4.1369569	13,707.46	44,971.9
	77	49	33.100	72	54	26.91	252	48	52.59	Johnson.....	4.2023795	15,936.01	52,283.4
				110	19	58.18	290	15	53.27	Wilmington.....	4.0746934	11,876.63	38,965.2
				128	40	14.4				Azimuth mark, R.M. no. 3.			
Perry, 1932.....	34	21	11.506	334	02	33.06	154	05	10.43	Pilgrim.....	4.2131369	16,335.67	53,594.6
	77	54	12.443	20	40	46.94	200	39	19.06	Wilmington.....	4.0529741	11,297.29	37,064.5
				304	46	27.6				Azimuth mark, R.M. no. 1.			
Kirkland, 1932.....	34	18	35.018	23	53	45.29	203	52	09.13	Pilgrim.....	4.0331320	10,792.75	35,409.2
	77	46	42.300	69	42	05.20	249	36	23.81	Wilmington.....	4.2183601	16,533.32	54,243.1
				112	46	13.89	292	42	00.02	Perry.....	4.0960888	12,476.39	40,933.0
				217	16	49.2				Azimuth mark, R.M. no. 3.			
Bloodworth, 1932.....	34	27	02.011	351	05	05.20	171	05	59.33	Kirkland.....	4.1990029	15,812.59	51,878.5
	77	48	18.137	39	59	16.32	219	55	56.15	Perry.....	4.1489189	14,090.26	46,227.8
				91	53	02.5				Azimuth mark, R.M. no. 3.			
Hampstead, 1932.....	34	22	14.126	44	40	22.59	224	37	55.39	Kirkland.....	3.9772838	9,490.38	31,136.4
	77	42	21.352	83	50	40.14	263	52	58.79	Perry.....	4.2618132	18,273.14	59,951.1
				134	15	32.97	314	12	11.84	Bloodworth.....	4.1043736	12,716.68	41,721.3
				203	24	40.6				Azimuth mark, R.M. no. 1.			
Pender, 1932.....	34	28	21.291	45	43	29.15	225	39	12.61	Hampstead.....	4.2093973	16,195.61	53,135.1
	77	34	47.517	83	19	47.50	263	12	08.81	Bloodworth.....	4.3187621	20,833.49	68,351.2
				220	39	44.9				Azimuth mark, R.M. no. 1.			

Coastal control arc—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Onslow, 1932.....	34	34	00.583	357	08	03.73	177	08	15.35	Pender.....	4.0198579	10,467.86	34,343.3
	77	35	08.023	26	57	58.81	206	53	53.57	Hampstead.....	4.3876813	24,416.38	80,106.1
				57	26	45.98	237	19	18.36	Bloodworth.....	4.3789163	23,928.55	78,505.6
			228	58	35.90		49	02	14.65	Verona.....	4.1140216	13,002.34	42,658.5
			284	24	58.92		104	30	50.15	Grant.....	4.2124023	16,308.06	53,504.0
			160	20	22.6					Azimuth mark, R.M. no. 3.			
Bethea, 1932.....	34	28	28.383	57	11	13.38	237	04	38.27	Hampstead.....	4.3273411	21,249.13	69,714.9
	77	30	42.409	88	01	06.78	207	58	48.04	Pender.....	3.7964966	6,258.88	20,534.3
				146	31	24.61	326	28	54.03	Onslow.....	4.0890223	12,276.02	40,272.3
			189	12	58.99		9	14	08.81	Verona.....	4.2790120	19,011.31	62,372.9
			235	38	29.35		55	41	49.71	Grant.....	4.0385136	10,927.32	35,850.7
			112	53	33.5					Azimuth mark, R.M. no. 3.			
<i>Supplementary points</i>													
Boundary monument (N.C.—Va.), 1931.....	36	33	01.286	78	45	03.8	258	43	03.4	Moyock.....	3.710081	5,129.6	16,829
	76	11	35.948	174	14	49.2	354	14	24.8	Hickory.....	4.006599	10,153.1	33,311
				269	55	04.2		89	58	40.5	Old.....	3.955837	9,033.1
Lee, 1911.....	36	29	21.011	35	32	16.7	215	29	02.0	Gregory.....	4.147938	14,058.5	46,124
	76	02	01.633	82	33	23.8	262	29	59.5	Guinea.....	3.935947	8,628.7	28,309
				142	26	34.5		322	24	29.6	Old.....	3.933337	8,577.0
			154	17	19.4					Azimuth mark, R.M. no. 3.			
Bell, 1911.....	36	26	12.536	64	54	04.7	244	49	18.7	Gregory.....	4.122640	13,262.9	43,513
	75	59	27.591	110	45	27.1	290	40	31.4	Guinea.....	4.122243	13,250.8	43,474
				146	34	45.8		326	33	14.3	Lee.....	3.842695	6,961.4
			115	25	45.9					Azimuth mark, R.M. no. 2.			
Currituck Beach lighthouse, 1875.....	36	22	35.425	92	23	04.8	272	12	37.3	Gregory.....	4.421421	26,388.9	86,578
	75	49	51.609	113	08	09.8	292	57	32.2	Guinea.....	4.463396	29,066.7	95,363
				129	34	45.4		309	25	20.6	Old.....	4.482020	30,340.3
Elizabeth City, municipal water tank, 1931.....	36	18	03.719	71	37	26.7	251	36	01.1	Elizabeth.....	3.580178	3,803.5	12,479
	76	13	19.102	222	43	02.0	42	40	29.2	Gregory.....	4.108718	12,844.5	42,141
				283	32	00.9		103	35	35.4	Camden.....	3.968687	9,304.4
Shiloh eccentric, 1931.....	36	15	30.669	48	43	14.1	228	42	11.7	Toxey.....	3.545241	3,509.5	11,514
	76	06	07.672	145	49	53.3	325	49	12.5	Camden.....	3.486357	3,064.5	10,054
				312	01	55.2					Azimuth mark, R.M. no. 3.		
Brickhouse Point 2, 1931.....	36	15	47.666	234	08	45.3	54	09	51.3	Camden.....	3.535914	3,434.9	11,269
	76	09	08.189	276	36	59.4	96	38	46.2	Shiloh eccentric.....	3.656736	4,536.7	14,884
Cobb Point light, 1931.....	36	17	18.705	277	24	28.0	97	26	53.4	Camden.....	3.788620	6,140.4	20,165
	76	11	20.861	293	02	52.4	113	05	57.7	Shiloh eccentric.....	3.929249	8,496.7	27,876
				310	16	04.4		130	17	22.9	Brickhouse Point 2.....	3.637525	4,340.4
Miller Point light, 1931.....	36	13	56.030	98	48	22.1	278	46	50.1	Toxey.....	3.594751	3,933.2	12,904
	76	05	17.633	151	25	29.6	331	24	19.2	Camden.....	3.793034	6,209.2	20,371
				156	49	04.7		336	48	35.1	Shiloh eccentric.....	3.501510	3,173.3
Long Point eccentric, 1931.....	36	10	29.371	46	24	36.9	226	22	51.3	Durant.....	3.790892	6,178.6	20,271
	76	14	54.953	122	44	40.8	302	41	02.0	Woodville.....	4.041348	10,998.9	36,086
				261	16	05.0		81	18	37.5	Weeks.....	3.815138	6,533.4
Stevenson Point 3, 1931.....	36	06	25.147	108	49	12.0	288	45	25.7	Durant.....	4.006083	10,141.1	33,271
	76	11	30.027	145	46	34.6	325	44	33.8	Long Point eccentric.....	3.959308	9,105.6	29,874
				188	55	17.6		8	55	49.2	Weeks.....	3.935573	8,621.8
			36	52	52.0					Azimuth mark, R.M. no. 2.			
Griffin, 1931.....	36	05	50.918	119	57	33.1	299	54	36.1	Durant.....	3.937495	8,659.5	28,410
	76	12	53.874	160	34	49.6	340	33	38.2	Long Point eccentric.....	3.959076	9,100.7	29,858
				243	17	22.1		63	18	11.4	Stevenson Point 3.....	3.370646	2,347.7
			54	33	24.4					Azimuth mark, R.M. no. 2.			
Frog Island, 1931.....	36	08	18.796	65	19	55.6	245	16	02.1	Griffin.....	4.037718	10,907.3	35,785
	76	06	17.637	65	52	27.7	245	49	23.5	Stevenson Point 3.....	3.932544	8,561.4	28,089
				89	16	41.6		269	09	50.9	Durant.....	4.240821	17,410.0
			127	47	32.6		307	44	59.8	Weeks.....	3.913075	8,186.1	26,857
			104	31	55.5					Azimuth mark, R.M. no. 3.			
Reed Point light, 1931 ¹	36	04	32.70	176	59	47	356	59	44	Griffin.....	3.382759	2,414.1	7,920
	76	12	48.82	209	37	18	29	38	04	Stevenson Point 3.....	3.600659	3,987.1	13,081
Sutton 2, 1931.....	36	10	04.529	290	39	07.6	110	42	46.1	Durant.....	3.995515	9,897.3	32,471
	76	24	04.347	9	32	27.3	189	31	59.9	Yeopin.....	3.845701	7,009.7	22,998
				227	23	21.2					Azimuth mark, R.M. no. 1.		
Halsey, 1915.....	36	07	47.641	43	06	44.2	223	05	44.8	Yeopin.....	3.566952	3,689.4	12,104
	76	23	00.991	162	09	11.0	342	08	39.0	Sutton 2.....	3.648657	4,432.6	14,543
				264	44	33.3		84	47	39.7	Durant.....	3.899581	7,935.6
			37	25	00.5					Azimuth mark, R.M. no. 2.			
Whitehat, 1915.....	36	08	54.773	8	16	23.8	188	16	16.7	Halsey.....	3.320394	2,090.9	6,860
	76	22	57.959	142	20	39.1	322	20	00.0	Sutton 2.....	3.433918	2,715.9	8,910
				184	54	15.5					Azimuth mark, R.M. no. 3.		

¹ No check on this position.

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Coastal control arc—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Grassy Point lighthouse, 1931.....	36 08 07.942	60 25 04.3	240 24 38.3	Halsey.....	3.102896	1,267.3	4,158						
	76 22 25.914	145 36 24.7	325 35 28.7	Sutton 2.....	3.639005	4,355.2	14,289						
Cactus, 1909.....	36 00 23.088	159 23 36.1	339 23 12.1	Whitehat.....	3.217709	1,650.9	5,416						
	76 30 50.819	219 16 21.3	39 19 53.2	Byrum.....	3.462647	2,901.7	9,520						
Laurel Point lighthouse, 1931 ¹	36 00 06.18	92 45 32	272 41 14	Yeopin.....	4.153075	14,225.7	46,672						
	76 23 33.31	170 27 26	350 26 41	Azimuth mark, R.M. no. 1.									
Lawrence, 1874.....	36 05 46.121	220 57 53.6	41 00 49.9	Cactus.....	4.040195	10,969.7	35,990						
	76 43 36.502	306 48 45.4	126 50 50.0	Yeopin.....	4.067862	11,691.3	38,357						
Bull Pond, 1874.....	36 10 12.766	267 43 19.8	87 47 10.6	Edenton.....	4.056734	11,395.5	37,387						
	76 45 08.551	344 20 51.1	164 21 45.4	Azimuth mark.	3.820454	6,613.8	21,699						
Eden 2 reference mark no. 1, 1909.....	36 02 33.770	164 29 01.4	344 28 22.7	Mavaton.....	3.990294	9,779.0	32,083						
	76 42 30.703	241 41 47.9	61 43 13.7	Lawrence.....	3.931188	8,534.7	28,001						
Eden 2, 1909.....	36 02 34.283	164 08 51.5	344 08 12.0	Edenton.....	3.789083	6,152.9	20,187						
	76 42 29.383	64 26 40.8	244 26 40.0	Azimuth mark, R.M. no. 3.	3.617387	4,143.7	13,595						
Chowan River toll bridge, green light on top, 1931 ¹	36 02 51.48	152 59 32	332 58 27	Lawrence.....	3.788639	6,146.7	20,166						
	76 41 46.82	240 54 45	60 55 45	Eden 2 reference mark no. 1.....	4.1563956	36.64	120.2						
Mackay Creek light, 1931 ¹	35 56 35.00	141 59 28	321 56 05	Lawrence.....	3.781193	6,042.2	19,823						
	76 36 45.34	231 36 40	51 40 09	Edenton.....	3.465086	2,918.0	9,573						
Edenton, highest water tank, 1931.....	36 03 36.300	90 22 26.0	270 20 06.7	Eden 2 reference mark no. 1.....	4.147350	14,039.4	46,061						
	76 36 08.230	163 30 22.5	343 28 54.5	Cactus.....	4.054137	11,327.6	37,164						
Plymouth, stack, 1931.....	36 03 08.230	295 02 40.5	115 05 32.3	Edenton.....	3.772611	5,923.9	19,435						
	76 36 08.230	163 30 22.5	343 28 54.5	Mavaton.....	4.118749	13,144.6	43,125						
Plymouth, stack, 1931.....	35 52 26.313	62 34 16.4	242 28 54.8	Byrum.....	3.883346	7,644.4	25,080						
	76 44 29.164	82 34 09.1	262 22 46.4	Jamesville.....	4.191250	15,532.8	50,961						
Plymouth, water tank, 1931 ¹	35 52 21.53	82 32 52	262 21 57	Williamston.....	4.451826	28,302.6	92,856						
	76 45 16.32	141 28 21	321 25 36	Cooper.....	4.052272	11,279.0	37,005						
Williamston, municipal water tank, 1931.....	35 50 58.875	241 05 15.3	61 13 17.9	Cooper.....	4.372243	23,563.7	77,309						
	77 03 39.714	286 26 58.1	106 32 50.1	Jamesville.....	4.197106	15,743.7	51,652						
Water tower, 1931.....	35 49 13.941	263 05 04.1	83 11 44.7	Williamston.....	4.237976	17,297.2	56,749						
	77 15 18.741	291 20 59.1	111 27 18.5	Green.....	4.242924	17,495.4	57,399						
Washington, municipal water tank, 1931.....	35 32 45.983	25 42 21.9	205 39 58.7	Carson.....	3.898596	7,917.6	25,976						
	77 03 34.581	106 04 26.3	167 38 15.6	Chocowinity.....	4.156814	14,348.7	47,076						
Martin-Beaufort County line, marker post, 1931 ¹	35 41 36.796	296 47	116 47	Boyd.....	4.228813	16,936.1	55,565						
	77 04 00.534			Shaw.....	3.863056	7,295.5	23,935						
Washington, brick stack, 1931.....	35 33 19.070	20 12 28.2	200 10 28.1	Woolard.....	1.246006	17.62	57.8						
	77 04 17.774	180 22 15.7	0 22 16.7	Chocowinity.....	4.172134	14,863.9	48,766						
Pamlico Fertilizer Co., water tank, 1931.....	35 31 35.291	40 30 05.7	220 26 34.5	Shaw.....	3.792417	6,200.4	20,342						
	77 01 37.401	109 40 30.0	99 09 42.1	Smaw.....	3.825435	6,690.1	21,949						
New Bern, water tank, 1931.....	35 07 03.868	262 20 33.3	82 25 08.7	Chocowinity.....	4.150271	14,134.2	46,372						
	77 02 35.649	339 06 28.7	159 08 25.9	Boyd.....	4.309970	20,416.0	66,981						
New Bern, municipal standpipe, 1931 ¹	35 06 17.54	180 17 40	145 30 42	Smaw.....	3.523566	3,338.6	10,953						
	77 03 19.81	325 29 50	0 17 41	Pipkin.....	4.087322	12,227.1	40,115						
New Bern, municipal incinerator, weather vane, 1931 ¹	35 07 19.40	174 58 01	354 57 45	New Bern south base.....	4.161391	14,500.8	47,575						
	77 02 49.09	343 41 44	163 42 19	New Bern north base.....	3.695504	4,960.3	16,274						
New Bern, Christ Episcopal Church, spire, 1931.....	35 06 24.679	256 27 50.1	76 32 17.7	Askin.....	4.005977	10,138.6	33,263						
	77 02 22.380	295 23 21.4	115 30 43.8	New Bern north base.....	3.613374	4,105.6	13,470						
New Bern, U.S. Post Office, dome, 1931.....	35 06 23.896	256 16 13.9	76 20 39.9	Askin.....	3.917189	8,264.0	27,113						
	77 02 19.467	295 24 58.1	115 32 18.9	New Bern north base.....	3.741276	5,511.6	18,083						
Great Neck Point eccentric, 1931.....	34 57 13.206	48 58 00.4	228 56 14.1	Pipkin.....	4.083455	12,118.7	39,759						
	76 42 28.933	125 42 20.7	305 38 17.9	Arapahoe.....	4.334633	21,608.9	70,895						
Piersons Point 2 eccentric, 1931.....	34 58 35.730	293 20 55.7	113 29 08.0	New Bern north base.....	3.560054	3,707.3	12,163						
	76 46 19.834	352 41 48.4	172 42 08.3	Pipkin.....	4.081076	12,052.5	39,542						
Piersons Point 2 eccentric, 1931.....	34 58 35.730	293 20 55.7	113 29 08.0	Arapahoe.....	4.333079	21,531.7	70,642						
	76 46 19.834	352 41 48.4	172 42 08.3	New Bern north base.....	3.564315	3,667.0	12,031						
Piersons Point 2 eccentric, 1931.....	34 58 35.730	293 20 55.7	113 29 08.0	Temple.....	3.819645	6,601.5	21,658						
	76 46 19.834	352 41 48.4	172 42 08.3	Arapahoe.....	4.121173	13,218.2	43,307						
Piersons Point 2 eccentric, 1931.....	34 58 35.730	293 20 55.7	113 29 08.0	Great Neck Point eccentric.....	3.805226	6,386.0	20,951						
	76 46 19.834	352 41 48.4	172 42 08.3	Temple.....	3.841005	6,934.3	22,750						

¹ No check on this position.

Coastal control arc—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Cherry Point 2 eccentric, 1931	34	58	19.828	221	28	38.8	41	30	02.5	Piersons Point 2 eccentric	3.747470	5,590.7	18,342
	76	48	45.815	280	12	38.1	80	16	14.0	Great Neck Point eccentric	3.986941	9,703.8	31,837
				300	22	44.9	120	24	28.4	Temple	3.725687	5,317.2	17,445
Cherry Point 2, 1911 ¹	34	56	21.479	348	57	04.7	168	57	04.9	Cherry Point 2 eccentric	1.714615	51.834	170.06
	76	48	46.215										
Piersons Point 2, 1911 ¹	34	58	35.214	165	02	33	345	02	33	Piersons Point 2 eccentric	1.216799	16.474	54.05
	76	46	19.666										
Guthrie, 1908	34	40	56.746	123	56	43.9	303	55	48.1	Simkins	3.478864	3,012.1	9,882
	77	01	46.935	241	16	43.9	61	19	57.5	Knoll	3.994160	9,866.4	32,370
				124	29	57.1				Azimuth mark, R.M. no. 2			
Broad Creek 2, 1908	34	42	41.637	67	16	03.4	247	13	11.1	Guthrie	3.921892	8,355.9	27,414
	76	56	44.185	81	23	29.8	261	19	38.6	Simkins	4.013696	10,320.4	33,860
				212	15	05.5	32	15	26.8	Knoll	3.250344	1,779.7	5,839
				147	47	34.6				Azimuth mark, R.M. no. 2			
Spooners eccentric, 1931	34	43	31.175	83	10	44.8	263	06	00.8	Broad Creek 2	4.106507	12,779.3	41,927
	76	48	25.648	89	55	54.9	269	51	32.2	Knoll	4.069560	11,737.1	38,507
				138	34	29.1	318	32	38.6	Newport	3.872457	7,455.2	24,459
				255	05	24.3				Azimuth mark, water tank			
Spooners, 1915 ¹	34	43	31.101	265	59	07	85	59	07	Spoonsers eccentric	1.513764	32.641	107.09
	76	48	26.828										
Camp Glen, steel tower (Glen), 1927	34	43	23.353	92	57	41.2	272	55	56.3	Spoonsers eccentric	3.671017	4,688.3	15,382
	76	45	21.526	121	15	33.4	301	11	57.9	Newport	4.050929	11,244.2	36,890
				178	21	27.5	358	21	18.7	Harlowe	4.136465	13,691.9	44,921
Morehead City, Villa Hotel, water tank (VI), 1927	34	43	47.244	126	52	59.0	306	50	26.7	Newport	3.928947	8,490.8	27,857
	76	47	12.448	190	36	30.5	10	37	24.9	Harlowe	4.119771	13,175.6	43,227
				218	52	08.0	38	55	24.8	Adam	4.145302	13,973.4	45,844
Morehead City, water tank, 1913	34	43	16.362	92	56	05.1	272	52	43.8	Spoonsers eccentric	3.954269	9,000.5	29,529
	76	42	32.257	113	31	00.2	293	25	48.3	Newport	4.181170	15,176.4	49,791
				161	20	53.6	341	19	68.3	Harlowe	4.166536	14,673.6	48,142
Dome supported by pillars, 1931 ¹	34	43	10.58	92	47	40	272	42	44	Spoonsers eccentric	4.121007	13,213.2	43,350
	76	39	46.84	147	43	27	327	40	07	Harlowe	4.221628	16,658.2	54,653
Morehead City, pole on dome-shaped building, 1931 ¹	34	43	32.29	89	00	38	268	59	54	Spoonsers eccentric	3.297493	1,983.8	6,509
	76	47	07.59	189	44	26	0	45	18	Harlowe	4.133771	13,607.3	44,643
Channel light no. 13, flashing white, 1932	34	42	23.195	68	00	40.6	247	58	13.2	Guthrie	3.851766	7,108.3	23,321
	76	57	28.009	224	52	37.9	44	53	24.1	Knoll	3.466306	2,926.2	9,600
Queen, 1914	34	40	12.556	75	11	43.1	255	09	46.5	Broad Creek 2	3.097487	1,251.7	4,107
	77	08	18.016	185	58	23.3	5	58	53.8	Russell	3.732509	5,401.4	17,721
Free, 1914	34	35	55.336	247	46	23.5	67	49	10.2	Pelletier	4.117186	13,097.4	42,970
	77	15	00.474	153	41	37.0				Simkins	3.905971	8,053.2	26,421
				69	35	42.1	249	34	02.5	Azimuth mark, R.M. no. 3			
Swan Point eccentric, 1932	34	32	36.691	72	20	21.1	252	18	37.2	Duck Creek	3.678905	4,774.2	15,663
	77	21	45.505	136	17	39.5	328	10	12.8	Truesdale	4.189478	15,469.6	50,763
				232	41	09.9	37	32	55.8	Russell	3.916592	8,252.6	27,075
Swan Point (U.S.E.), 1914 ¹	34	32	33.785	165	48	52.4				Azimuth mark, R.M. no. 3			
	77	21	38.482	72	20	21.1	252	18	37.2	Grant	3.690437	4,902.7	16,085
Long Point, 1917 ¹	36	10	29.034	148	13	14.9	316	13	42.5	Verona	4.187037	15,382.9	50,409
	76	14	55.191	232	41	09.9	52	43	20.1	Duck Creek	3.866464	7,353.0	24,124
				43	00	26.7				Azimuth mark, R.M. no. 3			
Shiloh, 1916 ¹	36	15	30.220	116	33	49.1	296	33	45.1	Swan Point eccentric	2.301488	200.211	656.86
	76	06	07.704										
Nixon (S.C.), 1923	33	49	38.750	87	18	55.96	267	17	42.03	Long Point eccentric	1.078167	11.972	39.28
	78	38	35.707	218	29	24.16	36	31	16.23	Shiloh eccentric	1.142076	13.870	45.51
				129	02	22.0				Bryant	3.5338762	3,418.82	11,216.6
Oak Island, U.S. Coast Guard, flagpole, 1932 ¹	33	53	34.46	47	00	00	226	59	58	Little River	3.9391112	8,691.83	28,516.4
	78	02	00.95	168	26	17	348	25	18	Azimuth mark, R.M. no. 3			
Boundary monument (N.C.-S.C.), 1932 ¹	33	53	25.540	78	01	14	258	01	14	R (U.S.E.)	2.093149	123.9	406
	78	35	14.383							Southport east base	3.823977	6,667.7	21,876
Fish, 1923	33	54	43.716	101	41	02.67	281	39	17.08	Little River	0.645422	4.42	14.5
	78	17	16.960	239	28	57.91	59	31	37.60				
				265	33	30.3				Boon	3.6958086	4,963.74	16,285.2
Southport, water tank, 1932	33	55	17.112	110	42	49.5	296	38	21.9	Howell	3.9307894	8,526.86	27,975.2
	78	01	13.009	135	31	43.8	315	27	11.3	Azimuth mark, R.M. no. 2			
				142	41	49.0	322	40	53.2	Southport west base	4.138916	13,769.4	45,175
									Harvell	4.251671	17,851.3	58,567	
									Southport east base	3.626995	4,236.4	13,899	

¹ No check on this position.

Coastal control arc—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Fort, 1917.....	33 58 11.562	80 41 10.27	260 36 45.29	333 14 48.17	Southport east base.....	4.0914143	12,342.82	40,494.7					
	77 54 58.645	143 05 00.43	323 03 32.12	13 05 50.16	Cypress.....	3.8291355	6,747.38	22,137.0					
		196 35 17.7		36 06 04.36	Azimuth mark, R.M. no. 1.								
Bald Head Lighthouse, 1851.....	33 52 24.063	153 16 23.38	333 14 48.17	13 05 50.16	Southport east base.....	3.9886995	9,743.15	31,965.7					
	78 00 02.344	193 04 28.77	36 06 04.36	36 06 04.36	Cypress.....	4.2182620	16,529.59	54,230.8					
		216 03 14.88			Fort.....	4.1221221	13,247.14	43,461.7					
R (U.S.E.), 1923.....	33 53 31.715	169 20 14.60	349 19 47.52	51 46 56.04	Southport east base.....	3.8282198	6,733.17	22,090.4					
	78 02 04.477	231 42 58.35	51 46 56.04		Fort.....	4.1438560	13,926.95	45,692.0					
Cape Fear Lighthouse, 1905.....	33 50 47.251	128 42 10.04	308 39 52.82		R (U.S.E.).....	3.9088714	8,107.21	26,598.4					
	77 57 58.251	147 04 25.56	327 01 41.17		Southport east base.....	4.1437500	13,923.55	45,680.8					
		198 36 47.20	18 38 27.39		Fort.....	4.1597518	14,446.14	47,395.4					
Southport, white spire, 1932.....	33 55 10.032	24 17 41.0	204 17 11.3		R (U.S.E.).....	3.521585	3,323.4	10,904					
	78 01 11.263	117 26 01.9	297 21 33.4		Southport west base.....	4.143286	13,908.7	45,632					
		143 56 37.9	323 55 41.1		Southport east base.....	3.647204	4,438.2	14,561					
Fort Caswell, stack, 1932.....	33 53 37.034	84 30 46.3	264 30 09.3		R (U.S.E.).....	3.233558	1,712.2	5,617					
	78 00 58.147	120 10 41.3	306 06 05.5		Southport west base.....	4.196188	15,710.4	51,543					
		155 26 28.4	335 25 24.3		Southport east base.....	3.850970	7,095.3	23,278					
Cape Fear River, channel light, 1932 ¹	34 04 17.58	351 17 37	171 18 14		Fort.....	4.057232	11,408.6	37,430					
	77 56 05.91	41 15 05	221 14 42		Sprunt.....	3.202005	1,592.2	5,224					
Cape Fear River, channel light, 1932 ¹	34 04 20.76	354 37 38	174 38 02		Fort.....	4.057876	11,425.5	37,485					
	77 55 40.32	52 48 05	232 47 28		Sprunt.....	3.330845	2,142.1	7,028					
Bend, 1918.....	34 03 00.918	11 30 29.38	191 29 49.83		Fort.....	3.9580488	9,098.06	29,849.2					
	77 53 47.941	59 02 20.48	239 00 12.50		Cypress.....	3.8351671	6,841.75	22,446.6					
		188 42 30.53	8 42 51.89		Keyes.....	3.8098191	6,453.85	21,174.0					
		44 41 45.9			Azimuth mark, R.M. no. 2.								
Ruins, 1917.....	34 02 22.337	254 41 00.70	74 42 35.52		Bend.....	3.6535986	4,504.00	14,776.9					
	77 56 37.312	341 50 55.25	161 51 50.43		Fort.....	3.9101371	8,130.87	26,676.0					
		8 22 45.1			Azimuth mark, R.M. no. 1.								
Sprunt, 1917.....	34 03 38.723	284 13 48.76	104 15 28.95		Bend.....	3.6752274	4,733.99	15,531.4					
	77 56 46.853	344 35 31.37	104 36 31.90		Fort.....	4.0193459	10,455.53	34,302.9					
		354 03 48.17	174 03 53.51		Ruins.....	3.3740587	2,366.24	7,763.2					
		12 37 11.8			Azimuth mark.								
St. James Church, 1854.....	34 14 06.650	278 10 50.7	98 14 54.2		Pilgrim.....	4.049039	11,195.4	36,730					
	77 56 46.029	33 21 52.7	213 20 21.7		Johnson.....	3.877204	7,537.1	24,728					
		178 38 10.5	358 38 09.2		Wilmington.....	3.401626	2,521.3	8,272					
Mason, 1914.....	34 16 10.483	45 10 29.32	225 08 29.58		Pilgrim.....	3.8853304	7,679.46	25,195.0					
	77 46 00.308	166 26 41.94	346 26 18.28		Kirkland.....	3.6609724	4,581.13	15,029.9					
		207 49 52.6			Azimuth mark, R.M. no. 2.								
Wrightsville northwest base eccentric, 1932.....	34 13 09.037	100 33 35.47	280 33 14.78		Pilgrim.....	2.9815116	958.32	3,144.1					
	77 48 56.295	198 50 02.17	18 51 17.61		Kirkland.....	4.0258419	10,613.09	34,819.8					
		218 50 16.35	38 51 55.38		Mason.....	3.8560600	7,178.93	23,552.9					
		237 04 40.9			Azimuth mark, R.M. no. 1.								
Stake A, 1932 ¹	34 13 10.175	50 56 04.2	230 56 03.3		Wrightsville northwest base eccentric.	1.745348	55.635	182.53					
	77 48 54.607												
Wrightsville northwest base, 1918 ¹	34 13 06.412	117 36 21.4	297 36 18.0		Wrightsville northwest base eccentric.	2.241942	174.559	572.70					
	77 48 50.252												
Union, 1918.....	34 14 27.698	28 57 51.3	208 56 26.9		Johnson.....	3.899012	7,936.2	26,037					
	77 56 57.819	187 21 18.0	7 21 23.3		Wilmington.....	3.275909	1,887.6	6,193					
Bridge, 1918.....	34 15 30.218	299 39 44.8	119 39 46.9		Wilmington.....	2.040428	109.756	360.09					
	77 56 52.103	4 20 34.9	184 20 31.7		Union.....	3.285990	1,931.9	6,338					
Wrightsville Beach, Oceanic Hotel, observation tower, flagpole, 1932.....	34 12 28.795	117 03 33.5	297 02 32.6		Pilgrim.....	3.493114	3,112.5	10,212					
	77 47 44.811	124 07 38.8	304 06 58.7		Wrightsville northwest base eccentric.	3.344474	2,210.4	7,252					
		188 03 43.6	8 04 18.8		Kirkland.....	4.056788	11,396.9	37,391					
Wrightsville Beach, water tank, 1932.....	34 12 02.007	135 00 56.2	315 00 07.0		Pilgrim.....	3.500864	3,168.6	10,396					
	77 48 05.592	147 51 20.0	327 50 51.6		Wrightsville northwest base eccentric.	3.387265	2,439.3	8,003					
		189 58 28.4	9 59 15.3		Kirkland.....	4.089750	12,295.6	40,340					
Wilmington, Catholic Church, western one of twin domes, 1932.....	34 13 55.691	174 04 09.1	354 04 02.6		Wilmington.....	3.458431	2,873.6	9,428					
	77 56 36.770	195 21 29.3	15 22 50.7		Perry.....	4.143843	13,926.5	45,691					
		276 36 17.7	96 40 16.0		Pilgrim.....	4.038099	10,916.9	35,817					
Atkinson, 1914.....	34 23 56.504	69 08 36.89	249 05 34.09		Hampstead.....	3.9469478	8,850.09	29,035.7					
	77 36 57.078	202 09 04.36	22 10 17.96		Pender.....	3.9449634	8,809.75	28,903.3					
		228 48 16.63	48 51 43.84		Betha.....	4.1047255	12,726.99	41,755.1					
		134 49 00.0			Azimuth mark, R.M. no. 3.								

No check on this position.

Coastal control arc—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Wilmington, silver water tank with scale on side and ball on top, 1932.	34	15	25.567	290	23	37.8	110	32	34.7	Pilgrim	4.060903	11,505.4	37,747
	77	56	34.191	27	00	37.9	206	59	00.2	Johnson	3.990992	9,794.7	32,135
				103	46	56.2	283	46	48.2	Wilmington	2.572460	373.6	1,226
Wilmington, silver water tank with black writing, 1932.	34	13	39.257	275	07	56.2	95	11	00.1	Pilgrim	3.924516	8,404.6	27,574
	77	55	00.133	51	31	34.1	231	29	03.6	Johnson	3.942437	8,758.6	28,736
				140	32	45.6	320	31	44.7	Wilmington	3.639297	4,358.1	14,298
Wilmington, water tank, 1932.	34	16	01.680	328	19	16.8	148	19	30.7	Wilmington	3.080242	1,202.9	3,947
	77	57	13.066	19	20	11.0	199	18	55.2	Johnson	4.018189	10,427.7	34,212
				205	48	09.7	25	49	51.5	Perry	4.025510	10,605.0	34,793
Wilmington, black water tank, 1932.	34	15	28.491	200	45	41.8	20	47	10.2	Perry	4.053234	11,304.0	37,087
	77	56	49.237	290	13	58.5	110	18	03.9	Pilgrim	4.075463	11,897.7	39,034
				24	44	31.0	204	43	01.9	Johnson	3.987120	9,707.8	31,850
Wilmington, church spire with broad base, 1932.	34	14	20.872	176	04	23.6	356	04	20.4	Wilmington	3.319583	2,087.3	6,848
	77	56	42.788	196	53	28.4	16	54	53.1	Perry	4.121360	13,223.9	43,385
				280	27	51.6	100	31	53.2	Pilgrim	4.048617	11,184.5	36,694
Wilmington, low church spire with broad base, 1932.	34	13	46.789	168	50	04.6	348	49	50.9	Wilmington	3.504201	3,193.0	10,476
	77	56	24.209	193	48	22.4	13	49	30.6	Perry	4.149561	14,111.1	46,296
				275	19	48.1	95	23	39.3	Pilgrim	4.024018	10,568.6	34,674
Wilmington, low church spire with weather vane, 1932.	34	13	51.184	194	17	38.2	14	18	54.4	Perry	4.146173	14,001.4	45,936
	77	56	27.709	276	00	32.0	96	04	25.1	Pilgrim	4.028211	10,671.1	35,010
				38	25	03.6	218	23	22.3	Johnson	3.870744	7,425.8	24,363
Wilmington, Presbyterian Church, tall spire with cross, 1932.	34	13	48.336	194	48	58.2	14	50	17.9	Perry	4.150002	14,125.4	46,343
	77	56	33.783	275	27	34.6	95	31	31.2	Pilgrim	4.034109	10,817.1	35,489
				37	53	08.4	217	51	30.6	Johnson	3.860984	7,260.8	23,821
Wilmington, Baptist Church, tall spire with cock weather vane, 1932.	34	13	59.398	196	19	51.6	16	21	17.7	Perry	4.142230	13,874.9	45,521
	77	56	45.103	277	03	39.4	97	07	42.4	Pilgrim	4.046972	11,142.2	36,556
				34	28	29.6	214	26	58.2	Johnson	3.867187	7,365.2	24,164
Wilmington, Lutheran Church, spire, 1932.	34	14	08.778	195	55	57.5	15	57	19.6	Perry	4.131824	13,546.4	44,443
	77	56	37.948	278	40	24.2	98	44	23.2	Pilgrim	4.041409	11,000.4	36,090
				34	22	55.2	214	21	19.8	Johnson	3.886875	7,706.8	25,285
Wilmington, sharp spire with weather vane, 1932.	34	14	09.454	35	20	43.2	215	19	03.8	Johnson	3.893376	7,823.0	25,686
	77	56	31.171	169	45	00.4	349	44	50.7	Wilmington	3.393343	2,473.7	8,116
				195	14	56.8	16	16	15.0	Perry	4.129680	13,479.7	44,225
Wilmington, spire, 1932.	34	14	31.622	30	40	22.8	210	38	50.8	Johnson	3.914525	8,213.4	26,947
	77	56	44.278	176	34	28.7	350	34	26.4	Wilmington	3.244095	1,754.3	5,756
				197	28	46.8	17	30	12.4	Perry	4.112119	12,918.7	42,384
Wilmington, First Baptist Church, spire, 1932.	34	14	29.079	31	48	59.1	211	47	24.0	Johnson	3.914934	8,221.2	26,972
	77	56	38.647	172	15	11.0	352	15	05.6	Wilmington	3.266320	1,846.4	6,058
				196	46	05.8	16	47	28.3	Perry	4.112310	12,951.2	42,491
Wilmington, stack, 1932.	34	13	39.585	51	16	35.7	231	14	06.2	Johnson	3.940874	8,727.2	28,632
	77	55	02.020	140	57	19.2	320	56	19.3	Wilmington	3.635454	4,319.7	14,172
				185	11	56.7	5	12	24.6	Perry	4.145581	13,982.4	45,874
Wilmington, high stack, 1932.	34	14	41.807	33	52	57.4	213	51	08.6	Johnson	3.948751	8,886.9	29,156
	77	56	14.429	148	51	19.6	328	51	10.5	Wilmington	3.225149	1,679.4	5,510
				194	33	13.6	14	34	22.4	Perry	4.093637	12,406.1	40,702
Wilmington, highest stack, 1932.	34	13	39.885	34	18	44.6	214	17	22.6	Johnson	3.821048	6,622.9	21,729
	77	57	02.109	185	59	46.7	5	59	54.4	Wilmington	3.526816	3,363.7	11,036
				197	18	20.7	17	19	56.3	Perry	4.164282	14,597.6	47,892

Eastern oblique arc to Jacksonville

<i>Principal points</i>													
Stuart (Va.), 1918.	36	40	51.594	9	45	00.68	189	42	51.81	Moore	4.5030958	31,840.00	104,491.3
	80	13	23.084	119	24	05.77	299	14	57.70	Buffalo	4.4162016	26,073.63	85,543.2
Bull (Va.), 1918.	36	41	34.506	352	34	13.50	172	34	17.65	Stuart	3.1251396	1,333.95	4,376.5
	80	13	30.031	9	04	03.26	189	01	58.51	Moore	4.5201662	33,125.79	108,680.2
			116	58	53.06	296	49	49.07	Buffalo	4.4030613	25,296.55	82,993.8	
Cedder Mountain, 1918.	36	25	38.462	84	04	31.88	263	52	19.70	Moore	4.4899895	30,902.21	101,385.0
	79	56	26.072	138	08	26.74	317	58	21.02	Stuart	4.5779628	37,841.02	124,150.1
				139	15	18.61	319	05	08.67	Bull	4.5904675	38,946.41	127,776.7
				273	15	47.8				Azimuth mark, R.M. no. 1.			
Chestnut (Va.), 1932.	36	36	48.340	5	35	03.16	185	34	14.93	Cedder Mountain	4.3160442	20,746.47	68,065.7
	79	55	05.029	105	27	43.97	285	16	48.55	Stuart	4.4515926	28,287.37	92,806.1
			228	31	42				Azimuth mark, R.M. no. 1.				
James (Va.), 1932.	36	38	42.396	45	43	04.18	225	33	12.90	Cedder Mountain	4.5385541	34,558.44	113,380.5
	79	39	52.878	81	15	27.48	261	06	23.26	Chestnut	4.3604795	22,933.98	75,242.6
				94	43	39.62	274	23	39.30	Stuart	4.6996771	50,081.47	164,309.0
				33	57	20.7				Azimuth mark, R.M. no. 3.			

Eastern oblique arc to Jacksonville—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Smith, 1932	36	25	47.556	89	24	57.21	269	15	20.81	Cedder Mountain	4.3834666	24,180.57	79,332.4
	79	40	15.413	132	41	40.06	312	32	50.62	Chestnut	4.4782651	30,079.12	98,684.6
				181	20	33.55	1	20	46.96	James	4.3782201	23,890.22	78,379.8
				297	49	22.9				Azimuth mark, R.M. no. 2			
Pelham, 1932	36	30	09.019	65	26	58.44	245	19	58.41	Smith	4.2867607	19,353.55	63,495.8
	79	28	28.697	132	59	12.76	312	52	25.08	James	4.3661118	23,233.35	76,224.7
				43	42	58.0				Azimuth mark, R.M. no. 2			
Mount Cross (Va.), 1932	36	39	02.250	353	12	57.93	173	13	44.75	Pelham	4.2188521	16,552.06	54,304.5
	79	29	47.263	32	35	02.55	212	28	48.56	Smith	4.4632138	29,054.53	95,323.1
				87	43	14.36	267	37	12.87	James	4.1777010	15,055.70	49,395.2
				169	57	57.3				Azimuth mark, R.M. no. 3			
Kentuck (Va.), 1932	36	39	29.583	44	21	03.16	224	14	19.05	Pelham	4.3827509	24,140.76	79,201.8
	79	17	10.587	87	29	45.25	267	22	13.53	Mount Cross	4.2744542	18,812.83	61,721.8
				204	17	38.1				Azimuth mark, R.M. no. 1			
Estelle, 1932	36	29	00.668	96	03	23.92	275	55	24.15	Pelham	4.3051146	20,188.99	66,236.7
	79	15	01.973	130	10	58.44	310	02	11.02	Mount Cross	4.4591284	28,782.49	94,430.6
				170	38	36.29	350	37	19.66	Kentuck	4.2933128	19,647.75	64,461.0
				222	08	25.4				Azimuth mark, R.M. no. 1			
Semora, 1932	36	29	41.367	82	14	25.86	262	10	46.77	Estelle	3.9663941	9,255.38	30,365.4
	79	08	53.561	145	45	53.35	325	40	57.17	Kentuck	4.3412739	21,941.88	71,987.7
				229	28	03.3				Azimuth mark, R.M. no. 2			
White Oak (Va.), 1932	36	38	45.900	355	10	06.44	175	10	40.41	Semora	4.2264581	16,844.50	55,264.0
	79	09	50.565	23	15	28.10	203	12	22.59	Estelle	4.2929430	19,631.03	64,406.1
				97	03	35.94	276	59	13.27	Kentuck	4.0418670	11,012.02	36,128.6
				316	49	11.0				Azimuth mark, R.M. no. 1			
Crawley (Va.), 1933	36	36	01.386	51	55	54.30	231	49	56.86	Semora	4.2782112	18,976.28	62,258.0
	78	58	53.305	107	18	16.43	287	11	44.34	White Oak	4.2330083	17,100.48	56,103.8
				822	44	01.6				Azimuth mark, R.M. no. 1			
Hagers Mount, 1933	36	27	54.236	101	42	50.22	281	36	28.07	Semora	4.2131942	16,337.82	53,601.7
	78	58	10.796	189	09	11.51	319	02	14.72	White Oak	4.4245065	26,577.03	87,194.8
				175	58	30.80	355	58	05.40	Crawley	4.1776257	15,053.09	49,386.7
				298	48	06.9				Azimuth mark, R.M. no. 2			
Leasburg, 1933	36	23	35.637	185	41	42.81	5	42	09.65	Semora	4.0541951	11,329.09	37,168.9
	79	09	38.733	244	59	52.29	65	06	40.81	Hagers Mount	4.2764480	18,899.40	62,005.8
				215	50	43.4				Azimuth mark, R.M. no. 3			
Roxboro, 1933	36	22	55.102	94	49	34.50	274	43	38.61	Leasburg	4.1761923	15,003.49	49,223.9
	78	59	38.829	132	13	58.82	312	08	29.34	Semora	4.2706090	18,047.00	61,177.7
				193	22	18.15	13	23	10.42	Hagers Mount	3.9769856	9,477.54	31,094.2
				265	18	50.1				Azimuth mark, R.M. no. 2			
Allen, 1932	36	20	11.601	112	27	34.34	292	21	31.61	Leasburg	4.2174089	16,497.15	54,124.4
	78	59	26.970	176	38	36.12	356	38	29.09	Roxboro	3.7931428	5,048.27	16,562.5
				47	46	55				Azimuth mark, R.M. no. 2			
Laws, 1933	36	14	26.194	168	03	10.36	348	01	45.20	Leasburg	4.2383249	17,311.11	56,794.9
	79	07	14.938	215	55	11.19	35	59	41.29	Roxboro	4.2873189	19,378.44	63,577.4
				227	36	25.56	47	41	02.53	Allen	4.1987255	15,802.49	51,845.3
				45	28	05.0				Azimuth mark, R.M. no. 2			
Red Mount, 1933	36	14	10.083	91	34	58.81	271	27	36.24	Laws	4.2718656	18,701.03	61,355.0
	78	54	46.276	147	52	06.23	327	49	20.11	Allen	4.1193141	13,161.70	43,181.5
				155	44	52.31	335	41	59.08	Roxboro	4.2492548	17,752.31	58,242.4
				5	29	35.1				Azimuth mark, R.M. No. 3			
Hillsboro, 1933	36	03	42.037	180	19	47.72	0	19	50.42	Laws	4.2978592	19,854.51	65,139.3
	79	07	19.517	224	08	49.30	44	16	13.63	Red Mount	4.4314508	27,065.41	88,600.2
				327	04	17				Azimuth mark, R.M. No. 3			
Hunt, 1933	36	07	06.802	68	26	20.99	248	20	05.91	Hillsboro	4.2388699	17,134.44	56,215.2
	78	56	42.773	130	39	29.51	310	33	16.33	Laws	4.3182270	20,807.84	68,267.1
				192	34	10.39	12	35	19.16	Red Mount	4.1260429	13,367.28	43,855.8
				7	46	51.0				Azimuth mark, R.M. no. 2			
Durham, 1933	35	59	46.804	110	09	30.48	290	01	44.88	Hillsboro	4.3243480	21,103.18	69,236.0
	78	54	07.938	164	03	55.16	344	02	24.03	Hunt	4.1493483	14,104.19	46,273.5
Chapel Hill, 1933	35	52	57.099	161	49	25.88	341	46	52.69	Hillsboro	4.3206474	20,924.13	68,648.6
	79	02	58.712	199	44	40.10	19	48	21.08	Hunt	4.4445139	27,830.04	91,305.7
				226	27	04.07	46	32	15.60	Durham	4.2934586	18,342.50	60,178.7
Durham north base, 1932	35	57	25.564	61	43	01.79	241	37	02.70	Chapel Hill	4.2414108	17,434.55	57,199.9
	78	52	46.620	154	55	36.21	334	54	48.44	Durham	3.6818129	4,806.32	15,768.7
				14	31	03.3				Azimuth mark, R.M. no. 2			
Durham south base, 1932	35	53	28.805	86	01	46.42	285	56	21.10	Chapel Hill	4.1447034	13,954.15	45,781.2
	78	53	43.732	177	01	14.94	357	01	00.74	Durham	4.0669240	11,668.05	38,274.4
				191	05	47.48	11	06	20.99	Durham north base	3.8713532	7,436.236	24,397.05
				339	41	12.1				Azimuth mark, R.M. no. 3			
Durham middle base, 1932	35	55	30.862	194	05	30.85	14	05	51.64	Durham north base	3.5616924	3,644.96	11,958.5
	78	53	22.034	8	13	52.14	188	13	39.42	Durham south base	3.5798994	3,801.01	12,470.5

Eastern oblique arc to Jacksonville—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Carpenter, 1933	35 49 42.340	110 33 29.37	200 27 14.71	Chapel Hill			4.2338854	17,135.05	56,217.2				
	78 52 19.086	171 40 27.14	351 39 23.29	Durham			4.2748241	18,828.86	61,774.4				
Tippers, 1933	35 54 17.854	66 46 46.86	246 39 06.05	Carpenter			4.3320611	21,481.33	70,476.7				
	78 39 12.588	114 23 15.88	294 14 30.23	Durham			4.3913425	24,623.09	80,784.3				
Cary High, 1933	35 46 56.303	114 44 34.86	294 35 10.05	Chapel Hill			4.4256371	26,646.31	87,422.1				
	78 46 53.919	122 06 18.72	302 03 08.49	Carpenter			3.9838623	9,635.24	31,671.6				
Raleigh 2, 1933	35 46 37.004	155 24 31.26	335 20 16.83	Durham			4.4170267	26,123.22	85,705.9				
	78 38 21.570	220 21 05.26	40 25 35.41	Tippers			4.2520498	17,866.93	58,618.4				
Garner, 1933	35 41 53.185	117 49 37.46	297 42 45.04	Cary High			4.3021376	20,051.07	65,784.2				
	78 35 07.864	150 55 15.45	330 53 22.31	Raleigh 2			4.0004513	10,010.40	32,842.5				
Knight, 1933	35 48 17.741	105 01 52.97	344 59 29.81	Tippers			4.3758355	23,759.13	77,949.7				
	78 28 24.105	143 15 18.0		Azimuth mark, R.M. no. 3									
Clyde, 1933	35 43 40.545	40 35 36.03	220 31 40.12	Garner			4.1931369	15,600.44	51,182.4				
	78 23 28.719	78 21 26.19	258 15 36.77	Raleigh 2			4.1852992	15,321.43	50,267.1				
Clayton, 1933	35 38 36.792	124 31 11.96	304 27 47.70	Tippers			4.2943884	19,696.47	64,620.8				
	78 29 17.581	184 17 18.71	304 14 41.87	Azimuth mark, R.M. no. 2									
Hocutt, 1933	35 41 25.451	79 23 38.46	259 16 50.35	Garner			4.2524365	17,882.84	58,670.6				
	78 19 06.710	139 02 54.82	319 00 02.18	Knight			4.0536765	11,315.57	37,124.5				
Hall, 1933	35 36 18.074	119 53 21.9		Azimuth mark, R.M. no. 3									
	78 24 57.676	123 11 32.03	303 09 00.65	Clayton			3.8928539	7,813.65	25,635.3				
Albert, 1933	35 29 37.058	189 18 37.17	9 19 28.04	Clyde			4.1404775	13,819.03	45,337.9				
	78 25 41.789	222 57 24.07	43 00 48.62	Hocutt			4.1122617	12,949.76	42,486.0				
Selma, 1933	35 34 42.212	170 48 14.3		Azimuth mark, R.M. no. 3									
	78 17 12.537	161 55 34.20	341 53 28.68	Clayton			4.2430162	17,499.12	57,411.7				
Sanders, 1933	35 22 42.203	185 08 01.39	5 08 27.03	Hall			4.0937258	12,408.69	40,710.8				
	78 22 02.954	204 27 37.51	24 31 27.45	Hocutt			4.3800440	23,990.76	78,709.7				
Braswell, 1933	35 34 42.212	172 37 07.0		Azimuth mark, R.M. no. 1									
	78 17 12.537	53 47 51.08	233 42 55.09	Albert			4.2015844	15,906.86	52,187.8				
Flowers, 1933	35 19 15.149	104 11 52.74	284 07 22.02	Hall			4.0819452	12,076.61	39,621.3				
	78 16 48.408	166 59 36.46	346 58 29.94	Hocutt			4.1056889	12,755.25	41,847.8				
Worley, 1933	35 24 40.387	146 08 57.0		Azimuth mark, R.M. no. 2									
	78 09 16.901	156 39 58.64	336 37 51.76	Albert			4.1438185	13,925.75	45,688.1				
Dudley, 1933	35 16 01.150	198 14 12.40	18 17 00.96	Selma			4.3685881	23,366.20	76,660.6				
	78 02 05.073	355 16 47.8		Azimuth mark, R.M. no. 2									
Goldsboro, 1933	35 28 21.899	49 30 24.04	229 25 42.71	Sanders			4.2070660	16,108.90	52,850.6				
	78 13 57.614	97 29 27.91	277 22 39.17	Albert			4.2528930	17,901.65	58,732.3				
Beston, 1933	35 20 25.299	157 16 53.27	337 15 00.01	Selma			4.1040793	12,708.06	41,693.0				
	77 50 55.770	347 40 01.6		Azimuth mark, R.M. no. 1									
Whitehall, 1933	35 12 26.599	128 48 14.47	308 45 12.48	Sanders			4.0080918	10,188.07	33,425.4				
	77 52 02.851	194 20 04.03	14 21 42.96	Braswell			4.2403562	17,392.27	57,061.1				
Brewer, 1933	35 17 00.897	270 24 28.8		Azimuth mark, R.M. no. 1									
	77 42 55.666	48 42 33.70	228 38 12.37	Flowers			4.1812262	15,178.41	49,797.8				
Carpenter, 1933	35 49 42.340	79 23 31.53	259 10 07.82	Sanders			4.2988537	19,672.24	64,541.3				
	78 52 19.086	133 58 44.27	313 56 01.49	Braswell			3.9927774	9,835.07	32,267.2				
Tippers, 1933	35 54 17.854	266 27 43.8		Azimuth mark, R.M. no. 2									
	78 39 12.588	105 03 58.22	284 55 27.86	Flowers			4.3637324	23,106.40	75,808.2				
Cary High, 1933	35 46 56.303	145 45 37.38	325 41 27.61	Worley			4.2870012	19,364.27	63,530.9				
	78 46 53.919	272 29 19.9		Azimuth mark, R.M. no. 2									
Raleigh 2, 1933	35 46 37.004	14 11 43.36	194 10 28.44	Dudley			4.1256125	13,354.03	43,812.3				
	78 38 21.570	74 50 24.73	254 40 38.67	Flowers			4.4233641	26,507.21	86,965.7				
Garner, 1933	35 41 53.185	102 12 49.31	282 07 24.13	Worley			4.1611405	14,492.41	47,547.2				
	78 35 07.864	64 20 49.61	244 14 22.81	Dudley			4.2733935	18,766.94	61,571.2				
Knight, 1933	35 48 17.741	109 28 21.66	289 23 09.29	Goldsboro			4.1598454	14,449.25	47,405.6				
	78 28 24.105	193 30 44.6		Azimuth mark, R.M. no. 1									
Clyde, 1933	35 43 40.545	113 31 09.73	293 25 22.27	Dudley			4.2201274	16,600.74	54,464.3				
	78 23 28.719	148 37 46.09	328 33 12.99	Goldsboro			4.3601501	22,916.59	75,185.5				
Clayton, 1933	35 38 36.792	186 33 01.57	6 33 40.31	Beston			4.1717080	14,849.37	48,718.3				
	78 29 17.581	27 15 00.1		Azimuth mark, R.M. no. 2									
Hocutt, 1933	35 41 25.451	58 37 03.56	233 31 47.79	Whitehall			4.2098449	16,212.31	53,189.9				
	78 19 06.710	117 29 05.67	297 24 28.16	Beston			4.1356593	13,666.56	44,837.7				
Hall, 1933	35 36 18.074	154 58 29.2		Azimuth mark, R.M. no. 1									
	78 24 57.676												

U. S. COAST AND GEODETIC SURVEY

TRIANGULATION AND TRAVERSE IN NORTH CAROLINA

Eastern oblique arc to Jacksonville—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Deep Run, 1933.....	35	08	25.814	116	39	51.43	296	34	14.36	Whitehall.....	4.2191085	16,561.84	54,336.6
	77	42	17.718	149	28	08.19	329	23	09.27	Boston.....	4.4108186	25,752.45	84,489.5
Kinston, 1933.....				176	32	33.75	356	32	11.87	Brewer.....	4.2014608	15,902.33	52,172.9
				211	44	03.0				Azimuth mark, R.M. no. 2.			
	35	15	54.805	44	54	02.03	224	48	48.27	Deep Run.....	4.2904620	19,519.20	64,039.2
	77	33	13.448	97	55	38.39	277	50	02.16	Brewer.....	4.1718715	14,854.96	48,736.6
Williams, 1933.....				317	29	09				Azimuth mark, R.M. no. 1.			
	35	08	38.030	88	39	00.02	268	33	09.46	Deep Run.....	4.1881361	15,421.84	50,596.5
	77	32	08.689	133	29	37.14	313	23	24.08	Brewer.....	4.3528973	22,537.06	73,940.3
				173	03	59.08	353	03	21.75	Kinston.....	4.1322422	13,559.45	44,486.3
Hargett, 1933.....				319	48	03.4				Azimuth mark, R.M. no. 2.			
	35	03	16.179	147	33	51.72	327	31	33.97	Deep Run.....	4.0533856	11,307.99	37,099.6
	77	38	18.134	223	18	11.56	43	21	43.99	Williams.....	4.1346750	13,635.62	44,736.2
Humphrey, 1933.....				174	04	21				Azimuth mark, R.M. no. 3.			
	35	01	37.129	122	35	31.65	302	33	43.43	Hargett.....	3.7535023	5,668.05	18,598.9
	77	35	09.660	139	18	18.82	319	14	12.78	Deep Run.....	4.2208135	16,619.33	54,525.3
				199	27	03.84	19	28	47.86	Williams.....	4.1385227	13,756.97	45,134.3
Duplin, 1933.....				274	18	35.3				Azimuth mark, R.M. no. 2			
	35	00	58.072	193	05	46.41	13	06	59.28	Deep Run.....	4.1512728	14,166.83	46,479.0
	77	44	24.521	245	21	01.05	65	24	31.38	Hargett.....	4.0092698	10,215.74	33,516.1
				285	03	55.03	85	09	13.51	Humphrey.....	4.1497763	14,118.10	46,319.1
Huffman, 1933.....				162	00	58.1				Azimuth mark, R.M. no. 1.			
	34	58	39.375	105	16	09.80	285	10	14.51	Duplin.....	4.2116680	16,280.51	53,413.6
	77	34	05.048	163	21	09.58	343	20	32.52	Humphrey.....	3.7572021	5,717.45	18,758.0
Sandlin, 1933.....				175	19	24.6				Azimuth mark, R.M. no. 1.			
	34	54	59.220	168	12	43.73	348	11	51.56	Duplin.....	4.0529569	11,296.84	37,063.0
	77	42	53.496	223	46	52.37	43	51	18.23	Humphrey.....	4.2302961	16,664.02	55,754.5
				243	07	17.13	63	12	19.83	Huffman.....	4.1708939	15,027.75	49,303.5
Richlands, 1933.....				278	56	05.0				Azimuth mark, R.M. no. 1.			
	34	53	57.436	97	06	43.06	277	00	56.72	Sandlin.....	4.1898239	15,482.06	50,794.1
	77	32	48.278	167	22	01.88	347	21	17.91	Huffman.....	3.9496804	8,903.90	29,212.2
			321	13	19.8				Azimuth mark, R.M. no. 2.				
Fountain, 1933.....													
	34	50	21.016	152	43	16.72	332	41	37.12	Sandlin.....	3.9843875	9,646.89	31,649.8
	77	39	59.319	210	19	35.89	30	22	58.02	Huffman.....	4.2503452	17,796.93	58,388.8
				238	37	02.89	58	41	09.32	Richlands.....	4.1078611	12,819.21	42,057.7
Harris, 1933.....				116	13	24.2				Azimuth mark, R.M. no. 3.			
	34	44	05.203	142	49	47.15	322	46	29.91	Fountain.....	4.1625165	14,538.40	47,698.1
	77	34	13.004	156	46	10.97	6	46	59.69	Richlands.....	4.2643001	18,378.08	60,295.4
				275	11	09.87	95	19	04.36	Truesdale.....	4.3280105	21,281.91	69,822.4
Roper, 1933.....				320	09	55.69	140	13	03.94	Verona.....	4.1189294	13,160.11	43,143.3
				257	56	04.7				Azimuth mark, R.M. no. 2.			
	34	47	56.913	314	39	00.66	134	42	26.68	Truesdale.....	4.1114396	12,925.27	42,405.7
	77	26	22.020	11	45	05.36	191	43	45.15	Verona.....	4.2457667	17,610.30	57,776.5
Supplementary points				59	16	06.49	239	11	37.57	Harris.....	4.1447940	13,957.06	45,790.8
				102	07	55.87	282	00	09.20	Fountain.....	4.3271595	21,240.24	69,685.7
				138	34	38.15	318	30	57.43	Richlands.....	4.1709292	14,822.76	48,631.0
				343	26	07.8				Azimuth mark, R.M. no. 2.			
Reidsville, most northerly of three Lucky Strike tobacco storage water tanks, 1933.....													
	36	23	30.514	98	25	11.8	278	14	30.2	Cedder Mountain.....	4.434877	27,219.3	89,302
	79	38	25.153	146	58	14.3	326	57	08.8	Smith.....	3.702330	5,038.8	16,531
Reidsville, Lucky Strike Cigarette factory, tall stack, 1933.....				230	21	45.0	50	27	39.3	Pelham.....	4.284993	19,274.9	63,238
	36	21	57.946	105	27	38.4	285	17	50.0	Cedder Mountain.....	4.408742	25,629.6	84,086
	79	39	54.425	175	46	30.7	355	46	18.3	Smith.....	3.851051	7,096.6	23,283
Spray (Va.), 1932.....				228	23	45.2	48	30	32.5	Pelham.....	4.358354	22,822.0	74,875
	36	32	32.388	115	54	46.0	205	48	15.8	Chestnut.....	4.257414	18,089.0	59,347
	79	44	10.305	209	16	23.5	29	18	56.9	James.....	4.116529	13,077.6	42,905
Leak, 1933.....				334	52	30.0	154	54	49.7	Smith.....	4.139258	13,780.3	45,211
				180	28	18.0				Azimuth mark, R.M. no. 3.			
	36	32	32.520	120	47	08.2	300	36	46.4	Stuart.....	4.479035	30,132.5	98,860
Russell, 1932.....				189	54	52.2	9	55	25.2	Chestnut.....	3.903366	8,005.1	26,263
				223	57	16.7				Azimuth mark, R.M. no. 1.			
	36	30	12.024	139	56	17.5	319	50	59.9	James.....	4.313199	20,568.3	67,481
G.S. Tie (Va.), 1932.....				186	18	15.5	6	18	58.8	Mount Cross.....	4.215991	16,443.4	53,948
				271	23	50.4	91	25	20.4	Pelham.....	3.576812	3,765.4	12,354
				346	11	59.4				Azimuth mark, R.M. no. 1.			
	36	36	44.247	197	42	06.8	17	42	39.4	Mount Cross.....	3.649861	4,465.4	14,650
Primary traverse station no. 25 (U.S.G.S.) (Va.), 1932 ¹				255	44	36.6	75	52	40.7	Kentuck.....	4.317875	20,791.0	68,212
				150	22	20.8				Azimuth mark, R.M. no. 2.			
	36	36	46.279	327	27	17.0	147	27	18.0	G.S. Tie.....	1.871047	74.310	243.80
White (Va.), 1932.....				79	30	43.536							
	36	32	34.875	156	55	38.4	336	53	36.3	Mount Cross.....	4.113287	12,980.4	42,587
	79	26	22.463	226	58	19.9	47	03	49.0	Kentuck.....	4.272998	18,749.9	61,515
			272	33	37.4				Azimuth mark, R.M. no. 2.				

¹ No check on this position.

Eastern oblique arc to Jacksonville—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance			
	°	'	"				Logarithm (meters)	Meters	Feet	
<i>Supplementary points—Continued</i>										
Williams (N.C.-Va.), 1932.....	36	32	28.976	72	03	25.8	Pelham.....	4.145202	13,970.2	45,834
	79	19	34.637	128	34	24.1	Mount Cross.....	4.289223	19,463.6	63,857
				313	23	56.5	Estelle.....	3.970406	9,341.3	30,647
Cunningham (Va.), 1933.....	36	32	35.242	142	17	36.2	Azimuth mark, R.M. no. 1.			
	79	03	54.848	229	41	37.0	White Oak.....	4.159779	14,447.0	47,398
				315	18	11.3	Crawley.....	3.992467	9,828.0	32,244
Lebanon, 1933.....	36	30	30.149	250	33	56.3	Hagers Mount.....	4.085617	12,179.2	39,958
	79	08	30.540	240	38	01.9	Azimuth mark, R.M. no. 2.			
				287	15	08.8	Cunningham.....	3.895887	7,868.4	25,815
Airway beacon no. 33, 1933.....	36	27	06.108	41	43	22	Hagers Mount.....	4.208373	16,157.5	53,010
	79	20	56.620	20	51	34.8	Semora.....	3.206576	1,609.1	5,279
				41	43	22	Azimuth mark, R.M. no. 1.			
Airway beacon no. 35 (Va.), 1933.....	36	27	06.108	116	38	49.4	Pelham.....	4.099937	12,587.4	41,297
	79	20	56.620	191	34	46.6	Williams.....	4.006854	10,169.1	33,330
				248	10	23.4	Estelle.....	3.978168	9,599.7	31,200
Milton, airway beacon no. 34 (Va.), 1933.....	36	37	51.621	296	41	10.4	Crawley.....	3.878526	7,560.1	24,803
	79	03	25.073	4	20	34.1	Cunningham.....	3.990348	9,780.2	32,087
				28	25	13.0	Semora.....	4.234974	17,178.1	56,358
Schoolfield, Dan River cotton mills, water tank (Va.), 1933.....	36	33	52.616	25	52	28.7	Estelle.....	4.000018	10,000.4	32,810
	79	12	06.649	319	14	27.7	Lebanon.....	3.015767	8,237.0	27,024
				328	10	28.6	Semora.....	3.959674	9,113.3	29,899
Schoolfield, Dan River cotton mills, tallest and most westerly of three stacks (Va.), 1933.....	36	34	18.876	27	41	17.1	Pelham.....	3.939342	8,696.4	28,531
	79	25	46.323	121	24	00.7	G. S. Tie.....	3.934820	8,606.5	28,236
				145	35	22.0	Mount Cross.....	4.024899	10,590.1	34,744
Danville, church spire (Va.), 1933 ¹	36	34	15.938	29	26	50.2	Pelham.....	3.941459	8,738.9	28,671
	79	25	36.061	121	02	32.9	G. S. Tie.....	3.949004	8,871.6	29,106
				144	44	47.7	Mount Cross.....	4.033832	10,810.2	35,466
Roxboro, municipal water tank, 1933.....	36	34	44.15	300	51	33	Williams.....	3.906444	8,117.9	26,633
	79	24	14.80	38	33	16	White.....	3.707135	5,094.9	16,716
Somerset Turkish towel mills, black water tank, ball on top, 1933. ¹	36	23	08.079	36	52	00.6	Laws.....	4.303114	20,096.2	65,932
	78	59	12.079	129	58	43.8	Semora.....	4.276150	18,896.4	61,963
				189	48	51.6	Hagers Mount.....	3.951894	8,951.5	29,368
Garrard, 1933.....	36	21	06.23	29	14	24	Allen.....	3.285479	1,929.7	6,331
	78	58	49.18	159	45	24	Roxboro.....	3.553495	3,576.8	11,735
University, 1933.....	36	06	43.603	201	21	25.5	Red Mount.....	4.169613	14,777.9	48,484
	78	58	21.797	253	53	16.1	Hunt.....	3.411233	2,577.7	8,457
				329	23	37.4	Azimuth mark, R.M. no. 3.			
Nelson, 1933.....	35	54	39.577	234	45	10.2	Durham.....	4.215518	16,425.5	53,889
	79	03	03.495	278	47	13.1	Durham south base.....	4.152466	14,205.8	46,607
				357	49	29.5	Chapel Hill.....	3.499787	3,160.7	10,370
Barbee, 1933.....	35	53	03.764	18	39	25.6	Azimuth mark, R.M. no. 1.			
	78	50	55.580	89	24	36.0	Carpenter.....	3.816376	6,552.0	21,496
				158	48	09.5	Chapel Hill.....	4.258622	18,139.4	59,512
Duke, 1933.....	35	52	05.758	23	04	57.1	Durham.....	4.124664	13,324.9	43,717
	78	53	41.341	334	57	44.0	Azimuth mark, R.M. no. 2.			
				96	30	07.7	Carpenter.....	3.688276	4,878.4	16,005
Durham, Duke University, chapel tower, northwest corner, 1933.....	35	59	54.75	165	30	10	Chapel Hill.....	4.148329	14,071.1	46,165
	78	56	24.557	233	22	49	Azimuth mark, R.M. no. 1.			
				267	53	40.9	Durham.....	3.530356	3,391.2	11,126
University of North Carolina, bell tower, 1933.....	35	59	54.75	307	54	39.0	Durham north base.....	3.837615	6,880.4	22,573
	79	02	58.160	38	26	21.2	Chapel Hill.....	4.202928	15,956.1	52,349
				80	01	01	Azimuth mark, R.M. no. 2.			
Durham, Chesterfield Cigarette Factory, tall brick stack, 1933.....	36	00	01.734	177	59	22.4	Hunt.....	4.118437	12,984.9	42,601
	78	54	21.039	279	40	58.8	Durham.....	3.540504	3,471.4	11,389
				36	49	09.6	Chapel Hill.....	4.217409	16,497.2	54,125
Durham, Chesterfield Cigarette Factory, aluminum tank, 1933. ¹	35	54	30.406	154	40	35.4	University.....	2.495136	312.7	1,026
	79	02	58.160	233	40	58.3	Durham.....	4.217016	16,482.2	54,075
				0	16	32.5	Chapel Hill.....	3.458763	2,875.8	9,435
Chapel Hill, black water tank, 1933.....	36	00	01.734	333	49	15.2	Durham north base.....	3.729423	5,363.2	17,596
	78	54	21.039	44	47	42.6	Chapel Hill.....	4.265511	18,429.4	60,464
				164	51	42.4	Hunt.....	4.132674	13,572.9	44,530
Durham, Durham Cotton Mill, tall stack, 1933 ¹	35	59	54.75	165	30	10	Hunt.....	4.138465	13,755.1	45,128
	78	54	25.09	299	41	20	Durham.....	2.694075	494.4	1,622
Durham, Durham Cotton Mill, tall stack, 1933 ¹	35	54	30.418	238	14	40.3	University.....	2.729506	536.4	1,760
	79	03	21.086	278	03	44.4	Nelson.....	4.276486	18,901.1	62,011
				348	40	13.8	Chapel Hill.....	3.467354	2,933.3	9,624

¹ No check on this position.

836306-35

Eastern oblique arc to Jacksonville—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
East Durham, Lucky Strike Tobacco Storage, north-easterly one of two water tanks, 1933.	35	58	13.359	13	55	48.5	193	54	57.6	Durham south base	3.955959	9,035.6	29,644
	78	52	17.002	26	44	32.5	206	44	15.1	Durham north base	3.217346	1,649.5	5,412
				136	01	52.2	316	00	47.0	Durham	3.602311	4,002.3	13,131
East Durham, Lucky Strike Tobacco Storage, south-westerly one of two aluminum water tanks, 1933.	35	57	57.985	14	07	43.6	194	06	54.7	Durham south base	3.932214	8,554.9	28,067
	78	52	20.469	33	15	31.2	213	15	15.8	Durham north base	3.077352	1,195.0	3,921
				141	15	11.8	321	14	08.6	Durham	3.633556	4,300.9	14,111
Apex, municipal water tank, 1933	35	43	51.110	133	12	45.4	313	05	47.1	Chapel Hill	4.390982	24,602.7	80,717
	78	51	03.856	170	06	18.6	350	05	34.6	Carpenter	4.040941	10,988.6	36,052
				227	42	30.8	47	44	56.8	Cary High	3.928685	8,485.6	27,840
Cary, municipal water tank, 1933	35	47	09.247	119	45	39.4	299	42	26.8	Carpenter	3.978334	9,513.4	31,212
	78	46	50.061	220	57	20.0	41	01	47.9	Tippers	4.243070	17,501.3	57,419
				298	50	41.1	118	57	31.3	Garner	4.304375	20,154.6	66,124
Fair, 1933	35	47	36.885	79	17	36.2	259	15	02.4	Cary High	3.827032	6,714.8	22,030
	78	42	31.209	201	56	51.3	21	58	47.6	Tippers	4.124694	13,325.8	43,720
				286	22	38.5	106	25	04.4	Raleigh 2	3.815258	6,535.2	21,441
				246	13	46				Azimuth mark, R.M. no. 2			
Airport, 1933	35	44	01.625	141	56	13.9	321	54	13.0	Fair	3.925693	8,427.4	27,649
	78	39	04.301	192	37	56.0	12	38	21.0	Raleigh 2	3.690871	4,907.6	16,101
				193	33	18.9				Azimuth mark, R.M. no. 1			
Briggs, 1933	35	50	05.825	17	11	52.0	197	11	05.6	Raleigh 2	3.828457	6,736.9	22,103
	78	37	02.264	60	57	19.2	240	54	06.8	Fair	3.975359	9,448.4	30,999
				4	03	49.2				Azimuth mark, R.M. no. 2			
State College, 1933	35	47	03.466	263	04	46.6	83	12	09.9	Knight	4.282587	19,168.4	62,888
	78	41	01.996	281	25	46.9	101	27	20.7	Raleigh 2	3.613929	4,110.8	13,487
				317	01	55.5	137	05	22.3	Garner	4.116028	13,062.6	42,856
				259	18	13				Azimuth mark, R.M. no. 1			
Raleigh, Carolina Hotel, revolving red beacon, 1933	35	46	42.409	92	00	17.1	271	55	26.3	Cary High	4.066851	12,498.3	41,005
	78	38	36.575	176	19	08.4	356	18	47.3	Tippers	4.148172	14,066.0	46,148
				259	08	06.5	79	14	04.6	Knight	4.194746	15,658.4	51,373
Bull (U.S.G.S.) (Va.), 1918 ¹	36	41	34.330	171	29	30.3	351	29	30.3	Bull	0.738781	5.48	18.0
	80	13	29.998										
Roxboro, black water tank, 1933 ¹	36	22	56.349	357	47		177	47		Roxboro	1.585122	38.47	126.2
	78	59	38.889										
Raleigh, State College, brick stack, 1933	35	47	03.917	287	40	57.1	107	41	57.6	Raleigh 2	3.436088	2,729.5	8,955
	78	40	05.111	322	01	27.5	142	04	21.2	Garner	4.084398	12,145.0	39,846
				88	43	29.3	208	39	30.2	Cary High	4.011556	10,269.7	33,693
Raleigh, Berry Kelly Training School, black water tank, ball on top, 1933.	35	47	34.457	289	19	57.2	109	21	54.6	Raleigh 2	3.727901	5,344.4	17,534
	78	41	42.358	316	39	59.0	136	43	49.5	Garner	4.159947	14,452.6	47,417
				81	28	45.8	261	25	43.6	Cary High	3.898292	7,912.1	25,958
Raleigh, Meredith College, tall brick stack, 1933	35	47	59.872	299	50	32.0	119	52	15.6	Raleigh 2	3.710136	5,130.2	16,831
	78	41	18.743	335	17	24.6	155	18	43.2	Airport	3.907526	8,082.1	26,516
				68	42	56.3	248	42	14.0	Fair	3.290683	1,952.9	6,407
Raleigh, Meredith College, black water tank, ball on top, 1933.	35	48	01.584	300	26	33.8	120	28	17.0	Raleigh 2	3.711182	5,142.6	16,872
	78	41	18.093	335	33	01.7	155	34	19.9	Airport	3.909733	8,123.3	26,651
				67	28	10.7	247	27	28.0	Fair	3.298362	1,987.8	6,522
Raleigh, Edenton Methodist Church, tall spire, 1933	35	46	52.900	324	57	19.9	144	57	27.9	Raleigh 2	2.776989	598.4	1,963
	78	38	36.251	95	03	40.0	275	02	14.2	State College	3.568176	3,699.8	12,138
				102	53	57.0	282	51	39.1	Fair	3.783802	6,078.6	19,943
Moriah, 1933	35	40	33.464	336	02	39.1	156	03	16.1	Clayton	3.594894	3,934.5	12,908
	78	30	21.081	108	50	17.9	288	47	30.6	Garner	3.881849	7,618.1	24,994
				109	16	50.0				Azimuth mark, R.M. no. 2			
Cary reference mark, 1918	35	46	57.052	37	26	56.9	217	26	56.5	Cary High	1.460417	28.808	94.71
	78	46	53.220										
Raleigh reference mark, 1918	35	46	36.714	115	56	27.9	295	56	27.5	Raleigh 2	1.309630	20.40	66.9
	78	38	20.840										
Raleigh airway beacon, green and white flashing, 1933	35	44	02.721	142	11	15.9	322	09	16.7	Fair	3.921994	8,355.9	27,414
	78	39	07.204	244	00	08.8	64	06	24.7	Knight	4.254414	17,964.5	58,939
				294	50	28.0	114	50	29.7	Airport	1.905148	80.38	263.7
Clayton, municipal water tank, 1933	35	39	08.849	217	21	05.1	37	23	33.4	Clyde	4.022700	10,536.6	34,569
	78	27	43.080	251	59	47.0	72	04	48.1	Hocutt	4.135191	13,651.8	44,789
				321	39	00.4	141	40	36.8	Hall	3.826720	6,710.0	22,014
Clayton Cotton Mills, water tank, 1933	35	38	46.239	326	24	28.3	146	25	38.4	Hall	3.738874	5,481.2	17,983
	78	26	58.159	85	15	59.3	265	14	38.0	Clayton	3.546495	3,519.6	11,547
				115	06	39.4	295	01	53.8	Garner	4.133437	13,596.8	44,609
Clayton, Liberty Cotton Mills, water tank, 1933	35	39	35.432	322	27	17.5	142	29	05.7	Hall	3.834786	7,669.8	25,163
	78	28	03.366	45	56	10.9	225	55	27.7	Clayton	3.414703	2,598.4	8,525
				111	43	20.2	291	39	12.7	Garner	4.060250	11,488.1	37,691

¹ No check on this position.

Eastern oblique arc to Jacksonville—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Wendell, black water tank, 1933.....	35 46 57.769	18 04 59.8	198 04 13.7	Clyde.....	3.805774	6,394.0	20,978						
	78 22 09.747	64 25 02.2	244 17 27.7	Garner.....	4.336242	21,689.1	71,158						
		104 43 19.6	284 39 40.6	Knight.....	3.987589	9,718.3	31,884						
Selma, municipal water tank (black), 1933.....	35 32 01.224	71 47 10.8	251 42 00.3	Albert.....	4.151748	14,182.3	46,530						
	78 16 47.305	122 42 04.9	302 37 19.6	Hall.....	4.166362	14,687.7	48,122						
		172 42 10.7	352 41 56.1	Selma.....	3.699142	5,002.0	16,411						
Oakland, Cleveland High School, water tank, 1933.....	35 34 01.057	203 26 44.8	23 28 10.2	Clayton.....	3.966774	9,263.5	30,392						
	78 31 44.085	247 32 27.8	67 36 24.3	Hall.....	4.044108	11,069.0	36,310						
		311 41 01.7	131 44 32.3	Albert.....	4.087334	12,227.4	40,116						
Smithfield, municipal water tank, 1933.....	35 30 51.796	6 58 34.3	186 57 51.8	Sanders.....	4.181865	15,200.7	49,871						
	78 20 49.810	72 38 33.2	252 35 43.7	Albert.....	3.837084	7,710.5	25,297						
		217 36 13.5	37 38 19.9	Selma.....	3.952568	8,905.4	29,414						
Dall, 1933.....	35 31 06.052	74 27 24.5	254 23 37.7	Albert.....	4.009236	10,214.9	33,513						
	78 19 11.339	204 10 45.8	24 11 54.9	Selma.....	3.863501	7,303.0	23,960						
		302 35 06.4	122 38 03.5	Braswell.....	3.972533	9,387.1	30,798						
		56 18 06		Azimuth mark, R.M. no. 3.									
Smithfield Cotton Mill, yellow brick stack, 1933.....	35 30 42.454	12 14 07.4	192 12 53.6	Sanders.....	4.180238	15,143.9	49,685						
	78 19 55.803	77 00 48.7	256 57 27.7	Albert.....	3.951801	8,949.5	29,362						
		209 05 09.1	29 06 44.0	Selma.....	3.927186	8,456.4	27,744						
Smithfield, concrete stack, 1933 ¹	35 29 50.87	7 56 44	187 56 02	Sanders.....	4.125111	13,338.6	43,762						
	78 20 49.90	86 42 44	266 39 55	Albert.....	3.867415	7,369.1	24,177						
Benson, water tank, 1933.....	35 23 02.429	222 00 36.6	42 04 48.8	Albert.....	4.214232	16,376.9	53,730						
	78 32 56.638	272 00 39.3	92 12 57.8	Sanders.....	4.217771	10,510.9	34,170						
		285 54 34.2	106 03 54.5	Flowers.....	4.406358	25,430.7	83,434						
Samway, 1933.....	35 16 26.420	150 01 49.1	329 59 16.1	Sanders.....	4.126166	13,371.1	43,868						
	78 17 38.330	193 37 52.4	13 38 21.3	Flowers.....	3.728404	5,350.6	17,564						
		262 22 33.1		Azimuth mark, R.M. no. 2.									
Edmondson, 1933.....	35 27 07.009	20 35 01.2	200 34 22.2	Worley.....	3.683641	4,826.6	15,835						
	78 08 09.646	104 45 56.8	284 42 34.9	Braswell.....	3.957726	9,072.5	29,765						
		278 05 47		Azimuth mark, R.M. no. 1.									
Goldsboro, State Hospital, stack, 1933.....	35 23 25.103	2 33 59.5	182 33 45.5	Dudley.....	4.136659	13,698.1	44,941						
	78 01 40.805	71 29 11.8	251 20 26.0	Flowers.....	4.383359	24,176.3	79,318						
		324 13 10.9	144 18 44.8	Whitehall.....	4.397998	25,003.3	82,032						
Goldsboro, Farmers Cotton and Storage Warehouse Co., water tank, 1933.....	35 23 41.406	12 50 42.2	192 50 35.7	Goldsboro.....	3.103424	1,268.9	4,163						
	77 59 44.334	97 13 00.4	277 07 28.7	Worley.....	4.163213	14,561.7	47,775						
		294 19 28.9	114 24 34.9	Beston.....	4.165783	14,648.2	48,058						
Goldsboro, St. Paul Methodist Church, spire, 1933.....	35 22 51.593	15 28 50.3	195 27 30.1	Dudley.....	4.118078	13,124.4	43,059						
	77 59 46.480	103 09 25.0	283 03 55.2	Worley.....	4.169681	14,780.2	48,491						
		288 33 17.2	108 38 24.3	Beston.....	4.150852	14,136.8	46,380						
Goldsboro, aluminum standpipe, 1933.....	35 23 29.417	7 13 48.6	187 13 46.1	Goldsboro.....	2.941826	874.6	2,869						
	77 59 51.149	98 45 20.4	278 39 52.6	Worley.....	4.159649	14,442.7	47,394						
		292 43 50.0	112 48 59.9	Beston.....	4.166086	14,658.4	48,092						
Goldsboro, Durham Hosiery Mills, aluminum water tank, higher of two, 1933.....	35 23 09.554	49 58 13.4	229 58 06.4	Goldsboro.....	2.590109	397.3	1,303						
	77 59 43.458	100 59 40.1	280 54 07.9	Worley.....	4.168468	14,739.0	48,356						
		290 45 47.0	110 50 52.5	Beston.....	4.153852	14,251.2	46,756						
Watson, 1933.....	35 18 35.361	221 57 04.8	41 59 53.7	Goldsboro.....	4.042275	11,022.4	36,163						
	78 04 47.452	319 10 48.2	139 12 22.0	Dudley.....	3.797865	6,278.6	20,599						
		231 40 18		Azimuth mark, R.M. no. 2.									
Goldsboro, Vinson Lumber Co., water tank, 1933 ¹	35 22 33.40	326 54 13	146 58 51	Whitehall.....	4.348539	22,312.0	73,202						
	78 00 04.52	44 15 58	224 13 14	Watson.....	4.010308	10,240.2	33,596						
Goldsboro eccentric reference mark no. 4, 1933 ¹	35 23 10.151	298 27 16.5	118 27 28.1	Goldsboro.....	2.759501	574.9	1,886						
	78 00 15.537												
Goldsboro eccentric, 1933 ¹	35 22 49.962	199 14 13.5	19 14 18.5	Goldsboro eccentric reference mark no. 4.	2.818862	658.964	2,161.95						
	78 00 24.139	244 16 00.4	64 16 17.0	Goldsboro.....	2.904238	802.1	2,632						
Duplin-Lenoir Counties, boundary monument, 1933 ¹	35 00 57.974	98 36	278 36	Duplin.....	1.304275	20.15	66.1						
	77 44 23.735												
Lenway, 1933.....	35 18 37.089	16 51 37.3	196 50 18.4	Whitehall.....	4.076627	11,929.6	39,139						
	77 49 46.058	152 10 17.6	332 09 37.3	Beston.....	3.578466	3,771.1	12,372						
		285 55 17.4	105 59 14.5	Brewer.....	4.032803	10,784.6	35,382						
		253 23 14		Azimuth mark, R.M. no. 2.									
Kinston, yellow brick stack, 1933.....	35 15 56.957	100 04 25.5	280 00 11.2	Brewer.....	4.053244	11,304.3	37,088						
	77 35 35.233	109 38 52.8	289 30 00.8	Beston.....	4.392406	24,683.5	80,982						
		271 02 55.8	91 04 17.7	Kinston.....	3.554415	3,584.4	11,760						
Kinston, Caswell Training School, brick stack, 1933 ¹	35 16 37.21	333 37 48	153 40 35	Williams.....	4.216922	16,478.7	54,064						
	77 36 57.83	94 38 37	274 35 10	Brewer.....	3.957731	9,072.6	29,766						

¹ No check on this position.

Eastern oblique arc to Jacksonville—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Liddell, 1933.....	35 10 39.714	137 43 52.8	317 42 44.6	Whitehall.....	3.648542	4,451.9	14,606						
	77 50 04.470	222 40 28.4	42 44 35.8	Brewer.....	4.263752	15,986.4	52,449						
		289 13 01.5	109 17 30.2	Deep Run.....	4.097364	12,513.1	41,053						
		300 59 59		Azimuth mark, R.M. no. 1.									
La Grange, municipal water tank, 1933.....	35 18 38.023	28 27 03.6	208 24 42.0	Whitehall.....	4.114483	13,016.2	42,704						
	77 47 57.697	126 19 54.4	306 18 11.3	Boston.....	3.746792	5,582.0	18,314						
		291 23 32.1	111 26 26.6	Brewer.....	3.913668	8,197.2	26,894						
Kinston, Caswell Training School, water tank, 1933.....	35 16 38.384	333 41 26.5	153 44 13.2	Williams.....	4.217757	16,510.4	54,168						
	77 36 57.766	28 05 21.8	208 02 17.4	Deep Run.....	4.235681	17,202.1	56,437						
		94 24 54.4	274 21 27.7	Brewer.....	3.957668	9,071.3	29,761						
Paradise eccentric, 1933.....	34 42 35.681	261 00 25.9	81 02 20.7	Truesdale.....	3.715533	5,194.4	17,042						
	77 23 42.279	46 12 10.3	226 09 19.3	Verona.....	4.025525	10,605.3	34,794						
		299 04 08.1		Azimuth mark, R.M. no. 2.									
Town Point eccentric, 1933.....	34 39 49.624	75 58 37.1	255 55 18.5	Verona.....	3.962365	9,169.9	30,085						
	77 22 53.522	213 16 16.0	33 17 43.0	Truesdale.....	3.850679	7,090.5	23,263						
		166 22 13.0	346 21 45.3	Paradise eccentric.....	3.721424	5,265.3	17,276						
		7 04 52.2		Azimuth mark, R.M. no. 1.									
Kinston, municipal standpipe, green, 1933.....	35 16 20.811	344 08 26.8	164 09 59.1	Williams.....	4.170993	14,824.9	48,638						
	77 34 48.730	37 50 31.7	217 46 12.9	Deep Run.....	4.267806	18,527.0	60,784						
		95 46 17.1	275 41 36.0	Brewer.....	4.092295	12,367.9	40,577						
Jodup, 1933.....	34 59 01.384	16 00 55.5	196 00 07.2	Sandlin.....	3.890059	7,763.5	25,471						
	77 41 29.115	128 57 59.4	308 56 18.8	Duplin.....	3.757373	5,719.7	18,765						
		243 27 33.5	63 31 11.1	Humphrey.....	4.031502	10,752.3	35,277						
		47 08 49.4		Azimuth mark, R.M. no. 2.									
Walton, 1933.....	34 45 07.206	80 06 37.7	260 02 33.0	Harris.....	4.044800	11,086.6	36,373						
	77 27 04.284	191 36 33.4	11 36 57.5	Roper.....	3.727442	5,338.8	17,516						
		290 33 47.7	110 37 37.6	Truesdale.....	4.040187	10,969.5	35,989						
		98 51 38.9		Azimuth mark, R.M. no. 3.									
Town Point (U.S.E.), 1933 ¹	34 39 49.827	79 18 47.0	259 18 46.3	Town Point eccentric.....	1.527617	33.699	110.56						
	77 22 52.221												
Paradise (U.S.E.), 1933 ¹	34 42 34.239	211 17 13.3	31 17 13.9	Paradise eccentric.....	1.716120	52.014	170.65						
	77 23 43.340												
Malone, 1933 ¹	36 14 56.831	189 28 25.5	9 29 28.9	Leasburg.....	4.209853	16,212.6	53,191						
	79 11 25.812	278 33 08.6	98 35 36.9	Laws.....	3.801727	6,334.7	20,783						
		353 10 27		Azimuth mark, R.M. no. 2.									

North Carolina-Virginia boundary arc

<i>Principal points</i>												
Vulture, 1933.....	36 31 36.481	118 43 42.0		Azimuth mark, R.M. no. 3.								
	77 46 44.336	209 29 49.4		Auto azimuth mark.								
Powell (Va.), 1933.....	36 40 09.197	353 21 55.51	173 22 39.56	Vulture.....	4.2016824	15,910.45	52,199.5					
	77 47 58.225	298 20 55.2		Azimuth mark, R.M. no. 2.								
Rawlings (Va.), 1933.....	36 39 06.994	45 45 46.11	225 40 04.70	Vulture.....	4.2986053	19,888.65	65,251.3					
	77 37 11.576	96 51 42.79	276 45 16.69	Powell.....	4.2088152	16,173.92	53,063.9					
		355 06 35.8		Azimuth mark, R.M. no. 2.								
Stancell (N.C.-Va.), 1933.....	36 32 43.064	60 04 03.69	240 02 38.42	Vulture.....	3.6140129	4,111.62	13,489.5					
	77 44 21.112	158 35 39.20	338 33 29.73	Powell.....	4.1694530	14,772.47	48,466.0					
		222 01 09.81	42 05 25.90	Rawlings.....	4.2024475	15,938.50	52,291.6					
		52 04 32.6		Azimuth mark, R.M. no. 3.								
Jordon, 1933.....	36 29 41.404	103 08 07.53	283 02 02.63	Vulture.....	4.1950145	15,668.03	51,404.2					
	77 36 31.030	115 37 18.34	295 32 38.60	Stancell.....	4.1128469	12,987.20	42,543.2					
		176 41 38.03	356 41 13.87	Rawlings.....	4.2421180	17,462.96	57,293.1					
		201 03 52.7		Azimuth mark, R.M. no. 2.								
Lilly, 1933.....	36 31 18.676	226 57 21.14	47 03 02.17	Hickory.....	4.2889423	19,451.02	63,815.6					
	76 21 48.255	258 01 53.49	78 05 58.11	Moyock.....	4.0190698	10,448.88	34,281.0					
		336 16 01.9		Azimuth mark, R.M. no. 3.								
Wallaceton (Va.), 1933.....	36 39 10.830	274 56 56.75	95 02 50.91	Hickory.....	4.1701092	14,794.80	48,539.3					
	76 22 06.360	310 03 14.84	139 07 32.43	Moyock.....	4.2148057	16,398.56	53,800.9					
		357 56 01.03	177 56 13.62	Lilly.....	4.1632378	14,563.23	47,779.5					
		6 42 54.0		Azimuth mark, R.M. no. 2.								
Corapeake, 1933.....	36 31 43.790	229 33 33.98	49 40 02.43	Wallaceton.....	4.3277025	21,266.82	69,772.9					
	76 33 01.014	272 35 32.65	92 42 13.07	Lilly.....	4.2241545	16,755.39	54,971.6					
		158 23 58.2		Azimuth mark, R.M. no. 2.								
Baines (Va.), 1933.....	36 40 11.212	276 10 07.08	96 16 57.28	Wallaceton.....	4.2345983	17,163.20	56,309.6					
	76 33 36.367	312 56 39.89	133 03 42.05	Lilly.....	4.3814329	24,067.61	78,961.9					
		356 46 53.59	176 47 14.07	Corapeake.....	4.1949466	15,665.59	51,396.2					
		179 03 21.8		Azimuth mark, R.M. no. 3.								

¹ No check on this position.

North Carolina-Virginia boundary arc—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Harrell (Va.), 1933.....	36	37	03.997	231	10	03.22	51	12	55.62	Baines.....	3.9641641	9,207.97	30,209.8
	76	38	25.216	320	44	06.07	140	47	19.25	Corapeake.....	4.1052870	12,743.45	41,809.1
				130	13	15.0				Azimuth mark, R.M. no. 3.			
Morgan (Va.), 1933.....	36	38	13.823	254	02	46.15	74	07	51.22	Baines.....	4.1205337	13,198.78	43,303.0
	76	42	07.406	291	16	52.59	111	19	05.14	Harrell.....	3.7727110	5,925.31	19,439.9
				311	27	57.55	131	33	23.19	Corapeake.....	4.2586320	18,139.78	59,513.6
				236	10	27.4				Azimuth mark, R.M. no. 2.			
Vann, 1933.....	36	30	50.095	181	55	20.61	1	55	31.62	Morgan.....	4.1362524	13,085.24	44,899.0
	76	42	25.886	207	25	14.70	27	27	38.07	Harrell.....	4.1134849	12,986.28	42,605.8
				283	14	12.60	83	19	48.76	Corapeake.....	4.1507936	14,151.21	46,427.8
				230	15	26.3				Azimuth mark, R.M. no. 1.			
Quay (Va.), 1933.....	36	36	56.877	260	59	54.23	81	05	55.78	Morgan.....	4.1830803	15,243.35	50,010.9
	76	52	13.436	307	41	05.90	127	46	55.92	Vann.....	4.2665528	18,473.66	60,609.0
				357	11	00.2				Azimuth mark, R.M. no. 2.			
Gatling, 1933.....	36	30	12.505	163	35	49.06	343	34	21.11	Quay.....	4.1137435	12,994.02	42,631.2
	76	49	45.773	217	29	35.88	37	34	08.98	Morgan.....	4.2720370	18,708.41	61,379.2
				263	55	17.11	83	59	38.82	Vann.....	4.0416349	11,007.40	36,113.4
				92	36	08.6				Azimuth mark, R.M. no. 3.			
Camp (Va.), 1933.....	36	37	53.494	287	08	20.54	107	10	36.25	Quay.....	3.7720095	5,915.75	19,408.6
	76	56	00.923	326	41	05.67	146	44	49.17	Gatling.....	4.2303945	16,997.87	55,767.2
				331	19	36.2				Azimuth mark, R.M. no. 2.			
Como, 1933.....	36	30	01.984	204	42	03.51	24	44	43.84	Camp.....	4.2041333	16,000.49	52,494.9
	77	00	30.046	223	57	32.23	44	02	28.03	Quay.....	4.2498918	17,778.36	58,327.8
				268	47	16.78	88	53	40.02	Gatling.....	4.2051204	16,036.90	52,614.4
				37	05	22.9				Azimuth mark, R.M. no. 3.			
Beale (Va.), 1933.....	36	37	44.486	268	24	42.70	88	28	48.48	Camp.....	4.0102380	10,238.54	33,590.9
	77	02	52.864	275	13	26.88	95	19	48.32	Quay.....	4.2029240	15,956.00	52,349.0
				346	00	00.03	166	01	25.11	Como.....	4.1670774	14,691.88	48,201.6
				156	06	47.7				Azimuth mark, R.M. no. 3.			
Severn, 1933.....	36	30	13.720	223	16	17.35	43	21	31.22	Beale.....	4.2809535	19,096.49	62,652.4
	77	11	39.709	271	11	17.29	91	17	55.64	Como.....	4.2219186	16,669.35	54,689.4
				32	04	46.4				Azimuth mark, R.M. no. 2.			
Shiloh (Va.), 1933.....	36	37	31.386	268	13	33.89	88	18	55.05	Beale.....	4.1264897	13,381.03	43,900.9
	77	11	51.173	309	13	18.55	129	20	04.30	Como.....	4.3400617	21,880.72	71,787.0
				358	47	18.71	178	47	25.54	Severn.....	4.1301300	13,493.67	44,270.5
				275	05	20.8				Azimuth mark, R.M. no. 1.			
Woodard, 1933.....	36	30	11.040	224	22	27.30	44	27	45.93	Shiloh.....	4.2788264	19,003.18	62,346.3
	77	20	46.039	269	36	28.71	89	41	53.70	Severn.....	4.1334165	13,596.17	44,606.8
				204	27	05.4				Azimuth mark, R.M. no. 2.			
Ellis (Va.), 1933.....	36	37	47.795	272	03	33.93	92	09	04.34	Shiloh.....	4.1389107	13,769.26	45,174.6
	77	21	04.981	314	49	55.24	134	55	32.01	Severn.....	4.2974546	19,836.02	65,078.7
				358	04	56.31	178	05	07.60	Woodard.....	4.1488087	14,086.68	46,216.0
				215	18	13.0				Azimuth mark, R.M. no. 1.			
Daniel, 1933.....	36	30	25.833	83	01	20.49	262	56	54.47	Jordon.....	4.0497480	11,213.68	36,790.2
	77	29	03.813	142	59	32.32	322	54	41.64	Rawlings.....	4.3037905	20,137.53	66,035.1
				221	06	46.33	41	11	31.61	Ellis.....	4.2575039	18,092.72	59,359.2
				272	03	56.30	92	08	52.43	Woodard.....	4.0932703	12,395.68	40,668.2
				51	32	35.6				Azimuth mark, R.M. no. 2.			
Emporia (Va.), 1933.....	36	38	36.039	275	13	32.28	95	19	58.85	Ellis.....	4.2085004	16,162.20	53,025.5
	77	31	52.789	313	08	30.19	133	15	07.48	Woodard.....	4.3567958	22,740.28	74,607.1
				344	20	52.80	164	28	33.49	Daniel.....	4.1954404	15,683.41	51,454.7
				22	47	47.28	202	45	01.51	Jordon.....	4.2521972	17,872.99	58,638.3
				96	53	50.51	276	50	40.23	Rawlings.....	3.9017765	7,975.84	26,167.4
				55	01	30.1				Azimuth mark, R.M. no. 3.			
Bethel Hill, 1933.....	36	30	14.515	46	22	58.90	226	21	10.56	Hagers Mount.....	3.7970140	6,266.34	20,558.8
	78	55	08.589	152	25	20.31	332	23	06.47	Crawley.....	4.0815007	12,064.51	39,581.6
				9	33	30				Azimuth mark, R.M. no. 1.			
Halloway, 1933.....	36	28	59.770	82	30	51.26	262	24	46.68	Hagers Mount.....	4.1875623	15,401.48	50,529.7
	78	47	57.490	102	09	16.02	282	04	59.64	Bethel Hill.....	4.0403737	10,074.22	36,004.6
				128	35	62.72	303	29	22.24	Crawley.....	4.3192400	20,856.43	68,426.5
				205	10	14				Azimuth mark, R.M. no. 2.			
Moon (Va.), 1933.....	36	38	46.083	11	13	53.77	191	12	27.89	Halloway.....	4.2654009	18,424.72	60,448.4
	78	45	33.322	42	16	25.19	222	09	42.41	Bethel Hill.....	4.3281555	21,289.01	69,845.7
				75	44	21.68	255	36	24.45	Crawley.....	4.3120848	20,515.63	67,308.4
				307	19	51.4				Azimuth mark, R.M. no. 2.			
Averett (Va.), 1933.....	36	34	34.874	53	30	33.96	233	25	00.42	Halloway.....	4.2398020	17,350.10	56,922.8
	78	38	37.129	126	51	18.88	306	47	10.67	Moon.....	4.1112757	12,920.39	42,389.6
				262	23	33				Azimuth mark, R.M. no. 1.			
Bullock, 1933.....	36	29	19.340	88	32	57.71	268	23	56.72	Halloway.....	4.3551490	22,654.21	74,324.7
	78	32	47.694	132	36	12.57	312	28	36.43	Moon.....	4.4122620	25,838.18	84,770.8
				138	14	22.75	318	10	54.73	Averett.....	4.1154282	13,044.52	42,796.9
				33	20	52				Azimuth mark, R.M. no. 3.			

North Carolina-Virginia boundary arc—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Clarksville (Va.), 1933.....	36	38	16.409	7	13	03.75	187	12	13.58	Bullock.....	4.2223695	16,686.66	54,746.1
	78	31	23.465	57	40	40.55	237	36	21.95	Averett.....	4.1058141	12,768.93	41,859.9
				92	33	04.74	272	24	37.54	Moon.....	4.3249307	21,131.52	69,329.0
				27	19	24.9				Azimuth mark, R.M. no. 2.			
Townsville, 1933.....	36	29	43.942	86	05	48.00	266	01	24.91	Bullock.....	4.0428537	11,037.07	36,210.8
	78	25	25.300	150	36	54.78	330	33	21.40	Clarksville.....	4.2584932	18,133.98	59,494.6
				284	39	05.8				Azimuth mark, R.M. no. 1.			
Anderson (Va.), 1933.....	36	37	35.892	2	22	32.83	182	22	18.38	Townsville.....	4.1631593	14,559.93	47,768.7
	78	25	01.049	37	12	28.25	217	07	50.31	Bullock.....	4.2834766	19,207.76	63,017.5
				97	31	12.98	277	27	24.80	Clarksville.....	3.9814884	9,582.71	31,439.3
				290	12	58.4				Azimuth mark, R.M. no. 1.			
Buchanan, 1933.....	36	30	01.844	87	05	56.31	267	01	39.25	Townsville.....	4.0322262	10,770.26	35,335.4
	78	18	13.113	144	05	57.16	324	01	54.15	Anderson.....	4.2376749	17,285.22	56,709.9
				180	36	09.0				Azimuth mark, R.M. no. 1.			
Bethany (Va.), 1933.....	36	39	39.938	11	24	03.39	191	22	37.34	Buchanan.....	4.2595274	18,177.22	59,636.4
	78	15	48.734	38	00	42.73	217	54	59.14	Townsville.....	4.3673903	23,301.84	76,449.5
				74	28	23.12	254	22	53.48	Anderson.....	4.1535974	14,242.87	46,728.5
				14	10	15.9				Azimuth mark, R.M. no. 1.			
Oakville, 1933.....	36	29	58.910	90	20	45.33	270	13	31.94	Buchanan.....	4.2584656	18,132.83	59,490.8
	78	06	04.515	141	00	25.13	320	54	36.97	Bethany.....	4.3628400	23,058.97	75,652.6
				281	04	16.8				Azimuth mark, R.M. no. 1.			
Hagood (Va.), 1933.....	36	38	55.386	355	20	20.13	175	20	52.41	Oakville.....	4.2198778	16,591.20	54,433.0
	78	06	58.689	45	36	42.45	225	30	00.58	Buchanan.....	4.3708304	23,487.16	77,057.5
				95	59	56.95	275	54	40.52	Bethany.....	4.1217683	13,236.35	43,426.3
				19	14	37.1				Azimuth mark, R.M. no. 2.			
Howard, 1933.....	36	29	24.455	95	51	16.16	275	47	07.17	Oakville.....	4.0200942	10,473.56	34,362.0
	77	59	05.868	146	17	39.66	326	12	57.96	Hagood.....	4.3256020	21,164.20	69,436.2
				257	30	06.22	77	37	27.39	Vulture.....	4.2763684	18,895.93	61,994.4
				219	48	49.16	39	55	27.03	Powell.....	4.4131913	25,893.53	84,952.4
				225	21	31.5				Azimuth mark, R.M. no. 1.			
<i>Supplementary points</i>													
Lynch (Va.), 1933.....	36	37	50.524	251	25	27.01	71	30	33.42	Powell.....	4.1286561	13,447.95	44,120.5
	77	56	31.553	308	15	03.08	128	20	53.02	Vulture.....	4.2695819	18,602.95	61,033.2
				13	50	00.08	193	48	28.16	Howard.....	4.2058596	16,064.22	52,704.0
				97	21	53.53	277	15	39.27	Hagood.....	4.1960996	15,707.23	51,532.8
				44	28	14.70	224	22	33.37	Oakville.....	4.3086651	20,354.72	66,780.4
				87	20	24.1				Azimuth mark, R.M. no. 2.			
Callahan, 1933.....	36	32	21.809	177	30	02.3	357	29	57.9	Averett.....	3.613368	4,105.5	13,469
	78	38	29.928	303	24	56.2	123	28	19.8	Bullock.....	4.008830	10,205.4	33,482
				66	15	04.9	246	09	27.2	Halloway.....	4.188506	15,435.0	50,640
				48	39	54.7				Azimuth mark, R.M. no. 2.			
Virgilina, 1933.....	36	31	51.577	265	43	24.8	85	48	26.0	Callahan.....	4.101058	12,620.0	41,404
	78	46	55.863	16	09	19.2	196	08	42.5	Halloway.....	3.741414	5,513.3	18,088
				66	31	17.1	246	24	35.7	Hagers Mount.....	4.262960	18,321.5	60,110
				193	57	11.0				Azimuth mark, R.M. no. 3.			
Woody, 1933.....	36	32	22.250	304	23	29.2	124	27	07.0	Halloway.....	4.043007	11,041.0	36,224
	78	54	03.504	22	21	42.4	202	21	03.7	Bethel Hill.....	3.629133	4,257.3	13,967
				22	23	08.3				Azimuth mark, R.M. no. 2.			
Buffalo (Va.), 1933.....	36	39	34.596	279	01	59.2	99	08	01.5	Clarksville.....	4.183727	15,266.1	50,086
	78	41	30.349	335	00	16.5	155	02	00.0	Averett.....	4.008271	10,192.3	33,439
				76	06	11.4	256	03	46.4	Moon.....	3.793615	6,217.5	20,399
Clarksville, municipal water tank, aluminum, final (Va.), 1933.....	36	37	25.397	97	51	52.7	277	44	36.8	Moon.....	4.262833	18,316.3	60,093
	78	33	22.891	242	04	09.6	62	05	20.8	Clarksville.....	3.526089	3,358.1	11,017
				268	28	19.9	88	33	19.4	Anderson.....	4.095986	12,473.4	40,923
Walker, 1933.....	36	32	31.074	308	31	07.7	128	33	25.8	Buchanan.....	3.868232	7,883.0	24,222
	78	22	05.223	44	02	07.0	224	00	07.9	Townsville.....	3.855148	7,163.9	23,504
				182	00	26.3				Azimuth mark, R.M. no. 3.			
Drewry, 1933.....	36	27	38.499	110	46	27.6	290	42	23.8	Townsville.....	4.038162	10,918.5	35,822
	78	18	35.125	149	54	46.9	329	52	42.0	Walker.....	4.018050	10,424.4	34,201
				187	04	03.2	7	04	16.3	Buchanan.....	3.648581	4,452.3	14,607
				315	07	12.8				Azimuth mark, R.M. no. 2.			
Daz eccentric, 1933.....	36	20	50.685	167	34	15.3	347	32	48.9	Townsville.....	4.226136	16,832.0	55,223
	78	22	59.740	207	39	25.6	27	42	02.6	Drewry.....	4.152120	14,194.5	46,570
				76	17	55.3				Azimuth mark, R.M. no. 1.			
Daz, 1918.....	36	20	50.348	226	59	31.2	46	59	31.5	Daz eccentric.....	1.182129	15.21	49.9
	78	23	00.186										
Boydton, water tank (silver color) final (Va.), 1933.....	36	40	04.45	273	48	31	93	53	01	Bethany.....	4.051726	11,264.9	36,958
	78	23	21.31	28	25	19	208	24	19	Anderson.....	3.716542	5,206.5	17,082
South Hill, water tank (silver color) final (Va.), 1933.....	36	43	26.800	349	25	40.4	169	26	18.0	Hagood.....	3.929960	8,510.6	27,922
	78	08	01.551	58	57	03.0	238	52	23.8	Bethany.....	4.131716	13,543.0	44,432
				66	56	54.3	246	46	45.4	Anderson.....	4.439790	27,529.0	90,318

1 No check on this position.

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Henderson, church spire, 1933 ¹	36	19	42.06	187	10	59	7	12	10	Walker.....	4.378249	23,891.8	78,385
	78	24	05.33	217	42	26	37	43	05	Daz eccentric.....	3.427158	2,674.0	8,773
Henderson Cotton Mills, tank, aluminum, 1933.....	36	20	13.844	185	30	49.2	5	31	41.6	Walker.....	4.358504	22,829.9	74,901
	78	23	33.411	208	26	52.6	28	29	49.6	Drewry.....	4.192890	15,591.6	51,153
				216	28	42.2	36	29	02.2	Daz eccentric.....	3.149916	1,412.3	4,634
Henderson, American Agricultural Chemical Co., tank, tall, black, 1933.....	36	20	57.144	60	24	03.6	240	23	55.3	Daz eccentric.....	2.605358	403.0	1,322
	78	22	45.686	182	41	38.4	2	42	02.5	Walker.....	4.330679	21,413.1	70,253
				206	45	29.0	26	47	57.7	Drewry.....	4.141676	13,857.2	45,463
Airway beacon no. 47, 1933.....	36	32	50.637	155	01	58.1	334	59	52.5	Hagood.....	4.093557	12,403.9	40,695
	78	03	27.908	228	11	48.3	48	15	56.5	Lynch.....	4.142294	13,876.9	45,528
				314	14	47.1	134	17	23.1	Howard.....	3.959273	9,104.9	29,872
Wise, 1933.....	36	29	40.391	93	16	22.5	273	11	42.7	Buchanan.....	4.068993	11,721.8	38,457
	78	10	22.879	264	54	19.3	84	56	52.9	Oakville.....	3.809927	6,455.5	21,179
				153	46	03.4				Azimuth mark, R.M. no. 3.....			
Paschal, 1933.....	36	32	39.221	313	59	30.4	134	01	32.7	Oakville.....	3.852009	7,112.3	23,334
	78	09	30.117	13	24	00.2	193	23	28.8	Wise.....	3.753308	5,666.4	18,591
				69	35	51.1	249	30	39.8	Buchanan.....	4.142605	13,886.9	45,561
				266	39	12.9				Azimuth mark, R.M. no. 1.....			
Sykes (N.C.-Va.), 1933.....	36	32	40.635	51	31	39.8	231	28	38.0	Howard.....	3.987414	9,714.4	31,871
	77	54	00.307	158	31	39.1	338	30	09.0	Lynch.....	4.011377	10,265.4	33,679
				213	01	37.9	33	05	13.8	Powell.....	4.217406	16,497.0	54,124
				280	17	51.3	100	22	10.9	Vulture.....	4.042333	11,023.8	36,167
				34	39	59.1				Azimuth mark, R.M. no. 1.....			
Roanoke Rapids, high, large, globular water tank, 1933.....	36	27	06.394	143	27	56.6	323	24	52.7	Stancell.....	4.111246	12,919.5	42,387
	77	39	11.895	187	39	45.8	7	40	57.5	Rawlings.....	4.350490	22,412.5	73,532
				219	57	21.2	39	58	56.9	Jordan.....	3.794792	6,234.4	20,454
Camp, 1933.....	36	30	00.791	120	45	15.3	300	41	54.0	Stancell.....	3.990765	9,789.6	32,118
	77	38	42.872	187	40	14.7	7	41	09.1	Rawlings.....	4.230157	16,988.6	55,737
				280	18	38.5	100	19	56.9	Jordan.....	3.523126	3,335.2	10,942
				173	57	09.0				Azimuth mark, R.M. no. 3.....			
Roanoke Rapids, Rosemary Mills, red brick stack on west side, 1933.....	36	27	15.045	145	34	02.7	325	31	17.0	Stancell.....	4.088560	12,262.0	40,230
	77	39	42.356	106	09	33.9	16	10	09.4	Camp.....	3.725844	5,319.2	17,451
				226	32	21.7	46	34	15.5	Jordan.....	3.816931	6,560.4	21,524
Primary traverse station no. 11 (U.S.G.S.), 1933 ¹	36	30	00.060	180	55	11.1	0	55	11.1	Camp.....	1.352838	22,534	73.93
	77	38	42.887										
Mason (N.C.-Va.), 1933.....	36	32	41.977	15	30	25.2	195	29	48.3	Jordan.....	3.761631	5,776.1	18,950
	77	35	28.983	167	52	55.3	347	51	54.2	Rawlings.....	4.084174	12,138.8	39,825
				293	37	06.0	113	40	55.2	Daniel.....	4.019578	10,461.1	34,321
				287	50	15.9				Azimuth mark, R.M. no. 1.....			
Concord (N.C.-Va.), 1933.....	36	32	38.926	230	11	34.7	50	16	08.9	Ellis.....	4.172694	14,883.1	48,820
	77	28	45.159	6	27	21.5	188	27	10.4	Daniel.....	3.615808	4,128.6	13,545
				64	46	03.8	244	41	26.0	Jordan.....	4.107817	12,817.9	42,053
				185	41	07.9				Azimuth mark, R.M. no. 1.....			
Pit, 1933.....	36	30	15.848	80	03	41.0	260	01	16.5	Jordan.....	3.788117	6,139.3	20,142
	77	32	28.062	135	02	04.1	315	00	16.4	Mason.....	3.803956	6,367.8	20,892
				156	43	48.3	336	40	59.4	Rawlings.....	4.251030	17,825.0	58,481
				231	29	16.7	51	31	29.4	Concord.....	3.850371	7,085.5	23,246
				208	03	27.9				Azimuth mark R.M. no. 1.....			
Emporia, water tank, aluminum, 1933 ¹	36	41	53.89	337	52	27	157	53	26	Emporia.....	3.818425	6,583.0	21,598
	77	33	32.60	46	36	13	226	34	02	Rawlings.....	3.874208	7,485.3	24,558
Can eccentric (Va.), 1933.....	36	36	29.633	116	46	25.2	296	44	54.6	Shiloh.....	3.626075	4,227.4	13,869
	77	09	19.274	256	27	22.5	76	31	12.9	Beale.....	3.904547	9,875.2	32,399
				229	34	29.1				Azimuth mark.....			
Cal eccentric (Va.), 1933.....	36	38	05.956	281	58	49.6	102	00	04.4	Beale.....	3.503171	3,185.5	10,451
	77	04	58.281	65	25	19.2	245	22	43.6	Can eccentric.....	3.853243	7,132.5	23,401
				84	06	13.7	264	02	07.4	Shiloh.....	4.013411	10,313.6	33,837
				253	17	19.2				Azimuth mark, R.M. no. 3.....			
Primary traverse station no. 12 eccentric (Va.), 1933.....	36	38	46.853	276	00	06.1	96	04	52.2	Cal eccentric.....	4.078372	11,977.7	39,297
	77	12	57.759	307	54	22.7	127	56	33.1	Can eccentric.....	3.837704	6,881.8	22,578
				324	34	37.1	144	35	16.9	Shiloh.....	3.455522	2,854.4	9,365
Can (Va.), 1918.....	36	36	30.237	37	56	48.4	217	56	48.1	Can eccentric.....	1.373096	23.61	77.5
	77	09	18.690										
Primary traverse station no. 12 (U.S.G.S.) (Va.), 1918 ¹	36	38	47.202	5	16	31	185	16	31	Primary traverse station no. 12 eccentric.....	1.033705	10.807	35.46
	77	12	57.719										
Boykins, black water tank (Va.), 1933.....	36	35	05.635	180	16	45.1	0	16	45.6	Shiloh.....	3.652568	4,492.7	14,740
	77	11	51.954	235	42	03.3	55	43	34.4	Can eccentric.....	3.862397	4,596.2	15,079
				358	02	40.3	178	02	47.6	Severn.....	3.954400	9,003.3	29,538

¹ No check on this position.

North Carolina-Virginia boundary arc—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance			
	°	'	"				Logarithm (meters)	Meters	Feet	
<i>Supplementary points—Continued</i>										
Knight (Va.), 1933.....	36	32	46.234	287	04	04.4	Como.....	4.235430	17,196.1	56,418
	77	11	30.587	2	45	51.5	Severn.....	3.672702	4,706.5	15,441
				151	16	59.0	Azimuth mark, R.M. no. 3.....			
Statesville (N.C.-Va.), 1933.....	36	32	38.496	311	42	09.0	Como.....	3.860286	7,249.1	23,783
	77	04	07.522	68	24	02.7	Severn.....	4.082888	12,102.9	39,708
				91	16	35.7	Knight.....	4.042289	11,022.7	36,164
				61	09	41.7	Azimuth mark, R.M. no. 2.....			
Futrell, 1933.....	36	26	16.223	152	52	55.9	Severn.....	3.915166	8,225.6	26,987
	77	09	09.043	212	28	08.1	Statesville.....	4.145199	13,970.1	45,834
				241	39	09.4	Como.....	4.166610	14,676.1	48,160
				109	50	09.4	Azimuth mark, R.M. no. 3.....			
Franklin, flat top tank, black (Va.), 1933.....	36	40	49.851	326	51	30.3	Quay.....	3.933235	8,575.0	28,133
	76	55	22.091	10	03	51.2	Camp.....	3.742021	5,521.0	18,113
				63	00	01.0	Beale.....	4.090327	12,569.8	41,239
Franklin, tall brick stack (Va.), 1933.....	36	40	49.883	329	42	57	Quay.....	3.919920	8,316.1	27,284
	76	55	02.198	15	01	18	Camp.....	3.750457	5,629.3	18,469
				63	59	14	Beale.....	4.114351	13,012.2	42,691
Winton, 1932.....	36	23	51.367	148	34	07.0	Como.....	4.126831	13,391.6	43,936
	76	55	49.440	217	35	52.8	Gatling.....	4.171245	14,833.5	48,666
Parker, 1932.....	36	26	33.802	44	55	36.2	Winton.....	3.849395	7,069.6	23,194
	76	52	29.094	118	13	37.7	Como.....	4.133056	13,584.9	44,570
				211	04	58.4	Gatling.....	3.896114	7,872.5	25,828
				210	45	51.3	Azimuth mark, R.M. no. 3.....			
Gatesville, 1932.....	36	24	13.573	87	30	30.2	Winton.....	4.188337	15,429.0	50,620
	76	45	30.879	112	34	00.6	Parker.....	4.052287	11,279.4	37,006
				150	10	39.1	Gatling.....	4.105682	12,765.0	41,847
				335	31	27.1	Azimuth mark.....			
Primary traverse station no. 9 (U.S.G.S.), 1933 ¹	36	30	03.559	47	32	33.7	Como.....	1.856910	71.93	236.0
	77	00	27.914							
Primary traverse station no. 11 (U.S.G.S.), 1933 ¹	36	30	11.884	92	09	06.7	Gates.....	1.556929	36.052	118.28
	76	46	09.494							
Freeman (N.C.-Va.), 1933.....	36	33	02.117	51	37	58.2	Gatling.....	3.925253	8,418.9	27,621
	76	45	20.531	206	31	55.5	Morgan.....	4.031027	10,740.6	35,238
				313	06	45.3	Vann.....	3.774721	5,952.8	19,530
				9	55	39.2	Azimuth mark, R.M. no. 3.....			
Gates, 1933.....	36	30	11.928	90	12	30.5	Gatling.....	3.728053	5,346.3	17,540
	76	46	10.942	193	26	28.8	Freeman.....	3.731889	5,393.7	17,696
				258	07	04.6	Vann.....	3.757593	5,722.6	18,775
				66	48	07.2	Azimuth mark, R.M. no. 3.....			
Boundary monument no. 20 (N.C.-Va.), 1933 ¹	36	33	02.081	93	18	50	Freeman.....	1.277747	18.956	62.19
	76	45	19.770							
Saunders, 1933.....	36	33	01.649	71	02	55.8	Vann.....	4.095560	12,461.2	40,883
	76	34	32.231	142	13	51.4	Harrell.....	3.975551	9,452.6	31,012
				316	35	57.6	Corapeake.....	3.518866	3,302.7	10,836
				166	48	24.3	Azimuth mark, R.M. no. 3.....			
Virginia-North Carolina boundary monument no. 14, 1933. ¹	36	33	01.973	302	21		Saunders.....	1.271121	18.669	61.25
	76	34	32.865							
Primary traverse station no. 3P (U.S.G.S.) (N.C.-Va.), 1918. ¹	36	33	01.973	302	34		Saunders.....	1.268133	18.541	60.83
	76	34	32.859							
Drummond (N.C.-Va.), 1933.....	36	33	01.531	183	30	26.2	Wallaceton.....	4.057086	11,404.8	37,417
	76	22	37.449	275	00	12.7	Moyock.....	4.060290	11,489.2	37,694
				338	53	22.6	Lilly.....	3.531276	3,398.4	11,150
				335	27	04.2	Azimuth mark, R.M. no. 2.....			
Boundary monument (N.C.-Va.), 1933 ¹	36	33	01.606	50	11	00	Drummond.....	0.556664	3.603	11.82
	76	22	37.338							

Jacksonville northward to Virginia boundary

Principal points	Latitude and longitude			Azimuth			Distance			
	°	'	"	°	'	"	Logarithm (meters)	Meters	Feet	
Greenville, 1933.....	35	36	46.808	222	23	36.52	Carson.....	4.3164495	20,722.85	67,988.2
	77	23	27.131	281	15	30.38	Boyd.....	4.1467164	14,018.98	45,993.9
				84	15	53.0	Azimuth mark, R.M. no. 2.....			
Moore, 1933.....	35	44	21.584	263	24	45.85	Carson.....	4.0491221	11,197.53	36,737.2
	77	21	33.772	326	53	04.96	Boyd.....	4.3007538	19,987.52	65,575.7
				11	30	21.67	Greenville.....	4.1654248	14,302.92	46,925.5
				349	59	43.6	Azimuth mark, R.M. no. 1.....			

¹ No check on this position.

Jacksonville northward to Virginia boundary—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Eureka, 1933.....	35 44 13.589	268 22 02.70	88 25 27.20	Moore.....	3.9445591	8,801.55	28,876.4						
	77 27 23.895	336 35 46.22	156 38 04.30	Greenville.....	4.1761427	15,001.78	49,218.3						
Farmville, 1933.....	35 39 05.658	224 24 02.06	44 27 37.96	Eureka.....	4.1235206	13,289.87	43,601.8						
	77 33 33.928	241 40 20.28	61 47 20.47	Moore.....	4.3129833	20,558.11	67,447.7						
		285 36 27.79	105 42 21.30	Greenville.....	4.2002000	16,856.45	52,022.4						
		265 47 48.1		Azimuth mark, R.M. no. 1.									
Mosley, 1933.....	35 45 31.622	275 50 26.85	95 58 31.88	Moore.....	4.3216001	20,970.37	68,800.3						
	77 35 23.975	261 14 12.47	101 18 52.94	Eureka.....	4.0898930	12,209.86	40,353.1						
		346 53 55.11	166 54 59.33	Farmville.....	4.0868122	12,212.71	40,067.9						
		313 37 07.8		Azimuth mark, R.M. no. 2.									
Owens, 1933.....	35 40 29.186	216 11 36.51	36 14 15.04	Mosley.....	4.0628944	11,552.99	37,903.4						
	77 39 55.536	284 58 57.86	105 02 40.34	Farmville.....	3.9972763	9,937.48	32,603.2						
		270 34 46.1		Azimuth mark, R.M. no. 2.									
Shackleford, 1933.....	35 39 22.331	226 32 48.15	46 37 27.44	Mosley.....	4.2190675	16,560.27	54,331.5						
	77 43 22.505	248 23 19.42	68 25 20.09	Owens.....	3.7480714	5,598.50	18,367.7						
		271 56 24.27	92 02 07.34	Farmville.....	4.1706894	14,814.58	48,604.2						
		160 00 22.4		Azimuth mark, R.M. no. 2.									
Wooten, 1933.....	35 45 34.982	270 20 36.03	90 26 27.94	Mosley.....	4.1798086	15,128.94	49,635.5						
	77 45 26.181	318 33 59.36	138 37 12.38	Owens.....	4.0991736	12,565.47	41,225.2						
		344 50 35.09	164 51 47.27	Shackleford.....	4.0754860	11,898.33	39,036.4						
		118 33 33.8		Azimuth mark, R.M. no. 2.									
Brown, 1933.....	35 51 35.089	317 34 19.10	137 38 18.03	Mosley.....	4.1820139	15,205.96	49,888.2						
	77 42 12.337	23 38 25.47	203 36 32.06	Wooten.....	4.0843645	12,144.08	39,842.7						
		280 16 42.2		Azimuth mark, R.M. no. 2.									
Rocky Mount east base, 1932.....	35 54 45.093	357 03 27.24	177 03 47.67	Mosley.....	4.2325039	17,080.63	56,038.7						
	77 35 58.870	40 04 08.17	219 58 36.03	Wooten.....	4.3451781	22,140.03	72,637.7						
		58 08 24.71	238 04 45.79	Brown.....	4.0426669	11,032.32	36,195.2						
	265 39 54.2		Azimuth mark, R.M. no. 1.										
Rocky Mount west base, 1933.....	35 55 34.447	275 38 09.77	95 44 07.27	Rocky Mount east base.....	4.1862152	15,353.777	50,373.18						
	77 46 08.262	321 08 36.48	141 10 54.80	Brown.....	3.9747550	9,435.28	30,955.6						
		356 43 30.44	176 43 55.09	Wooten.....	4.2673095	18,505.87	60,714.7						
		98 28 51.8		Azimuth mark, R.M. no. 2.									
Battleboro, 1933.....	36 02 54.424	318 03 07.42	138 08 24.81	Rocky Mount east base.....	4.3067213	20,263.82	66,482.2						
	77 44 59.101	7 17 10.47	187 16 29.82	Rocky Mount west base.....	4.1357937	13,670.79	44,851.6						
		0 06 41.4		Azimuth mark, R.M. no. 3.									
O'Neal, 1933.....	36 03 04.361	1 15 09.48	181 15 01.60	Rocky Mount east base.....	4.1872848	15,391.64	50,497.4						
	77 35 45.456	48 25 07.92	228 19 01.94	Rocky Mount west base.....	4.3195846	20,872.99	68,480.8						
		88 48 45.04	268 41 19.23	Battleboro.....	4.1418032	13,861.27	45,476.5						
		258 25 08.6		Azimuth mark, R.M. no. 1.									
Mann, 1933.....	36 07 04.195	296 25 56.67	116 31 45.98	O'Neal.....	4.2195285	16,577.86	54,389.2						
	77 45 38.541	352 41 32.94	172 41 56.17	Battleboro.....	3.8899358	7,781.32	25,463.6						
		257 25 21.7		Azimuth mark, R.M. no. 2.									
Chapel, 1933.....	36 08 25.151	1 55 43.85	181 55 36.01	O'Neal.....	3.9953232	9,892.89	32,456.9						
	77 35 32.153	54 20 26.64	234 14 52.64	Battleboro.....	4.2421944	17,466.04	57,303.2						
		80 42 17.04	200 36 19.51	Mann.....	4.1865825	15,366.77	50,415.8						
		257 12 58.5		Azimuth mark, R.M. no. 2.									
Haywood, 1933.....	36 13 55.305	350 22 46.01	170 23 26.74	Chapel.....	4.0137217	10,321.00	33,861.5						
	77 36 41.144	46 42 32.32	226 37 15.12	Mann.....	4.2663276	18,464.08	60,577.6						
		40 03 46.9		Azimuth mark, R.M. no. 2.									
Pettitt, 1933.....	36 14 04.615	300 02 08.70	120 09 15.29	Chapel.....	4.3194364	20,805.96	68,457.7						
	77 47 34.665	347 22 02.93	167 23 11.47	Mann.....	4.1231696	13,279.13	43,566.6						
		270 57 12.93	91 03 39.21	Haywood.....	4.2127811	16,322.29	53,550.7						
		268 13 41.7		Azimuth mark, R.M. no. 1.									
Taylor, 1933.....	36 18 21.551	297 30 38.84	117 36 51.47	Haywood.....	4.2488347	17,735.14	58,186.0						
	77 47 11.025	4 15 46.15	184 15 32.17	Pettitt.....	3.8998957	7,941.37	26,054.3						
		19 03 50.3		Azimuth mark, R.M. no. 2.									
Halifax, 1933.....	36 18 33.242	352 53 20.88	172 53 46.20	Haywood.....	3.9361642	8,633.05	28,323.6						
	77 37 23.938	61 32 27.46	241 26 26.14	Pettitt.....	4.2392272	17,347.11	56,913.0						
		88 38 20.06	268 32 32.43	Taylor.....	4.1658777	14,651.35	48,068.6						
		36 45 04.0		Azimuth mark, R.M. no. 3.									
Alston, 1933.....	36 24 11.927	303 47 12.30	123 53 22.53	Halifax.....	4.2729328	18,747.04	61,505.9						
	77 47 48.475	355 03 19.14	175 03 41.34	Taylor.....	4.0350268	10,839.94	35,564.0						
		189 38 31.41	6 39 09.53	Vulture.....	4.1397373	13,795.50	45,260.7						
		238 53 50.49	59 00 32.97	Jordon.....	4.2942783	19,691.48	64,604.6						
		347 30 09.8		Azimuth mark, R.M. no. 2.									
Adams, 1933.....	36 24 32.146	348 23 35.04	168 24 29.03	Halifax.....	4.0528132	11,293.10	37,050.8						
	77 38 55.012	47 18 47.93	227 13 53.88	Taylor.....	4.2262154	16,835.09	55,233.1						
		87 21 35.12	267 16 18.50	Alston.....	4.1240789	13,306.90	43,667.7						
		200 36 04.36	20 37 29.90	Jordon.....	4.0079387	10,184.48	33,413.6						
		192 04 16.8		Azimuth mark, R.M. no. 1.									

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Jacksonville northward to Virginia boundary—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Roanoke eccentric, 1933.....	36 26 53.126	346 56 14.08	166 56 38.12	Adams.....	3.6494232	4,460.91	14,635.5						
	77 39 35.478	68 00 46.92	247 55 54.19	Alston.....	4.1221502	13,248.00	43,464.5						
		129 19 31.39	309 15 16.37	Vulture.....	4.1396432	13,792.51	45,260.9						
		221 30 12.80	41 32 02.45	Jordon.....	3.8405799	6,927.55	22,728.1						
		330 16 38.8		Azimuth mark, R.M. no. 1.									
<i>Supplementary points</i>													
Dawson, 1933.....	35 20 42.479	319 38 24.0	139 41 16.2	Kinston.....	4.065595	11,630.4	38,157						
	77 38 11.423	46 27 38.3	226 24 54.0	Brewer.....	3.996026	9,908.9	32,509						
		170 52 46.2		Azimuth mark, R.M. no. 3.									
Arba, 1933.....	35 23 09.871	306 41 48.5	126 44 08.1	Dawson.....	3.890682	7,597.7	24,927						
	77 42 12.673	314 30 27.8	134 35 39.6	Kinston.....	4.281299	19,111.7	62,702						
		5 27 28.6	185 27 03.7	Brewer.....	4.057768	11,422.7	37,476						
		4 28 35.7		Azimuth mark, R.M. no. 1.									
Eason, 1933.....	35 23 35.113	4 49 53.2	184 49 25.7	Kinston.....	4.153392	14,236.1	46,708						
	77 32 26.011	58 38 18.9	238 34 58.9	Dawson.....	4.009217	10,214.5	33,512						
		87 02 22.7	266 56 42.9	Arba.....	4.171035	14,826.4	48,643						
		355 16 57.7		Azimuth mark, R.M. no. 1.									
Flanigan, 1933.....	35 31 51.038	179 00 42.0	359 00 36.4	Shackleford.....	4.143342	13,910.5	45,638						
	77 43 12.967	227 22 26.5	47 28 03.5	Farmville.....	4.296591	19,796.6	64,949						
		313 04 54.5	133 11 09.9	Eason.....	4.349356	22,354.0	73,340						
		354 35 15.7	174 35 50.7	Arba.....	4.207723	16,133.3	52,931						
		349 30 43.2		Azimuth mark, R.M. no. 3.									
Carr, 1933.....	35 31 02.708	353 09 45.2	173 10 23.2	Eason.....	4.142789	13,892.8	45,580						
	77 33 31.550	42 05 16.0	222 00 13.7	Arba.....	4.292759	19,622.7	64,379						
		95 51 09.3	275 45 31.5	Flanigan.....	4.168046	14,724.7	48,309						
		136 01 54.0	315 56 10.0	Shackleford.....	4.330644	21,411.3	70,247						
		179 46 11.0	359 46 09.6	Farmville.....	4.172724	14,884.1	48,832						
		89 52 17.8		Azimuth mark, R.M. no. 3.									
Cox eccentric, 1933.....	36 26 18.823	229 15 09.8	49 19 41.6	Vulture.....	4.176448	15,012.3	49,253						
	77 54 21.490	291 44 37.3	111 48 30.6	Alston.....	4.022975	10,543.3	34,591						
		86 20 49.7		Azimuth mark, R.M. no. 2.									

Littleton, municipal water tank, black, 1933 ¹	36 26 13.07	221 47 59	41 48 02	Cox eccentric.....	2.376207	237.8	780
	77 54 27.85	229 08 09	49 12 44	Vulture.....	4.183216	15,248.1	50,026
Cox (B.M. N 3), 1918.....	36 26 18.539	108 13 46.1	283 13 45.2	Cox eccentric.....	1.582291	38,220	125.40
	77 54 19.996						
Roanoke (B.M. Z 1), 1918.....	36 26 53.539	282 54 19.4	102 54 20.7	Roanoke eccentric.....	1.755646	56.97	186.9
	77 39 37.708						
Weldon, Eastern Cotton Oil Co., water tank, black, 1933.....	36 24 47.837	82 29 37.8	262 28 10.0	Adams.....	3.567823	3,696.8	12,129
	77 36 27.914	129 35 31.3	309 33 39.9	Roanoke eccentric.....	3.782580	6,061.5	19,887
		179 30 32.6	359 30 30.7	Jordon.....	3.956005	9,049.1	29,689
Roanoke Rapids, large, squat, aluminum water tank, in east side, 1933.....	36 27 06.403	354 56 48.8	174 56 58.8	Adams.....	3.678817	4,773.3	15,660
	77 39 11.886	55 08 38.8	235 08 24.7	Roanoke eccentric.....	2.854898	716.0	2,349
		67 21 41.9	247 16 35.1	Alston.....	4.144477	13,946.9	45,757
Ruggles, 1933.....	36 16 45.371	13 28 07.1	193 27 37.3	Haywood.....	3.731587	5,390.0	17,684
	77 35 50.873	145 04 32.1	325 03 37.0	Halifax.....	3.608051	4,055.6	13,306
		327 40 25.2		Azimuth mark, R.M. no. 2.			
Enfield, municipal water tank, squat, black, 1933.....	36 10 47.150	51 01 00.0	230 57 39.9	Mann.....	4.038097	10,916.8	35,816
	77 39 59.221	118 10 56.5	298 06 27.5	Pettitt.....	4.110685	12,902.8	42,332
		220 27 17.7	40 29 14.8	Haywood.....	3.882151	7,623.4	25,011
Enfield, brick stack, 1933.....	36 10 26.052	296 36 31.3	116 39 26.7	Chapel.....	3.919742	8,312.7	27,273
	77 40 29.424	51 11 17.7	231 08 15.4	Mann.....	3.996560	9,921.1	32,549
		122 24 56.0	302 20 44.8	Pettitt.....	4.096645	12,579.0	41,270
Leggett, 1933.....	35 59 24.025	113 08 16.9	293 02 19.7	Battleboro.....	4.218442	16,536.4	54,253
	77 34 51.598	168 46 21.0	348 45 49.3	O'Neal.....	3.840336	6,923.7	22,716
		43 06 22.5		Azimuth mark, R.M. no. 2.			
Penelo, 1933.....	35 55 52.834	85 38 07.0	265 35 14.1	Rocky Mount west base.....	3.869554	7,405.5	24,206
	77 41 13.719	156 32 02.7	336 29 50.3	Battleboro.....	4.151290	14,167.4	46,481
		211 41 50.1	31 45 09.0	O'Neal.....	4.194144	15,636.7	51,301
		235 45 43.1	55 49 27.5	Leggett.....	4.063644	11,578.3	37,986
		262 46 12.7		Azimuth mark, R.M. no. 3.			
Rocky Mount, municipal power plant, high, yellow, brick stack, 1933.....	35 57 06.594	210 35 39.5	30 38 08.5	Battleboro.....	4.095412	12,457.0	40,869
	77 49 12.392	280 41 24.9	100 46 05.9	Penelo.....	4.080758	12,211.2	40,063
		301 35 28.8	121 37 16.9	Rocky Mount west base.....	3.733925	5,419.1	17,770
Sharpsburg, 1933.....	35 52 00.150	219 12 48.7	39 14 54.8	Rocky Mount west base.....	3.930778	8,526.6	27,974
	77 49 43.292	273 43 44.2	93 48 08.4	Brown.....	4.054559	11,338.6	37,200
		331 26 39.0	151 29 09.5	Wooten.....	4.130731	13,512.4	44,332
		200 57 19.9		Azimuth mark, R.M. no. 1.			
Rocky Mount, Atlantic Coast Line R.R. shops, red brick stack, 1933.....	35 55 31.857	266 20 04.0	86 24 02.4	Penelo.....	4.008799	10,204.7	33,480
	77 47 59.967	268 21 28.7	83 22 34.2	Rocky Mount west base.....	3.447391	2,801.5	9,191
		21 40 05.5	201 39 04.6	Sharpsburg.....	3.846876	7,020.6	23,033

¹ No check on this position.

Jacksonville northward to Virginia boundary—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Rocky Mount, Planters Oil Co., water tank, black, 1933 ¹	35 55 43.15	77 47 21.40	268 06 57	278 19 10	88 10 33	98 19 53	Penelo	3.964818	9,221.8	30,255			
							Rocky Mount west base	3.267861	1,852.9	6,079			
Pinetops, water tank, aluminum, 1933	35 47 23.941	77 38 20.332	307 59 34.2	27 07 17.7	128 01 17.2	207 04 21.3	Mosley	3.749872	5,621.8	18,444			
				72 36 16.5		252 32 07.5	Shackleford	4.222019	16,673.2	54,702			
							Wooten	4.049638	11,210.8	36,781			
Wilson, municipal power plant, tall brick stack, 1933 ¹	35 43 57.87	77 54 11.36	257 10 42	297 26 47	77 15 48	117 33 06	Wooten	4.131325	13,530.8	44,392			
							Shackleford	4.264620	18,391.6	60,340			
Crisp, 1933	35 45 06.657	77 37 45.916	257 48 47.1	330 19 21.7	77 50 10.0	150 21 48.7	Mosley	3.562064	3,648.1	11,969			
				20 52 03.3		200 50 47.7	Farmville	4.107311	12,803.0	42,005			
				100 06 06.4			Owens	3.961479	9,161.2	30,024			
							Azimuth mark, R.M. no. 3						
Greenville, Imperial Tobacco Co., taller of two tanks, 1933 ¹	35 36 32.87	77 22 44.94	112 01 31	187 03 25	292 01 07	7 04 06	Greenville	3.059007	1,145.5	3,758			
							Moore	4.163040	14,556.9	47,755			
Greenville, Imperial Tobacco Co., taller of two stacks, 1933 ¹	35 36 31.79	77 22 46.76	114 29 32	187 13 06	294 29 08	7 13 49	Greenville	3.047966	1,116.8	3,664			
							Moore	4.164196	14,594.7	47,883			
Snow Hill, 1933	35 27 11.244	77 41 13.215	238 27 21.9	11 24 20.8	58 31 40.9	191 23 46.3	Carr	4.135127	13,649.8	44,783			
				160 43 01.6		340 41 52.1	Arba	3.880150	7,588.4	24,896			
				123 33 07.1			Flanigan	3.960750	9,135.9	29,973			
							Azimuth mark, R.M. no. 3						
Snow Hill, municipal water tank, aluminum, 1933 ¹	35 27 05.18	77 40 41.02	102 57 47	156 30 56	282 57 28	338 29 28	Snow Hill	2.920701	833.1	2,733			
							Flanigan	3.982551	9,606.2	31,516			
Primary traverse station no. 9 eccentric, 1933	35 23 01.895	77 30 15.075	18 54 37.5	70 22 39.5	198 52 54.3	250 18 03.8	Kinston	4.143378	13,911.6	45,642			
				107 13 23.3		287 12 07.5	Dawson	4.106194	12,770.1	41,897			
							Eason	3.539013	3,459.5	11,350			
Primary traverse station no. 9 (U.S.G.S.), 1933 ¹	35 23 02.348	77 30 14.841	22 53 35		202 53 35		Primary traverse station no. 9 eccentric	1.180413	15,150	49,70			
Primary traverse station no. 13 eccentric, 1933	35 21 56.257	77 43 00.680	208 06 10.0	287 16 09.0	28 06 46.7	107 18 56.4	Arba	3.410274	2,572.0	8,438			
				359 12 08.7		179 12 11.6	Dawson	3.883604	7,640.0	25,005			
							Brewer	3.959193	9,103.2	29,866			
Primary traverse station no. 13 (U.S.G.S.), 1933 ¹	35 21 56.108	77 43 01.345	254 43 57		74 43 58		Primary traverse station no. 13 eccentric	1.240549	17,400	57.09			
Glenfield, 1933	35 23 30.378	77 37 00.423	19 06 41.7	85 26 24.1	199 06 00.6	265 23 23.2	Dawson	3.738458	5,475.9	17,966			
				330 29 43.3			Arba	3.897947	7,905.8	25,938			
							Azimuth mark, R.M. no. 1						
Hookerton, water tank, aluminum, 1933	35 25 26.959	77 35 24.676	25 39 22.7	33 55 31.2	205 37 46.2	213 54 35.8	Dawson	3.987886	9,724.9	31,906			
				110 06 35.3		290 03 13.2	Glenfield	3.636441	4,329.5	14,204			
							Snow Hill	3.971276	9,360.0	30,709			
Heath, 1933	35 17 44.623	77 32 25.864	19 33 54.0	122 09 16.1	199 33 26.5	302 05 56.3	Kinston	3.555292	3,591.6	11,783			
				170 58 49.0		359 58 49.0	Dawson	4.013123	10,306.8	33,815			
				224 37 19.2			Eason	4.033476	10,801.3	35,437			
							Azimuth mark, R.M. no. 1						
Monk, 1933	35 36 01.231	77 35 26.261	342 33 28.4	56 46 13.0	162 34 35.1	236 41 41.6	Carr	3.984215	9,643.1	31,637			
				206 25 58.1		26 27 03.5	Flanigan	4.147877	14,056.5	46,117			
				125 13 58.7			Farmville	3.802635	6,348.0	20,827			
							Azimuth mark, R.M. no. 3						

Washington to Pamlico Sound

<i>Principal points</i>													
Station	Latitude and longitude			Azimuth			Back azimuth			To station	Logarithm (meters)	Meters	Feet
James, 1933	35 26 12.053	76 59 53.543	86 12 17.02	161 09 03.11	266 07 45.83	341 06 30.51	Chocowinity	4.0728186	11,825.48	38,797.4			
				179 45 45.46		359 45 44.31	Shaw	4.3109038	20,459.92	67,125.6			
				82 15 08.3			Smaw	4.0826905	12,097.36	39,689.4			
							Azimuth mark, R.M. no. 1						
Fort, 1931	35 28 22.239	76 59 25.776	68 53 40.48	174 41 00.07	248 48 53.06	354 40 42.78	Chocowinity	4.1270650	13,398.77	43,959.1			
				344 47 33.96		164 48 45.07	Smaw	3.9079046	8,089.18	26,539.3			
				16 56 47.6			Orr	4.0721393	11,806.99	38,736.8			
							Azimuth mark, R.M. no. 3						
Core eccentric, 1931	35 25 25.340	76 50 43.012	59 40 54.98	95 57 46.49	239 37 03.24	275 52 27.33	Orr	4.0681636	11,699.40	38,383.8			
				112 37 20.76		292 32 17.67	James	4.1449340	13,961.56	45,805.6			
				134 13 43.82		314 08 23.08	Fort	4.1546761	14,278.29	46,844.7			
				05 14 09.5			Smaw	4.2883059	19,422.54	63,722.1			
							Azimuth mark, R.M. no. 3						
Reka, 1933	35 32 09.970	76 50 38.369	0 32 17.21	51 47 59.07	190 32 14.52	231 42 36.78	Core eccentric	4.0958882	12,470.62	40,914.0			
				94 23 30.27		274 18 06.40	James	4.2508832	17,819.00	58,461.2			
				337 41 38.5			Smaw	4.1484690	14,075.67	46,179.9			
							Azimuth mark, R.M. no. 2						

¹ No check on this position.

Washington to Pamlico Sound—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Rose, 1933.....	35	34	23.229	40	35	55.87	220	30	29.06	Core eccentric.....	4.3388058	21,817.54	71,579.7
	76	41	20.204	73	45	35.76	253	40	11.20	Reka.....	4.1657079	14,645.63	48,049.9
				40	58	35.0				Azimuth mark, R.M. no. 2.			
Spring, 1933.....	35	27	00.837	77	13	15.29	257	08	18.01	Core eccentric.....	4.1226502	13,263.26	43,514.5
	76	42	10.278	126	41	13.42	306	36	18.42	Reka.....	4.2030767	15,961.61	52,367.4
				185	17	01.43	5	17	30.52	Rose.....	4.1364727	13,692.18	44,921.8
				137	43	23.8				Azimuth mark, R.M. no. 3.			
Way, 1933.....	35	33	51.441	50	50	02.59	230	44	05.20	Spring.....	4.3013533	20,014.89	65,665.5
	76	31	54.944	93	58	58.42	273	53	29.62	Rose.....	4.1543598	14,267.89	46,810.6
				264	05	41.3				Azimuth mark, R.M. no. 1.			
Makleyville, 1933.....	35	27	38.691	85	21	50.58	265	16	22.88	Spring.....	4.1551453	14,293.72	46,895.3
	76	32	45.342	133	54	06.59	313	49	07.49	Rose.....	4.2551007	17,992.88	59,031.6
				186	18	16.55	6	18	45.83	Way.....	4.0623684	11,557.62	37,918.6
				331	06	37.1				Azimuth mark, R.M. no. 3.			
Scranton, 1933.....	35	29	45.961	65	15	58.54	245	12	42.76	Makleyville.....	3.9714939	9,304.70	30,724.0
	76	27	08.025	136	19	38.72	316	16	51.98	Way.....	4.0196815	10,463.61	34,329.4
				221	35	26.3				Azimuth mark, R.M. no. 1.			
Swan, 1933.....	35	24	39.536	105	45	41.48	285	38	09.02	Makleyville.....	4.3097435	20,405.32	66,946.5
	76	19	46.529	130	20	25.67	310	16	09.58	Scranton.....	4.1643275	14,599.15	47,897.4
				132	52	09.29	312	45	06.42	Way.....	4.3984382	25,028.70	82,115.0
				45	57	51.5				Azimuth mark, R.M. no. 3.			
Post, 1933.....	35	31	35.647	5	00	37.12	185	00	11.26	Swan.....	4.1096806	12,873.02	42,234.2
	76	19	01.970	74	36	37.88	254	31	55.54	Scranton.....	4.1040194	12,706.31	41,687.3
				102	11	35.18	282	04	05.80	Way.....	4.2991825	19,915.10	65,338.1
				34	37	13.5				Azimuth mark, R.M. no. 2.			
Jones, 1933.....	35	32	25.651	45	37	59.90	225	32	22.37	Swan.....	4.3123099	20,526.26	67,343.2
	76	10	04.950	83	32	41.82	293	27	29.71	Post.....	4.1340646	13,616.47	44,073.4
				53	03	38.0				Azimuth mark, R.M. no. 2.			
New Holland, 1933.....	35	26	34.582	76	14	52.54	256	09	20.79	Swan.....	4.1721906	14,865.88	48,772.5
	76	10	14.227	124	56	10.54	304	51	04.19	Post.....	4.2100326	16,219.32	53,212.9
				181	14	14.38	1	14	19.77	Jones.....	4.0343051	10,821.94	35,505.0
				78	55	54.7				Azimuth mark, R.M. no. 2.			
Englehard, 1933.....	35	32	31.231	59	34	19.33	239	27	09.30	New Holland.....	4.3357424	21,664.19	71,076.6
	75	57	53.562	89	31	27.06	269	24	21.91	Jones.....	4.2654001	18,424.69	60,448.3
				45	48	14.7				Azimuth mark, R.M. no. 3.			
Mount Pleasant, 1933.....	35	24	56.499	110	52	20.68	290	49	18.25	New Holland.....	3.9291023	8,493.81	27,866.8
	76	04	59.552	150	56	29.44	330	53	32.18	Jones.....	4.1997339	15,839.22	51,965.8
				217	25	43.85	37	29	51.09	Englehard.....	4.2468857	17,655.73	57,925.5
				20	58	19.8				Azimuth mark, R.M. no. 2.			
Gull Shoal beacon, 1933.....	35	21	57.878	115	51	23.78	295	47	02.71	Mount Pleasant.....	4.1016983	12,638.58	41,465.1
	75	57	28.758	178	09	59.54	358	09	45.15	Englehard.....	4.2906779	19,528.91	64,071.1
Durant, 1933.....	35	13	39.731	119	59	04.08	299	45	12.83	Mount Pleasant.....	4.6219916	41,878.55	137,396.5
	75	41	01.808	121	41	47.64	301	32	17.37	Gull Shoal beacon.....	4.4666208	29,283.35	96,073.8
				143	51	57.11	323	42	11.24	Englehard.....	4.6356916	43,220.68	141,799.8
				57	31	12.5				Azimuth mark, R.M. no. 2.			
Ocracoke, 1933.....	35	07	02.439	164	23	38.53	344	20	06.92	Mount Pleasant.....	4.5361991	34,371.55	112,767.3
	75	58	53.053	184	24	34.86	4	25	23.49	Gull Shoal beacon.....	4.4421209	27,677.12	90,804.0
				245	36	29.05	65	46	46.12	Durant.....	4.4734072	29,744.53	97,586.8
				304	10	14.9				Azimuth mark, R.M. no. 3.			
Salvo, 1933.....	35	32	02.877	29	07	27.67	209	00	14.23	Durant.....	4.5898870	38,894.39	127,606.0
	75	28	33.227	91	16	15.56	270	59	12.37	Englehard.....	4.6469299	44,353.70	145,517.1
				189	39	57.9				Azimuth mark, R.M. no. 1.			
Long Shoal lighthouse, 1933.....	35	33	22.940	276	43	09.00	96	51	07.60	Salvo.....	4.3197978	20,883.24	68,514.4
	75	42	16.480	86	12	46.97	266	03	42.15	Englehard.....	4.3739559	23,656.79	77,614.0
Metropolitan, 1933.....	35	41	47.824	303	36	50.78	123	47	16.02	Salvo.....	4.5116055	32,479.22	106,558.9
	75	46	26.887	337	53	33.87	157	57	59.73	Long Shoal lighthouse.....	4.2248390	16,781.82	55,058.4
				45	16	38.25	225	09	58.33	Englehard.....	4.3804044	24,344.70	79,870.9
				50	17	59.4				Azimuth mark, R.M. no. 2.			
Pea Island, 1874.....	35	42	37.509	350	37	25.82	170	38	40.49	Salvo.....	4.2971717	19,823.11	65,036.3
	75	30	41.419	45	42	52.63	225	36	07.69	Long Shoal lighthouse.....	4.3883400	24,453.44	80,227.7
				86	22	32.40	266	13	20.64	Metropolitan.....	4.3769094	23,818.23	78,143.6
				340	28	39.2				Azimuth mark, R.M. no. 3.			
<i>Supplementary points</i>													
Core, 1914 ¹	35	25	25.986	62	45	41	242	45	32	Core eccentric.....	1.638469	43.498	142.71
	76	50	41.479										
Fort (U.S.E.), 1914 ¹	35	28	23.715	58	16	01	238	16	00	Fort.....	1.445589	27.899	91.53
	76	59	24.835										
Belhaven, municipal water tank, black, 1933.....	35	32	22.778	122	29	12.1	302	26	57.4	Rose.....	3.839793	6,915.0	22,687
	76	37	28.558	251	57	32.3	72	00	46.3	Way.....	3.946248	8,835.8	28,989
				320	47	14.5	140	49	59.0	Makleyville.....	4.052929	11,296.1	37,061

¹ No check on this position.

Washington to Pamlico Sound—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Belhaven, Interstate Cooperage Co., yellow brick stack, 1933.	35	32	41.821	121	02	59.9	301	01	00.0	Rose.....	3.782632	6,062.2	19,889
	76	37	53.947	256	37	18.5	76	40	47.3	Way.....	3.908155	9,293.0	30,489
				288	21	57.8	108	28	13.2	Scranton.....	4.234361	17,153.8	56,279
New Holland, New Holland Corporation, water tank, 1933.	35	27	08.776	295	53	28.4	115	56	41.3	Mount Pleasant.....	3.969726	9,326.7	30,599
	76	10	32.119	336	49	07.5	156	49	17.9	New Holland.....	3.059316	1,146.3	3,761
				71	50	21.9	251	45	00.6	Swan.....	4.167956	14,721.6	48,299
New Holland, New Holland Corporation, stack, 1933.	35	27	05.805	295	31	20.8	115	34	32.4	Mount Pleasant.....	3.965661	9,239.8	30,314
	76	10	30.043	337	28	59.6	157	29	08.7	New Holland.....	3.017708	1,041.6	3,417
				72	14	39.0	252	09	06.4	Swan.....	4.168592	14,743.2	48,370
Primary traverse station no. 5 (U.S.G.S.), 1933 ¹	35	33	52.936	280	31	31.7	100	31	37.4	Way.....	2.401866	262.27	827.7
Cape Hatteras lighthouse, 1933.	35	15	17.006	70	09	16.5	249	53	21.8	Ocracoke.....	4.649417	44,608.4	146,353
	75	31	16.031	78	36	16.9	258	30	38.9	Durant.....	4.179293	15,111.0	49,577
				128	27	32.5	308	12	07.1	Englehard.....	4.710888	51,391.1	168,606
			187	32	12.1	7	33	46.5	Salvo.....	4.495129	31,270.1	102,592	
Bluff Shoal lighthouse, 1933.	35	12	37.337	177	46	01.8	357	45	41.4	Mount Pleasant.....	4.357869	22,796.5	74,792
	76	04	24.349	266	47	05.5	87	00	34.3	Durant.....	4.550513	35,523.3	116,546
				320	52	59.1	140	56	09.8	Ocracoke.....	4.123753	13,297.0	43,625

Newport to Core Sound

<i>Principal points</i>													
Park eccentric, 1933.	34	43	14.671	117	18	36.07	297	14	11.05	Newport.....	4.124078	13,306.01	43,654.8
	76	43	54.672	169	26	21.45	349	25	23.03	Harlowe.....	4.1521250	14,194.66	46,570.3
				151	18	48.2				Azimuth mark, R.M. no. 3.			

Park, 1927.	34	43	14.888	28	15	208	15	Park eccentric.....	0.8800128	7.586	24.89		
	76	43	54.431	117	16	38.57	297	12	13.47	Newport.....	4.1240518	13,306.13	43,655.2
				169	25	12.46	349	24	13.96	Harlowe.....	4.1519441	14,188.75	46,550.9
Adam, 1931.	34	49	40.168	17	29	39.82	197	28	15.94	Park.....	4.0950753	12,447.32	40,837.6
	76	41	27.372	17	30	03.29	197	28	39.33	Park eccentric.....	4.0953357	12,454.77	40,862.0
				69	39	55.40	249	34	07.01	Newport.....	4.2201165	16,600.32	54,462.9
			108	08	08.30	288	05	45.71	Harlowe.....	3.8243062	6,672.77	21,892.2	
			186	34	27.6				Azimuth mark, R.M. no. 1.				
Gaskill, 1933.	34	43	20.520	89	21	13.27	269	15	39.54	Park eccentric.....	4.1734441	14,908.85	48,913.5
	76	34	08.668	89	22	45.08	269	17	11.43	Park.....	4.1733370	14,905.17	48,901.4
				136	23	50.37	316	19	40.15	Adam.....	4.2085696	16,164.77	53,033.9
			161	16	51.3				Azimuth mark, R.M. no. 3.				
Simpson, 1933.	34	48	01.507	340	37	42.67	160	38	50.89	Gaskill.....	3.9627301	9,177.62	30,110.2
	76	36	08.310	53	20	11.83	233	15	45.99	Park eccentric.....	4.1699608	14,789.75	48,522.7
				53	20	56.57	233	16	30.81	Park.....	4.1697589	14,782.87	48,500.1
			110	34	37.18	290	31	35.03	Adam.....	3.9375350	8,660.34	28,413.1	
			336	15	25.6				Azimuth mark, R.M. no. 2.				
Shore, 1933.	34	47	28.829	52	25	32.15	232	21	49.48	Gaskill.....	4.0982647	12,539.05	41,138.5
	76	27	38.082	94	28	47.15	274	23	55.98	Simpson.....	4.1142654	13,009.64	42,682.5
				187	15	21.9				Azimuth mark, R.M. no. 3.			
Nowhere, 1933.	34	52	46.106	330	21	36.21	150	23	41.19	Shore.....	4.0510336	11,246.92	36,899.3
	76	31	16.869	14	04	50.27	194	03	12.22	Gaskill.....	4.2544833	17,967.32	58,947.8
				40	11	56.06	220	09	09.56	Simpson.....	4.0598651	11,477.97	37,657.3
			268	25	49.6				Azimuth mark, R.M. no. 2.				
Stacy, 1933.	34	49	53.177	39	41	42.17	219	40	19.27	Shore.....	3.7619171	5,779.86	18,962.8
	76	25	12.873	78	22	49.40	258	16	35.18	Simpson.....	4.2306962	17,009.68	55,805.9
				119	59	02.62	299	55	34.59	Nowhere.....	4.0282541	10,672.20	35,013.7
			164	19	43.7				Azimuth mark, R.M. no. 3.				
Russell, 1933.	34	45	23.200	57	54	21.95	237	52	00.83	Park.....	3.8714412	7,437.74	24,402.0
	76	39	46.788	162	06	40.78	342	05	43.39	Adam.....	3.9201803	8,321.09	27,300.1
				230	31	43.2				Azimuth mark, R.M. no. 3.			
White, 1933.	34	46	37.103	210	08	22.69	30	09	36.27	Adam.....	3.8144955	6,523.72	21,403.2
	76	43	36.275	291	17	55.07	111	20	05.94	Russell.....	3.7968857	6,264.49	20,552.7
				4	14	24.08	184	14	13.73	Park.....	3.7957603	6,248.28	20,499.6
			117	03	35.0				Azimuth mark, R.M. no. 3.				
<i>Supplementary points</i>													
Cape Lookout lighthouse, 1933.	34	37	21.326	119	55	06.3	299	48	02.4	Park eccentric.....	4.339830	21,869.1	71,749
	76	31	29.621	119	56	17.8	299	49	14.0	Park.....	4.339835	21,869.3	71,750
				159	55	05.8	339	53	35.3	Gaskill.....	4.071357	11,785.7	38,667
			197	27	13.5	17	29	25.3	Shore.....	4.292317	19,626.3	64,387	

¹ No check on this position.

Newport to Core Sound—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance						
							Logarithm (meters)	Meters	Feet				
<i>Supplementary points—Continued</i>													
Beaufort, Tidewater Power Co., water tank, ball atop center, 1933.	34	43	08.036	168	25	06.6	348	24	11.0	Adam.....	4.091138	12,335.0	40,469
	76	39	49.920	211	54	54.1	31	57	00.5	Simpson.....	4.027585	10,655.8	34,960
				267	26	10.1	87	29	24.5	Gaskill.....	3.939092	8,691.4	28,515
Near, 1913 ¹	34	43	19.710	117	54	20.5	207	54	19.4	Gaskill.....	1.727053	53.34	175.0
	76	34	06.815										
Stack (highest of three), 1933 ¹	34	45	18.19	146	58	08	326	55	40	Harlowe.....	4.083030	12,106.8	39,720
	76	41	17.21	178	10	07	358	10	01	Adam.....	3.907249	8,077.0	26,499

Eastern oblique arc to Sanford

<i>Principal points</i>													
Ogburn, 1918.....	36	14	41.612	117	48	30.29	297	35	41.36	Moore.....	4.5631652	36,573.39	119,991.2
	79	55	21.366	175	26	53.46	355	26	15.12	Cedder Mountain.....	4.3077152	20,310.25	66,634.5
				20	43	37				Azimuth mark, R.M. no. 2.....			
Kernersville, 1918.....	36	07	31.219	148	22	45.22	328	15	22.60	Moore.....	4.5510590	35,567.97	116,692.6
	80	04	31.199	199	49	31.18	19	54	18.22	Cedder Mountain.....	4.5518393	35,631.93	116,902.4
				225	57	32.45	46	02	57.07	Ogburn.....	4.2809881	19,098.01	62,657.4
				24	30	17				Azimuth mark, R.M. no. 2.....			
Guilford, 1918.....	36	04	58.585	105	28	55.58	285	22	13.95	Kernersville.....	4.2470282	17,685.94	58,024.6
	79	53	09.605	169	37	33.04	349	36	15.29	Ogburn.....	4.2617228	18,269.34	59,938.7
				42	54	16				Azimuth mark, R.M. no. 2.....			
High Point, 1918.....	35	57	29.763	161	23	50.74	341	21	23.91	Kernersville.....	4.2914123	19,561.95	64,179.5
	80	00	21.651	217	59	30.30	38	03	44.37	Guilford.....	4.2445524	17,561.13	57,615.1
				266	56	47.1				Azimuth mark, R.M. no. 3.....			
Greensboro, 1918.....	36	04	28.384	56	27	04.09	236	19	28.29	High Point.....	4.3674994	23,307.70	76,468.7
	79	47	26.489	96	12	58.01	276	09	35.95	Guilford.....	3.9362861	8,635.47	28,331.5

Climax, 1918.....	35	54	28.272	101	18	43.93	281	07	43.82	High Point.....	4.4585879	28,746.70	94,313.1
	79	41	36.786	154	41	11.77	334	37	46.26	Greensboro.....	4.3110232	20,465.54	67,144.0
				19	49	27				Azimuth mark, R.M. no. 2.....			
Asheboro, 1918.....	35	44	13.474	149	41	49.25	329	36	13.90	High Point.....	4.4539182	28,439.25	93,304.4
	79	50	49.022	187	42	27.33	7	44	26.10	Greensboro.....	4.5773447	37,787.20	123,973.5
				216	08	37.98	36	14	01.19	Climax.....	4.3706535	23,477.59	77,026.1
				250	01	37.4				Azimuth mark, R.M. no. 3.....			
Liberty, 1918.....	35	48	41.870	68	43	56.23	248	35	43.34	Asheboro.....	4.3566984	22,735.18	74,590.3
	79	36	45.897	145	39	58.04	325	37	08.53	Climax.....	4.1116833	12,932.62	42,429.4
				33	26	49.1				Azimuth mark, R.M. no. 2.....			
Ramsure, 1918.....	35	39	46.937	118	22	19.47	298	16	25.69	Asheboro.....	4.2384020	17,314.18	56,804.9
	79	40	42.772	199	49	57.82	19	52	16.17	Liberty.....	4.2437365	17,528.17	57,507.0
Siler, 1918.....	35	42	04.431	76	44	32.97	256	37	37.86	Ramsure.....	4.2648017	18,399.32	60,365.1
	79	28	50.747	96	57	04.48	276	44	14.85	Asheboro.....	4.5233830	33,372.06	109,483.2
				135	46	38.59	315	42	00.94	Liberty.....	4.2330874	17,103.59	56,114.0
				65	01	19				Azimuth mark, R.M. no. 2.....			
Ore Hill, 1918.....	35	39	44.410	90	16	09.96	270	07	23.10	Ramsure.....	4.3565987	22,729.96	74,573.2
	79	25	39.083	131	51	21.20	311	49	29.40	Siler.....	3.8108546	6,469.26	21,224.6
Paul Beck, 1918.....	35	34	08.197	123	42	41.46	308	36	38.71	Ramsure.....	4.2749574	18,834.64	61,793.3
	79	30	19.865	188	40	44.17	8	41	36.09	Siler.....	4.1716527	14,847.48	48,712.1
				214	16	12.42	34	18	55.93	Ore Hill.....	4.0983670	12,542.01	41,148.2
Jonesboro, 1918.....	35	27	32.803	110	42	21.82	290	29	54.56	Paul Beck.....	4.5394484	34,629.67	113,614.2
	79	08	53.496	131	45	37.84	311	35	53.02	Ore Hill.....	4.5302980	33,907.67	111,245.4
				174	50	42				Azimuth mark, R.M. no. 2.....			
Carthage, 1918.....	35	20	39.791	142	47	48.20	322	37	27.81	Ramsure.....	4.6477433	44,436.86	145,789.9
	79	22	54.537	155	46	21.67	335	42	03.34	Paul Beck.....	4.4366020	27,327.63	89,657.4
				173	18	30.58	353	16	55.02	Ore Hill.....	4.5504540	35,518.45	116,530.1
				238	58	45.58	59	06	52.80	Jonesboro.....	4.3935213	24,746.93	81,190.6
				266	48	31.4				Azimuth mark, R.M. no. 2.....			
Lemon, 1918.....	35	22	01.535	80	32	32.94	260	26	48.13	Carthage.....	4.1834035	15,254.69	50,048.1
	79	12	58.643	211	11	23.04	31	13	45.10	Jonesboro.....	4.0768778	11,936.52	39,161.7
				280	52	22.5				Azimuth mark, R.M. no. 2.....			
Foch, 1918.....	35	10	14.755	181	40	34.95	1	40	47.84	Carthage.....	4.2848859	19,270.19	63,222.3
	79	23	16.862	215	36	20.75	35	42	17.72	Lemon.....	4.4282364	26,806.27	87,946.9
Sanford, 1918.....	35	27	05.797	250	18	23.56	70	19	17.07	Jonesboro.....	3.3928083	2,470.63	8,105.7
	79	10	25.744	22	22	33.17	202	21	04.57	Lemon.....	4.0060115	10,139.38	33,265.6
				248	58	34.4				Azimuth mark, R.M. no. 2.....			
Allenby, 1918.....	35	31	16.065	350	20	47.41	170	21	14.35	Jonesboro.....	3.8438165	6,979.37	22,898.1
	79	09	39.910	8	31	23.09	188	30	56.48	Sanford.....	3.8920359	7,798.95	25,587.1

¹ No check on this position.

Eastern oblique arc to Sanford—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Swan, 1918.....	35	23	02.669	78	01	06.70	257	57	43.58	Lemon.....	3.9568584	9,054.37	29,705.9
	79	07	07.791	162	14	49.73	342	13	48.47	Jonesboro.....	3.9415968	8,741.72	28,680.1
				255	13	31	75	13	32	Swan reference mark no. 1.....	1.5565437	36.02	118.2
Swan eccentric, 1933 ¹	35	23	02.587	251	01	21	71	01	22	Swan reference mark no. 1.....	1.5565437	36.02	118.2
	79	07	06.546	283	28	28				Azimuth mark, R.M. no. 2.....			
<i>Supplementary points</i>													
Winston-Salem, water tank, 1918 ¹	36	06	00.34	261	06	29	81	13	33	Kernersville.....	4.261028	18,240.1	59,843
	80	16	31.85	302	51	28	123	00	59	High Point.....	4.461541	28,942.8	94,957
Greensboro, white water tank, 1918 ¹	36	03	41.48	53	19	54	233	13	53	High Point.....	4.282444	19,162.1	62,868
	79	50	08.30	117	39	43	297	37	56	Gulford.....	3.709400	5,121.5	16,803
Greensboro, city water tank, 1918 ¹	36	04	31.63	56	07	25	235	59	51	High Point.....	4.367139	23,288.4	76,405
	79	47	30.08	95	36	51	275	33	31	Gulford.....	3.931242	8,535.8	28,005
Flat Shoal Mountain, 1918 ¹	36	22	29.70	251	59	31	72	02	39	Moore.....	3.921038	8,337.5	27,354
	80	22	17.72	316	02	12	136	12	42	Kernersville.....	4.584535	38,418.0	126,043
Greensboro, Vicks Chemical Company, water tank, 1918 ¹	36	03	58.26	108	34	05	288	31	55	Gulford.....	3.766730	5,844.3	19,174
	79	49	28.18	253	02	06	73	03	17	Greensboro.....	3.502906	3,183.5	10,445
Pilot Mountain, 1918.....	36	20	23.770	249	21	11.7	69	28	00.4	Moore.....	4.263789	18,356.5	60,225
	80	28	28.843	281	50	30.2	102	10	06.5	Ogburn.....	4.705033	50,702.9	166,348
				303	26	11.7	123	40	21.4	Kernersville.....	4.634277	43,080.1	141,339
High Point, higher tank, 1918.....	35	57	32.224	71	00	41.8	251	00	36.6	High Point.....	2.367462	233.1	765
	80	00	12.857	160	42	58.5	340	40	26.5	Kernersville.....	4.291408	19,561.8	64,179
				217	34	27.1	37	38	36.0	Gulford.....	4.239704	17,366.2	56,976
Stokesdale, 1918 ¹	36	14	58.07	274	33	40	94	36	10	Ogburn.....	3.802890	6,351.7	20,839
	79	59	34.95	28	16	48	208	13	53	Kernersville.....	4.194131	15,636.2	51,300

Western North Carolina

Principal points													
Bowman (Va.), 1933.....	36	38	43.562	258	55	08.57	79	06	01.07	Bull.....	4.4415298	27,639.48	90,680.5
	80	31	42.642	321	14	45.46	141	23	31.02	Moore.....	4.5459990	35,155.96	115,340.8
				171	26	22.2				Azimuth mark, R.M. no. 1.			
Turner, 1933.....	36	25	35.878	205	45	11.57	25	49	52.37	Bowman.....	4.4308153	26,965.93	88,470.7
	80	39	34.315	232	39	01.36	52	54	33.15	Bull.....	4.6888686	48,850.45	160,270.2
				275	14	39.26	95	28	03.45	Moore.....	4.5302326	33,902.57	111,228.7
			8	46	57.9				Azimuth mark.				
Saddle, 1933.....	36	30	04.257	245	42	51.61	65	57	06.50	Bowman.....	4.5921677	39,099.19	128,277.9
	80	55	37.370	288	57	15.73	109	06	48.09	Turner.....	4.4042434	25,365.50	83,220.0
				217	01	53.4				Azimuth mark.			
Felt (Va.), 1933.....	36	37	23.293	264	34	26.40	84	45	02.45	Bowman.....	4.4248396	26,597.42	87,261.7
	80	49	28.578	325	48	44.27	145	54	37.96	Turner.....	4.4206979	26,344.98	86,433.5
				34	09	16.69	214	05	37.00	Saddle.....	4.2134530	16,347.56	53,633.6
			52	35	31.5				Azimuth mark.				
Bryant, 1933.....	36	23	17.945	202	14	43.34	22	16	45.63	Saddle.....	4.1313834	13,532.67	44,398.4
	80	59	03.227	261	35	55.06	81	47	28.84	Turner.....	4.4688488	29,433.97	96,567.9
				225	08	47.6				Azimuth mark, R.M. no. 1.			
Star, 1933.....	36	12	32.418	139	22	38.83	319	15	53.08	Bryant.....	4.4189012	26,236.22	86,076.7
	80	47	37.841	159	47	40.96	339	43	02.70	Saddle.....	4.5385132	34,555.18	113,399.8
				206	30	05.22	26	34	51.59	Turner.....	4.4312535	26,903.14	88,560.0
			207	09	44.2				Azimuth mark, R.M. no. 1.				
Owen, 1933.....	36	07	39.530	213	56	41.40	34	04	23.75	Bryant.....	4.5427342	34,892.67	114,477.0
	81	12	04.997	256	02	56.87	76	17	22.73	Star.....	4.6770675	37,763.09	123,894.4
Mulberry, 1933.....	36	22	34.452	266	23	44.36	86	32	21.16	Bryant.....	4.3376032	21,757.21	71,381.8
	81	13	34.489	295	24	24.20	115	39	45.60	Star.....	4.6339538	43,048.08	141,233.6
				355	21	42.61	175	22	35.53	Owen.....	4.4420726	27,674.04	90,793.9
			214	28	47.8				Azimuth mark, R.M. no. 1.				
Thomkins, 1933.....	36	14	24.468	236	07	53.57	56	16	49.14	Mulberry.....	4.4338142	27,152.78	89,083.7
	81	28	38.965	296	35	55.54	116	45	42.36	Owen.....	4.4439927	27,796.67	91,196.2
				126	14	44.3				Azimuth mark, R.M. no. 1.			
Hickory, 1933.....	35	59	47.400	153	39	55.96	333	34	39.97	Thomkins.....	4.4796406	30,174.53	98,997.6
	81	19	42.892	192	17	36.74	12	21	14.26	Mulberry.....	4.6347713	43,129.24	141,499.8
				218	10	58.66	38	15	28.21	Owen.....	4.2676926	18,522.20	60,768.3
			250	14	54.51	70	20	53.15	Poore.....	4.2160456	16,445.56	53,955.1	

1 No check on this position.

Western North Carolina—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance						
	°	'	"				°	'	"	Logarithm (meters)	Meters	Feet	
<i>Principal points—Continued</i>													
Hibriten, 1933.....	35	54	24.819	181	43	15.75	1	43	41.95	Thomkins.....	4.5681051	36,991.77	121,363.8
	81	29	23.458	235	36	24.55	55	42	05.40	Hickory.....	4.2460609	17,622.23	57,815.6
Grandfather, 1933.....	36	06	05.574	242	37	39.92	62	49	24.23	Poore.....	4.6288394	33,793.98	110,872.4
				22	12	28.59	202	06	29.74	Benn.....	4.6121072	40,936.17	134,304.7
				243	33	36.40	63	45	49.92	Thomkins.....	4.5398110	34,658.60	113,709.1
				275	37	17.87	96	00	49.45	Poore.....	4.7802883	60,295.97	197,821.0
Jonas, 1933.....	81	49	21.798	284	31	25.50	104	48	52.35	Hickory.....	4.6630148	46,027.22	151,007.6
				305	38	33.56	125	50	18.00	Hibriten.....	4.5679162	36,975.68	121,311.0
				346	07	02.80	166	12	44.65	Benn.....	4.7873834	61,289.13	201,079.4
				203	30	49.52	23	33	30.63	Grandfather.....	4.2348151	17,171.77	56,337.7
High Peak, 1933.....	81	36	31.778	278	53	41.27	99	08	05.24	Hibriten.....	4.5724772	37,366.05	122,591.8
				4	22	13.5				Azimuth mark, R.M. no. 3.			
				135	09	25.86	314	59	14.61	Jonas.....	4.5693328	37,096.49	121,707.4
Pogue, 1933.....	81	37	20.308	155	22	42.36	335	15	10.71	Grandfather.....	4.6649431	46,232.04	151,679.6
				207	44	51.97	27	49	02.62	Hibriten.....	4.8630233	23,068.71	75,684.6
				186	43	03.55	6	44	46.44	Jonas.....	4.5762273	37,690.10	123,654.9
Mitchell, 1933.....	82	15	54.675	249	54	04.52	70	05	55.87	High Peak.....	4.5138429	32,646.97	107,169.3
				236	43	24.02	56	56	16.74	Jonas.....	4.5969786	39,534.72	129,706.8
				298	42	29.59	118	53	36.51	Pogue.....	4.5158221	32,796.09	107,598.5
Pinnacle, 1933.....	82	02	27.611	305	03	06.8				Azimuth mark.			
				141	46	37.16	321	38	46.79	Mitchell.....	4.5154356	32,766.92	107,502.8
				195	09	23.20	15	14	22.27	Jonas.....	4.6907718	49,065.00	160,874.1
				220	26	01.48	40	29	16.97	Pogue.....	4.1151590	13,038.44	42,770.4
Bearwallow, 1933.....	82	21	26.095	241	34	07.79	61	49	14.10	High Peak.....	4.6480312	44,466.32	145,886.6
				193	51	51.64	13	55	04.63	Mitchell.....	4.5408741	34,743.54	113,987.8
				254	18	50.35	74	29	51.42	Pinnacle.....	4.4740875	29,791.16	97,739.8
Gerton, 1933.....	82	19	58.316	92	50	41.5				Azimuth mark.			
				26	50	43.75	206	49	52.80	Bearwallow.....	3.6903155	4,901.35	16,080.5
				191	48	36.03	11	48	57.97	Mitchell.....	4.4769382	29,987.96	98,383.5
	262	05	50.30	82	16	00.69				Pinnacle.....	4.4269028	26,724.08	87,677.3

U. S. COAST AND GEODETIC SURVEY

Britten, 1933.....	35	43	16.768	257	29	37.91	77	38	05.45	Mitchell.....	4.3493980	22,356.20	73,347.0
	82	30	23.527	334	52	46.98	154	57	59.76	Bearwallow.....	4.5040920	31,922.14	104,731.2
Pisgah, 1933.....	85	25	32.415	214	36	40.20	34	45	24.64	Britten.....	4.6008710	39,890.64	130,874.5
				263	46	02.81	83	59	57.23	Bearwallow.....	4.5622774	36,498.70	119,746.2
				206	02	48				Spivey, fire tower.			
Sandymush, 1933.....	82	52	57.436	262	09	55.64	82	23	05.71	Britten.....	4.5359210	34,349.55	112,695.1
				286	52	29.82	117	10	50.01	Bearwallow.....	4.7280729	53,485.41	175,411.1
				337	57	01.84	158	01	24.90	Pisgah.....	4.4828937	30,401.41	99,742.0
				29	11	11.0				Azimuth mark, R.M. no. 3.			
Water Rock (U.S.G.S.), 1933.....	83	08	15.997	223	57	02.26	44	05	58.61	Sandymush.....	4.5222101	33,282.05	109,192.9
				276	54	12.49	97	07	27.55	Pisgah.....	4.5420449	34,837.34	114,295.5
Sentell, 1933.....	82	55	37.804	82	44	30.60	262	37	10.64	Water Rock (U.S.G.S.).....	4.2849225	19,271.81	63,227.6
				190	38	05.17	10	39	38.48	Sandymush.....	4.3394949	21,852.19	71,693.4
				293	25	12.39	113	31	07.85	Pisgah.....	4.2265033	16,846.25	55,269.7
				226	24	39.3				Azimuth mark, R.M. no. 2.			
Guyot (U.S.G.S.) (Tenn.-N.C.), 1933.....	83	15	27.378	274	39	08.48	94	52	16.08	Sandymush.....	4.5322323	34,059.03	111,742.0
				337	52	25.66	157	56	36.68	Water Rock (U.S.G.S.).....	4.4605755	28,878.56	94,745.7
Max Patch, 1933.....	82	57	25.181	332	40	30.27	152	43	06.65	Sandymush.....	4.1663595	14,667.61	48,122.0
				23	56	49.10	203	50	29.96	Water Rock (U.S.G.S.).....	4.6067002	40,429.67	132,643.0
English (Tenn.), 1891.....	83	17	52.590	89	30	47.59	249	20	15.30	Guyot (U.S.G.S.).....	4.4630276	29,042.07	95,282.2
				12	14	13.2				Azimuth mark, R.M. no. 1.			
				290	24	48.27	110	36	47.11	Max Patch.....	4.5170049	32,885.53	107,891.9
Black Mountain, 1933.....	82	55	38.506	350	27	47.50	170	29	12.45	Guyot (U.S.G.S.).....	4.3430909	22,033.88	72,289.5
				55	30	08				Azimuth mark.			
				132	53	29.18	312	46	10.55	Water Rock (U.S.G.S.).....	4.4161333	26,069.54	85,529.8
Hogback Mountain, 1933.....	83	13	26.501	180	03	00.92	0	03	01.33	Sentell.....	4.3048809	20,178.13	66,201.1
				185	33	13.94	5	34	47.46	Sandymush.....	4.6217103	41,851.43	137,307.6
				192	57	07.93	13	00	07.41	Water Rock (U.S.G.S.).....	4.5432029	34,930.35	114,600.7
Rattlesnake Cliff, 1933.....	83	24	17.382	238	46	37.89	58	56	53.99	Black Mountain.....	4.4990279	31,552.07	103,517.1
				18	02	15.6				Azimuth mark, fire tower.			
				250	02	17.51	70	11	34.76	Water Rock (U.S.G.S.).....	4.4114555	25,790.25	84,613.5
Cheoah (U.S.G.S.), 1933.....	83	40	51.488	281	30	51.25	101	47	25.61	Black Mountain.....	4.6465777	44,317.74	145,399.1
				252	32	40.39	72	51	33.03	Water Rock (U.S.G.S.).....	4.7133775	51,686.55	169,575.0
				255	11	38.82	75	21	14.05	Rattlesnake Cliff.....	4.4141703	25,951.97	85,144.1
Standing Indian, 1933.....	83	02	07.127	294	02	32.08	114	18	21.27	Hogback Mountain.....	4.6586632	45,589.33	149,571.0
				158	01	56.26	337	56	59.97	Cheoah (U.S.G.S.).....	4.5406119	34,722.58	113,919.0
				197	20	09.87	17	24	46.54	Rattlesnake Cliff.....	4.6089916	40,643.55	133,344.7
	244	38	04.17	64	48	54.28	Hogback Mountain.....	4.5006714	31,671.70	103,909.6			
	143	14	19.7							Azimuth mark, R.M. no. 3.			

TRIANGULATION AND TRAVERSE IN NORTH CAROLINA

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Rabun 2 (Ga.), 1933.....	34	57	55.725	109	40	41.37	289	32	29.52	Standing Indian.....	4.3633040	23,083.62	75,733.5
	83	17	59.721	198	00	28.71	18	03	05.66	Hogback Mountain.....	4.3496342	22,368.36	73,386.9
				33	24	05.2				Azimuth mark, R.M. no. 3.....			
Tatham (U.S.G.S.), 1933.....	35	15	26.339	233	55	28.30	53	59	25.94	Cheoah (U.S.G.S.).....	4.1090393	12,854.03	42,171.9
	83	47	42.816	316	21	19.87	136	30	12.70	Standing Indian.....	4.5313930	33,993.27	111,526.3
Lance (Ga.), 1933.....	34	58	55.184	211	51	52.26	31	59	04.62	Tatham (U.S.G.S.).....	4.5561483	35,987.22	118,068.1
	84	00	14.357	261	56	52.05	82	12	54.23	Standing Indian.....	4.6328049	42,934.35	140,860.4
				79	02	41.25	258	43	05.93	Cohutta.....	4.7249444	53,081.65	174,152.0
				114	54	15.07	294	35	07.91	Bean.....	4.7455765	55,664.27	182,625.2
Laurel, 1933.....	35	17	47.525	264	00	31.27	84	12	23.40	Cheoah (U.S.G.S.).....	4.4953853	31,288.54	102,652.5
	84	01	23.501	281	46	54.43	101	54	48.41	Tatham (U.S.G.S.).....	4.3261796	21,192.38	69,528.7
				303	06	55.11	123	28	40.88	Standing Indian.....	4.7230262	52,847.71	173,384.5
				357	07	22.10	177	08	01.90	Lance.....	4.5433091	34,938.89	114,628.7
				76	45	51.86	256	27	20.13	Bean.....	4.6995680	50,068.90	164,267.7
Pack Mountain (U.S.G.S.), 1933.....	35	02	59.600	221	07	27.10	41	16	32.41	Laurel.....	4.5607060	36,366.88	119,313.7
	84	17	10.135	286	13	16.66	106	22	59.42	Lance.....	4.4286581	26,832.31	88,032.3
				56	02	08.38	235	52	14.26	Cohutta.....	4.5015547	31,736.18	104,121.1
				111	51	16	302	21	28.82	Bean.....	4.4683210	29,398.22	96,450.7
										Sassafras Mountain, fire tower.....			
<i>Supplementary points</i>													
Johnstown, 1933.....	36	29	07.898	214	03	45.1	34	09	58.9	Bull.....	4.443997	27,796.9	91,197
	80	23	57.175	312	57	55.8	133	02	03.8	Moore.....	4.152979	14,222.6	46,662
				96	35	45.2				Azimuth mark.....			
Brim (N. C.-Va.), 1933.....	36	33	04.289	150	04	21.2	330	01	56.7	Bowman.....	4.081682	12,069.3	39,597
	80	27	40.239	233	15	49.6	53	24	16.8	Bull.....	4.420568	26,337.1	86,408
				164	59	37.6				Azimuth mark.....			
Mount Airy, standpipe next to water tank, 1933.....	36	30	41.066	25	23	27.1	205	21	40.6	Turner.....	4.017516	10,411.6	34,159
	80	36	35.097	122	52	16.8	302	44	36.0	Felt.....	4.359510	22,882.8	75,075
				206	01	45.5	26	04	39.8	Bowman.....	4.218923	16,554.8	54,314

U. S. COAST AND GEODETIC SURVEY

83650-35-9

Alberta, 1933.....	36	19	41.059	105	55	41.8	285	46	22.0	Bryant.....	4.388738	24,475.9	80,301
	80	43	18.860	207	05	01.2	27	07	14.4	Turner.....	4.089398	12,285.6	40,307
				271	45	47.7				Azimuth mark, R.M. no. 2.....			
State Road, 1933.....	36	19	31.634	123	44	04.7	303	39	56.0	Bryant.....	4.099408	12,572.1	41,247
	80	52	03.722	238	55	54.3	59	03	18.7	Turner.....	4.338346	21,794.5	71,504
				128	09	49.2				Azimuth mark, R.M. no. 1.....			
Mount Airy, 1933.....	36	20	28.837	31	09	20.9	211	07	37.6	Turner.....	3.923743	8,389.6	27,525
	80	36	40.070	127	29	14.4	307	21	36.9	Felt.....	4.381392	24,065.3	78,954
				70	48	39.6				Azimuth mark.....			
Greystone Hotel, water tank, 1933.....	36	24	52.732	199	32	52.2	19	34	13.6	Saddle.....	4.008187	10,190.3	33,433
	80	57	54.375	208	30	10.2	28	35	11.2	Felt.....	4.420558	26,336.5	86,406
				325	58	03.0	146	04	08.1	Star.....	4.439620	27,518.2	90,283
B.M. Fairview, 1933 ¹	36	19	43.141	63	25	12.9	243	25	09.9	Alberta.....	2.156610	143.42	470.5
	80	43	13.718										
Wilkes, 1933.....	36	10	20.162	42	22	05.1	222	20	18.6	Owen.....	3.826042	6,690.5	21,980
	81	09	04.449	104	29	25.5	284	17	51.7	Thomkins.....	4.481315	30,291.1	99,380
				163	20	19.7	343	23	40.0	Mulberry.....	4.373188	23,615.0	77,477
North Wilkesboro, red brick house of Mrs. Claudill, spire, 1933 ¹	36	09	59.17	45	55	41	225	53	56	Owen.....	3.791423	6,186.2	20,296
	81	09	07.25	186	11	06	6	11	08	Wilkes.....	2.813415	650.8	2,135
Taylor, 1933.....	35	55	28.128	85	58	11.7	265	47	37.7	Hibriten.....	4.434112	27,171.4	89,145
	81	11	22.553	122	33	07.8	302	28	14.1	Hickory.....	4.172247	14,867.8	48,779
				192	18	38.0	12	19	47.4	Poore.....	4.141576	13,854.0	45,453
Taylorville, Methodist Church, spire, 1933 ¹	35	55	22.24	97	40	28	277	39	56	Taylor.....	3.133578	1,360.1	4,462
	81	10	28.78	120	31	30	300	26	05	Hickory.....	4.207144	16,111.8	52,860
Taylorville, prison camp, water tower, 1933.....	35	54	30.845	125	50	13.0	305	44	56.0	Hickory.....	4.222242	16,681.8	54,730
	81	10	42.965	150	39	30.4	330	39	07.1	Taylor.....	3.306504	2,025.4	6,645
				187	18	37.5	7	19	23.6	Poore.....	4.188256	15,426.1	50,610
Blowing Rock, 1933.....	36	07	13.208	325	42	14.3	145	48	32.8	Hibriten.....	4.457107	28,648.8	93,992
	81	40	07.222	49	23	05.4	229	14	58.0	Jonas.....	4.436935	27,348.6	89,726
				81	29	54.2	261	24	27.4	Grandfather.....	4.146941	14,026.2	46,018
				316	59	26.1				Azimuth mark.....			
Hartland, 1933.....	35	51	04.547	346	26	54.2	166	28	14.0	High Peak.....	4.165659	14,644.0	48,045
	81	38	48.305	117	56	04.9	297	47	12.7	Jonas.....	4.410552	25,736.7	84,438
				246	24	50.9	66	30	21.0	Hibriten.....	4.189065	15,454.9	50,705
				184	16	02.2				Azimuth mark, R.M. no. 1.....			
Lenoir, 1933.....	35	54	52.083	280	27	08.0	100	28	54.4	Hibriten.....	3.665172	4,625.6	15,176
	81	32	24.867	48	40	38.5	228	32	21.2	Pogue.....	4.690848	49,073.6	161,002
				98	54	53.9	278	42	16.3	Jonas.....	4.515104	32,741.9	107,421

¹ No check on this position.

TRIANGULATION AND TRAVERSE IN NORTH CAROLINA

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Circle, 1933	35	54	52.888	40	41	38.9	220	41	38.4	Lenoir	1.514747	32,715	107.33
	81	32	24.016										
Lenoir, First Baptist Church, spire, 1933	35	54	57.777	342	19	16.4	162	19	17.5	Circle	2.199100	158.2	519
	81	32	25.932	282	30	11.3	102	31	58.3	Hibriten	3.670871	4,686.7	15,376
				351	20	58.1	171	20	58.7	Lenoir	2.249238	177.5	582
Bridgewater, 1933	35	42	42.451	266	53	50.5	87	02	54.1	High Peak	4.369894	23,436.6	76,892
	81	52	02.900	36	12	21.0	216	09	32.6	Pogue	4.089924	12,300.5	40,356
				263	38	35.9				Azimuth mark, R.M. no. 1.			
Burke-Caldwell county-line stone, 1933 ¹	35	51	04.339	163	48	14	343	48	14	Hartland	0.824776	6.68	21.9
	81	38	48.231										
Grant, 1933	35	39	31.658	313	51	40.3	133	53	17.8	Pogue	3.766465	5,840.7	19,162
	81	59	38.974	16	55	12.0	196	53	33.9	Pinnacle	4.164286	14,597.8	47,893
				115	40	52.0	295	31	22.5	Mitchell	4.434510	27,196.3	89,227
Marion, 1933	35	41	02.401	334	53	01.1	154	53	31.4	Grant	3.489760	3,088.6	10,133
	82	00	31.093	111	10	17.8	291	01	18.5	Mitchell	4.395849	24,879.9	81,627
Lawn, 1933 ¹	35	41	00.998	201	09	59	21	10	00	Marion	1.666078	46.353	152.08
	82	00	31.759										
Marion A, 1933 ¹	35	41	02.635	279	00	18	99	00	19	Marion	1.663520	46.1	151
	82	00	32.903	330	17	40	150	17	41	Lawn	1.763950	58.1	191
Spivey, 1933	35	36	03.250	224	31	22.4	44	36	27.4	Britten	4.273076	18,753.2	61,526
	82	39	06.709	300	06	55.2	120	17	11.6	Bearwallow	4.490199	30,917.1	101,434
				26	09	04.3	206	05	24.6	Pisgah	4.335517	21,652.9	71,040
Asheville, 1933	35	35	41.757	44	17	06.3	224	10	05.0	Pisgah	4.418405	26,206.3	85,979
	82	33	19.666	94	21	51.0	274	18	29.0	Spivey	3.942555	8,761.0	28,743
Alley, 1933 ¹	35	35	43.952	3	57	49	183	57	49	Asheville	1.831230	67.800	222.44
	82	33	19.480	78	21	19				Azimuth mark.			

Asheville A, 1933 ¹	35	35	43.150	245	07	06	65	07	08	Alley	1.768941	58.7	193
	82	33	21.597	311	26	57	131	26	58	Asheville	1.811861	64.8	213
Waynesville, 1933	35	29	03.601	204	24	54.7	24	28	42.4	Sandymush	4.376788	23,811.6	78,122
	82	59	28.832	286	56	20.5	107	04	30.0	Pisgah	4.347364	22,251.7	73,004
				184	19	57.9				Azimuth mark, R.M. no. 3.			
Carver, 1933	35	22	43.719	91	51	21.7	271	43	00.7	Rattlesnake Cliff	4.339343	21,844.5	71,668
	83	09	52.331	194	24	38.1	14	25	33.9	Water Rock (U.S.G.S.)	3.989463	9,760.3	32,022
Dillsboro, 1933	35	21	12.240	227	59	00.8	48	04	14.1	Water Rock (U.S.G.S.)	4.263634	18,349.9	60,203
	83	17	16.684	255	51	25.3	75	55	42.5	Carver	4.063202	11,566.5	37,948
Sylva, 1933	35	22	21.379	264	30	15.9	84	33	00.7	Carver	3.858468	7,218.8	23,684
	83	14	37.014	62	09	10.0	242	07	37.6	Dillsboro	3.658918	4,569.5	14,959
				67	27	37.5				Azimuth mark, R.M. no. 3.			
Bryson, 1933	35	26	49.377	265	30	04.9	85	39	24.9	Water Rock (U.S.G.S.)	4.387706	24,417.8	80,111
	83	24	21.419	359	09	10.4	179	09	12.7	Rattlesnake Cliff	3.838299	6,890.5	22,607
				33	53	34.9				Azimuth mark, R.M. no. 1.			
Wayah, 1933	35	10	48.653	274	39	08.2	94	50	46.4	Hogback Mountain	4.488333	30,784.6	100,999
	83	33	38.806	352	40	04.7	172	40	51.6	Standing Indian	4.209619	16,203.9	53,162
				145	52	36.1	325	48	26.3	Cheoah (U.S.G.S.)	4.284617	19,481.3	63,915
				211	56	27.1	32	01	51.3	Rattlesnake Cliff	4.427873	26,783.9	87,874
				36	05	40.1				Azimuth mark, R.M. no. 3.			
Wayah Bald, fire tower, 1933	35	10	48.593	145	53	29.8	325	49	20.2	Cheoah (U.S.G.S.)	4.289589	19,480.0	63,911
	83	33	39.000	211	56	51.6	32	02	16.0	Rattlesnake Cliff	4.427941	26,788.0	87,887
				352	38	59.3	172	39	46.5	Standing Indian	4.209588	16,202.7	53,158
Standing Indian, fire tower, 1933 ¹	35	02	06.99	172	41	08	352	40	22	Wayah	4.209731	16,208.1	53,176
	83	32	17.26	289	32	51	109	40	03	Rabun 2	4.363292	23,083.0	75,731
Franklin, 1933	35	11	07.000	39	33	05.1	219	27	53.5	Standing Indian	4.333719	21,563.5	70,746
	83	23	15.514	87	59	48.3	267	53	49.2	Wayah	4.198124	15,780.6	51,774
				79	57	15.4				Azimuth mark, R.M. no. 2.			
Welch, 1933	35	16	28.816	81	29	58.8	261	25	06.0	Tatham (U.S.G.S.)	4.112738	12,964.0	42,533
	83	39	15.610	156	45	20.1	336	44	24.7	Cheoah (U.S.G.S.)	3.787896	6,136.2	20,132
				208	36	26.9				Azimuth mark, R.M. no. 2.			
Topton, 1933	35	16	25.756	268	19	04.9	88	20	18.7	Welch	3.509510	3,232.3	10,605
	83	41	23.447	79	13	10.6	259	09	31.6	Tatham (U.S.G.S.)	3.989551	9,762.3	32,028
				71	14	00.9				Azimuth mark, R.M. no. 1.			
Hayesville, 1933	35	02	15.269	270	29	11.5	90	38	46.4	Standing Indian	4.404549	25,383.4	83,279
	83	48	58.602	70	15	43.7	250	09	16.0	Lance	4.260302	18,209.7	59,743
				290	29	13.7				Azimuth mark, R.M. no. 2.			

¹ No check on this position.

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance			
	°	'	"				Logarithm (meters)	Meters	Feet	
<i>Supplementary points—Continued</i>										
Fain (U.S.G.S.), 1933.....	35	07	19.419	235	07	44.7	Tatham (U.S.G.S.).....	4.419800	26,290.6	86,255
	84	01	56.097	350	34	14.7	Lance.....	4.197310	15,751.1	51,677
				212	58	14.4	Azimuth mark, R.M., no. 2.			
Murphy, 1933.....	35	05	18.171	180	19	04.3	Fain (U.S.G.S.).....	3.572464	3,736.5	12,259
	84	01	56.915	229	00	04.6	Tatham (U.S.G.S.).....	4.456476	28,607.2	93,855
				234	52	05.5	Azimuth mark, R.M. no. 2.			

Goldsboro to Little River, S.C., and Marietta to Lincolnton

<i>Principal points</i>										
Station	Latitude and longitude			Azimuth	Back azimuth	To station	Logarithm (meters)	Meters	Feet	
Mount Olive, 1933.....	35	12	01.861	205	23	07.21	Dudley.....	3.9118538	8,163.08	26,781.7
	78	04	23.527	267	36	38.23	Whitehall.....	4.2730284	18,751.17	61,519.5
				252	05	50.0	Azimuth mark, R.M. no. 1.			
Alphin, 1933.....	35	07	09.553	132	14	34.91	Mount Olive.....	4.1273418	13,407.31	43,987.1
	77	57	51.162	158	36	34.94	Dudley.....	4.2454281	17,596.57	57,731.4
				222	01	46.82	Whitehall.....	4.1192294	13,159.20	43,173.1
Ireland, 1933.....	35	06	52.801	223	12	53.35	Mount Olive.....	4.1164286	13,074.61	42,895.6
	78	10	17.437	268	22	31.90	Alphin.....	4.2765636	18,904.43	62,022.3
				279	22	24	Azimuth mark, R.M. no. 2.			
Everton, 1933.....	35	02	15.466	126	46	56.67	Ireland.....	4.1548858	14,285.18	46,867.3
	78	02	45.625	172	11	47.23	Mount Olive.....	4.2610234	18,239.94	59,842.2
				219	26	10.12	Alphin.....	4.0695995	11,738.15	38,510.9
Warsaw, 1933.....	34	59	55.122	151	27	09.13	Azimuth mark, R.M. no. 2.			
	78	05	40.857	225	45	20.60	Ireland.....	4.1660102	14,655.82	48,083.3
				327	36	17.4	Everton.....	3.7923986	6,200.10	20,341.5

Robinson, 1933.....	35	00	29.899	211	04	17.73	Ireland.....	4.1392321	13,779.46	45,208.1
	78	14	58.276	260	00	25.16	Everton.....	4.2754592	18,856.42	61,864.8
				274	17	28.69	Warsaw.....	4.1615300	14,175.23	46,506.6
More, 1933.....	34	56	14.947	115	45	37.98	Azimuth mark, R.M. no. 2.			
	78	04	14.998	162	12	32.87	Robinson.....	4.2579359	18,110.73	59,418.3
				191	31	28.55	Warsaw.....	3.8528417	7,125.93	23,379.0
Canady, 1933.....	34	54	00.581	206	31	38.27	Everton.....	4.0545002	11,338.62	37,200.1
	78	18	54.499	259	25	22.37	Azimuth mark, R.M. no. 1.			
				139	27	42.0	Robinson.....	4.1274597	13,410.95	43,999.1
Camp, 1933.....	34	51	12.605	110	28	22.12	More.....	4.3561308	22,705.49	74,492.9
	78	09	47.307	155	20	34.14	Azimuth mark, R.M. no. 2.			
				222	08	18.36	Canady.....	4.1711236	14,829.40	48,652.8
Ingold, 1933.....	34	49	29.458	109	10	06.22	Robinson.....	4.2764630	18,900.05	62,007.9
	78	20	48.895	259	14	23.78	More.....	4.0993214	12,569.60	41,238.8
				60	37	17	Azimuth mark, R.M. no. 2.			
Hall, 1933.....	34	44	28.359	124	25	04.20	Canady.....	3.9467287	8,845.63	29,021.0
	78	11	55.446	148	54	10.64	Camp.....	4.2331853	17,107.45	56,126.7
				194	38	39.28	Azimuth mark, R.M. no. 3.			
Garland, 1918.....	34	47	02.499	223	50	27.26	Ingold.....	4.2157164	16,432.98	53,913.9
	78	23	40.069	284	47	22.72	Canady.....	4.3138568	20,599.51	67,583.6
				325	34	58.7	Camp.....	4.1097700	12,875.67	42,242.9
Kerr, 1918.....	34	40	06.839	142	54	08.13	Azimuth mark, R.M. no. 2.			
	78	17	18.947	162	53	46.39	Ingold.....	3.7979625	6,280.04	20,603.8
				225	35	13.60	Hall.....	4.2680714	18,538.36	60,821.3
Beard, 1933.....	34	43	00.041	211	31	54.91	Azimuth mark, R.M. no. 3.			
	78	26	40.397	290	26	05.44	Garland.....	4.2058775	16,064.881	52,706.20
				214	37	03	Ingold.....	4.2586558	18,140.77	59,516.8
Tussock, 1933.....	34	36	51.926	148	03	14.31	Hall.....	4.0614693	11,520.45	37,796.7
	78	22	02.358	172	28	41.71	Azimuth mark, R.M. no. 3.			
				230	12	50.65	Garland.....	3.9428435	8,766.85	28,762.6
White Lake, 1933.....	34	39	22.860	211	13	13.05	Kerr.....	4.1834013	15,254.62	50,047.9
	78	29	19.827	292	37	16.22	Azimuth mark, R.M. no. 1.			
				78	54	41.3	Beard.....	4.1261629	13,370.97	43,867.9

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance						
	°	'	"				°	'	"	Logarithm (meters)	Meters	Feet	
<i>Principal points—Continued</i>													
Monroe, 1933.....	34	33	06.557	182	42	55.38	2	43	07.64	White Lake.....	4.0647738	11,608.44	38,085.4
	78	29	41.424	194	08	12.51	14	09	55.39	Beard.....	4.2755416	18,860.00	61,876.5
				239	16	21.15	59	20	41.72	Tussock.....	4.1337196	13,605.66	44,637.9
				67	11	35.6				Azimuth mark, R.M. no. 2.			
Elizabethtown, 1933.....	34	37	39.620	253	25	38.70	73	29	37.80	White Lake.....	4.0482530	11,175.14	36,663.8
	78	36	20.457	309	34	24.85	129	38	11.38	Monroe.....	4.1205337	13,198.78	43,303.0
				301	56	26.8				Azimuth mark, R.M. no. 2.			
Rogers, 1933.....	34	30	54.340	199	22	09.28	19	23	47.08	Elizabethtown.....	4.1218403	13,238.55	43,433.5
	78	39	12.823	223	55	02.15	44	00	38.74	White Lake.....	4.3378572	21,769.94	71,423.5
				254	20	03.78	74	25	27.69	Monroe.....	4.1798491	15,130.36	49,640.2
				187	23	47.6				Azimuth mark, R.M. no. 1.			
Dublin, 1933.....	34	39	30.806	287	08	51.96	107	12	59.27	Elizabethtown.....	4.0643743	11,597.76	38,050.3
	78	43	35.519	337	09	49.13	157	12	18.25	Rogers.....	4.2371712	17,265.18	56,644.2
				171	21	05.9				Azimuth mark, R.M. no. 3.			
Griffin, 1933.....	34	31	07.234	180	28	15.77	0	28	18.61	Dublin.....	4.1908224	15,517.52	50,910.4
	78	43	40.529	273	18	32.48	93	21	04.17	Rogers.....	3.8350443	6,839.81	22,440.3
				134	00	38				Azimuth mark, R.M. no. 2.			
Mason, 1933.....	34	38	37.681	258	56	51.30	78	59	58.87	Dublin.....	3.9324261	8,559.06	28,080.8
	78	49	05.418	329	09	18.91	149	12	23.31	Griffin.....	4.2085025	16,162.28	53,025.7
				280	36	41.0				Azimuth mark, R.M. no. 1.			
Freeman, 1933.....	34	31	20.627	178	00	53.17	358	00	42.77	Mason.....	4.1295420	13,475.41	44,210.6
	78	48	47.088	207	42	19.85	27	45	16.73	Dublin.....	4.2320846	17,064.15	55,984.6
				272	59	49.46	93	02	43.19	Griffin.....	3.8937511	7,829.81	25,688.3
				243	17	11.7				Azimuth mark, R.M. no. 1.			
Allenton, 1933.....	34	35	31.835	239	55	34.70	59	59	15.51	Mason.....	4.0583672	11,438.45	37,527.6
	78	55	34.089	306	41	27.20	126	45	18.06	Freeman.....	4.1121148	12,945.38	42,471.6
				283	27	20				Azimuth mark, R.M. no. 3.			
Long Branch, 1933.....	34	33	06.853	220	24	13.38	40	25	38.07	Allenton.....	3.7684633	5,867.71	19,251.0
	78	58	03.334	233	19	08.37	53	24	13.81	Mason.....	4.2325458	17,082.28	56,044.1
				282	57	00.88	103	02	16.24	Freeman.....	4.1630785	14,557.22	47,759.8
				137	25	18.6				Azimuth mark, R.M. no. 2.			

Fields, 1933.....	34	27	03.239	152	22	59.57	332	20	49.33	Long Branch.....	4.1019847	12,646.92	41,492.4
	78	54	13.392	172	31	27.74	352	30	42.01	Allenton.....	4.1988277	15,906.21	51,857.5
				226	21	57.27	46	25	02.03	Freeman.....	4.0606505	11,498.75	37,725.5
				271	29	11.6				Azimuth mark, R.M. no. 2.			
Byrd, 1933.....	34	27	47.333	214	07	36.25	34	10	04.55	Long Branch.....	4.0754184	11,896.48	39,030.4
	79	02	25.110	276	08	23.14	96	13	01.34	Fields.....	4.1012077	12,624.31	41,418.3
				218	39	55.7				Azimuth mark, R.M. no. 1.			
Williamson, 1933.....	34	21	33.878	136	29	29.86	316	25	27.87	Byrd.....	4.2007116	15,874.92	52,083.0
	78	55	16.896	168	45	37.71	348	44	03.55	Long Branch.....	4.3378837	21,771.27	71,427.9
				189	04	30.63	9	05	06.51	Fields.....	4.0118816	10,277.36	33,718.3
				288	42	23.8				Azimuth mark, R.M. no. 2.			
Claybank, 1933.....	34	26	00.580	243	39	49.81	63	42	17.19	Byrd.....	3.8704031	7,419.99	24,343.8
	79	06	45.654	294	59	00.85	115	05	29.93	Williamson.....	4.2881987	19,417.74	63,706.4
				181	51	14.8				Azimuth mark, R.M. no. 2.			
Ford, 1933.....	34	19	30.295	137	11	08.86	317	07	02.32	Claybank.....	4.2149174	16,492.78	53,814.8
	78	59	29.036	163	38	52.27	343	37	12.81	Byrd.....	4.2030857	15,961.94	52,368.5
				239	24	09.32	59	26	31.56	Williamson.....	3.8742224	7,485.53	24,558.8
				77	51	30.4				Azimuth mark, R.M. no. 3.			
King eccentric, 1933.....	35	12	27.506	141	33	39.83	321	21	34.83	Benn.....	4.7051307	50,714.33	166,885.3
	81	18	45.904	188	35	06.43	8	40	33.44	Poore.....	4.9737408	94,132.76	308,833.9
				359	27		179	27		King.....	9.9057959	0.805	2.64
				81	06	35.9				Azimuth mark, R.M. no. 2.			
Baker, 1933.....	35	39	37.812	65	48	52.08	245	39	49.19	Benn.....	4.4105657	25,737.46	84,440.3
	81	24	05.551	207	13	55.17	27	22	31.19	Poore.....	4.6829841	48,193.01	158,113.2
Pasour, 1933.....	35	21	50.281	20	08	04.30	200	05	39.11	King eccentric.....	4.2664622	18,469.80	60,596.3
	81	14	34.551	120	37	02.33	300	22	30.11	Benn.....	4.6433588	43,990.49	144,325.5
				156	25	25.27	336	19	53.59	Baker.....	4.5551988	35,908.71	117,810.5
Anderson 2, 1933.....	35	33	57.079	31	41	50.70	211	36	32.95	Pasour.....	4.4201716	26,313.07	86,328.8
	81	05	26.902	90	04	59.78	269	45	06.85	Benn.....	4.7130607	51,648.86	169,451.3
				110	32	43.10	290	21	51.70	Baker.....	4.4778237	30,048.56	98,584.3
				173	38	05.63	353	35	46.60	Poore.....	4.7296316	53,657.64	176,041.8
				231	53	17				Azimuth mark, R.M. no. 1.			
Spencer, 1933.....	35	17	49.605	61	07	14.70	241	00	24.78	King eccentric.....	4.3120854	20,515.66	67,308.5
	81	06	55.689	122	39	23.20	302	34	57.84	Pasour.....	4.1385970	13,759.32	45,142.0
				184	17	18.78	4	18	10.25	Anderson 2.....	4.4756086	29,899.82	98,096.3
Huntersville, 1933.....	35	24	40.386	63	13	51.39	243	04	18.26	Spencer.....	4.4476231	28,030.00	91,961.8
	80	50	25.203	81	57	39.08	261	43	39.75	Pasour.....	4.5676466	36,952.74	121,235.8
				127	07	09.21	306	58	25.73	Anderson 2.....	4.4544962	28,477.13	93,428.7
				84	56	26.0				Azimuth mark, R.M. no. 3.			

Goldsboro to Little River, S.C., and Marietta to Lincoln—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Charlotte, 1933.....	35	13	37.496	87	14	28.52	266	58	15.62	King eccentric.....	4.6306522	42,722.06	140,164.0
	80	50	38.848	107	32	40.28	287	23	16.33	Spencer.....	4.4130539	25,885.34	84,925.5
				112	49	52.16	292	36	02.61	Pasour.....	4.5946827	39,326.26	129,022.9
				180	57	55.79	0	58	03.68	Huntersville.....	4.3103024	20,431.60	67,032.7
				197	55	57.9				Azimuth mark, R.M. no. 3.			
Concord, 1933.....	35	22	41.091	52	38	26.58	232	30	05.92	Charlotte.....	4.4403293	27,563.18	90,430.2
	80	36	12.495	99	45	49.51	279	37	35.62	Huntersville.....	4.3390694	21,830.79	71,623.2
				221	42	21.8				Azimuth mark, R.M. no. 1.			
Jackson, 1933.....	35	21	49.763	56	05	23.82	235	56	49.15	Charlotte.....	4.4336428	27,142.06	89,048.6
	80	35	48.092	103	25	57.63	283	17	29.69	Huntersville.....	4.3570333	22,752.72	74,647.9
				158	43	27.86	338	43	13.73	Concord.....	3.2298214	1,697.55	5,569.4
				181	30	21.5				Azimuth mark, R.M. no. 2.			
Mint Hill, 1933.....	35	11	20.003	103	19	32.79	283	12	43.23	Charlotte.....	4.2662487	18,460.72	60,566.5
	80	33	48.489	190	37	28.00	10	38	58.10	Concord.....	4.3295273	21,356.36	70,066.7
				193	12	19.93	13	14	04.11	Jackson.....	4.2996353	19,935.88	65,406.3
				60	09	27.5				Azimuth mark, R.M. no. 3.			
Locust, 1933.....	35	15	44.480	67	58	03.50	247	50	25.59	Mint Hill.....	4.3358081	21,067.46	71,087.3
	80	25	34.610	128	36	00.69	308	29	51.90	Concord.....	4.3139138	20,602.21	67,592.4
				43	55	02.0				Azimuth mark, R.M. no. 3.			
Advance, 1933.....	85	06	53.194	119	33	11.05	299	27	40.58	Mint Hill.....	4.2225520	16,693.68	54,769.2
	80	29	14.505	180	08	42.57	340	04	41.35	Concord.....	4.4922618	31,064.31	101,916.8
				198	44	59.93	18	47	06.65	Locust.....	4.2378451	17,292.00	56,732.2
				226	43	33.4				Azimuth mark, R.M. no. 1.			
Aquadale, 1933.....	35	13	56.650	62	29	03.58	242	19	35.20	Advance.....	4.4498151	28,171.83	92,427.1
	80	12	47.844	99	47	18.78	279	39	56.27	Locust.....	4.2937611	19,668.04	64,527.6
				255	03	55.3				Azimuth mark, R.M. no. 2.			
Fountain, 1933.....	35	04	43.753	102	16	01.76	282	09	03.27	Advance.....	4.2755875	18,861.99	61,883.0
	80	17	06.654	147	46	35.38	327	41	42.79	Locust.....	4.3816471	24,079.48	79,000.8
				201	09	32.09	21	03	01.12	Aquadale.....	4.2613657	18,254.32	59,889.4
				312	47	53.0				Azimuth mark, R.M. no. 2.			
McKay, 1933.....	35	09	22.354	69	21	43.65	249	13	07.74	Fountain.....	4.3852162	24,278.18	79,652.7
	80	02	09.831	117	41	32.71	297	35	24.99	Aquadale.....	4.2905519	18,220.15	59,777.3
				352	06	17.1				Azimuth mark, R.M. no. 1.			
Wadesboro, 1933.....	34	58	24.422	121	49	00.87	301	41	53.30	Fountain.....	4.3465415	22,209.64	72,866.1
	80	04	41.715	156	50	24.69	336	45	45.14	Aquadale.....	4.4949215	31,255.14	102,542.9
				190	44	08.08	10	45	35.32	McKay.....	4.3146477	20,637.05	67,706.7
				259	33	44.4				Azimuth mark, R.M. no. 1.			
Ingram, 1933.....	35	01	04.348	67	43	38.84	247	39	07.23	Wadesboro.....	4.1133431	12,982.04	42,591.9
	79	56	48.120	152	03	23.49	332	00	18.57	McKay.....	4.2399576	17,376.31	57,008.8
				69	24	49				Azimuth mark, R.M. no. 2.			
Lenzton, 1933.....	35	03	10.971	67	14	25.56	247	10	55.20	Ingram.....	4.0032052	10,074.10	33,051.4
	79	50	41.706	67	32	51.22	247	24	49.25	Wadesboro.....	4.3627814	23,055.86	75,642.4
				123	20	52.77	303	14	17.05	McKay.....	4.3190948	20,849.46	68,403.6
				342	54	18.5				Azimuth mark, R.M. no. 3.			
Hinson, 1933.....	34	55	47.698	108	55	56.37	288	50	37.66	Wadesboro.....	4.1737381	14,918.95	48,946.6
	79	55	25.398	167	52	12.71	347	51	25.28	Ingram.....	3.9991703	9,980.91	32,745.7
				207	45	12.21	27	47	54.89	Lenzton.....	4.1886134	15,438.79	50,652.1
				127	23	00.4				Azimuth mark, R.M. no. 2.			
Sandy, 1933.....	35	00	32.261	54	38	57.45	234	34	18.56	Hinson.....	4.1801748	15,141.71	49,677.4
	79	47	18.796	93	57	50.70	273	52	24.03	Ingram.....	4.1694277	14,468.64	47,469.2
				133	34	25.12	313	32	28.64	Lenzton.....	3.8511134	7,097.63	23,286.1
				72	39	52.0				Azimuth mark, R.M. no. 3.			
Martin, 1933.....	34	51	46.802	120	44	43.00	300	40	01.36	Hinson.....	4.1624881	14,537.44	47,694.9
	79	47	13.114	179	29	24.66	359	29	21.40	Sandy.....	4.2093277	16,193.01	53,126.6
				257	24	41.7				Azimuth mark, R.M. no. 2.			
Fruitland, 1933.....	34	55	20.076	61	37	40.69	241	33	06.97	Martin.....	4.1403021	13,813.45	45,319.6
	79	39	14.614	92	03	20.61	271	54	04.81	Hinson.....	4.3918938	24,654.30	80,886.8
				128	06	23.64	308	01	46.16	Sandy.....	4.1931840	15,602.13	51,183.0
				66	32	16.9				Azimuth mark, R.M. no. 2.			
Fairview, 1933.....	34	49	52.796	101	16	15.20	281	09	36.72	Martin.....	4.2567708	13,062.21	59,259.1
	79	35	35.734	151	09	17.53	331	07	12.37	Fruitland.....	4.0612916	11,515.73	37,781.2
				355	44	46.5				Azimuth mark, R.M. no. 1.			
McInnis (S.C.), 1933.....	34	44	36.306	149	05	21.99	329	02	23.47	Martin.....	4.1899711	15,465.75	50,740.5
	79	42	00.336	191	58	16.09	11	59	50.75	Fruitland.....	4.3070652	20,279.87	66,834.9
				225	02	39.08	45	06	18.51	Fairview.....	4.1402024	13,810.28	45,309.2
				38	35	23.4				Azimuth mark, R.M. no. 2.			
Zion, 1933.....	34	44	15.824	91	59	05.69	271	52	05.35	McInnis.....	4.2735570	18,774.01	61,594.4
	79	29	42.729	139	11	23.65	319	08	02.26	Fairview.....	4.1375106	13,724.94	45,029.2
				184	33	21.7				Azimuth mark, R.M. no. 1.			
Lynch (S.C.), 1933.....	34	58	42.236	131	43	12.04	311	38	38.01	McInnis.....	4.2150240	16,406.80	53,828.0
	79	33	58.912	173	12	36.21	353	11	41.04	Fairview.....	4.3182583	20,809.34	68,272.0
				212	22	07.92	32	24	33.73	Zion.....	4.0854002	12,173.07	39,937.8
				100	38	11.5				Azimuth mark, R.M. no. 3.			

Goldsboro to Little River, S.C., and Marietta to Lincolnton—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Oak Grove, 1933.....	34 38 51.599 79 24 56.313	88 50 48.22 143 54 18.19 118 17 07.0	268 45 39.75 323 51 35.17	Lynch..... Zion..... Azimuth mark, R.M. no. 3.	4.1405523 4.0922910	13,821.41 12,367.76	45,345.7 40,576.6						
Judson (S.C.), 1933.....	34 33 32.225 79 28 07.634	136 53 26.72 173 02 43.64 206 20 12.35 302 28 33.8	316 50 07.24 353 01 49.58 26 22 01.00	Lynch..... Zion..... Oak Grove..... Azimuth mark, R.M. no. 1	4.1169670 4.3005798 4.0406977	13,090.83 19,979.28 10,982.41	42,948.8 65,548.7 36,031.5						
Salem, 1933.....	34 36 15.573 79 19 47.907	68 28 32.63 121 29 24.48 132 49 25.8	248 23 49.00 301 26 29.24	Judson..... Oak Grove..... Azimuth mark, R.M. no. 3.	4.1365614 3.9642837	13,694.98 9,210.51	44,930.9 30,218.1						
Barlow (S.C.), 1933.....	34 29 58.505 79 24 32.385	140 12 12.48 177 52 31.93 211 57 06.84 334 10 37.3	320 10 10.47 357 52 18.35 31 59 48.18	Judson..... Oak Grove..... Salem..... Azimuth mark, R.M. no. 2.	3.9331516 4.2158485 4.1366218	8,573.37 16,437.98 13,696.88	28,127.8 53,930.3 44,937.2						
Dillon north base, 1933.....	34 32 10.699 79 17 35.834	69 03 23.47 155 57 55.60 221 49 55.0	248 59 27.43 335 56 40.66	Barlow..... Salem..... Azimuth mark, R.M. no. 3.	4.0580942 3.9171094	11,378.74 8,262.46	37,331.7 27,107.8						
Hamer (S.C.), 1933.....	34 29 59.571 79 18 27.447	89 49 35.54 169 57 57.09 41 51 12	269 46 08.84 349 57 11.45	Barlow..... Salem..... Azimuth mark, R.M. no. 3.	3.9689624 4.0706371	9,310.27 11,766.22	30,545.4 38,603.0						
Dillon south base (S.C.), 1933.....	34 26 06.273 79 21 31.100	147 07 44.35 208 06 36.92 213 05 25.79 208 16 09.9	327 06 01.75 28 08 50.12 33 07 09.72	Barlow..... Dillon north base..... Hamer..... Azimuth mark, R.M. no. 1.	3.9305041 4.1049338 3.9335744	8,521.26 12,733.091 8,581.72	27,956.8 41,775.15 28,155.2						
Hammond, 1933.....	34 29 59.712 79 15 26.859	52 17 48.75 89 57 35.87 140 49 42.38 335 50 42.1	232 14 22.62 269 55 53.58 320 48 29.29	Dillon south base..... Hamer..... Dillon north base..... Azimuth mark, R.M. no. 1.	4.0701847 3.6634317 3.7165852	11,753.97 4,607.14 5,206.97	38,562.8 15,115.3 17,083.2						
Pittman, 1933.....	34 29 13.061 79 09 11.469	98 33 55.32 113 05 14.16 327 52 47.02 43 15 22.7	278 30 22.73 293 00 28.39 147 54 09.53	Hammond..... Dillon north base..... Claybank..... Azimuth mark, R.M. no. 3.	3.9860940 4.1455519 3.8452219	9,684.88 13,981.44 7,002.00	31,774.5 45,870.8 22,972.4						
Oliver (S.C.), 1933.....	34 23 02.929 79 15 50.418	123 01 20.30 182 40 46.50 221 44 12.24 248 28 50.21 109 56 58.2	302 58 07.78 2 40 59.82 41 47 57.84 68 33 58.06	Dillon south base..... Hammond..... Pittman..... Claybank..... Azimuth mark, R.M. no. 3.	4.0159436 4.1091222 4.1844413 4.1746733	10,373.94 12,856.48 15,291.19 14,951.11	34,035.2 42,180.0 50,167.8 49,052.1						
Kemper (S.C.), 1933.....	34 19 34.349 79 11 56.644	137 06 31.24 193 17 49.90 213 42 12.81 270 18 57.50 142 07 56.2	317 04 19.31 13 19 23.23 33 45 08.42 90 25 59.07	Oliver..... Pittman..... Claybank..... Ford..... Azimuth mark, R.M. no. 3.	3.9432380 4.2630212 4.1656199 4.2813242	8,774.82 18,324.04 14,309.35 19,112.79	28,788.7 60,118.1 46,946.6 62,705.9						
Nichols (S.C.), 1933.....	34 16 39.899 79 08 54.010	139 01 47.16 190 44 29.12 249 59 04.57 354 44 40	319 00 04.24 10 45 41.56 70 04 22.96	Kemper..... Claybank..... Ford..... Azimuth mark, R.M. no. 1.	3.8525176 4.2451375 4.1867351	7,120.62 17,584.80 15,372.17	23,361.6 57,692.8 50,433.5						
Floyds (S.C.), 1933.....	34 11 21.540 79 03 37.665	140 29 21.91 202 52 48.00 295 51 56.7	320 26 23.94 22 55 07.95	Nichols..... Ford..... Azimuth mark, R.M. no. 1.	4.1044530 4.2134656	12,719.00 16,348.04	41,728.9 53,635.2						
Wilson, 1933.....	34 16 25.441 78 56 27.373	49 39 34.51 91 23 40.51 140 48 46.01 226 49 21.6	229 35 32.45 271 16 40.01 320 47 03.63	Floyds..... Nichols..... Ford..... Azimuth mark, R.M. no. 1.	4.1600290 4.2811305 3.8662940	14,455.36 19,104.27 7,350.11	47,425.6 62,677.9 24,114.5						
Green Sea (S.C.), 1933.....	34 07 30.724 78 58 39.409	132 58 21.16 191 35 05.40 254 12 47.2	312 55 33.69 11 36 19.61	Floyds..... Wilson..... Azimuth mark, R.M. no. 1.	4.0186093 4.2257967	10,437.81 16,818.86	34,244.7 55,179.9						
Clarendon, 1933.....	34 12 29.665 78 50 26.797	53 54 28.56 84 08 35.97 128 14 31.23 112 30 02.7	233 49 51.91 264 01 11.44 308 11 08.34	Green Sea..... Floyds..... Wilson..... Azimuth mark, R.M. no. 2.	4.1937244 4.3087177 4.0698117	15,621.56 20,357.18 11,743.88	51,251.7 66,788.5 38,529.7						
Iron Hill, 1933.....	34 08 16.512 78 47 03.601	85 31 47.44 146 18 19.89 260 49 48.2	265 25 17.03 326 16 25.76	Green Sea..... Clarendon..... Azimuth mark, R.M. no. 2.	4.2524817 3.9720520	17,894.70 9,376.74	58,676.7 30,763.5						
Loris (S.C.), 1933.....	34 03 09.261 78 53 17.859	134 21 59.43 194 13 49.65 225 21 09.84 127 18 54.1	314 18 59.21 14 15 25.63 45 24 39.63	Green Sea..... Clarendon..... Iron Hill..... Azimuth mark, R.M. no. 2.	4.0616845 4.2507751 4.1296329	11,526.16 17,814.56 13,478.23	37,815.4 58,446.6 44,219.8						

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance		
							Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>									
Guide, 1933	34 03 56.867 78 42 03.690	85 12 11.35 136 09 53.50 303 41 38.74 20 06 59.45 305 14 37.1	265 05 53.78 316 07 05.34 123 45 46.42 200 04 54.68	Loris..... Iron Hill..... Hughes..... Leon..... Azimuth mark, R.M. no. 2.	4.2393326 4.0451239 4.1351612 4.2218419	17,351.32 11,094.91 13,650.90 16,666.40	56,926.8 36,400.6 44,786.3 54,679.7		
Simpson (S.C.), 1933	33 59 11.600 78 50 10.020	146 39 47.90 195 52 45.00 234 47 57.04 267 01 24.03 315 25 14.53 273 35 20.0	326 38 02.81 15 54 29.41 54 52 29.78 87 10 03.36 135 27 41.53	Loris..... Iron Hill..... Guide..... Hughes..... Leon..... Azimuth mark, R.M. no. 2.	3.9428128 4.2419629 4.1836083 4.3778699 3.9836504	8,766.23 17,456.73 15,261.89 23,870.96 9,630.54	28,760.5 57,272.6 50,071.7 78,316.6 31,596.2		
<i>Supplementary points</i>									
Mount Olive, municipal water tank, aluminum, 1933	35 11 40.317 78 04 14.598	310 39 29.1 46 03 20.8 161 12 34.7	130 43 09.9 225 59 51.9 341 12 29.5	Alphin..... Ireland..... Mount Olive.....	4.107164 4.106888 2.845906	12,798.6 12,761.1 701.3	41,990 41,867 2,301		
Warsaw, aluminum water tank, 1933	35 00 04.880 78 05 54.645	93 14 40.3 229 57 47.3 340 21 28.0	273 09 28.5 49 59 35.7 160 22 25.1	Robinson..... Everton..... More.....	4.140079 3.796413 3.876390	13,806.4 6,257.7 7,523.0	45,296 20,530 24,682		
Clinton, silver-colored water tank, 1933	34 59 38.74 78 19 24.06	256 48 51 355 52 49	76 51 23 175 53 06	Robinson..... Canady.....	3.840214 4.019018	6,921.7 10,447.6	22,709 34,277		
Bladenboro, aluminum water tank, 1933	34 32 12.321 78 47 00.045	59 44 44.2 164 57 00.5 281 21 51.1	239 43 43.5 344 55 49.3 101 26 15.9	Freeman..... Mason..... Rogers.....	3.499771 4.089790 4.084784	3,160.6 12,286.7 12,155.8	10,369 40,343 39,881		
Bladenboro Cotton Mill, brick stack, 1933	34 32 37.367 78 48 10.080	21 45 38.8 115 26 31.6 172 45 57.1	201 45 17.8 295 22 19.6 352 45 25.6	Freeman..... Allenton..... Mason.....	3.405800 4.097956 4.048903	2,546.0 12,530.1 11,191.9	8,353 41,109 36,719		
Bladenboro Cotton Mill, aluminum water tank, 1933	34 32 42.874 78 48 21.878	14 23 55.1 115 18 43.0 174 10 08.5	194 23 40.7 295 14 37.6 354 09 43.6	Freeman..... Allenton..... Mason.....	3.417721 4.086093 4.046994	2,616.5 12,192.5 10,989.9	8,584 40,002 36,056		
Chadborn, aluminum water tank, 1933	34 19 22.971 78 49 28.664	62 58 18.0 90 53 21.4 114 24 21.2	242 54 22.1 270 47 42.9 294 21 04.8	Wilson..... Ford..... Williamson.....	4.080040 4.186115 3.989988	12,023.9 15,350.2 9,772.1	39,448 50,361 32,061		
Fairmont, ball on top of municipal water tank, 1933	34 29 49.17 79 06 38.07	1 26 58 74 04 59	181 26 54 254 03 33	Claybank..... Pittman.....	3.847934 3.607898	7,045.9 4,054.1	23,116 13,301		
Mullins, ball on top of southerly black water tank (S.C.), 1933	34 12 17.940 70 14 58.182	199 02 22.6 229 04 28.6 275 38 33.4	19 04 04.8 49 07 53.5 95 44 55.9	Kemper..... Nichols..... Floyds.....	4.153088 4.090912 4.243280	14,226.2 12,328.5 17,510.1	46,674 40,448 57,448		
Astronomic telescope, 1933	34 39 21.453 78 29 19.407	166 09 29	346 09 28	White Lake.....	1.6498798	44.656	146.51		
Magnetic station (N.C.G.S. and U.S.G.S. (1898)), 1933	34 37 39.622 78 36 20.443	78	258	Elizabethtown.....	5.563481	0.366	1.20		
Mullins, ball on top of northerly black water tank (S.C.), 1933	34 12 21.411 79 15 21.009	201 23 07.4 231 09 42.5 275 47 38.6	21 25 02.4 51 13 20.2 95 54 13.9	Kemper..... Nichols..... Floyds.....	4.156179 4.104094 4.257733	14,327.8 12,708.5 18,102.3	47,007 41,694 59,391		
Turner (N.C.-S.C.), 1933	34 17 32.621 79 03 48.118	280 22 12.7 358 59 32.0 78 17 39.6 222 57 26.4	100 26 21.0 178 39 37.9 258 14 47.3	Wilson..... Floyds..... Nichols..... Azimuth mark, R.M. no. 1.	4.050249 4.058309 3.902595	11,461.7 11,436.9 7,990.9	37,604 37,523 26,217		
B.M. State Line (N.C.-S.C.), 1933	34 17 33.085 79 03 40.853	66 08 03	246 08 02	Turner.....	1.548660	35.372	116.05		
Replacement (N.C.-S.C.), 1933	34 12 22.115 78 57 38.312	193 36 20.6 208 45 35.9 9 53 31.2 300 55 37.0	13 37 00.5 88 49 38.5 189 52 56.9	Wilson..... Clarendon..... Green Sea..... Azimuth mark, R.M. no. 1.	3.887281 4.043341 3.959691	7,714.0 11,049.5 9,113.0	25,308 36,252 29,900		
Tabor, municipal water tank, aluminum, 1933	34 09 03.838 78 52 35.333	5 42 03.7 72 55 56.9 207 25 14.9	185 41 39.9 252 52 32.6 27 26 27.1	Loris..... Green Sea..... Clarendon.....	4.040572 3.989422 3.854018	10,679.2 9,759.4 7,145.3	36,021 32,019 23,443		
Tabor (N.C.-S.C.), 1933	34 08 20.217 78 52 53.098	78 57 51.2 207 18 29.2 271 51 28.6 220 22 32	258 54 39.7 27 19 54.2 91 54 47.5	Green Sea..... Clarendon..... Iron Hill..... Azimuth mark, R.M. no. 1.	3.949925 3.926486 3.958446	8,911.0 8,442.8 9,087.5	29,236 27,699 29,815		
State-line monument (N.C.-S.C.), 1933	34 08 20.123 78 52 57.995	137 38 20	317 38 20	Tabor.....	0.591955	3.908	12.82		
Dothan (N.C.-S.C.), 1933	34 01 33.660 78 44 49.706	7 26 27.1 61 59 21.3 223 58 06.4 1 32 49.1	187 25 55.2 241 56 22.1 43 59 39.4	Leon..... Simpson..... Guide..... Azimuth mark, R.M. no. 3.	4.054398 3.969060 3.787600	11,334.4 9,312.4 6,132.0	37,186 30,552 20,118		
Dillon, Dillon Oil Co., tall, slender, black water tank (S.C.), 1933	34 25 14.673 79 22 15.035	215 12 08.2 229 50 08.6 292 25 18.3	35 12 33.0 49 53 59.5 112 28 55.6	Dillon south base..... Hammond..... Oliver.....	3.289113 4.134382 4.026507	1,945.9 13,626.4 10,629.4	6,384 44,706 34,873		

¹ No check on this position.

Goldsboro to Little River, S.C., and Marietta to Lincoln—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Dillon, municipal water tank, red (S.C.), 1933 ¹	34 25 20.04	79 22 20.09	214 56 32	293 30 40	34 56 54	113 34 14	Dillon south base.....	3.240057	1,738.0	5,702			
							Oliver.....	4.024386	10,577.6	34,703			
Maxton, aviation beacon on municipal water tank, 1933.....	34 44 18.126	79 20 58.194	353 07 55.7	31 04 54.7	173 08 35.7	211 02 39.1	Salem.....	4.175420	14,976.8	49,136			
			89 44 12.6		269 39 13.7		Oak Grove.....	4.069895	11,746.1	38,537			
							Zion.....	4.125280	13,343.8	43,779			
Rowland, municipal water tank, ball on top, 1933.....	34 32 31.192	79 17 37.564	295 16 16.1	324 27 17.8	115 21 02.9	144 28 31.9	Pittman.....	4.154728	14,280.0	46,850			
			356 00 19.6		178 00 20.7		Hammond.....	3.758599	5,735.9	18,819			
							Dillon north base.....	2.801410	633.0	2,077			
Hamer, Carolina Textile Corporation, stack (S.C.), 1933.....	34 28 49.087	79 19 49.352	180 09 12.3	208 43 24.2	0 09 13.1	28 44 39.8	Salem.....	4.138652	13,757.9	45,137			
			251 58 44.2		72 01 12.8		Dillon north base.....	3.850325	7,084.8	23,244			
							Hammond.....	3.847704	7,042.1	23,104			
Hamer, Carolina Textile Corporation, water tank, near stack, ball on top (S.C.), 1933.....	34 28 49.343	79 19 50.617	106 32 00.6	180 17 16.2	286 29 21.0	0 17 17.8	Barlow.....	3.874972	7,498.5	24,601			
			208 58 57.0		29 00 13.4		Salem.....	4.138307	13,750.1	45,112			
							Dillon north base.....	3.860857	7,093.4	23,272			
McRae (N.C.-S.C.), 1933.....	34 37 38.664	79 27 29.627	101 12 24.1	240 03 55.1	281 08 42.8	60 05 22.2	Lynch.....	4.004614	10,106.8	33,159			
			7 16 17.7		187 15 56.1		Oak Grove.....	3.653737	4,505.4	14,781			
			264 34 30				Judson.....	3.883959	7,655.2	25,116			
							Azimuth mark, R. M. no. 1.						
State-line monument (1905) (N.C.-S.C.), 1933 ¹	34 37 38.593	79 27 29.572	147 01 18		327 01 18		McRae.....	0.413300	2.59	8.5			
McColl, municipal water tank, aluminum (S.C.), 1933.....	34 40 12.452	79 32 49.352	212 19 54.3	281 38 56.2	32 21 40.6	101 43 25.2	Zion.....	3.948257	8,876.8	29,123			
			329 46 46.1		149 49 26.1		Oak Grove.....	4.039906	12,300.0	40,354			
							Judson.....	4.164395	14,269.0	46,814			
McColl, Marlboro Cotton Mills, tank, aluminum (S.C.), 1933. ¹	34 40 07.38	79 32 36.46	330 37 18	38 40 28	150 39 51	218 39 41	Judson.....	4.145206	13,970.3	45,834			
							Lynch.....	3.526367	3,360.2	11,024			
Laurinburg, Dixie Guano Co., tank, 1933.....	34 45 50.496	79 26 15.561	351 06 48.7	7 05 46.0	171 07 33.8	187 05 03.9	Oak Grove.....	4.116099	13,064.7	42,863			
			41 49 09.2		221 44 45.4		McRae.....	4.183905	15,272.3	50,106			
							Lynch.....	4.247911	17,697.5	58,063			
Laurinburg, municipal water tank, 1933.....	34 46 40.398	79 27 57.138	342 19 02.9	357 35 46.0	162 20 45.9	177 36 01.6	Oak Grove.....	4.180725	15,160.9	49,740			
			32 01 33.6		211 58 07.6		McRae.....	4.222922	16,707.9	54,816			
							Lynch.....	4.239897	17,373.9	57,001			
Airway beacon, flashing red and white, east of Clio (S.C.), 1933. ¹	34 35 55.43	79 27 39.27	184 24 50	217 23 28	4 24 56	37 25 01	McRae.....	3.503879	3,190.6	10,468			
							Oak Grove.....	3.834666	6,833.9	22,421			
Bennettsville, black water tank (S.C.), 1933 ¹	34 37 00.57	79 41 07.83	174 34 00	253 57 59	354 33 30	74 02 02	McInnis.....	4.149424	14,106.7	46,282			
							Lynch.....	4.055586	11,365.4	37,288			
Clio, white water tank (S.C.), 1933 ¹	34 34 45.28	79 32 53.56	167 09 32	237 03 85	347 08 54	57 06 39	Lynch.....	3.874425	7,489.0	24,570			
							McRae.....	3.992043	9,832.0	32,257			
Gibson (N.C.-S.C.), 1933.....	34 45 26.552	79 37 05.036	78 22 32.1	195 27 36.8	258 19 43.8	15 28 27.8	McInnis.....	3.884735	7,668.9	25,160			
			280 55 42.8		100 59 54.9		Fairview.....	3.930062	8,512.6	27,923			
			339 10 05.4		159 11 51.4		Zion.....	4.059174	11,459.7	37,597			
			51 31 02				Lynch.....	4.124794	13,328.9	43,730			
							Azimuth mark, R. M. no. 2.						
State-line monument (N.C.-S.C.), 1933 ¹	34 45 26.389	79 37 04.855	137 30 11		317 30 11		Gibson.....	0.832892	6.806	22.33			
Perhealth (N.C.-S.C.), 1933.....	34 48 20.368	79 46 26.084	169 21 51.8	315 35 44.3	349 21 24.9	135 38 15.9	Martin.....	3.811077	6,472.6	21,236			
			61 16 22				McInnis.....	3.985018	9,660.9	31,696			
							Azimuth mark, R. M. no. 2.						
Hamlet traverse tie, 1933.....	34 53 15.061	79 42 33.282	69 04 50.4	151 45 14.9	249 02 10.4	331 42 31.4	Martin.....	3.881354	7,609.5	24,966			
			232 36 42.1		52 38 35.7		Sandy.....	4.184606	16,297.0	50,187			
			294 46 47				Fruitland.....	3.802547	6,346.7	20,822			
							Azimuth mark, R. M. no. 2.						
Rockingham, 1918.....	34 54 30.935	79 41 02.451	44 36 47.9	139 24 56.2	224 35 55.9	319 21 20.5	Hamlet traverse tie.....	3.516413	3,284.1	10,775			
			241 02 26.3		61 03 28.0		Sandy.....	4.166368	14,667.9	48,123			
			243 20 27.6				Fruitland.....	3.495315	3,128.3	10,263			
							Azimuth mark, R. M. no. 1.						
Cordova, 1933.....	34 53 46.077	79 49 24.382	109 21 27.7	187 34 04.0	289 17 26.8	7 34 41.6	Hinson.....	4.054064	11,325.7	37,158			
			333 46 40.7		153 47 21.5		Sandy.....	4.101300	12,627.0	41,427			
			41 35 10.2				Martin.....	3.612462	4,097.0	13,442			
							Azimuth mark, R. M. no. 2.						
Pee Dee, 1933.....	34 57 23.810	79 51 14.300	64 38 46.4	129 12 11.7	244 36 25.4	309 09 08.1	Hinson.....	3.839583	6,911.7	22,676			
			234 59 29				Ingram.....	4.031735	10,758.1	35,296			
							Azimuth mark, R. M. no. 1.						
Astronomic station, 1933 ¹	35 00 33.106	79 47 18.320	24 51 07		204 51 07		Sandy.....	1.457882	28.700	94.16			
Entwistle, 1933.....	34 57 35.364	79 41 08.879	14 57 36.2	130 11 12.5	194 56 47.9	300 07 40.4	Hamlet traverse tie.....	3.919209	8,302.5	27,239			
			253 50 28				Sandy.....	4.035469	10,851.0	35,600			
							Azimuth mark, R. M. no. 2.						

¹ No check on this position.

Goldsboro to Little River, S.C., and Marietta to Lincoln—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance						
	°	'	"				Logarithm (meters)	Meters	Feet				
<i>Supplementary points—Continued</i>													
Ellerbe, 1933.....	35	04	27.096	332	13	44.6	152	16	15.7	Entwistle.....	4.156456	14,336.9	47,037
	79	45	32.178	20	29	05.1	200	28	03.9	Sandy.....	3.837888	7,724.8	25,344
				73	22	21.2	253	19	23.4	Lenzton.....	3.913091	8,186.4	26,858
				39	47	55.7				Azimuth mark, R.M. no. 1.			
Hamlet, city water tank, 1918.....	34	53	15.107	69	05	51.5	249	03	11.3	Martin.....	3.881917	7,619.3	24,998
	79	42	32.889	81	54	46.5	261	54	46.2	Hamlet traverse tie.....	1.005781	10.134	33.25
				232	34	01.0	52	35	54.5	Fruitland.....	3.801942	6,337.8	20,793
Rockingham, municipal water tank, aluminum, 1933.....	34	56	18.271	169	12	45.8	349	12	12.1	Sandy.....	3.901342	7,967.9	26,141
	79	46	19.981	253	13	34.2	73	16	32.5	Entwistle.....	3.916120	8,243.7	27,046
				314	26	01.0	134	28	10.8	Hamlet traverse tie.....	3.906428	8,061.7	26,449
Ellerbe, municipal water tank, black, 1933.....	35	04	27.555	20	26	57.3	200	25	56.1	Sandy.....	3.888636	7,738.1	25,387
	79	45	32.172	43	14	44.6	223	09	04.3	Hinson.....	4.341940	21,975.6	72,098
				73	16	41.0	253	13	43.2	Lenzton.....	3.913315	8,190.6	26,872
Marston, Marston Training School, black water tank, 1933.	35	01	18.841	46	26	39.5	226	23	55.9	Entwistle.....	3.999573	9,990.2	32,776
	79	36	23.514	85	06	51.0	265	00	35.0	Sandy.....	4.222084	16,675.7	54,710
				112	41	24.0	292	36	08.9	Ellerbe.....	4.178020	15,066.8	49,432
East Rockingham, Hannah-Picket no. 2, ball on top tall, black water tank, 1933.	34	55	30.143	47	30	59.6	227	29	40.7	Cordova.....	3.676442	4,747.2	15,575
	79	46	06.496	168	51	38.7	348	50	57.2	Sandy.....	3.977219	9,489.0	31,132
				242	54	45.0	62	57	36.5	Entwistle.....	3.928450	8,481.1	27,825
East Rockingham, short aluminum water tank, red top, 1933. ¹	34	56	26.42	316	32	04	136	34	10	Hamlet traverse tie.....	3.909672	8,122.2	26,648
	79	46	13.32	33	57	50	213	56	35	Cordova.....	3.774995	5,956.6	19,543
Wadesboro, municipal water tank, aluminum, 1933.....	34	57	55.622	109	56	45.9	349	56	42.4	Wadesboro.....	2.954886	901.3	2,957
	80	04	35.510	245	14	51.2	65	22	49.6	Lenzton.....	4.366760	23,288.0	76,338
				285	43	34.4	105	48	49.5	Hinson.....	4.161513	14,604.8	47,588
Wadesboro, church spire, cross on top, 1933. ¹	34	57	38.36	213	25	18	33	25	39	Wadesboro.....	3.230632	1,700.7	5,580
	80	05	18.64	245	10	57	65	19	20	Lenzton.....	4.388891	24,484.5	80,330
Mount Gilead, water tank, higher of two, 1933.....	35	13	08.206	321	29	51.0	141	35	23.3	Lenzton.....	4.371123	23,503.0	77,109
	80	00	19.077	21	56	19.5	201	55	15.7	McKay.....	3.875238	7,503.0	24,616
				94	34	06.0	274	26	53.0	Aquadale.....	4.278617	18,994.0	62,316

Mount Gilead, water tank, lower of two, 1933. ¹	35	13	08.22	321	18	29	141	24	04	Lenzton.....	4.372278	23,565.6	77,315
	80	00	23.02	21	13	38	201	12	37	McKay.....	3.873135	7,466.8	24,497
Ansonville, 1933.....	35	06	31.998	350	10	17.1	170	11	16.1	Wadesboro.....	4.183232	15,248.7	50,023
	80	06	24.328	144	43	20.2	324	39	39.2	Aquadale.....	4.225090	16,791.5	55,090
				230	48	26.3	50	50	52.8	McKay.....	3.919662	8,311.2	27,283
				213	56	12				Azimuth mark, R.M. no. 1.			
Marshville, 1933.....	34	59	56.942	137	07	43.8	317	03	13.6	Advance.....	4.243364	17,513.1	57,458
	80	21	23.979	216	24	17.2	36	26	45.0	Fountain.....	4.040777	10,984.4	36,038
				270	19	10.9	96	28	45.6	Wadesboro.....	4.407892	25,579.5	83,922
				204	33	48				Azimuth mark, R.M. no. 3.			
Marshville, black water tank, ball on top, west one, 1933.	34	59	14.750	141	29	20.2	321	25	05.0	Advance.....	4.256802	18,063.5	59,263
	80	21	50.342	207	12	37.0	27	12	52.0	Marshville.....	3.164950	1,462.0	4,797
				215	19	27.1	35	22	09.9	Fountain.....	4.094466	12,429.9	40,780
Marshville, black water tank, ball on top, east one, 1933.	34	59	20.100	139	00	43.0	318	56	07.7	Advance.....	4.267361	18,508.1	60,722
	80	21	15.119	168	48	21.5	348	48	16.4	Marshville.....	3.063458	1,157.3	3,797
				212	15	04.7	32	17	27.4	Fountain.....	4.071728	11,795.8	38,700
Charlotte, Presbyterian Church, spire, 1933. ¹	35	13	43.78	283	47	22	103	54	12	Mint Hill.....	4.267497	18,513.9	60,741
	80	50	39.17	357	35	44	177	35	45	Charlotte.....	2.287337	193.8	636
Sloop, 1933.....	35	20	47.825	257	47	02.9	77	50	25.5	Jackson.....	3.956239	9,041.5	29,664
	80	41	38.122	45	53	57.9	225	48	45.6	Charlotte.....	4.279698	19,041.4	62,472
				47	15	52				Azimuth mark, R.M. no. 3.			
Allen, 1933.....	35	13	32.973	35	21	08.2	215	20	02.9	Mint Hill.....	3.701013	5,023.6	16,482
	80	36	53.601	183	30	53.8	3	31	17.5	Concord.....	4.228491	16,923.5	55,523
				319	39	21				Azimuth mark, R.M. no. 3.			
Locke, 1933.....	35	25	09.579	5	32	11.1	185	31	57.4	Jackson.....	3.791464	6,166.8	20,298
	80	35	24.448	14	50	36.3	194	50	08.5	Concord.....	3.075228	4,734.0	15,531
				87	48	19.7	267	39	37.7	Huntersville.....	4.356857	22,743.5	74,818
				93	44	14.6				Azimuth mark, R.M. no. 2.			
Jackson Training School for Boys, water tank, 1933.....	35	21	48.495	6	24	07.0	186	23	27.9	Allen.....	4.186573	15,366.4	50,415
	80	35	45.847	187	27	46.9	337	27	31.5	Concord.....	3.244261	1,754.9	5,758
				184	58	45.2	4	58	55.6	Locke.....	3.793824	6,220.5	20,408
Kannapolis, tall silver water tank, 1933.....	35	29	35.727	336	47	44.4	156	49	05.2	Locke.....	3.950532	8,923.4	29,276
	80	37	43.812	349	46	28.7	169	47	21.6	Concord.....	4.113418	12,984.3	42,599
				19	59	13.4	199	56	57.6	Sloop.....	4.238287	17,309.6	56,790
Kannapolis, tall brick stack, 1933.....	35	30	06.002	341	47	15.5	161	48	24.8	Locke.....	3.983896	9,636.0	31,614
	80	37	23.823	352	31	45.3	172	32	26.7	Concord.....	4.141364	13,847.3	45,431
				358	34	12.8	178	34	30.4	Azimuth mark, R.M. no. 1.	4.486162	30,631.1	100,496

¹ No check on this position.

Goldsboro to Little River, S.C., and Marietta to Lincolnton—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Concord, Presbyterian Church, spire (tall white), 1933	35	24	44.709	12	44	15.2	192	43	47.2	Jackson	3.742522	5,527.4	18,134
	80	34	59.818	89	44	51.4	269	35	55.2	Huntersville	4.369259	23,348.5	76,603
Huntersville, municipal water tank, 1933	35	24	40.789	298	19	57.4	118	25	02.3	Sloop	4.179178	15,107.0	49,564
	80	50	24.726	44	08	34.3	224	08	34.1	Huntersville	1.237217	17,287	56,65
Bench mark 41 (1932), 1933 ¹	35	24	40.898	23	44	29	203	44	29	Huntersville	1.236058	17,221	56.50
	80	50	24.928										
City, 1933 ¹	35	13	45.761	329	38	18.5	149	38	21.9	Charlotte	2.470117	295.2	969
	80	50	44.748										
Mayor, 1933 ¹	35	13	38.941	227	03	37.1	47	03	42.3	City	2.489327	308.551	1,012.30
	80	50	53.681	276	46	05.9	96	46	14.5	Charlotte	2.577182	377.7	1,239
Alexis, 1933	35	24	37.190	356	19	36.3	176	19	54.8	Spencer	4.099012	12,586.7	41,295
	81	07	27.604	64	30	59.0	244	26	51.7	Pasour	4.077013	11,940.2	39,174
Stanly, 1933	35	21	36.122	13	12	59.2	193	12	21.7	Spencer	3.855549	7,170.5	23,525
	81	05	50.805	91	55	56.1	271	50	53.0	Pasour	4.121584	13,229.8	43,405
Gastonia, 1933	35	15	50.424	62	03	45.8	241	59	17.1	King eccentric	4.124866	13,331.1	43,737
	81	11	00.283	154	00	05.6	333	58	01.7	Pasour	4.091327	12,340.3	40,486
Gastonia base reference mark no. 1, 1933 ¹	35	15	52.313	41	28	28.5	221	28	27.3	Gastonia	1.890480	77.7	255
	81	10	58.252										
Gastonia base, 1933 ¹	35	15	51.887	262	27	05.0	82	27	07.2	Gastonia base reference mark no. 1	1.999826	99.960	327.95
	81	11	02.163	313	26	04.6	133	26	05.7	Gastonia	1.816827	65.6	215
Cherryville, 1933	35	22	38.316	276	42	43.9	96	47	30.6	Pasour	4.100055	12,590.8	41,308
	81	22	49.866	341	50	51.7	161	53	12.7	King eccentric	4.296825	10,807.3	64,984
Dallas, water tank, tall, black, near white factory, 1933 ¹	35	17	31.99	126	34	06	306	30	00	Pasour	4.126182	13,371.6	43,870
	81	07	29.16	180	10	17	0	10	18	Alexis	4.117402	13,103.9	42,992
Charlotte airport beacon, revolving white light, 1933 ¹	35	12	02.61	124	19	58	304	09	50	Pasour	4.507590	32,180.3	105,578
	80	57	01.94	203	11	51	23	15	40	Huntersville	4.405054	25,412.9	83,375
Red Beacon U.S.L.H.S., 1933	35	12	27.370	159	53	47.0	339	53	46.9	King eccentric	0.649822	4.465	14.65
	81	18	45.843	161	53	11.2	341	50	50.2	Cherryville	4.296922	19,811.7	64,999
Denver, 1933	35	31	43.619	16	53	18.5	196	50	17.6	Spencer	4.429067	26,857.6	88,115
	81	01	46.889	126	36	03.8	306	33	55.9	Anderson 2	3.838927	6,901.2	22,642
Statesville, 1933	35	46	57.266	36	29	51.8	216	23	00.1	Azimuth mark, R.M. no. 2			
	80	53	40.951	141	08	16.1	320	59	02.6	Anderson 2	4.475511	29,889.0	98,061
Newton, 1933	35	39	46.930	312	12	47.6	132	17	22.3	Poore	4.575693	37,643.8	123,503
	81	13	18.527	89	03	47.2	268	57	30.0	Azimuth mark, R.M. no. 2			
Penelope, 1933	35	43	41.298	303	09	38.1	123	20	14.3	Anderson 2	4.516396	32,839.5	107,741
	81	23	38.578	5	09	57.7	185	09	42.0	Baker	3.877068	7,534.7	24,720
Catlin, 1933	35	34	03.156	339	08	26.0	159	14	14.2	Azimuth mark, R.M. no. 3			
	81	28	47.234	89	08	16.5	269	01	58.0	King eccentric	4.630593	42,716.2	140,145
Lincolnton, 1933	35	28	15.295	148	06	44.1	328	01	41.4	Bean	4.214489	16,366.6	53,762
	81	15	25.037	235	00	08.5	55	05	56.0	Azimuth mark, R.M. no. 2			
Primary traverse station no. 10 (U.S.G.S.), 1933 ¹	35	21	36.577	77	53	14.6	257	53	13.1	Baker	4.394178	24,784.4	81,313
	81	05	48.215	341	53	14.2				Anderson 2	4.264523	18,387.5	60,326
<i>Charlotte to South Carolina boundary</i>													
Monroe, 1934	<i>Principal points</i>												
	34	58	56.648	157	31	36.81	337	28	01.47	Mint Hill	4.3943725	24,795.48	81,349.8
Pleasant, 1934	80	32	33.863	198	58	10.65	19	00	05.14	Advance	4.1911766	15,530.19	50,952.0
	35	05	02.621	204	41	56.73	24	43	58.42	Azimuth mark, R.M. no. 1			
Mineral, 1934	80	42	19.934	260	13	02.92	80	20	34.54	Mint Hill	4.1072938	12,802.47	42,002.8
	34	55	50.684	307	09	26.80	127	15	03.24	Advance	4.3049822	20,182.84	66,216.5
	80	41	26.472	107	02	10.7				Monroe	4.2707183	18,651.70	61,193.1
	34	55	50.684	175	26	50.52	355	26	19.85	Azimuth mark, R.M. no. 3			
	80	41	26.472	246	58	37.54	67	03	42.71	Pleasant	4.2320410	17,062.44	55,979.0
				55	17	50.5				Monroe	4.1666707	14,678.13	48,166.5

¹ No check on this position.

Charlotte to South Carolina boundary—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Providence, 1934.....	35 03 12.214 80 48 51.385	251 02 05.80 320 17 46.23 153 05 05.8	71 05 50.71 140 22 01.37	Pleasant..... Mineral..... Azimuth mark, R.M. no. 3.	4. 0205935 4. 2473851	10,485.60 17,676.04	34,401.5 57,992.1						
Heath, 1934.....	34 53 18.813 80 47 01.442	171 20 13.12 241 08 49.82 54 55 06.2	351 19 10.11 61 12 01.52	Providence..... Mineral..... Azimuth mark, R.M. no. 3.	4. 2671158 3. 9870584	18,497.62 9,706.40	60,687.6 31,845.1						
State, 1934.....	35 00 53.366 80 51 06.224	218 36 26.02 302 20 17.62 336 04 04.11 14 13 27.2	38 37 43.43 122 25 49.93 156 06 24.34	Providence..... Mineral..... Heath..... Azimuth mark, R.M. no. 3.	3. 7384878 4. 2409224 4. 1853329	5,476.31 17,414.96 15,322.61	17,066.9 57,135.6 50,270.9						
Roddy (S.C.), 1934.....	34 52 16.063 80 56 11.735	205 54 39.03 262 04 42.65 346 23 46.8	25 57 34.02 82 09 57.34	State..... Heath..... Azimuth mark, R.M. no. 2.	4. 2486171 4. 1494675	17,726.26 14,108.07	58,156.9 46,286.2						
Fort Mill (S.C.), 1934.....	35 00 22.483 80 56 51.550	263 46 08.86 311 02 17.82 356 08 25.58 88 36 59.7	83 49 26.99 131 07 55.85 176 08 48.38	State..... Heath..... Roddy..... Azimuth mark, R.M. no. 3.	3. 0448464 4. 2981142 4. 1767670	8,807.37 19,866.17 15,023.36	28,895.5 65,177.6 49,289.1						
Winthrop (S.C.), 1934.....	34 56 26.091 81 01 41.290	225 13 54.66 284 25 04.09 312 36 56.16 247 38 33.7	45 16 40.74 104 33 27.68 132 40 04.74	Fort Mill..... Heath..... Roddy..... Azimuth mark, R.M. no. 1.	4. 0148624 4. 3630150 4. 0659037	10,348.14 23,068.27 11,373.75	33,950.5 75,683.1 37,315.4						
Red Hill, 1934.....	35 03 58.608 80 38 55.323	110 51 01.05 180 43 41.66 249 52 00.40 313 52 01.84 44 57 54.6	290 49 03.47 0 43 45.59 69 57 34.30 133 55 40.77	Pleasant..... Mint Hill..... Advance..... Monroe..... Azimuth mark, R.M. no. 1.	3. 7440196 4. 1336485 4. 1949379 4. 1277602	5,546.51 13,603.43 15,065.27 13,420.24	18,197.2 44,630.6 51,395.1 44,029.6						
Meekun, 1933.....	35 08 46.576 80 37 48.611	284 59 06.40 336 17 16.79 44 53 36.04 302 16 12	105 04 02.24 156 20 17.61 224 50 59.97	Advance..... Monroe..... Pleasant..... Azimuth mark, R.M. no. 2.	4. 1295927 4. 2978008 3. 9884895	13,476.98 19,851.84 9,738.44	44,215.7 65,130.6 31,950.2						
Richardson, 1934.....	34 49 13.963 80 47 50.657	113 49 38.30 189 24 16.29 10 58 48.1	293 44 52.00 9 24 44.42	Roddy..... Heath..... Azimuth mark, R.M. no. 1.	4. 1433958 3. 8835465	13,912.20 7,647.98	45,643.6 25,091.7						
Lancaster (S.C.), 1934.....	34 43 09.912 80 46 26.414	138 33 54.99 169 11 43.87 177 17 09.38 139 37 52.1	318 28 20.98 349 10 55.83 357 16 49.30	Roddy..... Richardson..... Heath..... Azimuth mark, R.M. no. 3.	4. 3514914 4. 0577004 4. 2737973	22,464.22 11,420.90 18,784.40	73,701.4 37,470.1 61,628.5						
Rodgers, 1934.....	34 55 23.304 80 46 26.491	13 01 34.34 145 07 09.17 263 39 12.69 304 15 09.8	193 01 14.33 325 04 28.84 83 42 04.46	Heath..... State..... Mineral..... Azimuth mark, R.M. no. 1.	3. 5952258 4. 0934906 3. 8843063	3,937.55 12,401.97 7,661.37	12,918.4 40,688.8 26,136.7						
<i>Supplementary points</i>													
Monroe, municipal water tank, 1934.....	34 58 57.449 80 32 36.281	127 18 15.4 199 12 46.1 291 56 29.2	307 12 40.4 19 14 42.0 111 56 30.6	Pleasant..... Advance..... Monroe.....	4. 269231 4. 191085 1. 820175	18,587.9 15,526.9 66.096	60,984 50,941 216.85						
Monroe, courthouse spire, 1934.....	34 58 58.064 80 33 00.523	65 49 15.3 128 20 00.0 158 05 54.7	245 44 25.4 308 20 38.8 338 03 09.2	Mineral..... Pleasant..... Meekun.....	4. 148465 4. 257457 4. 291140	14,075.5 18,090.8 19,549.7	46,179 59,353 64,139						
Fort Mill, silver tank (S.C.), 1934.....	35 00 22.809 80 56 51.314	246 44 14.4 203 49 48.3 356 09 57.2	06 48 49.9 83 53 06.3 176 10 19.9	Providence..... State..... Roddy.....	4. 121841 3. 944498 4. 177046	13,238.6 8,800.3 16,033.0	43,434 25,572 49,321						
Waxham, cotton mill stack, 1934.....	34 55 28.891 80 44 26.658	86 40 11.5 154 50 10.9 261 37 54.8	266 45 02.7 334 47 39.1 81 39 37.8	Rodgers..... Providence..... Mineral.....	3. 483764 4. 198039 3. 664859	3,046.4 15,777.5 4,622.3	9,995 51,763 15,165						
Lancaster, municipal water tank (S.C.), 1934.....	34 43 12.204 80 46 17.551	72 36 17.2 138 01 07.0 168 01 00.0	252 36 12.1 317 55 27.9 348 00 06.9	Lancaster..... Roddy..... Richardson.....	2. 373475 4. 353368 4. 056760	236.3 22,561.5 11,396.2	775 74,021 37,389						
Lancaster, aluminum tank (S.C.), 1934.....	34 42 13.392 80 45 49.132	151 25 30.2 139 36 25.9 160 35 48.1	331 25 08.9 319 30 30.6 346 34 38.8	Lancaster..... Roddy..... Richardson.....	3. 297372 4. 387421 4. 124609	1,983.2 24,401.8 13,323.2	6,507 80,058 43,711						
Fort Mill, standpipe (S.C.), 1934 ¹	35 00 13.17 80 56 36.37	357 33 48 126 41 48	177 34 02 306 41 40	Roddy..... Fort Mill.....	4. 167782 2. 681326	14,715.7 480.1	48,280 1,575						
State-line monument (1813) (N.C.-S.C.), 1934 ¹	34 40 10.684 80 47 51.671	194 18 49.8	14 18 50.4	Richardson.....	2. 018168	104.272	342.10						

¹ No check on this position.

Northwest corner of North Carolina

Station	Latitude and longitude	Azimuth	Back azimuth	To station	Distance				
					Logarithm (meters)	Meters	Feet		
Clinch (Va.), 1894. <i>Principal points</i>	36 49 44.301	98 22 29.71	278 02 42.11	High Knob 2.....	4.6950257	49,547.95	162,558.6		
	82 04 46.567	143 31 54.98	323 18 14.21	Birch (U.S.G.S.).....	4.7521562	56,514.03	186,413.1		
Holston 2 (Tenn.), 1933.....	36 26 12.909 82 07 46.147	188 57 18.43	8 58 53.49	Big A.....	4.3998052	25,107.60	82,373.9		
		291 17 19.30	111 36 30.67	Rogers.....	4.7100648	51,293.79	168,286.4		
		64 31 58.37	244 16 39.89	Big Knob.....	4.6256060	42,228.53	138,544.8		
		154 23 17.2		Azimuth mark, R.M. no. 2.					
		126 57 21.38	306 43 54.06	Big Knob.....	4.6245867	42,129.53	138,220.0		
		185 50 25.53	5 52 12.68	Clinch.....	4.6408149	43,733.57	143,452.6		
		244 30 52.45	64 51 45.38	Rogers.....	4.7625755	57,886.27	189,915.2		
		104 14 08.1		Azimuth mark, R.M. no. 3.					
		Bristol 2 (Va.-Tenn.), 1933.....	36 35 40.868 82 10 25.175	197 53 06.0	17 56 28.4	Clinch.....	4.436532	27,323.2	89,643
				347 15 02.4	167 16 37.0	Holston 2.....	4.254023	17,948.3	58,835
Dunn (Va.-Tenn.), 1895.....	36 35 44.132 82 15 57.925	263 27 58.7	83 53 47.4	Azimuth mark, R.M. no. 3.					
		325 09 41.9	145 14 34.5	Rogers.....	4.812167	64,888.4	212,888		
Smathers (Tenn.), 1933.....	36 18 28.877 82 20 49.760	109 42 06.9	289 33 31.5	Holston 2.....	4.331259	21,441.7	70,347		
		160 15 20.1	340 09 40.0	Big Knob.....	4.357680	22,786.6	74,759		
Damascus (Va.-Tenn.), 1895.....	36 36 50.994 81 49 36.593	233 43 23.8	53 51 08.6	Holston 2.....	4.623758	42,049.2	137,956		
		158 25 04.6		Azimuth mark, R.M. no. 2.	4.384000	24,210.3	79,430		
White Top 2 (Va.), 1933.....	36 38 06.447 81 36 19.636	95 27 52.0	275 03 32.8	Big Knob.....	4.785334	61,000.6	200,133		
		136 37 28.4	316 28 24.3	Clinch.....	4.516339	32,835.2	107,727		
N.C. corner (N.C.-Va.-Tenn.), 1894.....	36 35 16.967 81 40 39.399	258 31 04.7	78 41 10.1	Rogers.....	4.410076	25,708.5	84,845		
		83 22 02.1	263 14 06.6	Damascus.....	4.299685	19,938.2	65,414		
		242 57 41.9	62 59 51.7	Rogers.....	3.782738	6,063.7	19,894		
		324 14 42.7		Azimuth mark, R.M. no. 3.					
		230 59 48.3	51 02 23.2	White Top 2.....	3.919311	8,304.5	27,246		
		236 01 29.2	56 06 13.9	Rogers.....	4.155104	14,292.4	46,891		
		34 34 01		Azimuth mark, R.M. no. 2.					

Chowan River (second-order)

Principal points													
Meherrin, 1932.....	36	26	17.771	266	02	30.0	86	05	21.3	Parker.....	3.857390	7,201.0	23,625
	76	57	17.537	334	03	22.8	154	04	15.1	Winton.....	3.700540	5,018.1	16,464
Tunis, 1932.....	36	22	48.305	117	57	08.2	297	55	41.0	Winton.....	3.617890	4,148.5	13,611
	76	53	22.387	137	47	48.2	317	45	28.6	Meherrin.....	3.940448	8,718.6	28,604
				190	48	39.1	10	49	10.7	Parker.....	3.849804	7,076.3	23,216
Piland, 1932.....	36	20	44.543	118	31	42.3	298	27	29.9	Winton.....	4.081738	12,070.9	39,603
	76	48	43.865	152	28	53.6	332	26	39.9	Parker.....	4.084243	12,140.7	39,832
				216	43	50.5	36	45	45.0	Gatesville.....	3.905295	8,040.7	26,380
				249	40	27.3				Azimuth mark.			
Mason, 1932.....	36	18	58.484	125	10	44.5	305	08	54.3	Piland.....	3.754066	5,676.3	18,623
	76	45	37.809	181	01	07.0	1	01	11.2	Gatesville.....	3.987377	9,713.5	31,868
Cotton, 1932.....	36	18	11.038	161	07	02.9	341	06	24.4	Piland.....	3.699034	5,000.7	16,406
	76	47	38.964	244	10	16.3	64	11	28.0	Mason.....	3.526050	3,357.8	11,016
				96	58	49				Azimuth mark no. 1.			
				182	52	29				Azimuth mark no. 2.			
Newsome, 1932.....	36	15	38.954	153	30	59.3	333	30	03.9	Cotton.....	3.719130	5,237.6	17,184
	76	46	05.351	157	14	11.2	337	12	37.3	Piland.....	4.009269	10,215.7	33,516
				183	05	58.8	3	06	19.2	Gatesville.....	4.200996	15,885.3	52,117
				186	22	27.8	6	22	44.0	Mason.....	3.791573	6,188.3	20,303
				310	48	41.0	130	53	05.6	Mavston.....	4.169840	14,785.6	48,509
				110	50	12				Azimuth mark, chimney.			
Cannon, 1932.....	36	16	11.120	346	16	06.2	166	17	07.8	Mavston.....	4.040420	10,975.4	36,008
	76	40	21.809	32	58	58.5	212	56	09.1	Bull Pond.....	4.119386	13,163.9	43,189
				83	26	00.2	283	22	37.0	Newsome.....	3.936141	5,632.6	28,322
				123	13	09.4	303	10	02.3	Mason.....	3.974175	9,422.7	30,914
				152	37	34.2	332	34	31.1	Gatesville.....	4.224003	16,749.5	54,952
Saunders, 1932.....	36	12	03.445	171	47	22.9	351	47	00.1	Newsome.....	3.828769	6,710.7	22,017
	76	45	26.961	224	55	31.2	44	55	31.5	Cannon.....	4.032852	16,785.8	35,386
				286	27	34.0	106	31	35.6	Mavston.....	4.023105	10,668.5	35,002
				352	19	11.8	172	19	22.6	Bull Pond.....	3.536919	3,442.9	11,296

New River (second-order)

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points</i>													
Amos, 1932.....	34	32	01.539	87	04	07.3	267	01	12.8	Grant.....	3.895557	7,862.4	25,795
	77	19	40.792	108	10	42.9	288	18	36.2	Swan Point (U.S.E.).....	3.499870	3,161.3	10,372
				108	49	07.5	288	47	56.8	Swan Point eccentric.....	3.526286	3,359.6	11,022
Samworth, 1932.....	34	34	15.284	323	53	23.7	143	54	30.5	Amos.....	3.707621	5,100.6	16,734
	77	21	38.667	3	17	05.5	183	17	01.6	Swan Point eccentric.....	3.483304	3,043.0	9,984
				46	57	36.4	226	55	48.6	Grant.....	3.821542	6,630.4	21,753
Cedar Point, 1914.....	34	33	06.627	335	43	56.4	155	44	16.4	Amos.....	3.342416	2,200.0	7,218
	77	20	16.248	64	14	34.3	244	13	47.6	Swan Point (U.S.E.).....	3.367017	2,328.2	7,638
				67	56	35.6	247	55	44.9	Swan Point eccentric.....	3.390165	2,455.6	8,056
				135	12	11.9	315	11	25.1	Samworth.....	3.474459	2,981.7	9,782
Hatch (U.S.E.), 1932.....	34	33	06.974	182	46	13.1	2	46	15.3	Samworth.....	3.323737	2,107.4	6,914
	77	21	42.663	270	16	17.0	90	17	06.0	Cedar Point.....	3.343062	2,203.2	7,228
				354	02	57.9	174	03	00.2	Swan Point (U.S.E.).....	3.012079	1,028.2	3,373
Hall (U.S.E.), 1932.....	34	33	41.603	229	07	55.8	49	08	22.5	Samworth.....	3.200369	1,586.2	5,204
	77	22	25.727	288	04	17.6	108	05	31.1	Cedar Point.....	3.540637	3,472.5	11,393
				314	10	51.9	134	11	16.4	Hatch (U.S.E.).....	3.184976	1,531.0	5,023
Court, 1932.....	34	34	41.418	293	41	54.3	118	42	35.1	Samworth.....	3.301720	2,003.2	6,572
	77	22	50.627	340	59	44.9	160	59	59.0	Hall (U.S.E.).....	3.289892	1,949.4	6,396
Poverty, 1932.....	34	34	06.749	199	21	38.0	19	21	46.4	Court.....	3.053966	1,132.3	3,715
	77	23	05.355	263	12	23.6	83	13	12.8	Samworth.....	3.347387	2,225.3	7,301
				307	29	11.7	127	29	34.2	Hall (U.S.E.).....	3.104877	1,273.1	4,177
Ferry eccentric, 1932.....	34	34	39.532	267	44	05.4	87	44	38.2	Court.....	3.168316	1,473.4	4,834
	77	23	48.389	312	38	18.8	132	38	43.2	Poverty.....	3.173534	1,491.2	4,892
Covil, 1932.....	34	35	04.419	289	49	15.4	109	49	59.2	Court.....	3.320064	2,089.6	6,856
	77	24	07.754	318	09	58.0	138	10	33.4	Poverty.....	3.377457	2,384.8	7,824
				327	13	59.2	147	14	10.2	Ferry eccentric.....	2.959982	912.0	2,992
Stone eccentric, 1932.....	34	34	28.390	236	37	21.1	56	37	58.6	Covil.....	3.304979	2,018.3	6,622
	77	25	13.884	261	02	23.2	81	03	11.7	Ferry eccentric.....	3.343609	2,206.0	7,238
				263	42	52.7	83	44	14.0	Court.....	3.565067	3,673.4	12,052
Gin eccentric, 1932.....	34	35	53.495	294	23	09.0	114	24	23.2	Covil.....	3.563620	3,661.2	12,012
	77	26	18.593	327	49	51.5	147	50	28.2	Stone eccentric.....	3.491061	3,097.9	10,164
Water, 1932.....	34	35	42.399	352	06	09.4	172	06	12.9	Covil.....	3.072446	1,181.5	3,876
	77	24	14.124	33	44	29.2	213	43	55.2	Stone eccentric.....	3.438122	2,742.3	8,997
				96	09	43.9	276	08	33.2	Gin eccentric.....	3.503806	3,190.1	10,466
Hines, 1932.....	34	36	43.938	27	44	03.2	207	43	41.0	Water.....	3.330887	2,142.3	7,029
	77	23	35.000	69	33	43.6	249	32	10.7	Gin eccentric.....	3.648229	4,448.7	14,596
Gillette (U.S.E.), 1932.....	34	36	07.143	55	30	20.9	235	29	56.2	Water.....	3.129116	1,346.2	4,417
	77	23	30.583	84	24	09.3	264	22	33.9	Gin eccentric.....	3.635638	4,301.7	14,113
				174	19	55.4	354	19	52.9	Hines.....	3.056668	1,139.4	3,738
Fish (U.S.E.), 1932.....	34	37	10.245	56	09	41.4	236	08	36.8	Gillette (U.S.E.).....	3.542947	3,491.0	11,453
	77	21	36.785	74	56	41.5	254	55	34.4	Hines.....	3.495997	3,118.9	10,233
Grey (U.S.E.), 1932.....	34	37	35.697	305	14	44.1	125	15	08.8	Fish (U.S.E.).....	3.133196	1,358.9	4,458
	77	22	20.350	33	15	36.6	213	14	56.7	Gillette (U.S.E.).....	3.513623	3,263.0	10,705
				50	01	15.8	230	00	33.4	Hines.....	3.394800	2,482.0	8,143
Rhodes (U.S.E.), 1931.....	34	38	20.070	336	12	55.9	156	13	17.1	Fish (U.S.E.).....	3.371295	2,351.2	7,714
	77	22	14.007	6	44	19.3	186	44	15.8	Grey (U.S.E.).....	3.138877	1,376.8	4,517
French (U.S.E.), 1931.....	34	38	04.835	43	44	38.0	223	44	02.1	Fish (U.S.E.).....	3.367027	2,328.2	7,638
	77	20	33.593	71	44	09.4	251	43	08.8	Grey (U.S.E.).....	3.456924	2,863.7	9,395
				100	24	31.9	280	23	34.8	Rhodes (U.S.E.).....	3.415018	2,600.3	8,531
Bluff (U.S.E.), 1931.....	34	39	36.034	335	07	51.4	155	08	20.5	French (U.S.E.).....	3.490989	3,097.3	10,162
	77	21	24.733	28	11	52.9	208	11	24.9	Rhodes (U.S.E.).....	3.424212	2,655.9	8,714
				100	48	32.5	280	47	42.7	Town Point (U.S.E.).....	3.355609	2,267.8	7,440
Spring (U.S.E.), 1931.....	34	38	41.579	158	14	40.3	338	14	30.5	Town Point (U.S.E.).....	3.354930	2,264.3	7,429
	77	22	19.263	219	36	19.3	39	36	50.3	Bluff (U.S.E.).....	3.339066	2,178.0	7,146
				292	48	29.6	112	49	29.7	French (U.S.E.).....	3.465353	2,919.8	9,579
				348	34	49.9	168	34	52.9	Rhodes (U.S.E.).....	2.830069	676.2	2,218
Hadnot (U.S.E.), 1931.....	34	40	27.169	308	44	59.5	128	45	43.4	Bluff (U.S.E.).....	3.400893	2,517.1	8,258
	77	22	41.826	349	50	03.3	169	59	16.2	Spring (U.S.E.).....	3.519039	3,304.0	10,840
				12	57	11.6	192	57	05.7	Town Point (U.S.E.).....	3.072139	1,180.7	3,874
				158	12	36.5	338	12	01.5	Paradise (U.S.E.).....	3.625007	4,217.0	13,835
Little Ragged (U.S.E.), 1932.....	34	40	45.670	187	40	30.2	7	40	40.3	Paradise (U.S.E.).....	3.528372	3,375.8	11,075
	77	24	01.056	285	46	34.4	105	47	19.1	Hadnot (U.S.E.).....	3.321369	2,096.0	6,877
				314	28	14.1	134	28	53.3	Town Point (U.S.E.).....	3.380240	2,456.1	8,038
High, 1932.....	34	41	55.867	9	21	00.3	189	20	46.0	Town Point (U.S.E.).....	3.595067	3,936.1	12,914
	77	22	27.105	47	52	39.2	227	51	45.7	Little Ragged (U.S.E.).....	3.598473	3,224.6	10,579
				121	21	59.4	301	21	16.0	Paradise (U.S.E.).....	3.356417	2,272.0	7,454
North base (U.S.E.), 1932.....	34	33	02.173	47	01	39.5	227	01	18.6	Swan Point (U.S.E.).....	3.168293	1,283.2	4,210
	77	21	01.661	98	03	27.4	278	03	04.2	Hatch (U.S.E.).....	3.023580	1,035.8	3,404
				263	14	13.2	83	14	39.0	Cedar Point.....	3.066883	1,166.0	3,825

New River (second-order)—Continued

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U. S. COAST AND GEODETIC SURVEY

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance			
	°	'	"				Logarithm (meters)	Meters	Feet	
<i>Principal points—Continued</i>										
South base (U.S.E.), 1932	34	32	32.736	91	07	03.8	Swan Point (U.S.E.)	3.221450	1,665.1	5,463
	77	20	33.192	141	19	59.0	North base (U.S.E.)	3.065117	1,161.8	3,812
				202	28	23.8	Cedar Point	3.053130	1,130.1	3,708
View, 1932	34	31	22.213	167	18	22.8	Swan Point (U.S.E.)	3.354238	2,260.7	7,417
	77	21	18.000	206	26	21.0	Cedar Point	3.555500	3,593.4	11,789
				244	10	26.8	Amos	3.444413	2,782.4	9,129
Fish, 1932	34	30	51.421	197	50	07.4	Swan Point (U.S.E.)	3.520289	3,313.5	10,871
	77	22	18.283	237	53	15.3	View	3.251662	1,785.1	5,857
Passet, 1932	34	32	37.126	57	04	32.4	Amos	3.304746	2,017.2	6,618
	77	18	34.395	109	18	01.4	Cedar Point	3.439564	2,751.5	9,027
Crag, 1914	34	33	09.602	321	01	32.9	Passet	3.110826	1,290.7	4,235
	77	19	06.233	22	45	58.4	Amos	3.357442	2,277.4	7,472
				86	58	40.6	Cedar Point	3.252266	1,787.6	5,865
Vim, 1932	34	33	01.042	47	02	25.7	Passet	3.033962	1,081.3	3,548
	77	18	03.359	99	26	40.6	Crag	3.210861	1,625.0	5,331
Bay, 1914	34	33	23.580	311	46	25.9	Vim	3.018045	1,042.4	3,420
	77	18	33.851	0	33	20.1	Passet	3.155792	1,431.5	4,697
				62	36	04.2	Crag	2.968445	929.9	3,051
Sea, 1914	34	33	15.303	56	50	46.0	Vim	2.904989	803.5	2,636
	77	17	36.975	99	58	47.2	Bay	3.167993	1,472.3	4,830
Williams, 1914	34	33	31.381	320	34	43.2	Sea	2.807054	641.3	2,104
	77	17	52.948	15	51	06.2	Vim	2.987581	971.8	3,188
				77	01	22.0	Bay	3.029434	1,070.1	3,511
Camp, 1932	34	37	11.396	268	46	08.7	Gillette (U.S.E.)	3.614084	4,112.3	13,492
	77	25	52.052	325	48	23.7	Covil	3.674848	4,729.9	15,518
				15	44	06.1	Gin eccentric	3.396873	2,493.9	8,182
Ragged (U.S.E.), 1933	34	41	58.671	234	16	05.5	Paradise (U.S.E.)	3.273465	1,877.0	6,158
	77	24	48.214	312	22	16.6	Hadnot (U.S.E.)	3.621487	4,183.0	13,724
				334	29	37.6	Little Ragged (U.S.E.)	3.396604	2,492.3	8,177
Montford (U.S.E.), 1932	34	43	00.787	293	07	02.7	Paradise (U.S.E.)	3.318714	2,083.1	6,834
	77	24	58.625	348	25	10.7	Ragged (U.S.E.)	3.290893	1,953.9	6,410
Southwest (U.S.E.), 1933	34	42	32.203	231	25	53.3	Montford (U.S.E.)	3.150118	1,412.9	4,635
	77	25	42.040	268	48	01.8	Paradise (U.S.E.)	3.480197	3,021.3	9,912
				304	36	30.9	Ragged (U.S.E.)	3.259842	1,819.0	5,968
Jarman, 1933	34	41	50.543	205	48	40.1	Montford (U.S.E.)	3.381020	2,404.5	7,889
	77	25	39.770	245	33	11.1	Paradise (U.S.E.)	3.512506	3,254.7	10,678
Stump, 1933	34	41	10.089	179	51	37.3	Jarman	3.095720	1,246.6	4,090
	77	25	39.650	197	00	54.6	Montford (U.S.E.)	3.552342	3,567.3	11,704
Bog, 1933	34	41	13.115	203	54	22.6	Jarman	3.100903	1,261.5	4,139
	77	25	59.857	280	16	15.0	Stump	2.718285	522.7	1,715
Swamp, 1933	34	43	12.728	30	13	41.0	Ragged (U.S.E.)	3.421776	2,641.0	8,665
	77	23	50.971	47	33	35.4	Jarman	3.574256	3,752.2	12,310
				66	10	15.7	Southwest (U.S.E.)	3.489938	3,089.9	10,137
Northeast, 1933	34	43	47.379	342	21	32.8	Swamp	3.049390	1,120.4	3,676
	77	24	04.316	16	27	52.2	Ragged (U.S.E.)	3.543195	3,493.0	11,400
				34	00	48.8	Jarman	3.637787	4,343.0	14,249
Moss (U.S.E.), 1933	34	43	20.697	298	24	32.0	Montford (U.S.E.)	3.110385	1,289.4	4,230
	77	25	43.196	358	52	21.2	Southwest (U.S.E.)	3.174531	1,494.6	4,904
Brier (U.S.E.), 1933	34	43	47.263	325	59	45.7	Montford (U.S.E.)	3.237410	1,727.5	5,668
	77	25	36.592	11	35	55.7	Moss (U.S.E.)	2.922036	835.7	2,742
Pine (U.S.E.), 1933	34	43	58.293	314	31	11.3	Brier (U.S.E.)	2.685529	484.8	1,591
	77	25	50.178	351	16	54.6	Moss (U.S.E.)	3.068946	1,172.0	3,845
Wilson (U.S.E.), 1933	34	44	06.496	329	23	37.8	Brier (U.S.E.)	2.837954	688.6	2,259
	77	25	50.372	358	52	49.5	Pine (U.S.E.)	2.402788	252.8	829
Marsh (U.S.E.), 1933	34	44	16.560	322	55	07.9	Wilson (U.S.E.)	2.589633	388.7	1,275
	77	25	59.585	336	57	56.7	Pine (U.S.E.)	2.786492	611.6	2,007
Mill (U.S.E.), 1933	34	44	24.917	336	14	26.4	Wilson (U.S.E.)	2.792534	620.2	2,035
	77	26	00.194	356	33	18.9	Marsh (U.S.E.)	2.411608	258.0	846
<i>Supplementary points</i>										
Beacon (U.S.E.), 1933 ¹	34	44	27.67	284	55	12	Mill (U.S.E.)	2.517966	329.6	1,081
	77	26	12.71	315	42	42	Marsh (U.S.E.)	2.679701	478.3	1,569
Stone (U.S.E.), 1932 ¹	34	34	26.402	126	51		Stone eccentric	2.009323	102.17	335.2
	77	25	10.676							
Ferry (U.S.E.), 1932 ¹	34	34	39.861	354	46		Ferry eccentric	1.007748	10.18	33.4
	77	23	48.425							

¹ No check on this position.

TRIANGULATION AND TRAVERSE IN NORTH CAROLINA

103

New River (second-order)—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance				
	°	'	"				Logarithm (meters)	Meters	Feet		
<i>Supplementary points—Continued</i>											
Gin (U.S.E.), 1932 ¹	34	35	53.170	113	59	293	59	Gin eccentric.....	1.391641	24.64	80.8
	77	26	17.710								
Beacon no. 4, 1932 ¹	34	32	41.22	234	17	54	17	North base (U.S.E.).....	3.043815	1,106.2	3,629
	77	21	36.89	10	03	190	03	Swan Point (U.S.E.).....	2.366807	232.7	763
Light no. 2, 1932 ¹	34	32	57.16	259	58	79	58	North base (U.S.E.).....	2.948032	887.2	2,911
	77	21	35.93	5	10	185	10	Swan Point (U.S.E.).....	2.859288	723.2	2,373
Beacon no. 10, 1932 ¹	34	31	36.68	20	02	200	01	Fish.....	3.171512	1,484.3	4,870
	77	21	58.35	196	03	16	03	Swan Point (U.S.E.).....	3.262742	1,831.2	6,008
Beacon no. 6, 1932.....	34	32	24.430	176	01	356	01	Swan Point (U.S.E.).....	2.460776	288.9	948
	77	21	37.696	237	56	57	57	Cedar Point.....	3.389198	2,450.2	8,039
				346	01	166	02	View.....	3.295696	1,975.6	6,482
Light no. 8, 1932.....	34	32	08.036	179	57	359	57	Swan Point (U.S.E.).....	2.899507	793.4	2,603
	77	21	38.460	229	15	49	16	Cedar Point.....	3.441939	2,766.6	9,077
				340	37	160	38	View.....	3.175122	1,496.7	4,910

Boone northward (second-order)

<i>Principal points</i>											
Feathercamp (Va.), 1934.....	36	39	53.507	271	58	92	04	Rogers.....	4.188444	15,432.8	50,632
	81	43	03.194	337	14	167	16	N.C. corner.....	3.965797	9,242.7	30,324
				60	06	240	02	Damascus.....	4.052178	11,276.6	36,997
				279	02			Azimuth mark.....			
Grant (U.S.G.S.) (Va.), 1934.....	36	41	39.926	282	10	102	16	Feathercamp.....	4.190253	15,497.2	50,844
	81	53	13.198	328	50	148	53	Damascus.....	4.017242	10,405.0	34,137
				190	44			Azimuth mark.....			

Glenn, 1934.....	36	34	52.317	105	18	285	13	Damascus.....	4.142717	13,890.5	45,572
	81	40	37.478	123	51	303	43	Grant (U.S.G.S.).....	4.353927	22,590.6	74,116
				168	42	338	40	Feathercamp.....	3.998479	9,965.0	32,694
				176	24	356	24	N.C. corner.....	2.881565	761.3	2,498
				233	27	53	32	Rogers.....	4.167083	14,692.1	48,202
				166	35			Azimuth mark.....			
Haunted (Tenn.), 1934.....	36	36	13.653	164	36	344	35	Grant (U.S.G.S.).....	4.018372	10,432.1	34,226
	81	51	21.620	241	16	61	21	Feathercamp.....	4.149712	14,116.0	46,312
				246	11	66	12	Damascus.....	3.455246	2,852.6	9,359
				278	60	98	57	Glenn.....	4.206696	16,206.8	53,172
				75	45			Azimuth mark.....			
Bald Knob (U.S.G.S.) (Tenn.), 1934.....	36	30	46.529	130	09	310	04	Haunted.....	4.194498	15,649.4	51,343
	81	43	20.369	208	07	28	08	Glenn.....	3.934065	8,591.4	28,187
				229	28			Azimuth mark.....			
Shady (Tenn.), 1934.....	36	30	07.228	193	20	13	21	Haunted.....	4.064769	11,608.3	38,085
	81	53	09.381	244	46	64	53	Glenn.....	4.315213	20,664.2	67,796
				265	13	85	19	Bald Knob (U.S.G.S.).....	4.167534	14,707.3	48,252
				206	36			Azimuth mark.....			
Trout, 1934.....	36	24	11.542	320	24	140	30	Thomkins.....	4.370430	23,465.5	76,986
	81	38	37.887	116	52	296	43	Shady.....	4.335860	24,314.2	79,771
				150	00	329	57	Bald Knob (U.S.G.S.).....	4.148008	14,060.7	46,131
				13	41			Azimuth mark.....			
Doe (Tenn.), 1934.....	36	25	36.098	168	24	348	23	Shady.....	3.931023	8,531.5	27,990
	81	52	00.482	233	29	53	34	Bald Knob (U.S.G.S.).....	4.206848	16,100.8	52,824
				277	21	97	29	Trout.....	4.304601	20,165.1	66,158
Bald of Rich (U.S.G.S.), 1934.....	36	18	44.002	133	22	313	17	Doe.....	4.267366	18,508.3	60,723
	81	43	00.480	212	56	32	59	Trout.....	4.080368	12,032.8	39,478
				290	20	110	28	Thomkins.....	4.360629	22,941.9	75,269
				22	12	202	08	Grandfather.....	4.402136	25,242.7	82,817
				58	16			Azimuth mark.....			
Stone (N.C.-Tenn.), 1934.....	36	18	51.500	184	58	4	58	Doe.....	4.097543	12,518.2	41,070
	81	52	44.071	244	52	65	00	Trout.....	4.367161	23,289.5	76,409
				270	51	90	57	Bald of Rich (U.S.G.S.).....	4.163175	14,560.5	47,771
				347	54	167	56	Grandfather.....	4.382778	24,142.3	79,207
				266	01			Azimuth mark.....			
<i>Supplementary points</i>											
McQueen (Tenn.), 1934.....	36	34	18.947	192	48	12	49	Grant (U.S.G.S.).....	4.144264	13,940.0	45,735
	81	55	17.629	267	14	87	22	Glenn.....	4.340581	21,906.9	71,873
				337	38	157	39	Shady.....	3.923723	8,389.2	27,524
				255	59			Azimuth mark.....			

¹No check on this position.

Boone northward (second-order)—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Iron (U.S.G.S.) (Tenn.), 1934	36 30	59.811		141 56	28.2		321 54	33.0		McQueen	3.891952	7,797.4	25,582
	81 52	04.302		186 15	28.2		6 15	53.6		Haunted	3.983200	9,732.0	31,929
Luciuda (Tenn.), 1934	36 21	23.141		248 11	22.1		68 16	31.4		Glenn	4.267751	18,624.7	60,776
	81 47	19.399		307 11	57.5		127 14	31.0		Azimuth mark.			
Green, 1934	36 17	25.527		141 04	04.0		321 03	13.2		Trout	4.146033	13,996.9	45,921
	81 51	18.250		258 56	17.4		79 01	12.1		Bald of Rich (U.S.G.S.)	3.908977	8,109.2	26,605
McQueen, fire tower (Tenn.), 1934 ¹	36 34	18.76		192 49	15		12 50	30		Azimuth mark.			
	81 55	17.87		321 50	52		141 52	48		Stone	3.532359	3,406.9	11,177
Feathercamp, fire tower (Va.), 1934	36 39	53.161		246 43	54.8		66 43	55.4		Bald of Rich (U.S.G.S.)	4.102192	12,653.0	41,512
	81 43	04.191		271 55	50.4		92 02	01.8		Azimuth mark.			
Kong (Va.), 1934	36 40	50.708		151 37	29.5		331 37	09.8		Grant (U.S.G.S.)	4.144484	13,947.1	45,768
	81 52	40.187		276 58	04.1		97 03	48.6		Iron (U.S.G.S.)	3.891899	7,796.5	25,579
Cress (Tenn.), 1934	36 29	39.090		328 18	09.6		148 19	59.2		Feathercamp	1.430510	26.947	88.41
	81 51	57.701		277 08	13		295 55	17.9		Rogers	4.189129	15,457.1	50,712
				115 50	00.6		80 52	14.6		Grant (U.S.G.S.)	3.236625	1,724.3	5,657
				280 47	06.9		116 56	44.6		Feathercamp	4.159440	14,435.8	47,361
				296 48	49.5					Damascus	3.938673	8,683.1	28,488
				190 42	57					Azimuth mark.			
										Shady	3.297467	1,983.7	6,508
										Bald Knob (U.S.G.S.)	4.115310	13,041.0	42,785
										Trout	4.348904	22,330.8	73,264
										Azimuth mark.			

Sanford to Virginia boundary (traverse)

Osgood, 1918	<i>Principal points</i>			35 33	08.763		46 54	36.2		226 53	10.6		Allenby	3.7061217	5,083.02	16,676.5
				79 07	12.587											
Davis, 1918				35 33	46.737		359 09	19.4		179 09	19.8		Osgood	3.0683502	1,170.44	3,840.0
				79 07	13.272		208 45	42					Azimuth mark.			
Gibbons, 1918				35 34	24.272		27 31	19.5		207 31	05.6		Davis	3.1154044	1,304.88	4,279.5
				79 06	49.338											
Esprey, 1918				35 35	08.090		31 54	27.8		211 54	08.3		Gibbons	3.2018013	1,590.75	5,219.0
				79 06	15.947											
Farley, 1918				35 35	31.208		15 40	42.1		195 40	37.5		Esprey	2.8692345	740.00	2,427.8
				79 06	08.004											
Dro, 1918				35 37	02.348		31 25	18.0		211 24	38.3		Farley	3.5173745	3,291.35	10,798.4
				79 04	59.844											
Moncure, 1918				35 37	14.738		73 41	37.0		253 41	06.8		Dro	3.1334277	1,359.65	4,460.8
				79 04	07.991		285 48	11					Azimuth mark.			
Dri, 1918				35 37	10.987		109 45	36.9		289 45	20.5		Moncure	2.5339639	341.95	1,121.9
				79 03	55.203											
Dre, 1918				35 36	58.406		132 21	49.7		312 21	39.9		Dri	2.7599935	575.43	1,887.9
				79 03	38.308		127 20	54					Azimuth mark.			
Dra, 1918				35 36	40.101		111 18	37.0		291 18	03.6		Dre	3.1910737	1,552.65	5,094.0
				70 02	40.832		168 58	27					Azimuth mark.			
Doz, 1918				35 37	18.534		48 45	07.3		228 44	36.1		Dra	3.2543922	1,796.36	5,893.6
				79 01	47.169		209 29	21					Azimuth mark.			
Doy, 1918				35 37	51.108		22 53	54.7		202 53	44.9		Doz	3.0373367	1,089.77	3,575.4
				79 01	30.319											
Dox, 1918				35 38	01.369		45 16	31.0		225 16	23.6		Doy	2.6526156	449.38	1,474.3
				79 01	17.630		235 01	01					Azimuth mark.			
Dow, 1918				35 39	01.804		56 27	35.8		236 26	30.8		Dox	3.5276602	3,370.23	11,057.2
				78 59	25.987											
Dov, 1918				35 41	29.086		56 51	18.2		236 48	37.2		Dow	3.9189196	8,296.97	27,221.0
				78 54	49.833											
Dot, 1918				35 42	01.860		65 20	37.7		245 19	46.6		Dov	3.3839236	2,420.60	7,941.6
				78 53	22.338											
Dos, 1918				35 42	10.964		49 49	13.3		229 49	05.6		Dot	2.6383647	434.88	1,423.8
				78 53	09.122											
Dor, 1918				35 42	45.091		39 44	23.4		219 44	03.1		Dos	3.1360069	1,367.75	4,487.4
				78 52	34.340											
Dop, 1918				35 43	14.667		29 38	05.7		209 37	53.7		Dor	3.0206440	1,048.68	3,440.5
				78 52	13.711											

¹ No check on this position.

Sanford to Virginia boundary (traverse)—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Don, 1918.....	35 43 16.997 78 51 37.216	85 31 35.6	265 31 14.3	Dop.....	2.9638211	920.07	3,018.6						
Baldwin, 1918.....	35 43 23.055 78 51 19.175	67 37 17.8	247 37 07.3	Don.....	2.6905237	490.37	1,608.8						
Apex, 1918.....	35 44 00.584 78 50 56.322	26 24 31.9	206 24 18.6	Baldwin.....	3.1110541	1,291.38	4,236.8						
Dom, 1918.....	35 45 15.782 78 50 10.824	26 15 35.4	206 15 08.8	Apex.....	3.4123287	2,584.22	8,478.4						
Dol, 1918.....	35 45 33.768 78 49 46.726	47 31 28.1	227 31 12.0	Dom.....	2.9142641	820.85	2,693.1						
Dok, 1918.....	35 45 53.836 78 48 40.375	69 38 50.0	249 38 11.3	Dol.....	3.2498970	1,777.86	5,832.9						
Dol, 1918.....	35 46 00.643 78 48 29.101	53 28 13.5	233 28 06.9	Dok.....	2.5470879	352.44	1,156.3						
Doh, 1918.....	35 46 59.745 78 47 57.894	23 17 07.4 21 07 46.5	203 16 49.2	Dol..... Azimuth mark.	3.2973251	1,983.01	6,505.9						
Dog, 1918.....	35 47 12.398 78 47 38.122	51 51 26.3	231 51 14.8	Doh.....	2.8002886	631.38	2,071.5						
Dof, 1918.....	35 47 14.363 78 47 14.107	84 16 03.5	264 16 49.5	Dog.....	2.7825637	606.13	1,988.6						
Cary, 1918.....	35 46 57.345 78 46 53.441	135 18 11.7 328 25	315 17 59.6 148 25	Dof..... Cary reference mark	2.8679830 1.0253059	737.88 10.600	2,420.9 34.78						
Raleigh, 1918.....	35 46 36.908 78 38 21.582	92 50 03.2 295 11	272 45 04.0 115 11	Cary..... Raleigh reference mark	4.1096082 1.3138672	12,870.88 20.600	42,227.2 67.59						
Hilltop, 1918.....	35 51 59.232 78 35 16.481	25 05 16.9 201 39 07	205 03 28.5	Raleigh..... Azimuth mark.	4.0399901	10,964.53	35,972.8						

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Dob, 1918.....	35 56 23.629 78 31 42.063	33 26 07.8	213 24 02.1	Hilltop.....	3.9895812	9,762.95	32,030.6
Diz, 1918.....	35 56 31.669 78 31 36.815	27 57 47.6	207 57 44.5	Dob.....	2.4479945	280.54	920.4
Dix, 1918.....	35 56 57.742 78 31 17.959	30 27 40.5	210 27 29.4	Diz.....	2.9695360	932.26	3,058.6
Div, 1918.....	35 57 25.761 78 31 02.044	24 47 28.7 184 41 52	204 47 19.3	Dix..... Azimuth mark.	2.9782838	951.23	3,120.8
Dit, 1918.....	35 58 15.834 78 30 56.082	5 31 46.3	185 31 42.8	Div.....	3.1904753	1,550.51	5,087.0
Dis, 1918.....	35 58 27.998 78 30 42.380	42 28 52.3	222 28 44.3	Dit.....	2.7061542	508.34	1,667.8
Forrest, 1918.....	35 58 52.441 78 30 33.757	16 00 05.2	196 00 00.1	Dis.....	2.8941618	783.72	2,571.3
Dir, 1918.....	35 59 05.362 78 30 23.077	33 53 43.0	213 53 36.8	Forrest.....	2.6810310	479.77	1,574.0
Dip, 1918.....	35 59 24.446 78 29 48.541	55 47 29.4	235 47 09.1	Dir.....	3.0195906	1,046.14	3,432.2
Dfm, 1918.....	35 59 43.160 78 29 31.098	37 08 43.9	217 08 33.6	Dip.....	2.8594917	723.59	2,374.0
Wake, 1918.....	36 00 32.596 78 28 31.027	44 38 31.6	224 37 56.3	Dim.....	3.3306748	2,141.29	7,025.2
Youngsville, 1918.....	36 00 45.396 78 28 26.482	16 05 36.7	196 05 34.1	Wake.....	2.6134206	410.60	1,347.1
Dil (B.M. M 9), 1918.....	36 02 09.451 78 28 47.317	348 36 47.3	168 36 59.6	Youngsville.....	3.4220455	2,642.69	8,670.2
Dlk, 1918.....	36 02 18.102 78 28 51.485	338 37 33.7	158 37 36.2	Dil (B.M. M 9).....	2.4568691	286.33	939.4
Dig, 1918.....	36 02 28.515 78 28 59.444	328 10 07.7	148 10 12.4	Dlk.....	2.5772157	377.76	1,239.4
Tank, 1918.....	36 02 41.696 78 29 06.008	337 58 43.0	157 58 46.9	Dig.....	2.6417118	438.24	1,437.8
Dif, 1918.....	36 03 18.117 78 29 14.987	348 40 39.7	168 40 45.0	Tank.....	3.0587389	1,144.82	3,756.0
Did, 1918.....	36 03 31.003 78 29 10.314	16 24 34.3	196 24 31.6	Dif.....	2.6170411	414.04	1,358.4

Sanford to Virginia boundary (traverse)—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance						
	°	'	"				Logarithm (meters)	Meters	Feet				
<i>Principal points—Continued</i>													
Dic, 1918.....	36	03	38.086	40	27	45.2	220	27	40.8	Did.....	2.4577788	286.93	941.4
	78	29	02.874										
Dib, 1918.....	36	04	13.349	50	46	58.2	230	46	26.8	Dic.....	3.2352359	1,718.84	5,639.2
	78	28	09.664										
Dez, 1918.....	36	04	19.699	39	30	42.9	219	30	39.1	Dib.....	2.4042929	258.68	832.3
	78	28	03.214										
Dey, 1918.....	36	04	32.465	15	24	58.6	195	24	56.0	Dez.....	2.6108293	408.16	1,339.1
	78	27	58.878										
Dex, 1918.....	36	04	53.575	353	22	38.7	173	22	40.5	Dey.....	2.8162504	655.01	2,149.0
	78	28	01.897										
Dew, 1918.....	36	05	02.390	6	17	04.6	186	17	03.9	Dex.....	2.4366658	273.32	896.7
	78	28	00.701	202	43	22				Azimuth mark.			
Franklinton, 1918.....	36	06	24.860	24	28	10.2	204	27	43.0	Dew.....	3.4460109	2,792.61	9,162.1
	78	27	14.468										
Deter, 1918.....	36	07	05.862	0	25	18.6	180	25	18.4	Franklinton.....	3.1016741	1,263.79	4,146.3
	78	27	14.096	189	05	52				Azimuth mark.			
Det, 1918.....	36	07	59.170	11	40	21.8	191	40	13.8	Deter.....	3.2247246	1,677.74	5,504.4
	78	27	00.523										
Des, 1918.....	36	08	20.071	4	19	52.3	184	19	51.2	Det.....	2.8102826	646.07	2,119.6
	78	26	58.571	174	27	45				Azimuth mark.			
Der, 1918.....	36	09	03.314	355	27	08.9	175	27	11.4	Des.....	3.1261446	1,337.04	4,386.6
	78	27	02.811	191	45	02				Azimuth mark.			
Dep, 1918.....	36	09	20.336	25	08	39.5	205	08	33.7	Der.....	2.7691040	579.57	1,901.5
	78	26	52.960	203	21	03				Azimuth mark.			
Deo, 1918.....	36	09	31.498	23	16	39.8	203	16	36.3	Dep.....	2.5734746	374.52	1,228.7
	78	26	47.039										

Den, 1918.....	36	10	43.270	2	58	24.3	182	58	21.6	Deo.....	3.3454013	2,215.14	7,267.5
	78	26	42.442										
Dem, 1918.....	36	10	55.885	343	16	35.3	163	16	38.1	Den.....	2.6085172	405.99	1,332.0
	78	26	47.117										
Del, 1918.....	36	11	11.607	339	01	33.1	159	01	37.5	Dem.....	2.7151416	518.97	1,702.7
	78	26	54.551										
Dek, 1918.....	36	11	29.904	336	56	41.1	156	56	46.7	Del.....	2.7873921	612.90	2,010.8
	78	27	04.157										
Kittrell, 1918.....	36	11	44.014	358	11	20.9	178	11	21.2	Dek.....	2.6385917	435.10	1,427.5
	78	27	04.707										
Deg, 1918.....	36	14	17.244	15	04	09.2	195	03	39.1	Kittrell.....	3.6893974	4,891.00	16,046.6
	78	26	13.811	209	10	19				Azimuth mark.			
Def, 1918.....	36	14	31.829	36	21	33.2	210	21	25.3	Deg.....	2.7468006	558.21	1,831.4
	78	26	00.553										
Ded, 1918.....	36	15	36.663	47	09	08.0	227	08	17.0	Def.....	3.4680699	2,938.12	9,639.5
	78	24	34.287										
Dec, 1918.....	36	16	48.049	13	27	57.2	193	27	44.7	Ded.....	3.3545852	2,262.48	7,422.8
	78	24	13.182	15	25	50				Azimuth mark.			
Mobile, 1918.....	36	19	08.594	354	24	32.1	174	24	42.1	Dec.....	3.6387565	4,352.68	14,280.4
	78	24	30.174										
Mill, 1918.....	36	19	20.156	12	24	10.7	192	24	08.9	Mobile.....	2.5621800	364.91	1,197.2
	78	24	27.032										
Henderson, 1918.....	36	19	29.408	33	42	45.8	213	42	41.3	Mill.....	2.5350514	342.81	1,124.7
	78	24	19.404										
Daya, 1918.....	36	19	42.290	50	29	05.6	230	28	54.2	Henderson.....	2.7951821	624.00	2,047.2
	78	24	00.105										
Dare, 1918.....	36	19	53.305	39	58	58.8	219	58	52.1	Daya.....	2.6464898	443.09	1,453.7
	78	23	48.690	205	50	16.8				Azimuth mark.			
Deb, 1918.....	36	20	37.717	26	20	52.4	206	20	36.2	Dare.....	3.1840013	1,527.57	5,011.7
	78	23	21.507	233	47	02.4	53	47	15.1	Daz.....	2.8188671	658.97	2,162.0
Day, 1918.....	36	20	52.540	83	36	05.3	263	35	51.0	Deb.....	2.7825280	606.07	1,988.4
	78	22	36.032										
Das, 1918.....	36	20	55.932	82	55	36.5	262	55	16.5	Day.....	2.9287712	848.73	2,784.5
	78	22	02.254										
Dar, 1918.....	36	21	00.821	60	03	31.4	240	03	25.2	Das.....	2.4798853	301.92	990.5
	78	21	51.762	221	30	49.8				Azimuth mark.			

Sanford to Virginia boundary (traverse)—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Dap (B.M. R 6), 1918.....	36	21	59.849	43	48	17.5	223	47	36.0	Dar.....	3.4015340	2,520.77	8,270.2
	78	20	41.784										
Daw (B.M. Q 6), 1918.....	36	22	05.861	24	45	08.2	204	45	06.1	Dap (B.M. R 6) Azimuth mark.	2.3097693	204.07	669.5
	78	20	38.356	184	39	10.9							
Dan (B.M. O 6), 1918.....	36	22	14.137	5	05	15.1	185	05	14.6	Daw (B.M. Q 6).....	2.4084110	256.10	840.2
	78	20	37.445										
Dal, 1918.....	36	22	40.147	340	11	28.4	160	11	35.3	Dan (B.M. O 6) Daw azimuth mark.	2.9305037	852.13	2,795.7
	78	20	49.029	340	11	43.0							
Dag 1918.....	36	22	51.861	6	03	52.8	186	03	51.9	Dal.....	2.5600195	363.09	1,191.2
	78	20	47.490										
Daf, 1918.....	36	23	11.762	23	59	52.1	203	59	45.6	Dag.....	2.8270115	671.45	2,202.9
	78	20	36.534										
Middleburg 1918.....	36	23	35.671	45	16	03.2	225	15	45.5	Daf.....	3.0199728	1,047.06	3,435.2
	78	20	06.689	236	21	06				Azimuth mark.			
Dad, 1918.....	36	24	48.416	59	13	10.5	239	11	40.9	Middleburg.....	3.6414662	4,379.92	14,369.8
	78	17	35.695										
Dab (B.M. C 6), 1918.....	36	24	54.600	43	29	47.9	223	29	43.6	Dad.....	2.4196005	262.78	862.1
	78	17	28.435										
Cuz (B.M. A 6), 1918.....	36	25	08.516	29	03	28.2	209	03	22.6	Dab (B.M. C 6).....	2.6908148	490.70	1,609.9
	78	17	18.869										
Cuy (B.M. X 5), 1918.....	36	25	15.835	43	15	58.2	223	15	53.1	Dab (B.M. C 6).....	2.4911308	309.84	1,016.5
	78	17	10.345										
Manson (B.M. W 5), 1918.....	36	25	17.073	83	30	16.0	263	30	08.0	Cuz (B.M. A 6).....	2.5279644	337.26	1,106.5
	78	16	56.894										
Cux (B.M. U 5), 1918.....	36	25	08.861	101	01	33.1	281	01	02.1	Cuy (B.M. X 5).....	3.1218901	1,324.01	4,343.9
	78	16	04.728							Manson (B.M. W 5).....			
Ridgeway (B.M. R 5), 1918.....	36	26	07.737	57	37	05.7	237	35	57.5	Cux (B.M. U 5).....	3.5298992	3,387.66	11,114.3
	78	14	09.893										
Cuv (B.M. Q 5), 1918.....	36	26	11.757	63	55	48.2	243	55	42.2	Ridgeway (B.M. R 5).....	2.4501670	281.95	925.0
	78	13	59.725										
Norlina (B.M. L 5), 1918.....	36	26	50.056	75	17	18.9	255	15	31.7	Cuv (B.M. Q 5).....	3.6668898	4,643.97	15,236.1
	78	10	59.387										
Cus (B.M. J 5), 1918.....	36	26	48.466	95	14	25.1	275	14	12.4	Norlina (B.M. L 5).....	2.7297970	536.78	1,761.1
	78	10	37.923										
Warren (B.M. H 5), 1918.....	36	26	24.176	108	45	54.9	288	45	02.3	Cus (B.M. J 5).....	3.3670323	2,328.28	7,638.6
	78	09	09.401										
Cut (B.M. F 5), 1918.....	36	26	10.323	108	37	16.1	288	36	45.8	Warren (B.M. H 5).....	3.1263086	1,337.55	4,388.3
	78	08	18.509										
Cur (B.M. D 5), 1918.....	36	26	06.075	102	08	43.8	282	08	29.3	Cut (B.M. F 5).....	2.7941015	622.45	2,042.2
	78	07	54.078										
Cup (B.M. B 5), 1918.....	36	26	05.675	91	14	30.3	271	14	16.7	Cur (B.M. D 5).....	2.7557225	569.80	1,869.4
	78	07	31.207										
Macon (B.M. Z 4), 1918.....	36	26	13.907	85	20	27.0	265	19	12.9	Cup (B.M. B 5) Azimuth mark.	3.4937234	3,116.90	10,226.0
	78	05	26.483	83	26	46.2							
Cun (B.M. X 4), 1918.....	36	26	40.885	71	56	21.5	251	55	20.7	Macon (B.M. Z 4).....	3.4282993	2,681.02	8,796.0
	78	03	44.146										
Cum (B.M. U 4), 1918.....	36	26	40.589	92	21	21.6	272	21	16.3	Cun (B.M. X 4).....	2.3463801	222.01	728.4
	78	03	35.239										
Cul (B.M. S 4), 1918.....	36	25	51.469	127	46	38.6	307	45	52.0	Cum (B.M. U 4).....	3.3930294	2,471.89	8,109.9
	78	02	16.789										
Cug (B.M. R 4), 1918.....	36	25	46.902	109	01	09.3	289	00	59.6	Cul (B.M. S 4).....	2.6354759	431.99	1,417.3
	78	02	00.393										
Cuf (B.M. O 4), 1918.....	36	25	48.685	86	19	00.2	266	18	39.8	Cug (B.M. R 4).....	2.9318653	854.84	2,804.6
	78	01	26.146										
Cue (B.M. N 4), 1918.....	36	25	51.273	86	40	19.3	266	39	46.7	Cuf (B.M. O 4).....	3.1374419	1,372.28	4,502.2
	78	00	31.148										
Cud (B.M. L 4), 1918.....	36	25	47.703	110	24	07.0	290	24	00.0	Cue (B.M. N 4).....	2.4992367	315.67	1,035.7
	78	00	19.270										
Vaughan (B.M. I 4), 1918.....	36	25	26.480	143	26	37.5	323	26	25.9	Cud (B.M. L 4) Azimuth mark.	2.9108333	814.39	2,671.9
	77	59	59.797	141	27	00							

Sanford to Virginia boundary (traverse)—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Principal points—Continued</i>													
Cub (B.M. H 4), 1918.....	36 25 21.405 77 59 50.215	123 14 35.6	303 14 30.0	Vaughan (B.M. I 4).....	2.4554505	235.40	936.3						
Cru (B.M. E 4), 1918.....	36 25 12.053 77 59 19.284	110 30 46.8	290 30 28.4	Cub (B.M. H 4).....	2.9152475	822.71	2,699.2						
Cro (B.M. D 4), 1918.....	36 25 15.129 77 59 06.927	72 52 57.7	252 52 50.4	Cru (B.M. E 4).....	2.5080083	322.11	1,056.8						
Cote (B.M. A 4), 1918.....	36 25 19.115 77 58 56.252	65 12 14.8	245 12 08.5	Cro (B.M. D 4).....	2.4667880	292.95	961.1						
CrI (B.M. Z 3), 1918.....	36 25 46.048 77 58 20.150	47 17 34.8	227 17 13.4	Cote (B.M. A 4).....	3.0877512	1,223.91	4,015.4						
Cre, 1918.....	36 25 58.734 77 56 47.933	80 20 43.2	260 19 53.4	CrI (B.M. Z 3).....	3.3673704	2,330.08	7,644.6						
Coz (B.M. W 3), 1918.....	36 25 58.418 77 56 38.084	92 16 23.1	272 16 22.2	Cre.....	2.3900810	245.52	805.5						
Coy (B.M. U 3), 1918.....	36 25 50.490 77 55 37.221	99 09 42.3	279 09 06.2	Coz (B.M. W 3).....	3.1862766	1,535.59	5,038.0						
Littleton (B.M. R 3), 1918.....	36 25 55.321 77 55 03.010	80 05 27.4 236 15 15.9	260 05 07.1 56 15 41.4	Coy (B.M. U 3).....	2.9370528	865.07	2,838.2						
Cow (B.M. L 3), 1918.....	36 28 02.289 77 51 06.772	56 24 25.7	236 22 30.8	Cox (B.M. N 3).....	3.1100571	1,238.42	4,227.1						
Cov (B.M. I 3), 1918.....	36 28 05.292 77 50 50.933	76 47 23.5	256 47 14.1	Cow (B.M. L 3).....	3.7617373	5,777.46	18,954.9						
Summit (B.M. H 3), 1918.....	36 27 51.972 77 49 39.972	103 05 17.9	283 04 35.7	Cov (B.M. I 3).....	2.6075244	405.06	1,328.9						
Cot (B.M. D 3), 1918.....	36 27 50.488 77 48 59.828	92 37 24.8	272 37 01.0	Summit (B.M. H 3).....	3.2586015	1,813.85	5,950.9						
					3.0002474	1,000.57	3,282.7						

Cos (B.M. C 3), 1918.....	36 27 48.935 77 48 26.260	93 16 53.3	273 16 33.4	Cot (B.M. D 3).....	2.9223038	837.15	2,746.5
Cor (B.M. B 3), 1918.....	36 27 54.095 77 48 08.035	70 41 12.7 224 20 12.8	250 41 01.9	Cos (B.M. C 3) Azimuth mark.....	2.6320171	480.86	1,577.6
Thelma (B.M. Y 2), 1918.....	36 28 19.238 77 47 37.480	44 28 08.8 48 57 59.0	224 27 50.6	Cor (B.M. B 3) Azimuth mark.....	3.0358185	1,065.97	3,562.9
Cop (B.M. X 2), 1918.....	36 28 45.095 77 46 18.636	67 54 24.0	247 53 37.1	Thelma (B.M. Y 2).....	3.3260183	2,118.45	6,950.3
Con (B.M. V 2), 1918.....	36 28 46.460 77 46 10.036	78 52 41.6	258 52 36.5	Cop (B.M. X 2).....	2.3387960	218.17	715.3
Cog (B.M. T 2), 1918.....	36 28 46.264 77 45 57.876	91 08 39.7 266 18 40	271 08 32.5	Con (B.M. V 2) Azimuth mark.....	2.4811071	302.77	993.3
Cof, 1918.....	36 28 45.062 77 45 51.173	102 31 09.9	282 31 05.9	Cog (B.M. T 2).....	2.2323076	170.93	560.8
Coe (B.M. R 2), 1918.....	36 28 42.543 77 45 44.425	114 48 24.8	294 48 20.8	Cof.....	2.2673089	185.06	607.2
Cod (B.M. P 2), 1918.....	36 28 27.341 77 45 18.996	126 30 39.8	306 30 24.7	Coe (B.M. R 2).....	2.8963055	787.60	2,584.0
Cob (B.M. N 2), 1918.....	36 28 07.729 77 43 45.171	104 30 59.8	284 30 04.0	Cod (B.M. P 2).....	3.3825288	2,412.84	7,916.1
Coa (B.M. L 2), 1918.....	36 28 09.132 77 43 36.608	78 39 46.5	258 39 41.3	Cob (B.M. N 2).....	2.3423731	219.97	721.7
Cly (B.M. J 2), 1918.....	36 28 14.066 77 43 23.556	64 45 03.5	244 44 55.8	Coa (B.M. L 2).....	2.5521011	356.53	1,169.7
Clu (B.M. H 2), 1918.....	36 28 15.931 77 43 14.128	76 14 08.8	256 14 03.2	Cly (B.M. J 2).....	2.3831647	241.64	792.8
Clo (B.M. F 2), 1918.....	36 28 06.884 77 42 24.804	102 47 53.2	282 47 23.9	Clu (B.M. H 2).....	3.1001181	1,259.27	4,131.5
ClI (B.M. D 2), 1918.....	36 27 54.239 77 41 09.054	101 40 57.9	281 40 12.9	Clo (B.M. F 2).....	3.2846223	1,925.85	6,318.4
Clc (B.M. B 2), 1918.....	36 27 30.470 77 40 22.554	122 19 41.6 315 32 41.5	302 19 13.9 135 33 08.2	ClI (B.M. D 2) Roanoke (B.M. Z 1).....	3.1367630 3.2026699	1,370.13 1,594.07	4,495.2 5,231.8
Clx (B.M. X 1), 1918.....	36 26 41.091 77 39 22.124	134 40 28.2	314 40 18.9	Roanoke (B.M. Z 1).....	2.7370052	545.76	1,790.5
Clz (B.M. U 1), 1918.....	36 26 17.550 77 38 25.715	117 19 10.9	297 18 37.4	Clx (B.M. X 1).....	3.1989922	1,581.22	5,187.7

Sanford to Virginia boundary (traverse)—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance						
	°	'	"				Logarithm (meters)	Meters	Feet				
<i>Principal points—Continued</i>													
Civ (B.M. T 1), 1918.....	36	25	59.759	117	59	54.9	297	59	30.3	Ciz (B.M. U 1).....	3.0675410	1,188.26	3,832.9
	77	37	44.299										
Cit (B.M. Q 1), 1918.....	36	25	56.367	105	24	43.6	285	24	34.6	Civ (B.M. T 1).....	2.5949074	393.47	1,290.9
	77	37	29.071										
Cir, 1918.....	36	25	53.946	93	51	45.2	273	51	18.8	Cit (B.M. Q 1).....	3.0448637	1,108.83	3,637.9
	77	36	44.656										
Cip (B.M. L 1), 1918.....	36	25	43.825	102	47	06.3	282	46	33.5	Cir.....	3.1492678	1,410.16	4,626.5
	77	35	49.447	21	12	08.3				Azimuth mark.			
Weldon (B.M. K 1), 1918.....	36	25	44.256	86	10	03.9	266	09	59.2	Cip (B.M. L 1).....	2.2982767	198.74	652.0
	77	35	41.487	61	24	25.3				Azimuth mark.			
Garysburg (B.M. I 1), 1918.....	36	26	45.950	58	23	52.5	238	22	38.8	Weldon (B.M. K 1).....	3.5596514	3,627.87	11,902.4
	77	33	37.444										
Cin (B.M. G 1), 1918.....	36	27	04.910	61	51	49.8	241	51	23.8	Garysburg (B.M. I 1).....	3.0931288	1,239.16	4,065.5
	77	32	53.596										
Cim (B.M. E 1), 1918.....	36	27	34.453	59	26	04.1	239	25	27.3	Cin (B.M. G 1).....	3.2529560	1,790.42	5,874.1
	77	31	51.659										
Cil (B.M. C 1), 1918.....	36	28	24.945	71	30	17.8	251	28	26.8	Cim (B.M. E 1).....	3.6903932	4,902.22	16,083.4
	77	28	44.951										
Cik (B.M. A 1), 1918.....	36	29	01.188	62	55	51.8	242	54	59.6	Cil (B.M. C 1).....	3.3899312	2,454.32	8,052.2
	77	27	17.165										
Cig, 1918.....	36	29	11.057	61	04	43.3	241	04	30.1	Cik (B.M. A 1).....	2.7986173	628.95	2,063.5
	77	26	55.049										
Cid (B.M. W), 1918.....	36	29	39.505	53	38	27.9	233	37	59.5	Cig.....	3.1699590	1,478.97	4,852.3
	77	26	07.200	54	21	38				Azimuth mark.			
Cib (B.M. U), 1918.....	36	29	59.171	70	31	38.3	250	30	57.3	Cid (B.M. W).....	3.2595753	1,817.92	5,964.3
	77	24	58.336										

Cia (B.M. S), 1918.....	36	30	18.496	59	24	09.5	239	23	45.4	Cib (B.M. U).....	3.0682075	1,170.06	3,838.8
	77	24	17.867										
Cra (B.M. P), 1918.....	36	30	25.248	69	10	01.4	249	09	48.3	Cia (B.M. S).....	2.7673242	585.23	1,920.0
	77	23	55.888										
Cet (B.M. O), 1918.....	36	30	44.830	63	23	32.1	243	23	08.3	Cra (B.M. P).....	3.1295367	1,347.52	4,421.0
	77	23	07.472										
Cer (B.M. M), 1918.....	36	30	54.059	49	41	04.6	229	40	56.6	Cet (B.M. O).....	2.6431308	439.67	1,442.5
	77	22	53.999										
Cep (B.M. K), 1918.....	36	31	15.268	36	34	12.8	216	34	01.2	Cer (B.M. M).....	2.9106059	813.97	2,670.5
	77	22	34.509										
Cel (B.M. I), 1918.....	36	31	26.347	49	18	23.5	229	18	14.0	Cep (B.M. K).....	2.7191327	523.76	1,718.4
	77	22	18.547										
Cef (B.M. G), 1918.....	36	31	32.036	63	39	56.5	243	39	48.0	Cel (B.M. I).....	2.5968911	395.27	1,296.8
	77	22	04.309										
Ced (B.M. E), 1918.....	36	31	51.967	69	35	33.7	249	34	54.2	Cef (B.M. G).....	3.2458658	1,761.43	5,779.0
	77	20	57.952										
Caz (B.M. D), 1918.....	36	32	01.833	64	05	07.4	244	04	52.5	Ced (B.M. E).....	2.8424670	695.77	2,282.7
	77	20	32.796										
Care (B.M. A), 1918.....	36	32	37.123	70	38	29.1	250	37	15.1	Caz (B.M. D).....	3.5158623	3,279.91	10,760.8
	77	18	28.401	73	25	18				Azimuth mark.			
Ceda (B.M. V 11) (Va.), 1918.....	36	33	29.680	60	42	16.0	240	41	06.9	Care (B.M. A).....	3.5198048	3,309.82	10,859.0
	77	16	32.351										
Cay (B.M. T 11) (Va.), 1918.....	36	34	26.851	60	36	18.4	240	35	03.5	Ceda (B.M. V 11).....	3.5549983	3,589.20	11,775.6
	77	14	26.604										
Boykins (B.M. S 11) (Va.), 1918.....	36	35	00.810	73	12	27.3	253	11	04.2	Cay (B.M. T 11).....	3.5588042	3,620.80	11,879.2
	77	12	07.185										
Caw (B.M. Q 11) (Va.), 1918.....	36	35	09.177	56	13	24.9	236	13	15.6	Boykins (B.M. S 11).....	2.6664243	463.90	1,522.0
	77	11	51.675										
Cat (B.M. O 11) (Va.), 1918.....	36	35	39.834	48	38	08.6	228	37	42.9	Caw (B.M. Q 11).....	3.1552912	1,429.85	4,691.1
	77	11	08.506										
Cas (B.M. M 11) (Va.), 1918.....	36	35	46.477	57	46	31.4	237	46	23.6	Cat (B.M. O 11).....	2.5843086	383.98	1,259.8
	77	10	55.438										
Cap (B.M. K 11) (Va.), 1918.....	36	36	04.974	66	25	08.3	246	24	37.0	Cas (B.M. M 11).....	3.1538024	1,424.96	4,675.1
	77	10	02.897	234	40	06.6	54	40	33.0	Can.....	3.1292650	1,346.68	4,418.2

Sanford to Virginia boundary (traverse)—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
	°	'	"	°	'	"	°	'	"		Logarithm (meters)	Meters	Feet
<i>Supplementary points</i>													
Colon, 1918.....	35	31	23.988	330	38	17.2	150	38	20.4	Allenby.....	2.4474146	280.17	919.2
	79	09	45.362	21	08	27				Azimuth mark.....			
Allenby A, 1918.....	35	31	47.390	66	25	08.2	246	24	30.0	Colon.....	3.2558653	1,802.46	5,913.6
	79	08	39.798	208	58	49				Azimuth mark.....			
Allenby B, 1918.....	35	31	59.420	29	42	45.3	209	42	40.4	Allenby A.....	2.6302964	426.87	1,400.5
	79	08	31.400										
Allenby C, 1918.....	35	32	10.019	41	02	34.5	221	02	28.0	Allenby B.....	2.6365770	433.09	1,420.9
	79	08	20.112										
Allenby D, 1918.....	35	32	17.965	52	50	08.7	232	50	01.2	Allenby C.....	2.6078431	405.36	1,329.9
	79	08	07.289										
Allenby E, 1918.....	35	32	36.477	49	59	30.0	229	59	14.3	Allenby D.....	2.9481063	897.37	2,911.3
	79	07	40.308	215	03	23.8	35	03	40.0	Osgood.....	3.0847784	1,215.57	3,988.1
Fetner, 1918.....	35	47	17.348	21	38	33.5	201	38	27.8	Cary.....	2.8216755	663.25	2,176.0
	78	46	43.701	83	07	57.0	263	07	39.3	Dof.....	2.8859873	769.11	2,523.3
Dod, 1918.....	35	47	34.043	283	54	48.9				Azimuth mark.....			
	78	46	03.814										
Thompson, 1918.....	35	47	09.212	101	31	50.4	281	30	22.9	Dod.....	3.5834831	3,832.51	12,573.8
	78	43	34.274	98	53	09.0				Azimuth mark.....			
Method, 1918.....	35	47	19.786	289	00	28.0	109	01	57.0	Raleigh.....	3.6070702	4,046.41	13,275.6
	78	40	53.904	294	49	40.0				Azimuth mark.....			
Southern, 1918.....	35	46	36.621	114	09	14.8	294	08	05.7	Method.....	3.5121907	3,252.37	10,670.5
	78	38	55.732	269	13	16.2	89	13	36.1	Raleigh.....	2.9333866	857.80	2,814.3
				113	43	48.0				Azimuth mark.....			
East, 1918.....	35	45	58.509	178	34	32.9	358	34	32.2	Raleigh.....	3.0742007	1,186.32	3,892.1
	78	38	20.408	177	53	41				Azimuth mark.....			
Raleigh longitude, 1853 ¹	35	46	46.67										
	78	38	19.44										

Millbrook, 1918.....	35	51	02.173										
	78	36	13.498										
Doc, 1918.....	35	54	02.022										
	78	34	03.024										
Wake Forest, water tank, 1918.....	35	58	47.441	224	06	07.0	44	06	46.1	Dim.....	3.378701	2,391.7	7,847
	78	30	37.550	224	20	50.4	44	22	04.8	Wake.....	3.056377	4,532.9	14,872
				13	42	10.0	193	41	55.6	Div.....	3.413502	2,591.2	8,501
Youngsville, church spire, 1918.....	36	01	30.904	8	52	03.8	188	51	58.7	Youngsville.....	3.152731	1,421.4	4,663
	78	28	17.732	10	29	08.8	190	28	59.0	Wake.....	3.262339	1,829.5	6,002
				148	01	14.8	328	00	57.4	Dil.....	3.145659	1,398.5	4,588
Primary traverse station no. 4 (U.S.G.S.), 1918 ¹	36	31	51.746	215	41	42	35	41	42	Ced.....	0.922674	8.369	27.46
	77	20	58.148										
Primary traverse station no. 14 (U.S.G.S.) (Va.), 1918 ¹	36	34	59.12										
	77	12	11.98										

Sanford to Wilmington (traverse)

<i>Principal points</i>													
Station	Latitude and longitude			Azimuth			Back azimuth			To station	Logarithm (meters)	Meters	Feet
Spout Springs, 1918.....	35	16	43.547	159	39	10.8	339	36	20.4	Jonesboro.....	4.3292659	21,343.51	70,024.5
	79	03	59.189										
Prince, 1918.....	35	09	43.365	146	58	39.3	326	55	27.2	Spout Springs.....	4.1888800	15,448.27	50,683.2
	78	58	26.063	152	18	55.0				Azimuth mark.....			
Camp, 1918.....	35	08	57.778	134	44	14.3	314	43	42.0	Prince.....	3.3001781	1,996.08	6,548.8
	78	57	30.038	137	20	26.1				Azimuth mark.....			
Lake, 1918.....	35	07	56.811	151	26	34.4	331	26	11.1	Camp.....	3.3302314	2,139.10	7,018.0
	78	56	49.640	325	35	57.9				Azimuth mark.....			
Shaw, 1918.....	35	05	16.768	141	58	58.7	321	57	31.1	Lake.....	3.7966617	6,261.26	20,542.2
	78	54	17.323	319	30	04.5				Azimuth mark.....			
Pine, 1918.....	35	04	48.214	135	03	59.9	315	03	40.0	Shaw.....	3.0644806	1,243.03	4,078.2
	78	53	42.665	208	46	26				Azimuth mark.....			
Fayetteville, 1918.....	35	02	43.160	137	24	07.7	317	22	47.3	Pine.....	3.7190060	5,236.08	17,178.7
	78	51	22.771	101	31	18				Azimuth mark.....			
Vander, 1918.....	35	01	33.121	104	55	21.7	284	52	17.9	Fayetteville.....	3.9240420	8,395.41	27,543.9
	78	46	02.690	101	54	18				Azimuth mark.....			

¹ No check on this position.

Sanford to Wilmington (traverse)—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance						
	°	'	"				Logarithm (meters)	Meters	Feet				
<i>Supplementary points—Continued</i>													
Spout Springs B, 1918.....	35	16	57.338	180	01	00.2	0	01	00.2	Spout Springs C.....	2.3521969	225.01	738.2
	79	04	59.720										
Spout Springs A, 1918.....	35	16	49.005	148	54	01.7	328	53	58.1	Spout Springs B.....	2.4769880	299.91	984.0
	79	04	53.590										
Prince F Prime, 1918.....	35	16	23.940	125	22	39.4	305	22	14.5	Spout Springs A.....	3.1252502	1,334.29	4,377.6
	79	04	10.541										
Prince F, 1918.....	35	16	21.125	125	20	06.9	305	20	04.1	Prince F Prime.....	2.1760496	149.99	492.1
	79	04	05.700										
Prince G, 1918.....	35	16	25.845	13	31	17.7	193	31	16.9	Prince F.....	2.1749455	149.60	490.8
	79	04	04.316	193	21	39.1	13	21	42.1	Spout Springs.....	2.7487350	560.71	1,839.6
Prince E, 1918.....	35	15	55.708	125	19	35.4	305	19	10.1	Prince F.....	3.1318531	1,354.73	4,444.6
	79	03	21.968										
Duf, 1918.....	35	15	50.138	137	03	28.5	317	03	24.9	Prince E.....	2.3701178	234.49	769.3
	79	03	15.648										
Dud, 1918.....	35	15	31.994	149	52	38.4	329	52	31.0	Duf.....	2.8105402	646.46	2,120.9
	79	03	02.813										
Duc, 1918.....	35	14	27.030	158	24	01.4	338	23	43.3	Dud.....	3.3330949	2,153.25	7,064.5
	79	02	31.456										
Dub, 1918.....	35	13	52.160	149	02	43.5	329	02	28.8	Duc.....	3.0979821	1,253.09	4,111.2
	79	02	05.964										
Prince D, 1918.....	35	13	16.741	167	56	48.3	347	56	48.0	Dub.....	3.0477116	1,116.12	3,661.8
	79	01	50.747										
Overhills, 1918.....	35	13	10.158	139	55	45.0	319	55	41.1	Prince D.....	2.4234166	265.10	869.7
	79	01	49.999										
Manchester, 1918.....	35	12	43.398	125	11	42.3	305	11	15.7	Overhills.....	3.1556220	1,430.94	4,694.7
	79	01	03.762	124	27	41.9				Azimuth mark.			
Bragg, 1918.....	35	10	28.908	156	04	49.2	336	04	07.3	Manchester.....	3.6564989	4,534.18	14,875.9
	78	59	51.077	156	36	28.0				Azimuth mark.			
Prince C, 1918.....	35	10	19.229	141	32	55.1	321	32	49.7	Bragg.....	2.5807863	380.88	1,249.6
	78	59	41.717										
Prince B, 1918.....	35	09	55.489	119	58	36.0	299	58	07.2	Prince C.....	3.1656581	1,464.39	4,804.4
	78	58	51.589										
Prince A, 1918.....	35	09	48.416	314	57	51.4	134	57	54.9	Prince.....	2.3429476	220.27	722.7
	78	58	32.221	113	58	32.6	293	58	21.5	Prince B.....	2.7295182	536.44	1,760.0
Fayetteville J, 1918.....	35	04	52.167	141	25	28.0	321	25	14.3	Shaw.....	2.9866584	969.75	3,181.6
	78	53	53.452	294	01	30.3	114	01	36.5	Pine.....	2.4759538	299.19	981.6
Fayetteville I, 1918.....	35	03	52.779	151	07	27.0	331	07	04.1	Fayetteville J.....	3.3201537	2,090.04	6,857.1
	78	53	13.611										
Fayetteville H, 1918.....	35	03	20.287	156	55	47.4	336	55	37.7	Fayetteville I.....	3.0367613	1,088.33	3,570.6
	78	52	56.780										
Fayetteville G, 1918.....	35	03	14.341	182	38	41.1	2	38	41.3	Fayetteville H.....	2.2634678	183.43	601.8
	78	52	57.114										
Fayetteville E, 1918.....	35	03	10.656	201	27	15.0	21	27	16.0	Fayetteville G.....	2.0864034	122.01	400.3
	78	52	58.875										
Fayetteville D, 1918.....	35	03	04.534	152	00	06.1	332	00	03.8	Fayetteville E.....	2.3297328	213.66	701.0
	78	52	54.917										
Fayetteville C, 1918.....	35	02	46.034	112	35	30.7	292	34	59.6	Fayetteville D.....	3.1715132	1,484.27	4,869.6
	78	52	00.843										
Fayetteville B, 1918.....	35	02	47.550	81	16	02.2	261	15	55.3	Fayetteville C.....	2.4880874	307.67	1,009.4
	78	51	48.844										
Fayetteville A, 1918.....	35	02	44.048	100	23	01.5	280	22	48.1	Fayetteville B.....	2.7773209	598.85	1,964.7
	78	51	25.602	290	53	04.3	110	53	06.0	Fayetteville.....	1.8852435	76.78	251.9
Primary traverse station no. 17 (U.S.G.S.), 1918 ¹	35	10	54.98										
	79	00	04.88										
Primary traverse station no. 18 (U.S.G.S.), 1918 ¹	35	09	47.574	116	41	33	296	41	32	Prince A.....	1.7618903	57.795	189.62
	78	58	30.181										
Fayetteville F, 1918 ¹	35	08	14.096	201	27	16	21	27	16	Fayetteville G.....	0.9082169	8.095	26.56
	78	52	57.231										
Primary traverse station no. 4 (U.S.G.S.), 1918 ¹	35	03	17.006	293	11	19	113	11	24	Fayetteville F.....	2.3572163	227.62	746.8
	78	53	05.487										

¹ No check on this position.

Sanford to Wilmington (traverse)—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance			
	°	'	"				Logarithm (meters)	Meters	Feet	
<i>Supplementary points—Continued</i>										
Fayetteville, water tank, 1918 ¹	35 02 43.52	78 52 02.73		211 41 34	270 37 10	31 41 35	Fayetteville C.....	1.959779	91.2	299
Primary traverse station no. 3 (U.S.G.S.), 1918 ¹	35 01 51.73	78 47 28.89				90 37 32	Fayetteville.....	3.005550	1,012.9	3,323
Primary traverse station no. 2 (U.S.G.S.), 1918 ¹	35 00 35.17	78 41 42.65								
Primary traverse station no. 1 (U.S.G.S.), 1918 ¹	34 58 49.647	78 35 24.749		285 05 47.1		105 05 49.6	Hayne.....	2.0525785	112.87	370.3
Primary traverse station no. 3 (U.S.G.S.), 1918 ¹	34 15 25.55	77 59 32.58								

Sanford to Osborne (traverse)

<i>Principal points</i>										
Carr, 1918.....	35 02 35.345	79 30 28.659		217 38 54.8		37 43 03.1	Foch.....	4.2525860	17,889.00	58,690.8
Hoffman, 1918.....	35 02 03.821	79 32 37.099		253 22 28.2		73 23 42.0	Carr.....	3.5311400	3,397.35	11,146.1
Broadacre, 1918.....	35 01 27.300	79 33 42.853		235 58 03.3		55 58 41.0	Hoffman.....	3.3034540	2,011.19	6,598.4
Marston, 1918.....	34 59 44.548	79 34 03.981		189 36 03.4	54 22 33.8	9 36 15.5	Broadacre.....	3.5066953	3,211.41	10,536.1
Cognac, 1918.....	34 58 30.024	79 36 14.034		235 08 34.5	228 16 25.6	55 09 49.1	Azimuth mark.	3.6041439	4,019.24	13,186.5
Oise, 1918.....	34 56 47.175	79 36 45.533		194 08 57.9		14 09 16.0	Marston.....	3.5143581	3,208.57	10,723.6
							Azimuth mark.			
							Cognac.....			

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Ainse, 1918.....	34 56 02.042	79 37 38.051		224 21 04.4		44 21 34.4	Oise.....	3.2802017	1,906.35	6,254.4
Vesle, 1918.....	34 55 19.674	79 39 15.031		241 32 53.3	61 33 48.8	241 08 43.9	Ainse.....	3.4470554	2,799.34	9,184.2
Hamlet, 1918.....	34 53 14.757	79 42 33.218		224 27 52.2		44 28 44.1	Rockingham.....	3.4931890	3,113.07	10,213.5
Light, 1918.....	34 49 44.013	79 45 21.631		213 28 27.7		33 30 04.0	Rockingham.....	3.5171457	3,289.62	10,792.7
Osborne (S.C.), 1918.....	34 47 50.825	79 46 21.245		203 18 34.4		23 19 08.4	Hamlet.....	3.8504955	7,753.46	25,437.8
<i>Supplementary points</i>										
Debeney A, 1918.....	35 31 17.555	79 09 49.986		210 26 35.1	30 26 37.8	100 15 20.2	Colon.....	2.3616290	229.95	754.4
Debeney, 1918.....	35 30 40.075	79 10 16.975		210 28 43.2	213 06 57	30 29 01.6	Allenby.....	2.4116302	253.01	846.5
Brook, 1918.....	35 29 20.124	79 10 40.407		193 28 34.6		13 28 48.2	Colon.....	3.1959987	1,570.36	5,152.1
Lee, 1918.....	35 28 46.960	79 10 37.433		175 48 19.0	355 48 17.3	174 36 02.5	Azimuth mark.	3.4037674	2,533.77	8,312.9
Sanford C, 1918.....	35 28 30.600	79 10 35.726		175 07 17.0	355 07 16.0		Debeney.....	3.0106485	1,024.82	3,362.3
Sanford B, 1918.....	35 27 44.912	79 10 37.605		181 55 38.4		1 55 30.5	Sanford.....	3.4957618	3,131.57	10,274.2
Sanford A, 1918.....	35 27 14.437	79 10 49.944		198 19 43.4	18 19 50.6	113 34 28.3	Sanford.....	2.7041742	506.03	1,660.2
Troy, 1918.....	35 26 32.215	79 10 35.789		164 39 35.2	344 39 27.0	13 45 18.7	Sanford C.....	3.1488534	1,408.81	4,622.1
Fismes, 1918.....	35 25 25.338	79 11 17.074		206 48 10.0	26 48 34.0		Sanford B.....	2.9953640	989.38	3,246.0
Lennon 1918.....	35 25 06.574	79 11 35.327		218 31 45.0	38 31 55.6		Sanford.....	2.8233702	865.84	2,844.5
Gum, 1918.....	35 24 40.734	79 11 46.765		199 55 06.9	19 55 13.5		Sanford A.....	3.1301053	1,349.29	4,426.8
Alfair, 1918.....	35 24 18.327	79 11 39.896		165 54 39.8	345 54 35.8		Sanford.....	3.0275511	1,065.49	3,495.7
							Troy.....	3.3634578	2,309.18	7,576.0
							Fismes.....	2.8687726	739.22	2,425.3
							Lennon.....	2.9278914	847.02	2,778.9
							Gum.....	2.8524550	711.96	2,335.8

¹ No check on this position.

Sanford to Osborne (traverse)—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Mangin, 1918.....	35 23 59.013	79 11 47.386	197 36 56.1	0 11 59.7	17 37 00.4	Alfair.....	2.7955368	624.51	2,048.9				
						Lemon C azimuth mark.....							
Reeves, 1918.....	35 23 14.958	79 11 47.223	38 33 01.2	179 49 35.1	218 32 19.8	Lemon.....	3.4613604	2,893.08	9,491.7				
						Mangin.....	3.1328019	1,357.69	4,454.4				
Lemon C, 1918.....	35 22 56.658	79 12 08.181	223 09 49.2	218 17 15.0	43 10 01.3	Reeves.....	2.8882999	773.21	2,536.8				
						Azimuth mark.....							
Lemon B, 1918.....	35 22 23.401	79 12 30.507	208 48 07.1		28 48 20.0	Lemon C.....	3.0680462	1,169.62	3,837.3				
Lemon A, 1918.....	35 22 03.272	79 12 40.620	83 17 28.3	202 22 12.2	263 17 17.9	Lemon.....	2.6609804	458.12	1,503.0				
						Lemon B.....	2.8266058	670.82	2,200.8				
Morrison, 1918.....	35 21 00.088	79 13 10.020	188 37 27.1	200 51 50.0	8 37 33.7	Lemon.....	3.2822424	1,915.32	6,283.8				
						Lemon A.....	3.3188704	2,083.87	6,836.8				
Mihiel, 1918.....	35 20 42.274	79 13 36.241	230 20 02.3		50 20 17.5	Morrison.....	2.9345444	860.09	2,821.8				
Huron, 1918.....	35 19 50.965	79 14 25.275	218 03 41.6		38 04 10.0	Mihiel.....	3.3028513	2,008.41	6,589.3				
Cameron, 1918.....	35 19 48.415	79 14 56.662	264 20 05.6		84 20 23.8	Huron.....	2.9012410	796.60	2,613.5				
Hayes, 1918.....	35 18 36.391	79 15 45.043	208 49 56.7		28 50 24.6	Cameron.....	3.4037705	2,533.79	8,312.9				
Hamilton, 1918.....	35 18 17.482	79 15 46.303	183 07 31.2		3 07 31.9	Hayes.....	2.7661158	583.60	1,914.7				
Newton, 1918.....	35 16 52.185	79 16 11.908	193 49 30.2		13 49 45.0	Hamilton.....	3.4325019	2,707.08	8,881.5				

Mount Vernon, 1918.....	35 16 22.696	79 16 13.389	182 21 34.2		2 21 35.0	Newton.....	2.9588158	909.53	2,984.0			
Ailette, 1918.....	35 15 57.539	79 16 20.538	193 07 02.3	204 25 56.4	13 07 06.4	Mount Vernon.....	2.9009413	796.05	2,611.7			
						Lemon.....	4.0906953	12,322.40	40,427.7			
Vass, 1918.....	35 14 48.188	79 17 23.720	216 46 00.5		36 46 37.0	Ailette.....	3.4262006	2,668.09	8,753.6			
Lakeview A, 1918.....	35 14 16.534	79 18 30.902	240 07 33.5		60 08 12.3	Vass.....	3.2919864	1,958.78	6,426.4			
Guynemer A, 1918.....	35 14 13.946	79 18 44.362	256 48 42.7		76 48 50.4	Lakeview A.....	2.5435057	349.55	1,146.8			
Guynemer, 1918.....	35 14 01.597	79 19 03.460	231 45 20.8		51 45 31.8	Guynemer A.....	2.7887670	614.85	2,017.2			
Lakeview, 1918.....	35 14 12.943	79 18 39.560	59 56 54.3	104 17 09.3	239 56 40.5	Guynemer.....	2.843982	698.2	2,291			
						Guynemer A.....	2.097981	125.3	411			
						Vass.....	3.343164	2,203.8	7,230			
						Lakeview A.....	2.389695	245.3	805			
						Azimuth mark no. 1.....						
						Azimuth mark no. 2.....						
Fonck, 1918.....	35 13 52.063	79 19 37.233	251 00 47.9		71 01 07.4	Guynemer.....	2.9557517	903.13	2,963.0			
Delaware, 1918.....	35 13 14.240	79 20 26.384	226 50 08.7		46 50 37.1	Fonck.....	3.2314613	1,703.97	5,590.4			
Niagara D, 1918.....	35 12 43.882	79 20 48.790	211 12 08.6		31 12 21.6	Delaware.....	3.0389431	1,093.81	3,588.6			
Niagara C, 1918.....	35 12 38.533	79 20 55.308	225 00 08.5	71 01 32.7	45 00 12.2	Niagara D.....	2.3675682	233.11	764.8			
						Azimuth mark.....						
Niagara, 1918.....	35 12 28.640	79 21 02.309	39 32 08.5	210 08 55.5	219 30 51.0	Foch.....	3.7282716	5,348.99	17,549.1			
						Niagara C.....	2.5472352	352.56	1,156.7			
						Delaware.....	3.2236055	1,673.42	5,490.2			
						Ailette.....	3.9823743	9,602.28	31,503.5			
Niagara B, 1918.....	35 12 34.355	79 21 09.581	250 22 13.1	313 45 15.6	70 22 21.3	Niagara C.....	2.5835226	383.29	1,257.5			
						Niagara.....	2.4059604	254.66	835.5			
Niagara A, 1918.....	35 12 26.864	79 21 19.125	226 16 47.6	262 39 54.5	46 16 53.1	Niagara B.....	2.5237910	334.03	1,095.9			
						Niagara.....	2.6323285	428.87	1,407.1			
						Niagara C azimuth mark.....						
						Foch E azimuth mark.....						

Sanford to Osborne (traverse)—Continued

Station	Latitude and longitude			Azimuth	Back azimuth	To station	Distance		
	°	'	"				Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>									
Foch E, 1918.....	35 12 11.239	199 29 09.6	19 29 13.5	Niagara A.....	2.7082283	510.77	1,675.8		
	79 21 25.861	228 00 24.4	48 00 38.0	Niagara.....	2.9039272	801.54	2,629.7		
		24 16 20.5		Azimuth mark.					
Foch D, 1918.....	35 10 52.506	215 16 40.4	35 17 19.5	Foch E.....	3.4730939	2,972.31	9,751.7		
	79 22 33.724								
Foch C, 1918.....	35 10 47.785	236 23 21.7	56 23 26.7	Foch D.....	2.4196772	262.83	862.3		
	79 22 42.375								
Foch B, 1918.....	35 10 45.383	260 06 51.2	80 07 00.9	Foch C.....	2.6346898	431.21	1,414.7		
	79 22 59.164	52 43 25.9		Azimuth mark.					
Foch A, 1918.....	35 10 28.382	233 20 27.9	53 20 43.9	Foch B.....	2.9432753	877.56	2,879.1		
	79 23 26.986	328 36 49.1	148 36 54.9	Foch.....	2.6918927	491.92	1,613.9		
Quentin E, 1918.....	35 10 10.147	233 10 07.0	53 10 24.1	Foch A.....	2.9719685	937.49	3,075.7		
	79 23 56.640	261 58 01.3	81 58 24.2	Foch.....	3.0071424	1,016.58	3,335.2		
		233 46 28.8		Foch B azimuth mark.					
Quentin D, 1918.....	35 09 37.669	205 46 44.8	25 46 55.8	Quentin E.....	3.0459102	1,111.50	3,646.6		
	79 24 15.742	232 30 27.7	52 31 01.6	Foch.....	3.2736734	1,877.90	6,161.1		
		55 06 07.4		Quentin B azimuth mark.					
Quentin C, 1918.....	35 09 29.837	234 08 23.5	54 08 31.3	Quentin D.....	2.6258885	422.56	1,386.3		
	79 24 29.273								
Quentin B, 1918.....	35 09 21.726	208 51 22.4	28 51 25.5	Quentin C.....	2.4445661	278.33	913.2		
	79 24 34.581	237 20 52.4		Azimuth mark.					
Quentin A, 1918.....	35 09 00.468	184 48 08.6	4 48 09.8	Quentin B.....	2.8178492	657.43	2,156.9		
	79 24 36.755								
Quentin, 1918.....	35 08 50.723	199 39 56.0	19 39 58.5	Quentin A.....	2.5096695	318.91	1,046.3		
	79 24 40.995	219 25 21.4	39 26 09.9	Foch.....	3.5253854	3,352.63	10,999.4		
		37 55 19.7		Azimuth mark.					
Aberdeen, 1918.....	35 08 03.790	220 43 28.8	40 43 57.2	Quentin.....	3.2807051	1,908.56	6,261.7		
	79 25 30.187	32 31 57.7		Azimuth mark.					
Griffin, 1918.....	35 06 40.007	209 39 05.4	29 39 38.8	Aberdeen.....	3.4729169	2,971.10	9,747.7		
	79 26 28.246								
Pond A, 1918.....	35 06 07.698	227 12 47.1	47 13 11.5	Griffin.....	3.1660902	1,465.85	4,809.2		
	79 27 10.726								
Keyser A, 1918.....	35 05 55.638	204 58 54.9	24 58 58.8	Pond A.....	2.6127930	410.01	1,345.2		
	79 27 17.563								
Keyser, 1918.....	35 05 09.246	185 13 27.8	5 13 30.7	Keyser A.....	3.1570397	1,435.62	4,710.0		
	79 27 22.724								
Pond, 1918.....	35 06 04.253	12 59 07.8	192 58 59.0	Keyser.....	3.240450	1,739.6	5,707		
	79 27 07.293	44 25 01.7	224 24 55.8	Keyser A.....	2.570153	371.7	1,219		
		140 41 06.5	320 41 04.5	Pond A.....	2.137468	137.2	450		
		221 54 18.7	41 54 41.1	Griffin.....	3.170410	1,480.5	4,857		
Erie, 1918.....	35 03 33.817	211 59 42.7	32 00 24.4	Keyser.....	3.5400459	3,467.74	11,377.1		
	79 28 35.256								
Ratle, 1918.....	35 03 04.796	219 26 51.9	39 27 08.6	Erie.....	3.0637747	1,158.18	3,799.8		
	79 29 04.296								
Alexander, 1918.....	35 03 03.627	267 14 06.7	87 14 23.6	Ratle.....	2.8735891	747.46	2,452.3		
	79 29 33.756								
Richmond, 1918.....	35 02 56.951	249 36 02.8	69 36 15.4	Alexander.....	2.7711071	590.35	1,936.8		
	79 29 55.589	51 32 19.9	231 32 00.9	Carr.....	3.0295496	1,070.41	3,511.8		
Carr A, 1918.....	35 02 45.296	62 15 40.1	242 15 26.9	Carr.....	2.8187534	658.80	2,161.4		
	79 30 05.653	215 22 46.7	35 22 52.4	Richmond.....	2.6439607	440.52	1,445.3		
Hoffman A, 1918.....	35 02 33.490	73 28 52.3	253 27 42.5	Hoffman.....	3.5070110	3,213.74	10,543.7		
	79 30 35.546	244 20 49.8	64 21 07.0	Carr A.....	2.9245150	840.46	2,757.4		
		251 51 58.9	71 52 02.8	Carr.....	2.2640481	183.67	602.6		
Hamlet F, 1918.....	34 53 58.791	206 23 39.0	26 23 50.0	Rockingham.....	3.0436847	1,105.82	3,628.0		
	79 41 21.815								
Hamlet E, 1918.....	34 53 20.922	189 01 50.7	9 01 54.9	Hamlet F.....	3.0724696	1,181.60	3,876.6		
	79 41 29.120								
Hamlet D, 1918.....	34 53 16.831	238 28 01.4	58 28 06.0	Hamlet E.....	2.3821981	241.10	791.0		
	79 41 37.213								
Hamlet C, 1918.....	34 53 06.501	240 36 01.5	60 36 14.1	Hamlet D.....	2.8093711	644.72	2,115.2		
	79 41 59.333								
Hamlet B, 1918.....	34 53 00.582	151 02 23.9	331 02 21.6	Hamlet C.....	2.3233671	210.56	690.8		
	79 41 55.318								

Sanford to Osborne (traverse)—Continued

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Hamlet A, 1918.....	34 52 50.992	140 01 15.7	320 01 01.8	Hamlet.....	2.9803302	955.72	3,135.6						
	79 42 09.036	229 41 23.8	49 41 31.6	Hamlet B.....	2.6597655	456.84	1,498.8						
		140 49 06.2	320 48 52.6	Hamlet, city water tank.....	2.9816844	958.70	3,145.3						
Light I, 1918.....	34 52 11.145	205 38 24.0	25 38 45.2	Hamlet.....	3.3373368	2,174.39	7,133.8						
	79 43 10.271	231 42 07.3	51 42 42.3	Hamlet A.....	3.2969919	1,981.49	6,500.9						
Light J, 1918.....	34 52 14.766	231 55 38.2	51 56 10.3	Hamlet A.....	3.2577812	1,810.43	5,939.7						
	79 43 05.158	49 19 44.4	229 19 41.5	Light I.....	2.2335729	171.23	561.8						
Light H, 1918.....	34 51 44.337	211 30 47.8	31 31 26.3	Hamlet.....	3.5143524	3,268.53	10,723.5						
	79 43 40.498	222 54 04.7	42 54 21.9	Light I.....	3.0522239	1,127.78	3,700.1						
Light G, 1918.....	34 50 51.038	223 41 25.5	43 42 00.8	Light H.....	3.3563322	2,271.60	7,452.7						
	79 44 42.273												
Light F, 1918.....	34 50 44.167	245 33 00.2	65 33 10.7	Light G.....	2.7089159	511.58	1,678.4						
	79 45 00.604												
Light D, 1918.....	34 50 41.716	235 02 23.6	55 02 26.0	Light F.....	2.1199527	131.81	432.4						
	79 45 04.856												
Light C, 1918.....	34 50 37.523	226 58 29.6	46 58 32.7	Light D.....	2.2773059	189.37	621.3						
	79 45 10.305												
Light E, 1918.....	34 50 44.470	246 43 19.1	66 43 29.7	Light G.....	2.709408	512.2	1,680						
	79 45 00.792	332 57 20.9	152 57 21.0	Light F.....	1.020927	10.5	34						
		48 28 17.2	228 28 11.8	Light C.....	2.509012	322.9	1,059						
		50 35 24.3	230 35 22.0	Light D.....	2.125956	133.6	438						
Light B, 1918.....	34 49 57.538	182 00 38.5	2 00 39.5	Light C.....	3.0909246	1,232.89	4,044.9						
	79 45 12.008	32 09 03.3	212 08 57.8	Light.....	2.6823018	459.52	1,507.6						
Light A, 1918.....	34 49 48.522	52 52 29.2	232 52 25.6	Light.....	2.2989921	199.06	653.1						
	79 45 15.385	197 41 44.8	17 41 46.7	Light B.....	2.4506757	282.28	926.1						
Osborne I, 1918.....	34 49 42.365	166 10 26.0	346 10 25.6	Light.....	1.9077667	80.87	265.3						
	79 45 20.870	215 03 28.4	35 03 31.6	Light A.....	2.3850467	242.69	796.2						
Osborne H, 1918.....	34 49 35.719	214 59 42.1	34 59 45.3	Osborne I.....	2.3979289	249.99	820.2						
	79 45 26.513												
Osborne G, 1918.....	34 49 31.218	204 54 00.3	24 54 04.7	Light.....	2.6676997	465.26	1,526.4						
	79 45 29.340	207 23 14.9	27 23 16.5	Osborne H.....	2.1937208	156.21	512.5						
		212 04 15.2	32 04 20.1	Osborne I.....	2.6078405	405.36	1,329.9						
Osborne F, 1918.....	34 49 11.268	189 29 03.2	9 29 05.5	Osborne G.....	2.7946795	623.27	2,044.8						
	79 45 33.382												
Osborne E, 1918.....	34 48 58.336	211 26 29.2	31 26 34.7	Osborne F.....	2.6693846	467.07	1,532.4						
	79 45 42.999												
Osborne D, 1918.....	34 48 51.222	196 54 47.5	16 54 49.0	Osborne E.....	2.3601107	229.15	751.8						
	79 45 45.592												
Osborne C, 1918.....	34 48 39.188	171 46 16.6	351 46 15.4	Osborne D.....	2.5736671	374.69	1,229.3						
	79 45 43.482												
Osborne B, 1918.....	34 48 33.405	180 58 49.9	0 58 50.0	Osborne C.....	2.2509791	178.23	584.7						
	79 45 43.602												
Osborne A (S.C.), 1918.....	34 47 54.483	79 19 56.7	259 19 43.3	Osborne.....	2.7845346	608.88	1,997.6						
	79 45 57.707	196 38 29.9	16 38 38.0	Osborne B.....	3.0975432	1,251.82	4,107.0						
Sanford, red steel standpipe, 1918.....	35 28 54.734	17 49 58.6	197 49 33.7	Sanford.....	3.547361	3,526.6	11,570						
	79 09 42.918	180 59 48.8	0 59 50.6	Allenby.....	3.639117	4,356.3	14,292						
		333 43 49.4	153 44 18.1	Jonesboro.....	3.449587	2,815.7	9,238						
Sanford, tall steel water tank, 1918.....	35 28 53.148	312 46 53.0	132 47 54.6	Jonesboro.....	3.561702	3,045.0	11,959						
	79 10 39.590	344 05 32.1	164 05 36.0	Lee.....	2.297367	198.3	651						
		353 58 29.8	173 58 37.8	Sanford.....	3.522022	3,326.8	10,915						
Jonesboro, tall square white steeple with spiral, 1918.....	35 27 17.604	29 31 49.7	209 29 43.0	Lemon.....	4.048947	11,193.0	36,722						
	79 09 20.106	77 36 25.2	257 35 47.1	Sanford.....	3.229111	1,694.8	5,560						
		235 04 53.1	55 05 08.5	Jonesboro.....	2.912926	818.3	2,685						
Carthage, lower water tank, 1918.....	35 20 48.206	262 56 23.5	83 03 25.2	Lemon.....	4.268081	18,538.8	60,823						
	79 25 07.440	338 03 37.9	158 05 59.4	Niagara.....	4.219979	16,595.1	54,446						
		351 50 32.8	171 51 36.6	Foch.....	4.294915	19,720.4	64,699						
Carthage, taller water tank, 1918.....	35 20 44.414	262 29 17.9	82 36 14.2	Lemon.....	4.262930	18,320.2	60,106						
	79 24 58.120	338 40 19.5	158 42 35.6	Niagara.....	4.214836	16,399.7	53,805						
		352 28 38.2	172 29 36.7	Foch.....	4.291647	19,572.5	64,214						
Carthage, courthouse dome, 1918.....	35 20 44.181	262 30 25.7	82 37 24.4	Lemon.....	4.268964	18,423.2	60,443						
	79 25 02.191	338 19 40.7	158 21 50.2	Niagara.....	4.215656	16,430.7	53,906						
		352 10 30.8	172 11 31.7	Foch.....	4.291794	19,579.2	64,236						
Vass, white steeple with shingle roof, 1918 ¹	35 15 24.72	48 08 13	228 05 55	Niagara.....	3.909989	8,128.1	26,667						
	79 17 02.99	226 41 34	46 41 59	Alette.....	3.168665	1,474.6	4,838						

¹No check on this position.

Sanford to Osborne (traverse)—Continued

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U. S. COAST AND GEODETIC SURVEY

Station	Latitude and longitude			Azimuth			Back azimuth			To station	Distance		
											Logarithm (meters)	Meters	Feet
<i>Supplementary points—Continued</i>													
Lakeview, green water tank with black roof, 1918.....	35	14	34.918	0	03	29.0	180	03	28.9	Lakeview A.....	2.753231	566.5	1,859
	79	18	30.879	17	57	30.2	197	57	25.2	Lakeview.....	2.852409	711.9	2,336
				44	33	05.8	224	31	38.4	Niagara.....	3.737171	5,459.7	17,912
Niagara, water tank, 1918.....	35	12	24.170	145	35	56.6	325	35	55.3	Niagara A.....	2.002620	100.6	330
	79	21	16.878	210	27	29.7	30	27	33.9	Niagara B.....	2.561245	364.1	1,195
				249	30	12.3	69	30	20.7	Niagara.....	2.594868	393.4	1,291
Southern Pines, Congregational Church, steeple, 1918 ¹	35	10	30.39	320	16	14	140	16	23	Foch.....	2.796839	626.4	2,055
	79	23	32.68	44	11	10	224	10	57	Quentin E.....	2.939427	869.8	2,854
Southern Pines, water tank, 1918.....	35	10	18.695	75	18	26.6	255	18	16.1	Foch.....	2.680028	478.7	1,571
	79	22	58.565	214	03	42.6	34	04	41.0	Foch E.....	3.621890	4,136.9	13,737
				216	17	14.4	36	18	21.4	Niagara.....	3.696235	4,968.6	16,301
Aberdeen, Seaboard Air Line Ry., water tank, 1918 ¹	35	08	04.75	49	33	52	229	33	51	Aberdeen.....	1.661201	45.8	150
	79	25	28.81	220	30	30	40	30	58	Quentin.....	3.270286	1,863.3	6,113
Hoffman, Seaboard Air Line Ry., semaphore, 1918 ¹	35	01	48.70	236	11	05	56	11	20	Hoffman.....	2.923045	837.6	2,748
	79	33	04.55	55	49	23	235	49	01	Broadacre.....	3.069516	1,173.6	3,850
Hamlet, Seaboard Air Line Ry., water tank, 1918 ¹	34	53	00.47	113	21	45	293	21	22	Hamlet.....	3.045403	1,110.2	3,642
	79	41	53.08	204	45	11	24	45	40	Rockingham.....	3.487109	3,069.8	10,072

¹No check on this position.

ELEVATIONS

The elevations given in the following table are referred to mean sea level. The stations are divided into three classes: First, those fixed by direct connection with sea level, the elevations of which are subject to a probable error of ± 0.1 meter; second, the stations in the main scheme fixed by reciprocal measures of the vertical angles and subject to probable errors varying from ± 0.2 to ± 1.7 meters; and, third, the intersection stations, the elevations of which are fixed by measurement of vertical angles which are not reciprocal (the station not being occupied). The probable errors of these elevations may be as great as ± 3 meters.

Since recent adjustments have changed the elevations of bench marks in North Carolina by slight amounts, the elevations of the class 1 stations, as given in the following table, do not agree exactly with the latest adopted elevations of these points. The differences are small, however, and it did not seem advisable to readjust the trigonometric elevations to eliminate these discrepancies, especially as the probable errors of the class 2 and class 3 elevations are several times as large as any changes that would be made by the readjustment.

The traverse lines listed in this publication are also precise level lines so that practically all of the stations thus included are also precise-level bench marks. The elevations of these stations are not given in this list because they are given in the publication of the precise levels in the State and this publication should be consulted for any such data.

Table of elevations

Station	Point to which elevation refers	Elevation above mean sea level	
		Meters	Feet
<i>Class 1</i>			
Climax.....	Station mark.....	256.637	841.983
Siler.....	do.....	234.518	769.414
<i>Class 2</i>			
Anderson.....	do.....	471.6	1,547
Asheboro.....	do.....	337.3	1,107
Benn.....	do.....	886.4	2,908
Big Butt.....	do.....	1,479	4,852
Big Knob (Va.).....	do.....	962	3,156
Buffalo (Va.).....	do.....	1,210.4	3,971
Bull (Va.).....	do.....	978.8	3,211
Cedder Mountain.....	do.....	303.4	995
Greensboro.....	do.....	285.8	938
Guilford.....	do.....	295.7	970
High Point.....	do.....	307.0	1,007
Hogback (S.C.).....	do.....	984.4	3,230
Kernersville.....	do.....	310.2	1,018
King.....	do.....	515.7	1,692
Liberty.....	do.....	252.3	828
Moore.....	do.....	784.0	2,572
Ogburn.....	do.....	277.9	912
Poora.....	do.....	816.9	2,680
Ramsure.....	do.....	278.5	914
Roan High Bluff.....	do.....	1,912	6,273
Rogers (Va.).....	do.....	1,745	5,725
Stuart (Va.).....	do.....	858.6	2,817
Wofford (S.C.).....	do.....	267.6	878
Young.....	do.....	332.9	1,092
<i>Class 3</i>			
Mount Mitchell.....	Ground.....	2,038	6,686
Lincolnton Courthouse.....	Base of cupola.....	288	945
Crowder Mountain.....	Ground.....	490	1,608
Spencer Mountain.....	do.....	394	1,293
Silver Creek Knob.....	do.....	868	2,848
Blackstock Knob.....	do.....	1,944	6,378
Bakers Knob.....	do.....	552	1,811

Table of elevations—Continued

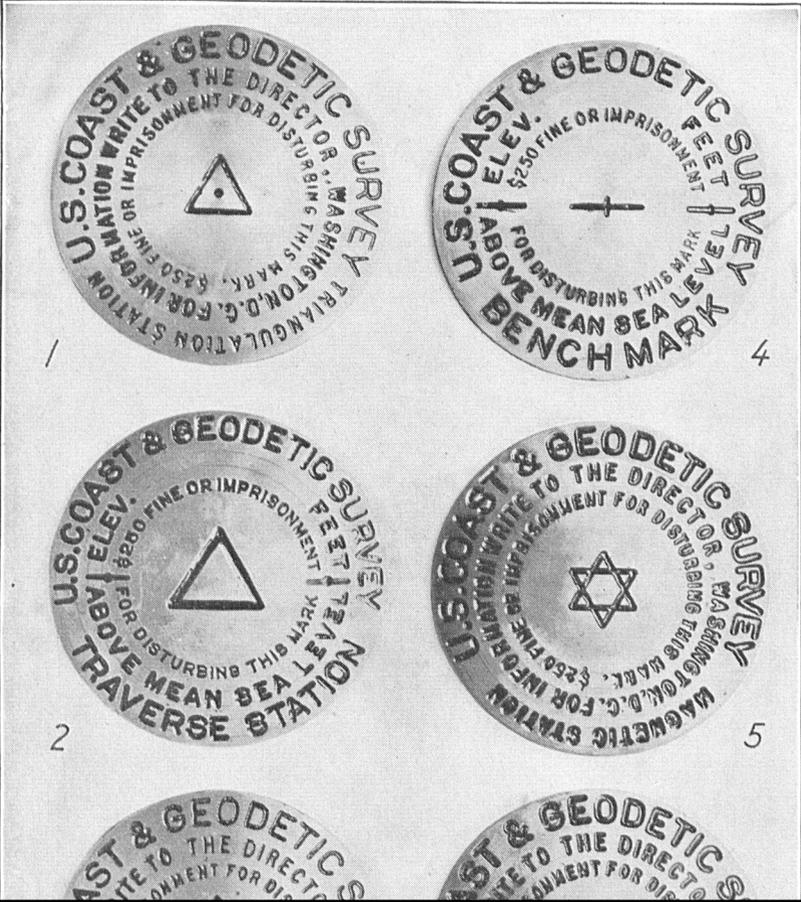
Station	Point to which elevation refers	Elevation above mean sea level	
		Meters	Feet
<i>Class 3—Continued</i>			
Hibriten Mountain.....	Ground.....	690	2,264
Carleton Knob.....	do.....	696	2,283
East Drowning Creek Mountain.....	do.....	630	2,067
West Drowning Creek Mountain.....	do.....	648	2,126
Little Pisgah Mountain.....	do.....	1,352	4,436
Mount Pisgah.....	do.....	1,741	5,712
Sugarloaf Mountain.....	do.....	1,212	3,976
Pinnacle Mountain.....	do.....	1,168	3,832
Big Craggy Mountain.....	do.....	1,850	6,070
Cold Mountain 1.....	do.....	1,410	4,626
Mount Hardy.....	do.....	1,860	6,102
Richland Balsam Mountain.....	do.....	1,942	6,371
Tryon Mountain, northeast summit.....	do.....	942	3,091
Great Hogback Mountain.....	do.....	1,457	4,780
Chimney Top Mountain.....	do.....	1,394	4,573
Whitesides Mountain.....	do.....	1,503	4,931
Little Bald Mountain.....	do.....	1,590	5,217
Pickens Nose.....	do.....	1,497	4,911
Standing Indian Mountain.....	do.....	1,675	5,495
Tryon Mountain.....	do.....	990	3,248
Fodderstack Mountain.....	do.....	1,375	4,511
Saddleback Mountain.....	do.....	1,391	4,564
Bear Wallow Mountain.....	do.....	1,294	4,245
Sitting Bull Mountain (Ga.).....	do.....	1,538	5,046
Pilot Mountain.....	do.....	736	2,415

DESCRIPTIONS OF TRIANGULATION AND TRAVERSE STATIONS

This list of descriptions of stations may be conveniently consulted by reference to the illustrations at the end of this publication or to the index on page 395. All azimuths given in the descriptions are reckoned continuously from true south around by west to 360° , south being 0° , west 90° , north 180° , and east 270° . Where magnetic azimuths are given they are indicated as such. The distance between the station and reference mark is the horizontal distance unless otherwise noted. In general, except where the contrary is specifically stated, the surface and underground mark are not in contact, so that a disturbance of the surface mark will not necessarily affect the underground mark. The underground mark should be resorted to only in cases where there is evidence that the surface mark has been disturbed.

The name and dates given in each description immediately after the county refer to the chief of party by whom the station was established, the date of the establishment of the station, and the date when the station was last recovered. Any person who finds that one of the stations herein described has been disturbed or that the description no longer fits the facts is requested to send such information to the Director, United States Coast and Geodetic Survey, Washington, D.C.

The standard station and reference marks (see fig. 2) referred to in the following descriptions and notes consist of a disk and shank of bronze cast in one piece. The disk of the station mark is 90 millimeters in diameter, with a hole at the center surrounded by a 20-millimeter equilateral triangle, and has the following inscribed legend: "U.S. Coast and Geodetic Survey Triangulation Station. For information write to the Director, Washington, D.C. \$250 fine or imprisonment for disturbing this mark." The shank is 25 millimeters in diameter and 80 millimeters long, with several grooves cut around it



to give a secure anchorage in concrete. The name of the station and the year in which it was established are stamped on the station mark.

The standard reference mark (shown in fig. 2) is the same size and shape as the station mark, with an arrow on the top in place of the triangle, which, when properly set, points to the station. The legend is the same, except the words "reference mark" take the place of the words "triangulation station."

The standard bench mark (shown in fig. 2) is the same size and shape as the station mark; with a straight line on the top instead of the triangle. When this bench mark is set in place in a vertical position, as in the side of a building, the line is placed horizontal and is the mark to which the elevation refers.

STANDARD NOTES ON MARKING OF STATIONS

Surface marks

Note 1.—A standard bronze tablet set in the top of (a) a square block or post of concrete, (b) a concrete cylinder, (c) an irregular mass of concrete.

Note 2.—A standard bronze tablet wedged in a drill hole in outcropping bedrock, (a) and surrounded by a triangle chiseled in the rock, (b) and surrounded by a circle chiseled in the rock, (c) at the intersection of two lines chiseled in the rock.

Note 3.—A standard bronze tablet set in concrete in a depression in outcropping bedrock.

Note 4.—A standard bronze tablet wedged in a drill hole in a boulder.

Note 5.—A standard bronze tablet set in concrete in a depression in a boulder.

Note 6.—A standard bronze tablet set in concrete at the center of the top of a tile (a) which is embedded in the ground, (b) which is surrounded by a mass of concrete, (c) which is fastened by means of concrete to the upper end of a long wooden pile driven into the marsh, (d) which is set in a block of concrete and projects from 12 to 20 inches above the block.

Underground marks

Note 7.—A block of concrete 3 feet below the ground containing at the center of its upper surface (a) a standard bronze tablet, (b) a copper bolt projecting slightly above the concrete, (c) an iron nail with the point projecting above the concrete, (d) a glass bottle with the neck projecting a little above the concrete, (e) an earthenware jug with the mouth projecting a little above the concrete.

Note 8.—In bedrock, (a) a standard bronze tablet wedged in a drill hole, (b) a standard bronze tablet set in concrete in a depression, (c) a copper bolt set in cement in a drill hole or depression, (d) an iron spike set point up in cement in a drill hole or depression.

Note 9.—In a boulder 3 feet below the ground, (a) a standard bronze tablet wedged in a drill hole, (b) a standard bronze tablet set in concrete in a depression, (c) a copper bolt set with cement in a drill hole or depression, (d) an iron spike set with cement in a drill hole or depression.

Note 10.—Embedded in earth 3 feet below the surface of the ground, (a) a bottle in an upright position, (b) an earthenware jug in an upright position, (c) a brick in horizontal position with a drill hole in its upper surface.

Reference marks

Note 11.—A standard bronze tablet, with the arrow pointing toward the station, set at the center of the top of (a) a square block or post of concrete, (b) a concrete cylinder, (c) an irregular mass of concrete.

Note 12.—A standard bronze tablet, with the arrow pointing toward the station, (a) wedged in a drill hole in outcropping bedrock, (b) set in concrete in a depression in outcropping bedrock, (c) wedged in a drill hole in a boulder, (d) set in concrete in a depression in a boulder.

Note 13.—A standard bronze tablet, with the arrow pointing toward the station, set in concrete at the center of the top of a tile, (a) which is embedded in the ground, (b) which is surrounded by a mass of concrete, (c) which is fastened by

means of concrete to the upper end of a long wooden pile driven into the marsh, (d) which is set in a block of concrete and projects from 12 to 20 inches above the block.

Witness marks

Note 14.—A conical mound of earth surrounded by a circular trench.

Note 15.—A tree marked with (a) a triangular blaze with a nail at the center and each apex of the triangle, (b) a square blaze with a nail at the center and each corner of the square, (c) a blaze with a standard disk reference mark set at its center into the tree.

EASTERN OBLIQUE ARC

Principal points

Buffalo (Floyd County, Va., A. T. Mosman, 1876; 1918).—About 25 miles by road northwest of Stuart, on Buffalo Mountain, and at west end of rocky ridge which is about 150 yards long and has no trees on it. East end of ridge is about 6 feet higher in elevation than west end. To reach from Stuart, follow Carroll Pike about 12 miles to "Old Edwards Place", take right-hand road, and continue to Buffalo Mountain. Surface mark was square-headed copper bolt with cross cut in top set flush with top of block of masonry about 10 inches high. Underground mark was copper bolt with cross cut in top driven into solid rock. Reference marks were copper bolts with crosses cut in top and driven 4 inches into solid rock at following distances and directions from station: 8.76 feet, true north; 10.37 feet, true east; 8.38 feet, true south; and 8.75 feet, true west. In 1918, surface mark had been destroyed and copper bolts had been removed from reference marks. Underground mark was recovered in good condition, and surface mark was replaced by standard disk station mark in mound of concrete. Two standard reference disks, in bedrock, note 12a, were established in 1918. One is about 1 meter (3 feet) in elevation below station, and 2.66 meters (8.7 feet) due west of station. Other is about 0.3 meter (1 foot) in elevation below station, about 10° south of east and 4.11 meters (13.5 feet) distant from station.

Moore (Stokes County, A. T. Mosman, 1876; 1933).—On highest summit of Sauratown Mountains known locally as Moores Knob, about 12 miles northwest of Walnut Cove railway station on Norfolk and Western and Southern Railways, and about 4½ miles west of Danbury. To reach from junction of North Carolina routes 89 and 661, go south 10.3 miles on route 661, turn left onto dirt road leading toward Moores Springs, follow 0.6 mile, turn right at Wall's house onto rough dirt road leading toward mountain, and proceed about 1½ miles to L. T. Long's farm at foot of mountain. Follow steep trail from this point to summit and station site. Original station mark was cross on copper bolt set in rock which had been leveled by blasting. This was replaced in 1918 by a standard disk station mark, note 2. Original reference marks were copper bolts marked similar to station mark set in rock 6 feet north (true meridian) and 6 inches below station, 5.97 feet south and 1 foot above station, 7.12 feet east and 18 inches below station, and 6.03 feet west and 18 inches below station. In 1918, only the east and west bolts were recovered, and an additional standard reference disk was established in rock outcrop, note 12b, 13.05 meters (42.81 feet) from station in azimuth 349°56'. In 1933, only one of the original copper bolts, the south mark, distance 5.97 feet, was recovered, and a standard reference disk was established in rock outcrop, note 12a, along edge of farm road, 4 feet south-southwest from 17-inch oak with triangular blaze, 34 feet southwest of vacant house on L. T. Long's farm, and approximately 0.6 mile from station in azimuth 113°18'19". Cupola of R. J. Reynolds School building is 3.5 miles from station in azimuth 128°32'44".

Poore (Wilkes County, C. O. Boutelle, 1877; 1933).—About 7 miles south of Wilkesboro, on summit of Poores Mountain (locally known as Pores Knob). To reach from Wilkesboro, go south about 8 miles on North Carolina route 16 or about 0.55 mile beyond brick church on left, turn left onto gravel road at sign "Pores Knob 6 miles". Follow main winding road up mountain 3.3 miles, take left fork at arrow "To Tower", and continue 2.1 miles to fire tower at summit which is centered over station mark. Surface mark is standard disk station mark in block of concrete covering granite post which was original station mark. Four granite posts are about 5 feet from station on the north, south, east, and west sides. Reference mark no. 1 is a standard reference disk in rock outcrop, note 12a, and 22.759 meters (74.67 feet) from station in azimuth 177°04'. Reference mark no. 2 is standard reference disk in top of foundation pier of north-

east leg of tower, and 3.005 meters (9.86 feet) from station in azimuth $226^{\circ}27'$. Reference mark no. 3 is standard reference disk in top of foundation of southeast leg of tower, and 3.016 meters (9.89 feet) from station in azimuth $316^{\circ}35'$. Reference mark no. 4 is standard reference disk in top of large boulder, note 12c, on southwest edge of knob, on southwest side of road, and 29.590 meters (97.08 feet) from station in azimuth $49^{\circ}40'$. Reference mark no. 5 is standard reference disk in rock outcrop, note 12a, near top of road cut on side road to left of North Carolina route 16 about 1 mile along highway towards Taylorsville, 75 feet from center line of highway, and approximately $1\frac{1}{4}$ miles from station in azimuth $62^{\circ}52'20''$. Azimuth from station to prison camp water tank in Taylorsville is $7^{\circ}19'24''$.

Young (Rowan County, C. O. Boutelle, 1876; 1933).—Near highest point of Young Mountain, 12 miles northwest of Salisbury, about 2 miles east of Third Creek railway station on Southern Railway, and 2 miles northwest of Barber Junction railway station, on land of Mr. George Chandler who lives on highway at foot of mountain. To reach from Cleveland, go east about 2 miles on United States route 70 or about 0.4 mile west of Mountain Grove service station, turn left (north) on very dim road through woods, and follow to station site on highest point of summit. Station is about 75 yards west of dim road. Detailed information on how to reach station site can be obtained from Mountain Grove service station. Station was originally marked by buried bottle and central stone post surrounded by four other stone posts as reference marks. North, east, and west posts were recovered in 1930; but, in 1933, only the east post, 1.510 meters (4.95 feet) distant from station, was recovered. Station was re-marked in 1930 with standard disk station marks, notes 1a and 7a. Three standard reference disks were established in 1933. No. 1 is in buried boulder, note 12c, about 1 mile from United States route 70, 20 feet west of center line of country road leading north from route 70, about 160 yards south of farmhouse, 200 feet south of curve in road to east, and approximately one-half mile from station in azimuth $123^{\circ}57' 22''$. No. 2 is in rock outcrop, note 12a, 22.840 meters (74.93 feet) from station in azimuth $19^{\circ}28'$. No. 3 is in boulder, note 12d, 28.335 meters (92.96 feet) from station in azimuth $72^{\circ}53'$.

Benn (Burke-Cleveland Counties, C. O. Boutelle, 1877; 1933).—Station is about 13 miles south of Morganton, 20 miles west of north of Shelby, $4\frac{1}{2}$ miles northwest of Casar, and on Benns Knob (the most southerly high summit of South Mountains). To reach from Casar Cash Store in Casar, go north about 200 yards on route 182, take left fork northwest at church, continue 1.5 miles, keep main road to left at road junction, continue 0.7 mile, take right-hand upper fork, proceed 0.6 mile, take left fork, cross small plank bridge, and continue 0.6 mile to Bill McNealy's house. Follow dim road from in front of house 0.3 mile, take left fork, and follow past open field on right and on up to creek. Continue on foot up trail to saddle, and to right up ridge about $1\frac{1}{4}$ miles to summit and station site. Surface mark is standard disk station mark in mound of concrete covering granite post which was original station mark. Underground mark is center of a buried lamp chimney. Four 6-by 6-inch granite posts with crosses on tops are around station—to north, 5.05 feet; to south, 4.93 feet; to east, 4.85 feet; and to west, 5.05 feet. In 1933, three standard reference disks in rock outcrops, notes 12a, were established. No. 1 is 16.178 meters (53.08 feet) from station in azimuth $118^{\circ}07'$. No. 2 is 16.013 meters (52.54 feet) from station in azimuth $189^{\circ}00'$. No. 3 is on slope of next distant hill, and approximately 0.6 mile from station in azimuth $204^{\circ}34'07''$. Azimuth from station to smokestack in Morganton is $176^{\circ}31'42''$.

King (Gaston County, C. O. Boutelle, 1876; 1933).—About 3 miles southeast of Kings Mountain railway station on Southern Railway, about 26 miles west-southwest of Charlotte, at highest point of Kings Mountain, and at an elevation of about 1,700 feet. Summit is ridge of broken rocks about 200 yards long, with average width of 15 feet. Height of cliff at station is 97 feet. Station is marked by glass lamp shade plugged at both ends and filled with ashes, and covered by brick platform, 5 feet square with diagonals on north-and-south and east-and-west (true) lines, having a hole 8 inches square at center. Station was recovered in 1917, but brick platform had been partly torn away. When station was recovered in 1933, a flagpole had been set over the station mark. Station *King eccentric* (see description thereof) is 0.805 meter (2.64 feet) from station in azimuth $179^{\circ}27'$.

Rogers (Grayson-Smyth Counties, Va., A. H. Buchanan, 1894; 1934).—About 25 miles east of Abingdon, about $5\frac{1}{2}$ miles east of Konnarock, about 65 feet north

of highest point of Mount Rogers (locally known as "Balsam"), 33.8 feet north of twin 12-inch spruce tree, and in top of rock outcrop which projects about 3 feet above ground. To reach from sign "White Top" at Chilhowie, go south 13.4 miles on Virginia route 79 to White Top Inn on left, follow left fork across mountain 4.1 miles to top of grade, pass through gate on left and follow farm road 2.8 miles (keeping left at fork) to pasture in gap, and continue on foot along well-blazed trail north about 1 mile to station site. Originally marked by drill hole in rock at intersection of north-and-south and east-and-west grooves, and surrounded by letters "U.S.C.S.". Station was re-marked in 1930 with standard disk station mark; and two standard reference disks were established in rock outcrops. No. 1 is at about same elevation as station, near trail leading to station, 39.5 feet south of twin 12-inch tree, and 22.16 meters (72.7 feet) from station in azimuth $9^{\circ}49'$. No. 2 is on downward slope of ridge, and 15.01 meters (49.2 feet) from station in azimuth $86^{\circ}02'$. No. 3, established in 1933, is standard reference disk in east-and-west rock outcrop on downward slope of ridge, about 30 feet east-northeast of 6-inch dead tree, and 75 yards from station in azimuth $83^{\circ}18'$.

Roan High Bluff (Mitchell County, A. H. Buchanan, 1894; 1933).—On highest part of bluff known locally as "Eagle Cliff", which forms extreme western part of Roan Mountain, about 5 miles north of Bakersville, and about three-fourths mile from where Cloudland Hotel used to be. Trucks may be driven to within one-half mile of station site over very rough roads from either side of mountain. Original station mark was drill hole 2 inches deep at intersection of north-and-south and east-and-west grooves in rock with letters "U.S.C.S." Point was re-marked in 1930 with standard disk station mark in drill hole, note 2c. No reference marks were established for original station mark; but in 1930, two standard reference disks in rock outcrops, note 12a, were established. No. 1 is 9.548 meters (31.33 feet) (slope) from station in azimuth $354^{\circ}16'$. No. 2 is 8.110 meters (26.61 feet) from station in azimuth $73^{\circ}20'$. Reference mark no. 3, standard reference disk in rock outcrop, note 12a, was established in 1933, about 60 feet south of center of road leading to station, and approximately 0.5 mile from station in approximate azimuth $224^{\circ}03'$.

Fork (Carter County, Tenn., C. A. Schanck, 1930).—About 7 miles northwest of village of Roan Mountain, $2\frac{1}{4}$ miles south of Hampton, and on highest point of Fork Mountain. Top of mountain is wooded with large hardwood trees. To reach from W. M. Hill's store, which is on main highway about 8 miles by road from Roan Mountain and about 6 miles by road from Hampton, take dirt road leading north from west side of store, proceed about one-half mile to road fork in small stream, take left fork up bank, and proceed about one-half mile to house occupied by Dave Honeycutt and known locally for its bowl-shaped spring in solid rock. Continue on foot along road as it swings to right, keep right at fork about 75 yards from house, pass burned house on left, continue to road fork just beyond another small house on left, make sharp turn back to left onto dim road, and proceed up draw and to right along east side of mountain to just beyond point where road goes down into draw. Leave road at old apple tree where road swings from west to north in bottom of draw, proceed west up draw to top of ridge, turn right along ridge, and follow about one-fourth mile to highest point and station site. Station mark is standard disk station mark in boulder, note 4, about 6 inches below surface of ground. Reference marks are standard reference disks in boulders, note 12c, projecting about 2 inches. No. 1 is 3.635 meters (11.93 feet) from station in azimuth $228^{\circ}02'$. No. 2 is 4.038 meters (13.25 feet) from station in azimuth $95^{\circ}26'$. Rock cairns were built over all three marks.

Big Knob (Scott County, Va., A. H. Buchanan, 1893; 1934).—About 6 miles (by road) northeast of Gate City, in Clinch Mountain Range, on southwesterly and lower one of two high peaks, on backbone of ridge at northern edge of summit, 20 feet south of 14-inch white oak, 13 feet north of 6-inch white oak, and 22 feet southwest of 10-inch white oak. Top of mountain is wooded. To reach from Gate City, go east on United States route 58 through Big Moccasin Gap 5.7 miles to home of Thomas Curtis on left (which is about 1 mile west of Hiltons), cross railroad track and drive into Mr. Curtis' barn lot. From here go on foot up old wagon road which narrows into well-blazed path and leads up hollow behind Mr. Curtis' house to top of mountain and station site 2 miles distant. Original station mark was 2-inch-deep drillhole at intersection of cross grooves surrounded by letters "U.S.C.S." in top of large rock flush with surface of ground. Original reference marks were drill holes in rocks, with arrows pointing toward station, at following distances and azimuths from station: 39.4 feet, $49^{\circ}01'$; 21.7 feet,

78°59'; 49.7 feet, 122°03'. In 1930, station and two reference marks were recovered; station was re-marked with standard station disk, note 3; and two standard reference disks were established in bedrock, note 12b. No. 1 is in drill hole of original reference mark, along backbone of ridge, 1 foot south of 8-inch white oak, and 39.1 feet from station in azimuth 48°58'. No. 2 is on downward slope of ridge, about 5 feet lower than station, and 22.7 feet from station in azimuth 163°59'. In 1933, reference mark no. 3, standard reference disk in bedrock note 12b, was established in 16-foot square rock outcrop on little separate knoll directly on line to Kingsport, but on same ridge with station, and about 75 yards from station in azimuth 31°52'. Azimuth from station to smokestack in Kingsport is 11°39'27".

Big Butt (Madison County, N.C.; Unicoi County, Tenn., A. H. Buchanan, 1893; 1933).—On central of three high peaks on top of Big Butt Mountain known locally as "Gravelly Knob", about 20 miles southeast of Greenville, 15 miles south of Chuckey on Southern Railway, and on or near North Carolina-Tennessee State line. To reach from Erwin, go south 8.6 miles on United States route 23 to gravel road on right which crosses concrete bridge at stone filling station and store, cross bridge, follow gravel road 4.7 miles to fork, keep straight ahead on right fork, continue 7.0 miles to Mill Creek, follow up creek 1.6 miles to farm of Millard Shelton and end of truck travel. Follow well-worn trail about 2¼ miles to top of mountain, and about 1¼ miles along top to Gravelly Knob and station site. Original station mark was drill hole at intersection of north-and-south and east-and-west grooved lines on large rock flush with ground. This rock was found dug up in 1930, and station was reestablished with standard disk station mark in drill hole in rock, note 2, about 2 feet below surface of ground, and probably within several inches of original position. Original reference marks were drill holes and arrows in rock outcrops. Two of these points were re-marked in 1930 with standard reference disks, note 12c. No. 1 is 3.372 meters (11.06 feet) from station in azimuth 354°37'. No. 2 is 5.125 meters (16.81 feet) from station in azimuth 301°56'. Remaining drill hole, 11.79 feet from station in azimuth 85°00', could not be found in 1930. Reference mark no. 3, standard reference disk in large white rock, note 12a, established in 1933, is on northwest side of trail which leads to most northerly of peaks on top of mountain, and approximately 0.4 mile from station in azimuth 132°10'26". Fire tower is about 4 miles from station in azimuth 62°01'42". In 1933 large stone, probably original station mark, marked with drill hole and letters "U.S.C.S." was found about 4 feet west of present station.

Wofford (Spartanburg County, S.C., C. O. Boutelle, 1876).—At Spartanburg, on ridge of roof of Wofford College, 49 feet from south end, and 32 feet from north end. Reference marks are stone posts, 1 foot square by 3 feet long, with tops flush with surface of ground. Tops of posts are marked with two deep diagonal grooves, one of which points north and south, and letters "U.S.C.S." Two posts are south of station, distant 32.23 meters (105.7 feet) and 89.13 meters (292.4 feet); and other two are east of station, distant 21.00 meters (68.9 feet) and 87.50 meters (287.1 feet).

Hogback (Greenville County, S.C., C. O. Boutelle, 1876).—About 15 miles southeast of Hendersonville, N.C., near northeastern end of Hogback Range of mountains, and on highest point of range. Surface of mountain near station is broad and flat. Surface mark is cross cut in top of stone post about 6 inches square, and marked by letters "U.S.C.S." Underground mark is glass bottle. Reference marks are four stone posts, similar to station mark but with arrows pointing toward station, placed 6 feet distant from station in north, south, east, and west directions.

Paris (Greenville County, S.C., C. O. Boutelle, 1875).—On Paris Mountain. Type of mark not described.

Pinnacle (Pickens County, S.C., C. O. Boutelle, 1875).—On salient point of Blue Ridge known as Caesars Head. Southern face of mountain consists of almost perpendicular ledges called "Pinnacle Rocks." Type of mark not described.

Rabun (Rabun County, Ga., C. O. Boutelle, 1875).—On second highest peak in Georgia, known locally as Kelly Bald Mountain, about 16 miles south of Franklin, N.C., and 4 miles south-southeast of Scaly, N.C., post office. (Type of mark not described.) In 1933, station *Rabun* 2 (see description thereof) was established in approximately same locality.

Cohutta (Fannin County, Ga., F. P. Webber, 1874; 1933).—On summit of south peak of Cowpen Mountain, about 7¼ miles south of Georgia-Tennessee

State line. To reach from Parkerville, go west on United States route 64 (Tennessee route 74) to Ocoee Inn, take left fork, proceed 1.6 miles, cross river bridge, continue 0.4 mile, turn left at gravel T-road, follow main road 10 miles to T-junction with another main road, turn right, proceed 3.7 miles, cross logging railroad, ford river, proceed 0.7 mile, ford small creek, turn sharp left up steep grade (this road is known as Government Road), follow 8.3 miles to local top, and continue 1.6 miles to end of truck travel, where several trees have triangular blazes. Follow broad trail leading up ridge to right, and continue about 300 yards to station site. Original station mark was drill hole, 2 inches deep, at intersection of two cross lines on top of large boulder set flush with ground. Station was re-marked in 1933 with standard disk station mark, note 4. Underground mark is nail in plaster of paris, in drill hole in large boulder 3 feet under ground. Original reference marks were drill holes in rock with arrows pointing toward station. These were re-marked in 1933 with standard reference disks. Distances and azimuths from station are: 9.30 meters (30.5 feet), $19^{\circ}36'$; 11.34 meters (37.2 feet), $167^{\circ}29'$; and 14.57 meters (47.8 feet), $315^{\circ}11'$.

Bean (Polk County, Tenn., A. H. Buchanan, 1887; 1934).—About 5 miles east of Benton, about 7 miles south of Cog Hill, on highest and western point of Beans Mountain known as "Oswald Dome," 16.17 feet northwest of north anchor bolt in northwest column footing of 80-foot forest service fire tower, and 29.5 feet north-northwest of north anchor bolt in southwest column footing of same. To reach from courthouse in Benton, go east 1.4 miles on Copper Hill pike, turn left (southeast) at bridge over second creek from Benton, go 2.8 miles to top of ridge, turn left (north) and follow 5.2 miles along top of ridge, turn left (north) at U turn and go 1.1 miles to station site. Original surface mark was intersection of east-and-west and north-and-south grooves with letters "U.S.C.S." in top of very hard sandstone post, $3\frac{3}{4}$ feet by 11 inches by 8 inches, projecting 4 inches above ground. Underground mark is center of $2\frac{1}{2}$ -inch mouth of stone fruit jar, 8 inches long and $5\frac{1}{4}$ inches in diameter, filled with ashes. In 1933, stone surface mark was reset with disk dated "1887-1933." Underground mark was not disturbed. Reference marks are drill holes in rocks in their natural positions at following distances and directions from station: 44 feet 10 inches, $N.45\frac{1}{2}^{\circ} E.$; 20 feet 5 inches, $S.5^{\circ} W.$; and 15 feet 2 inches, $N.54\frac{1}{2}^{\circ} W.$ In 1933, the first two reference marks mentioned were recovered, re-marked with standard disks, and redescribed. Reference mark no. 1 is 11 feet north of wire fence, 39 feet north of northeast column footing of fire tower, 42.83 feet north-northeast of north anchor bolt in northwest column footing of fire tower, and 13,672 meters (44.86 feet) from station in azimuth $223^{\circ}22'$. Reference mark no. 2 is 20.35 feet southwest of north anchor bolt in northwest column footing of fire tower, 15.67 feet northwest of north anchor bolt in southwest column footing of same, and 6.180 meters (20.28 feet) from station in azimuth $2^{\circ}03'$.

Roy (Monroe County, Tenn., A. H. Buchanan, 1887; 1934).—About $5\frac{1}{2}$ miles a little east of south from Sweetwater, on summit of sharp knob known locally as "Roy's Knob" and which is one of range of knobs called Fork Creek Knobs, at heads of Fork and Oostanaula Creeks. To reach from Sweetwater, go east $\frac{1}{2}$ mile on State route 68 to where it turns sharply to left and gravel road continues straight ahead, follow gravel road 4.8 miles to gravel road on right and home of L. D. Sands, turn right onto gravel road, go 0.55 mile, turn left onto road leading to home of S. R. Roy, and go through field about 1 mile to base of most prominent knob in vicinity and end of truck travel. Thence walk about $\frac{1}{4}$ mile directly to summit of knob and station, 16.8 feet east-northeast of 12-inch poplar tree with triangular blaze on north side. Surface mark is marble post, 8 inches square and $2\frac{3}{4}$ feet long, set in cement and projecting 6 inches above ground with north-and-south and east-and-west grooves and letters "U.S.C.S." carved on top. Underground mark is center of mouth of ink jug filled with and set in cement in hole cut in soft rock. In 1934 standard station disk was cemented in drill hole at intersection of cross on surface mark, and two reference marks and an azimuth mark were established. Reference mark no. 1 (probably standard reference disk) is in 1- by 2-foot flat red sandstone rock, about flush with surface of ground on upper side and protruding about 4 inches on lower side, 34.41 feet from station in azimuth $164^{\circ}49'$. No. 2 (probably standard reference disk) is in 2-foot square red sandstone rock which is flush with ground on upper side and protrudes about 1 foot on lower side, 69.85 feet from station in azimuth $297^{\circ}58'$. Azimuth mark is standard disk cemented in drill hole in east one of three old millstones in creek-bottom pasture just east of small spring house and north of Mr. Sand's home,

about 20 feet south of small stream, 40 feet south of east-and-west gravel road, 120 feet west of north-and-south gravel road (these roads leading to station), and about 1 mile from station in azimuth $190^{\circ}42'15''$.

Cockspur (Blount County, Tenn., A. H. Buchanan, 1885; 1890).—On high sharp point in range of Chilhowee Mountains, about $1\frac{1}{2}$ miles from southwest end, and about $2\frac{1}{2}$ miles from Yellow Sulphur post office. To reach from Yellow Sulphur, follow road towards Arlington Springs about 1 mile to road on left at site of old mill, and proceed along this road about $1\frac{1}{2}$ miles to station site. Marked by one-half inch deep drill hole in sandstone outcrop at intersection of north-and-south and east-and-west grooves. Reference marks are crosses cut in rock at following distances and directions from station: 39 feet 8 inches, S. $85\frac{1}{2}^{\circ}$ W.; 15 feet $6\frac{1}{2}$ inches, S. 1° W.; and 14 feet 9 inches, N. $88\frac{1}{4}^{\circ}$ E.

Supplementary points

Anderson (Catawba County, C. H. Sinclair, 1878).—About 10 miles southeast of Newton, about 15 miles southwest of Statesville, on highest point of Anderson Mountain. Marked by nail in wooden stake flush with surface of ground.

Statesville longitude (Iredell County, E. Smith, 1879).—In grounds of Simonton College, southwest of college building, 42.975 meters (140.99 feet) south and 22.387 meters (73.45 feet) west of center of cupola. Marked by stone and brick pier.

COASTAL CONTROL ARC

Principal points

Blossom (Princess Anne County, Va., C. D. Meaney, 1931).—About 6 miles south of Pungo post office, in orchard, approximately 43 meters (141 feet) east by north of old wood-and-concrete abandoned store and post office on west side of road at Blossom Hill, 12.5 meters (41 feet) east of center line of road, and 5.8 meters (19 feet) east of fence along east side of road. To reach from Pungo, go south 5.1 miles to Back Bay Garage on main macadam road leading to Munden Point, take right fork, and follow 1.4 miles to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark is 12 inches below surface. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 7 meters (23 feet) east of center line of road, in fence line, and 39.94 meters (131.0 feet) from station in azimuth $193^{\circ}05'$. No. 2 is approximately 60 meters (197 feet) south of point where highway turns east, 4.5 meters (15 feet) west of center line of road, 3 meters (10 feet) north of center line of lane leading to 2-story whitewashed house about 180 meters (591 feet) west of road, and approximately 0.3 mile from station in azimuth $199^{\circ}52'28''$. No. 3 is 15 meters (49 feet) west of center line of road, 1.5 meters (5 feet) south of center line of lane leading to white house, 8 meters (26 feet) south of abandoned store, 15 meters (49 feet) north of old abandoned shack, and 50.58 meters (165.9 feet) from station in azimuth $54^{\circ}38'$.

Hickory (Norfolk County, Va., C. D. Meaney, 1931; 1933).—About 4 miles south of Fentress, 0.5 mile north of main corner of Hickory, near jogged crossroads with old store (now used by negroes as living quarters) on west side and farmhouse in northeast angle, 16.3 meters (53 feet) north of center line of east-and-west macadam road, 10.4 meters (34 feet) east of north-and-south wire fence and gate, 25.14 meters (82.5 feet) east of southeast corner of old store, and in uncultivated field used as hog pasture. To reach from Fentress, go south 4.3 miles on main macadam road direct to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6.1 meters (20 feet) south of center line of east-and-west macadam road, 1 foot south of east-and-west wire fence, 18.0 meters (59 feet) east of fence line between cultivated field and farmyard, and 35.97 meters (118.0 feet) from station in azimuth $239^{\circ}52'$. No. 2 is 5 meters (16 feet) east of north-and-south dirt road, 2 meters (7 feet) east of electric-line pole, 6.1 meters (20 feet) north of macadam road, 16.64 meters (54.6 feet) south-southwest of southwest corner of old store, and 47.15 meters (154.7 feet) from station in azimuth $9^{\circ}38'$. No. 3 is 5 meters (16 feet) east of north-and-south macadam road, in cultivated field, 1 foot west of north-and-south wire fence, about 65 meters (213 feet) north of Hickory post office, and approximately

For notes in regard to marking of stations see p. 135.

one-fourth mile from station in azimuth $307^{\circ}24'45''$. Azimuth from station to water tank of Richmond Cedar Works in Great Bridge is $149^{\circ}09'36''$.

Old (Currituck County, C. D. Meaney, 1931).—About 5 miles east-northeast of Moyock, 9 miles southwest of Hickory, near Virginia-North Carolina State line, on land owned by C. G. Old and tenanted by J. I. McNamara. To reach from Moyock, go north 6 miles on route 27, turn right onto macadam road at De Luxe service station, continue on macadam road 4.8 miles to its end, keep straight ahead on sand-dirt road 0.5 mile to fork, take right-hand fork and keep straight ahead on main road (taking neither right nor left side roads) 2 miles to T-road, turn right, continue 1.3 miles, turn sharp right, and go 0.7 mile to right-hand turn and station site. Station is in northwest corner of farmyard, 5.5 meters (18 feet) east of west fence, 6.4 meters (21 feet) south of north fence, and 15.8 meters (52 feet) southwest of west side of gate leading to farmyard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in northeast corner of farmyard, 6 meters (20 feet) east of center line of road, and 57.06 meters (187.2 feet) from station in azimuth $256^{\circ}55'$. No. 2 is in north-and-south fence line, 17 meters (56 feet) west of west side of farmhouse, and 43.43 meters (142.5 feet) from station in azimuth $4^{\circ}06'$. No. 3 is on south side of cultivated field, 12 meters (39 feet) west of east edge of field, at north edge of timber which is on south-and-west sides of field, and approximately one-fourth mile from station in azimuth $11^{\circ}58'34''$.

Moyock (Currituck County, C. D. Meaney, 1931, 1933).—About 4 miles west-northwest of Moyock, on land owned by Grandy Ethridge and occupied by Edwin Culpepper. To reach from northwest on route 27, go west 1.6 miles on route 193, turn left onto dirt T-road, and continue on this road 1.8 miles to Mr. Culpepper's house just around sharp bend to left. Station is in open field, 144 feet south of the southwest corner of Culpepper's house, 96 feet east of center line of dirt road, about 35 paces southwest of shed, 62 feet north of most easterly of line of pine trees, and 42 feet northeast of most westerly of line of pines. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in open field, about 150 meters (492 feet) east-southeast of group of shacks, about 100 meters (328 feet) south of lone mail box on west side of road, 4 meters (13 feet) west of center line of dirt road, and approximately 0.3 mile from station in azimuth $17^{\circ}40'05''$. No. 2 is in open field, 6.7 meters (22 feet) west of center line of road, south of line of pine trees on east side of road, and 128.1 feet from station in azimuth $34^{\circ}45'$. No. 3 is 20 feet east of center line and just beyond bend of road, 6.7 meters (22 feet) north of twin locust tree on east side of road, about 40 meters (131 feet) west of Mr. Culpepper's house, and 130.6 feet from station in azimuth $108^{\circ}43'$.

Guinea (Currituck County, C. D. Meaney, 1931).—About 4 miles southeast of Moyock, about 150 meters (492 feet) southeast of E. H. Christain's Texaco filling station, on his property, in open area in pine grove, 57.4 meters (188 feet) east of center line of route 34, just south of first telegraph pole on east side of highway and 31.70 meters (104 feet) from it, and diagonally opposite most northerly of two abandoned houses on west side of highway. Reached by going south 4.4 miles on route 34 to point about 125 meters (410 feet) beyond Christain's filling station. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in pine grove, directly opposite most northerly of two abandoned houses, 32.61 meters (107 feet) east of center line of highway, and 39.16 meters (128.5 feet) from station in azimuth $320^{\circ}15'$. No. 2 is in open field, about 5 meters (16 feet) east of center line of single track of Norfolk Southern Railroad, and approximately $\frac{1}{4}$ mile from station in azimuth $12^{\circ}57'38''$. No. 3 is 7.0 meters (23 feet) west of center line of highway, directly opposite first telegraph pole on east side of highway, and 48.83 meters (160.2 feet) from station in azimuth $50^{\circ}19'$.

Tar (Camden County, C. D. Meaney, 1931).—About 3 miles airline northeast of South Mills, at Tar Corner, on land owned and occupied by Mr. C. T. Sawyer, in northwest corner of Mr. Sawyer's barnyard, 26.5 meters (87 feet) northeast of northeast side of his house, 7.8 meters (26 feet) south of northwest-and-southeast fence, 12 meters (39 feet) south of center line of northwest-and-southeast road, 31 meters (102 feet) southeast of southwest-and-northeast road, and 12.4 meters (41 feet) southeast of 18-inch water oak. To reach from South Mills, follow dirt road leading east 2 miles from east end of bridge over canal at point where concrete

road makes right-angle turn to left, and follow left fork (keeping main dirt road) 3 miles to T-road intersection at Tar Corner. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in cultivated field, 50 meters (164 feet) north of point where road turns west at northwest corner of field, 7 meters (23 feet) west of center line of road, 0.3 meter (1 foot) west of fence line, and 100 meters (328 feet) from station in azimuth $239^{\circ}04'$. No. 2 is in barnyard, at southeast corner of barn, and 67.39 meters (221.1 feet) from station in azimuth $316^{\circ}49'$. No. 3 is in northwest corner of farmyard on south side of entrance to field, 6 meters (20 feet) east of center line of road, 40 meters (131 feet) east of house on west side of road, and approximately 0.3 mile from station in azimuth $115^{\circ}54'12''$.

Gregory (Currituck County, C. D. Meaney, 1931).—About 8 miles northeast of Elizabeth City, on land owned and occupied by G. H. Ferebee, in southwest corner of cotton field, 30 meters (98 feet) east of center line of dirt road, and approximately 6 meters (20 feet) north of ditch marking southern boundary of Mr. Ferebee's land. To reach, follow route 34 north 8.9 miles from west end of bridge at Elizabeth City to dirt road on right across from Texaco filling station and follow dirt road 0.3 mile to south boundary of Mr. Ferebee's land and station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at north edge of cultivated field, 8 meters (26 feet) west of center line of road, 65 meters (213 feet) south of large house on west side of road, and approximately $\frac{1}{4}$ mile from station in azimuth $330^{\circ}43'32''$. No. 2 is in fence corner, 8 meters (26 feet) east of center line of road, 3 meters (10 feet) north of north side of gate leading into farm, and 53.27 meters (174.8 feet) from station in azimuth $354^{\circ}35'$. No. 3 is 8 meters (26 feet) west of center line of dirt road and 45.59 meters (149.6 feet) from station in azimuth $108^{\circ}07''$.

Burnt (Camden County, C. D. Meaney, 1931).—About 7 miles northwest of Elizabeth City, and about 5 miles southeast of South Mills, on west side of road, in southeast corner of cultivated field near timber line, on property of George Williams, about 150 meters (492 feet) northwest of white house with green trimmings on east side of road, 15.0 meters (49 feet) west of center line of dirt road, 11.9 meters (39 feet) northwest of corner post of field, and 7.6 meters (25 feet) west of north-and-south wire fence. To reach from Elizabeth City, go north 3 miles on route 34 to Camden, turn left at Texaco filling station across road from county school building, and proceed in northwesterly direction on main road (following telephone line when in doubt) 7.3 miles or about $\frac{1}{2}$ mile beyond store on west side of road to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 5 meters (16 feet) west of center line of dirt road, 2 meters (7 feet) south of telephone pole, about 25 meters (82 feet) northwest of "Curve" sign on east side of road, diagonally opposite abandoned house on east side of road, and approximately $\frac{1}{2}$ mile from station in azimuth $127^{\circ}56'29''$. No. 2 is 1 foot west of board fence around farmyard, 1 meter (3 feet) north of telephone pole, 7.6 meters (25 feet) east of center line of dirt road and center line of small wooden culvert, and 53.34 meters (175.0 feet) from station in azimuth $280^{\circ}18'$. No. 3 is in southwest corner of cultivated field, 1 foot east of north-and-south wire fence, about 5 meters (16 feet) north of southwest corner post of field, and 114.51 meters (375.7 feet) from station in azimuth $32^{\circ}44'44''$.

Camden (Camden County, C. D. Meaney, 1931).—About 5 miles east-southeast of Elizabeth City, 4 miles southeast of Camden, on northeast side of Pasquotank River, on south side of dirt road, in front (west) of house of Pauline Stokley, and 23.89 meters (78.4 feet) from shore line of river. To reach from Elizabeth City, follow route 34 north to Camden, continue on improved dirt road in south-easterly direction 5.4 miles to lane on right, turn right into lane, and go 0.8 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in fence line, 4 meters (13 feet) south of center line of dirt road, 5 meters (16 feet) north by east of 18-inch oak, 20 meters (66 feet) north of northwest corner of above house, 100 meters (328 feet) east of shore line of river, and 43.40 meters (142.4 feet) from station in azimuth $226^{\circ}53'$. No. 2 is in cornfield, 4 meters (13 feet) south of center line of dirt road, directly across road from small graveyard of Jordan family, 5 meters (16 feet) south of 30-inch oak, and approximately 0.4 mile from station in azimuth $257^{\circ}20'26''$. No. 3 is in east-and-west fence line, 9 meters (30 feet) from shore line of river, 60 meters

(197 feet) southwest of southwest corner of house, and 62.47 meters (205.0 feet) from station in azimuth $317^{\circ}22'$.

Elizabeth (Pasquotank County, C. D. Meaney, 1931).—About $2\frac{1}{2}$ miles west-southwest of Elizabeth City, about 75 meters (246 feet) east-southeast of Mrs. Brite's house, in farmyard, 19.57 meters (64.2 feet) south-southwest of southeast corner of barn (mostly easterly of group), 18.99 meters (62.3 feet) south-southeast of southwest corner of barn, and 24.50 meters (80 feet) southeast of northeast corner of large henhouse. To reach from Elizabeth City, take route 17 west from post office 2.8 miles, turn right onto dirt road directly across main highway from one-story brick school building, and follow this dirt road about 200 yards to Mrs. Brite's house on right (east) side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 7 meters (23 feet) east of north-and-south dirt road, about 40 meters (131 feet) southwest of Mrs. Brite's house, about 100 meters (328 feet) north of North Carolina route 342, and 101.50 meters (333.0 feet) from station in azimuth $61^{\circ}12'$. No. 2 is in barnyard, at southwest corner of garage and corn shed, and 43.74 meters (144 feet) from station in azimuth $134^{\circ}51'$. No. 3 is about 5 meters (16 feet) north of center line of east-and-west single railroad track, 1 foot south of east-and-west wire fence, in line of telephone poles, about 85 meters (279 feet) west of north-and-south dirt road, and approximately one-third mile from station in azimuth $133^{\circ}28'42''$. Azimuth from station to Elizabeth City municipal water tank is $251^{\circ}36'01''$.

Toxey (Pasquotank County, C. D. Meaney, 1931).—About 7 miles southeast of Elizabeth City, on southwest shore of Pasquotank River, on first point of land about 250 yards south of Poole Landing, 38 meters (125 feet) south and 31 meters (102 feet) west of shore line, and in pasture on high dry land. To reach from Elizabeth City, go south on Road Street 0.6 mile from Main Street, turn left onto brick road at entrance to cemetery, follow brick road in southeasterly direction 6.1 miles to dirt road to left (Texaco station in southeast angle), continue on dirt road 1.5 miles to a T-road to north, turn north, continue 0.6 mile (keeping straight ahead where main road turns left) through gate, and proceed 0.2 mile to river at Poole Landing. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 5 meters (16 feet) southwest of shore line, and 47.60 meters (156.2 feet) from station in azimuth $222^{\circ}36'$. No. 2 is in fence line, 3 meters (10 feet) north of north side of gate, 16 meters (53 feet) west of shore line, and 99.98 meters (328.0 feet) from station in azimuth $6^{\circ}56'$. No. 3 is 0.3 meter (1 foot) east of north-and-south fence which forms west side of pasture in which station is located, 2 meters (7 feet) west of narrow ditch, approximately 60 meters (197 feet) north and 60 meters (197 feet) south of fences forming north-and-south sides of pasture, and approximately one-fourth mile from station in azimuth $27^{\circ}01'28''$.

Weeks (Pasquotank County, C. D. Meaney, 1931).—About $8\frac{1}{2}$ miles south-southeast of Elizabeth City, $1\frac{1}{4}$ miles south-southwest of Weeksville, in pasture belonging to F. P. Markham, about 200 meters (656 feet) south of his house, about 400 feet beyond forks of road, 9.7 meters (32 feet) east of north-and-south wire fence, 6.7 meters (22 feet) east of north-and-south row of cedar trees in pasture, 25.9 meters (85 feet) north of east-and-west wire fence, 32.3 meters (106 feet) north of center line of dirt road, and about 80 meters (262 feet) northwest of W. L. Thompson's house on south side of road. To reach from Elizabeth City, go south on Road Street 0.6 mile from Main Street (Southern Hotel), turn left onto brick pavement at entrance to cemetery, follow brick road 7.9 miles to Old Weeksville, turn left onto brick road where concrete road goes straight ahead at Clover Farm Store, proceed 0.35 mile take right-hand dirt road (abandoned church in V of forks), and follow main dirt road (keeping straight ahead where fork takes off to left) 1.4 miles to the station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in southeast corner of pasture, 7.3 meters (24 feet) north of center line of dirt road, 13.0 meters (59 feet) southwest of 36-inch cedar tree in east-and-west fence line, and 58.12 meters (190.7 feet) from station in azimuth $217^{\circ}50'$. No. 2 is in pasture, 7.3 meters (24 feet) north of center line of dirt road, 4.42 meters (14.5 feet) east of 14-inch lone elm tree in pasture, 7.0 meters (23 feet) east of southwest corner post of pasture, and 25.61 meters (84.0 feet) from station in azimuth $282^{\circ}39'$. No. 3 is in southwest corner of pasture, 1 foot north and east

of southwest corner post, 8 meters (26 feet) north of center line of dirt road, about 75 meters (246 feet) east of house and barns on north side of road, and approximately one-fourth mile from station in azimuth $15^{\circ}43'41''$.

Woodville (Perquimans County, C. D. Meaney, 1931).—About $1\frac{1}{2}$ miles west-southwest of Woodville which is about 8 miles southwest of Elizabeth City, about 200 meters (656 feet) beyond Shell gas station, in field owned by John Spellmond, 41.8 meters (137 feet) south of center line of route 17, 24.90 meters (81.7 feet) east-northeast of northeast corner of Spellmond's house, 9.7 meters (32 feet) west of north-and-south wire fence, 26.8 meters (88 feet) south of east-and-west wire fence, and 28.0 meters (92 feet) south of northeast corner post of field. To reach from Woodville, go west 1.35 miles from Midway service station direct to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in line of telephone poles, 1 foot north of east-and-west wire fence, 2 feet south of telephone pole, 8 meters (26 feet) south of center line of route 17, and 66.86 meters (219.4 feet) from station in azimuth $211^{\circ}49'$. No. 2 is in line of telephone poles, 2 feet south of telephone pole, about 75 meters (246 feet) east of "Curve" sign on south side of road, 8.0 meters (26 feet) south of center line of route 17, and approximately 0.5 mile from station in azimuth $233^{\circ}45'18''$. No. 3 is 1 foot south of east-and-west wire fence on north side of field, 8.5 meters (28 feet) west of gate and road leading into field, 17.4 meters (57 feet) east of corner post between field and wood lot, and 43.86 meters (143.9 feet) from station in azimuth $91^{\circ}40'$.

Durant (Perquimans County, C. D. Meaney, 1931).—About $1\frac{1}{2}$ miles southeast of Durant Neck post office (which is also Newhope), on land owned by Harriet Louise Bow, about 91 meters (299 feet) south of negro shanty, in open field between farm buildings and pine woods, and approximately 38 meters (125 feet) west of center line of road. To reach from Newhope, follow main road east 0.95 mile to forks, take right-hand fork 0.7 mile to fork with three mail boxes and negro shanty in V, and take left-hand fork about 500 feet south to point opposite station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 0.5 meter (2 feet) north of east-and-west fence line which is southern boundary of open field, and 37.02 meters (121.5 feet) from station in azimuth $325^{\circ}52'$. No. 2 is 0.3 meter (1 foot) north of east-and-west fence line which is southern boundary of open field, and 54.47 meters (178.7 feet) from station in azimuth $57^{\circ}50'$. No. 3 is south of entrance leading to J. E. Skinner's house, 5.5 meters (18 feet) west of center line of highway, 0.5 meter (2 feet) north of fence line, 0.6 meter (2 feet) southwest of fence post, 6.4 meters (21 feet) south of oak tree, and approximately one-half mile from station in azimuth $173^{\circ}23'33''$.

Hertford (Perquimans County, C. D. Meaney, 1931).—One and two-tenths miles west of Hertford, about 250 feet southwest of J. B. Dail's house, in southwest corner of cornfield, just north of timber, about 60 yards west of large wooden barn, 11.6 meters (38 feet) northeast of southwest corner post of field, 7.3 meters (24 feet) east of north-and-south wire fence between cultivated fields, and 8.8 meters (29 feet) north of east-and-west wire fence between wood lot and cultivated field. To reach from Hertford, go west 1.4 miles from Anderson's drug store (main corner in town) on route 17, turn right onto dirt road (Shell gas sign in southwest angle), follow this main dirt road (turn neither right nor left) 1.05 miles or 0.45 mile beyond railroad crossing and about 200 feet beyond yellow house on left, and turn left into lane leading to Mr. Dail's house which sits back about 200 feet from road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 foot north of east-and-west wire fence, 80 feet west of northwest corner of barn, and 57.00 meters (187.0 feet) from station in azimuth $241^{\circ}56'$. No. 2 is in northwest corner of cultivated field, 1 meter (3 feet) from corner post of field, and 137.77 meters (452.0 feet) from station in azimuth $147^{\circ}59'15''$. No. 3 is 5 meters (16 feet) west of north-and-south road, 1 foot north of east-and-west wire fence, 1 meter (3 feet) west of northeast corner post of cultivated field, 3 meters (10 feet) south of east-and-west wagon road leading off main dirt road, 8 meters (26 feet) south of lone cedar tree on west side of dirt road, and approximately 0.3 mile from station in azimuth $163^{\circ}16'36''$.

Yeopin (Perquimans County, C. D. Meaney, 1931).—About $6\frac{1}{2}$ miles south-southeast of Hertford, on land owned by Raymond Barrows of Elizabeth City.

To reach from Hertford, go south 5.2 miles on street from point where United States route 17 turns west at Anderson's drug store to end of pavement at T-road on right, continue straight ahead on main road 1.7 miles to road turning right, follow this road $1\frac{1}{4}$ miles to a T-road, turn left, continue about 800 feet to lane turning right just beyond abandoned house on left, turn into lane, and follow 0.45 mile to crossing of lanes and station site. Station is in uncultivated field, about 75 meters (246 feet) southwest of this crossing, and just north of timbered area. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in southeast corner of barn lot, 0.3 meter (1 foot) east of east end of wooden gate, 6 meters (20 feet) southwest of old granary, and approximately one-half mile from station in azimuth $242^{\circ}20'16''$. No. 2 is in fence corner, approximately 50 meters (164 feet) south of lane crossing, and 42.60 meters (139.8 feet) from station in azimuth $259^{\circ}08'$. No. 3 is approximately 50 meters (164 feet) west of lane crossing, and 46.57 meters (152.8 feet) from station in azimuth $153^{\circ}35'$.

Barber (Chowan County, C. D. Meaney, 1931).—About 4 miles north of Edenton, in cultivated field, 18.9 meters (62 feet) southwest of intersection of main road and lane leading into C. H. Barber's house, about 125 meters (410 feet) south of Barber's house, 17.7 meters (58 feet) west of center line of dirt road, and 10.7 meters (35 feet) north of east-and-west ditch between cultivated fields. To reach from Edenton, go north 1.0 mile from corner of Church and Broad Streets on United States route 17, turn left onto dirt road at Habit's Transfer Co., and follow this main dirt road 3.35 miles to station at point where road turns sharp left. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 foot west of north-and-south wire fence, 5.0 meters (16 feet) east of center line of dirt road, and about 50 meters (164 feet) south of point where road turns sharp left (west), and 54.34 meters (178.3 feet) from station in azimuth $334^{\circ}53'$. No. 2 is 1 meter (3 feet) south of east-and-west wire fence, 5 meters (16 feet) north of center line of dirt road, 15 meters (49 feet) north of 12-inch lone oak tree on south side of road, about 100 meters (328 feet) west-southwest of small house on north side of road, and approximately 0.3 mile from station in azimuth $97^{\circ}44'28''$. No. 3 is 1 foot south of east-and-west wire fence, 5 meters (16 feet) north of center line of road, about 50 meters (164 feet) west of curve in main road and lane leading into Barber's house, and 48.89 meters (160.4 feet) from station in azimuth $138^{\circ}12'$.

Byrum (Chowan County, C. D. Meaney, 1931).—About 5 miles east-southeast of Edenton, on land owned by A. G. Byrum and tenanted by R. G. Blanchard, in field on north side of road, and 16.50 meters (54.1 feet) east of southeast corner of large galvanized barn. To reach from Edenton, go east on Church Street 0.3 mile from its intersection with Broad Street to railroad crossing, follow concrete road 2.1 miles, turn right onto asphalt road, and continue 3.1 miles or about 200 yards beyond T-road to north to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in cultivated field, 0.6 meter (2 feet) east of fence line, 7 meters (23 feet) east of center line of north-and-south dirt road leading south from intersection with paved highway, 9 meters (30 feet) north of 14-inch hickory tree, and approximately $\frac{1}{2}$ mile from station in azimuth $297^{\circ}27'05''$. No. 2 is in southeast corner of barn lot, 5.70 meters (18.7 feet) south of west side of wooden gate, 5.90 meters (19.4 feet) west of center line of lane leading to house, 8.90 meters (29.2 feet) north of center line of paved highway, and 86.08 meters (282.4 feet) from station in azimuth $328^{\circ}20'$. No. 3 is 12.30 meters (40.4 feet) north of center line of paved highway, and 59.44 meters (195.0 feet) from station in azimuth $67^{\circ}40'$.

Mavaton (Chowan County, C. D. Meaney, 1931; 1932).—About 8 miles north-northwest of Edenton, 28.96 meters (95.0 feet) east of southeast corner of Mavaton railroad station, in southwest angle of railroad and road crossing, about 75 meters (246 feet) west of center line of dirt road, about 30 meters (98 feet) west of an abandoned cotton gin, and 33.8 meters (111 feet) southeast of center line of main track. To reach from Edenton, go north 0.6 mile from corner of Church and Broad Streets on United States route 17, take asphalt fork to left at Triangle service station, follow main asphalt road (taking no right or left forks) 8.9 miles or 3.0 miles beyond Valhalla railroad station, turn right onto dirt crossroad (church in southwest angle), and continue 1.15 miles to railroad

crossing and station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 7 meters (23 feet) north of center line of track and center line of road crossing track, 1 foot south of east-and-west wire fence, 3 meters (10 feet) north of "R.R. Crossing" sign, about 100 meters (328 feet) east of old house and group of barns, and approximately 0.3 mile from station in azimuth $23^{\circ}08'52''$. No. 2 is 9.66 meters (31.7 feet) west-southwest of southwest corner of Mavaton railroad station, 11.9 meters (39 feet) southeast of center line of main track, 3.96 meters (13.0 feet) south of northeast corner post of cultivated field, and 48.16 meters (158.0 feet) from station in azimuth $46^{\circ}28'$. No. 3 is on railroad right-of-way, 1 foot south of east-and-west wire fence, 7.3 meters (24 feet) north of center line of main track, 8.83 meters (29.0 feet) west of center line of dirt road, 4.57 meters (15.0 feet) west of southeast corner post of cultivated field, and 70.71 meters (232.0 feet) from station in azimuth $163^{\circ}32'$.

Edenton (Chowan County C. D. Meaney, 1931).—About 3 miles west of Edenton, in field on west side of dirt road, 53 meters (174 feet) northeast of abandoned shack, and 59 meters (194 feet) west of center line of north-and-south dirt road. To reach from Edenton, follow route 17 west from corner of Broad and Queen Streets 3.5 miles to dirt road leading north, turn north, continue 0.2 mile to lane turning west and leading past some abandoned farm buildings, turn into lane, and follow about 60 yards to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 meter (3 feet) northwest of 10-inch oak, 6 meters (20 feet) west of north-and-south road, 5 meters (16 feet) south of lane, and 218.65 feet from station in azimuth $267^{\circ}26'$. No. 2 is 11 meters (36 feet) east of center line of route 17, 3 meters (10 feet) west of oak, and approximately one-half mile from station in azimuth $306^{\circ}56'40''$. No. 3 is 3 meters (10 feet) south of east-and-west lane, 0.3 meter (1 foot) south of wire fence, and 149.53 feet from station in azimuth $131^{\circ}13'$.

Perry (Bertie County, C. D. Meaney, 1931).—About 1 mile north of Perrytown, in cultivated field on top of light-sandy ridge, about 100 yards beyond group of houses on left side of road, opposite new small white house on east side of road, about 100 meters (328 feet) north of road, about 150 meters (492 feet) northeast of group of houses and barns, and about 40 meters (131 feet) south of east-and-west row of trees. To reach from crossroads at Perrytown, go north 1.15 miles direct to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at bend in road, about 5 meters (16 feet) south of center line of road, about 50 meters (164 feet) east of house on north side of road, and approximately 0.5 mile from station in azimuth $352^{\circ}05'23''$. No. 2 is on south side of row of maple and gum trees, on north side of cultivated field, and 56.36 meters (184.9 feet) from station in azimuth $55^{\circ}44'$. No. 3 is on south side of row of maple and gum trees, on north side of cultivated field, and 48.77 meters (160.0 feet) from station in azimuth $117^{\circ}03'$.

Capehart (Bertie County, C. D. Meaney, 1931).—About 6 miles south of Perrytown, and 9 miles east-northeast of Windsor, directly behind Johnnie Evan's house who lives just west of Capehart Church, in his tobacco field, and 23.54 meters (77.2 feet) south of west side of gate in yard fence. To reach from Windsor, follow route 17 toward Edenton 10.4 miles from Standard station to dirt crossroad. From Edenton, this crossroad is about $4\frac{1}{2}$ or 5 miles west of west end of toll bridge over Chowan River, and exactly 1.2 miles west of bridge over Salmon Creek. Go north from crossroad 1.45 miles on temporary route 35, turn left at T-road, and continue about 350 yards to Capehart Church on south side of road and station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 0.5 meter (1.6 feet) northeast of east corner of granary, and 51.81 meters (170.0 feet) from station in azimuth $228^{\circ}59'$. No. 2 is 108 meters (354 feet) southeast of intersection of route 35 and Capehart Road, 6 meters (20 feet) east of center of main sand road, 45 meters (148 feet) west of house, 0.3 meter (1 foot) east of fence line, and approximately one-fourth mile from station in azimuth $200^{\circ}05'55''$. No. 3 is 0.3 meter (1 foot) east of Johnnie Evan's fence line, and 67.48 meters (221.4 feet) from station in azimuth $110^{\circ}18'$.

White (Bertie County, C. D. Meaney, 1931).—About $10\frac{1}{2}$ miles north-northeast of Windsor, $3\frac{1}{2}$ miles west of Perrytown, on land owned by Z. J. Mitchell

who lives one-fourth mile south of station, just northeast of Negro shack, and about 75 meters (246 feet) south of center line of east-and-west road. To reach from Windsor, go east about 5 miles on route 17, turn left onto dirt road where highway turns to right, and follow main dirt road about 8 miles to lane leading right into house just before reaching White's Crossing. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 44.83 meters (147.1 feet) from station in azimuth $227^{\circ}51'$. No. 2 is 37.49 meters (123.0 feet) from station in azimuth $286^{\circ}06'$. No. 3 is in front of yellow house, in northeast corner of yard, 11 meters (36 feet) east of east side of yard gate, 8 meters (26 feet) south of center line of dirt road, and approximately 300 meters (984 feet) from station in azimuth $48^{\circ}18'05''$.

Askew (Bertie County, C. D. Meaney, 1931).—About 5 miles north of Windsor, 1 mile southeast of Askewville, in cultivated field, about 70 meters (230 feet) east of Mr. R. E. Hoggard's house, 8.8 meters (29 feet) north of center line of east-and-west road, 11.0 meters (36 feet) west-southwest of northwest corner of garden fence post, 43.6 meters (143 feet) east of southeast corner of main barn in group of three, and about 80 meters (262 feet) east of T-road intersection. To reach from Standard filling station in Windsor, follow route 30 north 6.1 miles to gravel crossroad at Dempsey's service station, turn right, go 2.9 miles to crossroads known as Buena Vista (gas station on either side); turn right onto dirt road, and follow 2.4 miles to station site (0.9 mile beyond railroad crossing at Askewville). Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at northwest corner of fence around small house, 6 meters (20 feet) south of center line of road, 3 meters (10 feet) east of lane leading into field, and 67.67 meters (222.0 feet) from station in azimuth $212^{\circ}19'$. No. 2 is opposite house and group of barns, 5.0 meters (16 feet) west of center line of north-and-south dirt road, and approximately 300 meters (984 feet) from station in azimuth $323^{\circ}49'33''$. No. 3 is about 50 meters (164 feet) east of Mr. Hoggard's house, 5 meters (16 feet) south of center line of dirt road, and 48.95 meters (160.6 feet) from station in azimuth $2^{\circ}27'$.

Cooper (Bertie County, C. D. Meaney, 1931).—About 7 miles east-southeast of Windsor, on land owned and occupied by Tom Cooper, in east side of open field, flanked on west side by cornfield and on east by few scattered pine striplings, and about 25 yards north of center line of road. To reach from Windsor, follow route 17 toward Edenton 1.5 miles from Standard station to dirt road turning right opposite Virginia Dare service station, continue on dirt road 3 miles to forks known as Ellis Store, and take right fork 3.4 miles in southerly and easterly direction to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 15 meters (49 feet) north of center of road, and 40.32 meters (132.3 feet) from station in azimuth $299^{\circ}57'$. No. 2 is in northwest corner of cornfield, 9 meters (30 feet) south of center line of road, 0.5 meter (1.6 feet) south of wire fence, and approximately 150 meters (492 feet) from station in azimuth $75^{\circ}36'47''$. No. 3 is 3 meters (10 feet) north of center line of road, and 52.65 meters (172.7 feet) from station in azimuth $57^{\circ}10'$.

Windsor (Bertie County, C. D. Meaney, 1931).—One and one-half miles northwest of Windsor. To reach from Windsor, go north from Standard filling station (main corner in town) 1.4 miles on route 30, turn left onto dirt road at Gulf gas station on left and Pure Oil station on right, follow this main dirt road 1.25 miles to crossroads at old two-story house in south angle, turn left, and continue 0.2 mile to station site, which is at highest point of road. Station is 14.3 meters (47 feet) west of center line of north-and-south dirt road, 8.8 meters (29 feet) west of north-and-south wire fence, 10.4 meters (34 feet) west-southwest of dead 14-inch cedar tree in fence line, 39.3 meters (129 feet) south-southwest of 20-inch live cedar tree in fence line, about 300 meters (984 feet) north of white house on west side of road, and about 200 meters (656 feet) south of two-story house on west side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in cultivated field, 4.5 meters (15 feet) east of center line of dirt road, 1 foot east of telephone pole, and 67.21 meters (220.5 feet) from station in azimuth $153^{\circ}19'$. No. 2 is 2 feet west of north-and-south wire fence, 5.0 meters (16 feet) west of center line of dirt road, and 48.77 meters (160.0 feet) from station in azimuth $308^{\circ}04'$. No. 3 is 5 meters (16 feet) west of center line of dirt road, 2 feet west of telephone pole, 4 meters (13 feet)

east of 40-inch oak tree, 8 meters (26 feet) south of lane leading to white house on west side of road, and approximately 0.25 mile from station in azimuth $317^{\circ}10'34''$. State fire lookout tower is approximately 1 mile from station in azimuth $247^{\circ}26'43''$.

Jamesville (Martin County, C. D. Meaney, 1931).—About 10 miles east of Williamston, in outskirts of village of Jamesville, on land owned by Kathleen Wallace Lilley, in northeast corner of yard of tenant house, 6 meters (20 feet) south of fence on south side of highway, 6 meters (20 feet) east of fence east of cornfield, approximately 76 meters (249 feet) east of Methodist Church, and approximately 45 meters (148 feet) southeast of large colonial house on north side of highway. To reach from Williamston, go south 0.7 mile on route 17 to junction with route 90, and proceed east 10.7 miles on route 90 to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in southeast corner of lot, 12 meters (39 feet) north of highway, 11 meters (36 feet) west of southwest corner of house, and 57.24 meters (187.8 feet) from station in azimuth $280^{\circ}38'$. No. 2 is in fence line, 88 meters (289 feet) southwest of center line of highway, and approximately $\frac{1}{2}$ mile from station in azimuth $296^{\circ}47'06''$. No. 3 is just west of southwest corner of colonial house, 6 meters (20 feet) north of center line of highway, 20 meters (66 feet) north of northwest corner of Methodist Church on south side of highway, and 94.79 meters (311.0 feet) from station in azimuth $137^{\circ}46'$.

Williamston (Martin County, C. D. Meaney, 1931).—About $1\frac{1}{4}$ miles south of Williamston, on grounds of Primitive Baptist Church which is small white frame building in grove of tall pines on west side of highway. To reach from Williamston, go south 1.2 miles from Standard service station on route 17 direct to station site. Station is about 22 meters (72 feet) west of center line of highway, approximately 90 meters (295 feet) south by east of church, and in opening in grove of pines. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 meters (20 feet) east of center line of highway, 3 meters (10 feet) east of ditch on east side of highway, 0.6 meter (2 feet) north of telephone pole, approximately 75 meters (246 feet) southeast of southeast corner of church, and 60.13 meters (197.4 feet) from station in azimuth $235^{\circ}18'$. No. 2 is 6 meters (20 feet) east of center line of highway, 3 meters (10 feet) north of center line of lane leading to house, directly east across highway from T-road leading west to Beargrass, approximately 50 meters (164 feet) north of point where highway makes curve to southeast, and approximately one-half mile from station in azimuth $16^{\circ}58'39''$. No. 3 is approximately 50 meters (164 feet) south of south side of church, 50 meters (164 feet) west of center line of highway, and 44.19 meters (145.0 feet) from station in azimuth $158^{\circ}47'$.

Green (Martin County, C. D. Meaney, 1931).—About $6\frac{1}{2}$ miles south of Williamston, on land owned by H. C. Green, one-fourth mile north of his home, 17 meters (56 feet) west of center line of route 17, and 16 meters (52 feet) north of woven-wire fence. To reach go south 6.8 miles on route 17 from Standard service station at turn in Williamston direct to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 7 meters (23 feet) south of center line of highway, and approximately one-half mile from station in azimuth $209^{\circ}31'50''$. No. 2 is 10 meters (33 feet) east of center line of highway, 4 meters (13 feet) northwest of northwest corner of front yard of farm house, and 48.40 meters (158.8 feet) from station in azimuth $227^{\circ}24'$. No. 3 is by telephone pole on east side of highway, and 44.47 meters (145.9 feet) from station in azimuth $337^{\circ}58'$.

Woolard (Beaufort-Martin Counties, C. D. Meaney, 1931).—About 12 miles south of Williamston, 10 miles north of Washington, 0.75 mile east of United States route 17, about on boundary between Beaufort and Martin Counties, in pine grove, in center of old wagon road leading south through woods, 9.4 meters (31 feet) southwest of center line of main dirt road, and 17.6 meters (58 feet) south of Beaufort-Martin County signpost on east side of road. To reach from Williamston, go south 13.0 miles from Standard oil station on route 17, and proceed east on dirt crossroad 0.75 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 3 meters (10 feet) east of center line of dirt road, about 30 meters (98 feet) southwest of old abandoned house, and approximately 0.25 mile from station in azimuth $249^{\circ}31'11''$. No. 2 is in center

of old wagon road through woods, 26.5 meters (87 feet) southwest of center line of main dirt road, and 53.55 meters (175.7 feet) from station in azimuth 269°59'. No. 3 is 2 feet east of wire fence, in center of old wagon road through woods, 6.0 meters (20 feet) northeast of center line of main dirt road, and 49.31 meters (161.3 feet) from station in azimuth 90°08'. Martin-Beaufort county-line marker post is 17.62 meters (57.8 feet) from station in azimuth 116°47'.

Carson (Pitt County, C. D. Meaney, 1931; 1933).—About 12.5 miles southwest of Williamston, 17 miles northwest of Washington, 5½ miles south of Robersonville, 14 miles northeast of Greenville, and on property of S. W. Carson. To reach from United States route 17, go to Batt's Crossroads which is about 11 miles south of Williamston and 11 miles north of Washington, turn northwest onto dirt road which has arrow sign "Bear Grass 7 Miles", follow this road 3.8 miles, take left-hand fork 2.6 miles to another fork, turn right, continue 0.7 mile (across bridge) to T-road on right with arrow sign "Robersonville 9½ Miles", turn right, proceed 3.7 miles to road leading left (southwest) at church (Congleton), follow this road 0.2 mile, take T-road to right opposite yellow house, and continue 0.2 mile to station site. To reach from Robersonville, follow south on Main Street and main-traveled road 5.25 miles from railroad crossing to fork at church (Congleton), and follow above directions from this point. To reach from Greenville, go north 3.8 miles on route 11, take paved right fork just before reaching group of section houses, continue on this road 7.9 miles (through town of Stokes where pavement ends) to crossroad with arrow sign "Robersonville 8; Wichard 2", turn left, go 1.1 miles, take main road at left fork, continue 1.2 miles to T-road opposite the yellow house described above and proceed 0.2 mile to station site. Station is 11 meters (36 feet) north of center line of road, 3 meters (10 feet) west of west edge of cultivated field, 5.5 meters (18 feet) east of center line of wagon road leading into woods, and 32.3 meters (106 feet) northeast of northeast corner of negro house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 2 feet east of telephone pole, 4 meters (13 feet) east of center line of intersection of T-road, 10 meters (33 feet) southwest of group of mail boxes, about 40 meters (131 feet) west-southwest of old house on east side of road, and approximately 0.2 mile from station in azimuth 293°50'40". No. 2 is 4 meters (13 feet) south of center line of road, 11 meters (36 feet) northwest of northwest corner of negro house, and 47.24 meters (155.0 feet) from station in azimuth 65°01'. No. 3 is in woods, 58 meters (190 feet) north of center line of main road, 3 meters (10 feet) west of center line of wagon road, and 46.78 meters (153.5 feet) from station in azimuth 172° 54'.

Shaw (Beaufort County, C. D. Meaney, 1931; 1933).—About 6 miles north of Washington, on grounds of old Sycamore Hill Church which has been entirely removed, near home of Mr. Shaw, in small clearing between road and site of church, 10 meters (33 feet) northeast of center line of road, 16.5 feet west-northwest of 10-inch oak, 24 feet east of 18-inch oak, and 41.5 feet east-southeast of 24-inch oak. To reach from Washington, go north 4.7 miles from Main Street on United States route 17, turn left onto dirt road between white house and red country store, and follow this road 0.4 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 4.5 meters (15 feet) southwest of center line of dirt road, 5 meters (16 feet) northwest of 36-inch oak, and 63.55 meters (208.5 feet) from station in azimuth 309°58'. No. 2 is 5 meters (16 feet) northeast of center line of dirt road, approximately 100 meters (328 feet) southeast of house and farm buildings, and 66.96 meters (219.7 feet) from station in azimuth 114°59'. No. 3 is 5 meters (16 feet) southwest of center line of dirt road, 3 meters (10 feet) north of 18-inch pine, 0.1 mile from house and farm buildings, and approximately one-fourth mile from station in azimuth 115°20'05".

Boyd (Pitt County, C. D. Meaney, 1931; 1933).—About 11 miles west of Washington, 8½ miles east of Greenville, 3 miles west of Grimesland, on land owned by Edwards and Tucker and overseen by Mr. Boyd, opposite telephone pole no. 1632, on slight rise of ground, in bare spot in forks of roads, 38 feet south of center line of route 264, 21 feet northwest of dirt road which turns off to southwest at this point, 31 feet northeast of 27-inch oak tree, and 122 feet northeast of northeast corner of small house occupied by negroes. To reach from Washington, go south 3 miles on United States route 17 to Chocowinity, proceed west 6.3 miles on route 91 to Grimesland, and continue west 3.3 miles on route 91 to station site. To reach from Greenville, go east about 8½ miles from main intersection

on United States route 264 to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 27 feet north of center line of highway, 25 feet east of center line of dirt road leading north, 2 feet west of telephone pole no. 1633, and 153.25 feet from station in azimuth $255^{\circ}32'$. No. 2 is about 9 paces north of center line of highway, 1 foot north of east-and-west wire fence, 46 feet southeast of telephone pole no. 1654, about 75 yards northwest of most westerly of two 1-story houses on south side of highway, and approximately 0.5 mile from station in azimuth $274^{\circ}19'38''$. No. 3 is 41 feet southeast of southeast corner of house mentioned above, 10 feet northwest of center line of dirt road mentioned above, at east corner of garden, 8 feet southwest of 20-inch pine tree with large blaze, and 179.55 feet from station in azimuth $42^{\circ}44'$.

Smaw (Beaufort County, C. D. Meaney, 1931; 1933).—Four miles east of Washington, on land of T. E. Smaw. To reach from Washington, go east 4.0 miles on United States route 264 (North Carolina route 91) to small Sinclair filling station and store on south side of road and station site. Station is in grove of tall pines, 35.54 meters (116.6 feet) east of southeast corner of filling station, 15.70 meters (51.5 feet) south-southwest of center line of road, and 11.43 meters (37.5 feet) south-southwest of south headwall of concrete culvert. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6.03 meters (19.8 feet) north-northwest of center line of road, 1 meter (3 feet) southeast of telephone pole, and 174.15 feet from station in azimuth $143^{\circ}21'$. No. 2 is 6 meters (20 feet) northeast of center line of road, 1 meter (3 feet) southeast of telephone pole, and 183.15 feet from station in azimuth $273^{\circ}35'$. No. 3 is 14 meters (46 feet) north-northeast of center line of road, 1 meter (3 feet) south of fence line, 16 meters (52 feet) south of southeast corner of small filling station on north side of road, 15 meters (49 feet) southwest of 30-inch pine tree, and approximately one-fourth mile from station in azimuth $117^{\circ}40'00''$.

Chocowinity (Beaufort County, C. D. Meaney, 1931; 1933).—About 6 miles south of Chocowinity Crossroads. To reach from Washington, go south on United States route 17 (highway to New Bern) 3 miles from drawbridge over Pamlico River to village of Chocowinity and junction of United States route 17 (North Carolina route 33) and North Carolina route 91, and continue south 6.0 miles on route 17 to secondary-road crossing and station site. Station is 45 meters (148 feet) south of this intersection, and 24 meters (79 feet) southeast of center line of highway pavement. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is by telephone pole, 9 meters (30 feet) northwest of center line of highway, and 57.48 meters (188.6 feet) from station in azimuth $56^{\circ}12'$. No. 2 is by woven-wire fence, 8 meters (26 feet) north of center line of secondary highway, 6 meters (20 feet) south of southeast corner of most easterly of two tobacco-curing barns, and approximately one-fourth mile from station in azimuth $125^{\circ}54'57''$. No. 3 is 8 meters (26 feet) northwest of center line of highway pavement, 8 meters (26 feet) north of intersection of secondary road with highway, 18 meters (59 feet) southeast of the southeast rail of railroad track, and 61.66 meters (202.3 feet) from station in azimuth $171^{\circ}38'$.

Orr (Beaufort County, C. D. Meaney, 1931).—About 13 miles southeast of Washington, one-fourth mile northwest of Blounts Creek Crossroads, in pine-grove area, 0.3 mile east of Blounts Creek, 20.1 meters (66 feet) north of center line of route 33, and 15.5 meters (51 feet) east of dirt road leading north off route 33. To reach from Washington, go south 3 miles on route 17 to Chocowinity, and proceed southeast 13.5 miles on route 33 to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in pine-grove area, 9.45 meters (31 feet) south of center line of route 33, 5.33 meters (17.5 feet) south of "Curve" sign on south side of highway, 3.5 meters (11 feet) west of wagon road leading south off route 33, and 43.77 meters (143.6 feet) from station in azimuth $329^{\circ}48'$. No. 2 is in telephone-line right-of-way, 9.75 meters (32.0 feet) south of center line of route 33, 25.6 meters (84 feet) west of center line of intersection of road leading north and route 33, and 45.35 meters (148.3 feet) from station in azimuth $66^{\circ}48'$. No. 3 is in pines, 6 meters (20 feet) north of center line of dirt road, about 50 meters (164 feet) northwest of bend in road, and approximately one-fourth mile from station in azimuth $165^{\circ}14'17''$.

Vance (Craven County, C. D. Meaney, 1931).—About 15 miles south of Washington, 3 miles northeast of Vanceboro, on land owned by Don White, of

Vanceboro, and 13 meters (43 feet) east of center line of graded road. To reach from Washington, go south 16.8 miles on route 17, turn east onto dirt road opposite Gulf filling station, proceed east on this road 2 miles, turn north, and go 0.55 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on north side of east-and-west graded road, 60 meters (197 feet) east of turn in road to north, and approximately one-half mile from station in azimuth $1^{\circ}44'06''$. No. 2 is 6 meters (20 feet) east of center line of graded road, and 40.14 meters (131.7 feet) from station in azimuth $9^{\circ}05'$. No. 3 is 6 meters (20 feet) west of center line of graded road, and 49.59 meters (162.7 feet) from station in azimuth $150^{\circ}27'$.

Turnstall (Craven County, C. D. Meaney, 1931).—About 13 miles northeast of New Bern, 8 miles northeast of Askin, and 5 miles southwest of Edward. To reach from Chocowinity, go southeast 18.9 miles on route 33 to Mack's Standard filling station at five points at Edward, turn south onto sandy-dirt road, continue 2.1 miles to Turnstall Road turning west, and follow this road southwest 3.65 miles to station site. To reach from route 17 at Askin Crossroads, turn east at Adams filling station, follow main road northeast 5.5 miles to fork, follow left fork at church and school 1.4 miles to old log tobacco drier on right just beyond house on left, turn right, and follow main road northeast 2.1 miles to station site. Latter route is better in wet weather. Station is 18 meters (59 feet) southeast of center line of Turnstall Road, about 68 meters (223 feet) northeast of old tumble-down house on south side of road, and opposite farm lane leading north. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 4 meters (13 feet) south of center line of road, and approximately one-half mile from station in azimuth $234^{\circ}10'09''$. No. 2 is 5 meters (16 feet) southeast of center line of road, and 41.45 meters (136.0 feet) from station in azimuth $253^{\circ}30'$. No. 3 is 6 meters (20 feet) northwest of center line of road, and 49.20 meters (161.4 feet) from station in azimuth $97^{\circ}32'$.

Askin (Craven County, C. D. Meaney, 1931).—About 7 miles east of New Bern, 1.7 miles south of crossroads at village of Askin, on right-of-way of old highway, opposite Toler's and Adam's filling station, in open area, 23.8 meters (78 feet) east of center line of intersection of route 17 and north branch of old brick pavement, 12.5 meters (41 feet) northeast of center line of brick pavement, and 18.41 meters (60.4 feet) west of center line of Norfolk Southern Railroad. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 10 meters (33 feet) west of center line of route 17, on edge of right-of-way, and 0.35 mile from station in azimuth $342^{\circ}28'24''$. No. 2 is about 40 meters (131 feet) north of crossroad sign on west side of route 17, 11.1 meters (36 feet) west of center line of route 17, 40.5 meters (133 feet) south-southwest of intersection of center lines of route 17 and old highway, and 41.79 meters (137.1 feet) from station in azimuth $28^{\circ}41'$. No. 3 is in fork of route 17 and old highway, 11.4 meters (37 feet) west of center line of route 17, 7.7 meters (25 feet) northeast of center line of old brick-paved highway, and 54.98 meters (180.4 feet) from station in azimuth $124^{\circ}02'$.

Pipkin (Pamlico County, C. D. Meaney, 1931).—About 8 miles east of New Bern, 4 miles west of Grantsboro, on land owned by R. L. Pipkin, in grassy area, 23.60 meters (77.4 feet) south of center line of route 302, and approximately 75 meters (246 feet) east of Pipkin's filling station. To reach from New Bern, follow route 17 to Bridgeton, and proceed southeast 6.8 miles on route 302 to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 8 meters (26 feet) north of center line of highway, and 71.93 meters (236.0 feet) from station in azimuth $272^{\circ}27'$. No. 2 is 13 meters (43 feet) south of center line of highway, 20 meters (66 feet) west of southwest corner of house, 3 meters (10 feet) south of southwest corner of yard, 0.3 meter (1 foot) west of fence on west side of yard, and approximately one-fourth mile from station in azimuth $272^{\circ}31'56''$. No. 3 is 8 meters (26 feet) north of center line of highway, and 65.88 meters (216.1 feet) from station in azimuth $146^{\circ}36'$.

New Bern north base (Craven County, C. D. Meaney, 1931; 1932).—About 2 miles south of New Bern, one-fourth mile west of United States route 70, on right-of-way of Norfolk Southern Railroad, in open area, 13.4 meters (44 feet) southeast of intersection of dirt road and railroad, 8.8 meters (29 feet) south of dirt road, 10.81 meters (35.5 feet) east of center line of Norfolk Southern Railroad

track, and 22.46 meters (73.7 feet) west of northwest corner of tobacco house on south side of road. To reach from New Bern, follow United States route 70 south across Trent River bridge to James City, continue south 1.5 miles on highway to dirt crossroad with sign "Airport 1 Mile", turn west onto this road, and go 0.2 mile to railroad and station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in northwest angle of railroad tracks and road, about 7 meters (23 feet) west of center line of track, about 7 meters (23 feet) north of center line of road, 2 feet north of telephone pole, 908 meters (2,979 feet) north of milepost 63, and about 1,282 meters (4,206 feet) from station in azimuth $336^{\circ}26'27''$. No. 2 is in line of telephone poles, 2 feet north of pole, 8.07 meters (26.5 feet) west of center line of railroad track, 86.7 meters (284 feet) south of intersection of dirt road and railroad, and 75.95 meters (249.2 feet) from station in azimuth $349^{\circ}56'$. No. 3 is along fence line at southwest corner of tobacco barn on north side of road, 4.5 meters (15 feet) north of center line of road, 45 meters (148 feet) west of railroad track, and 61.76 meters (202.6 feet) from station in azimuth $101^{\circ}00'$.

Arapahoe (Pamlico County, C. D. Meaney, 1931).—About 14 miles airline southeast of New Bern, on grounds of consolidated school at village of Arapahoe, in northeast corner of schoolyard, and approximately 16 meters (52 feet) west of center line of route 306. To reach from New Bern follow route 17 to Bridgeton, proceed east 10.6 miles on route 302 to Grantsboro, proceed south 8.0 miles on route 306 (sandy dirt) to Arapahoe, and continue south 0.15 mile on route 306 to school-grounds. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is alongside fence on east side of route 306, and 54.75 meters (179.6 feet) from station in azimuth $157^{\circ}04'$. No. 2 is on east side of route 306, and 71.82 meters (235.6 feet) from station in azimuth $190^{\circ}38'$. No. 3 is in southeast corner of sawmill yard, and approximately one-fourth mile from station in azimuth $323^{\circ}20'43''$.

New Bern south base (Craven County, C. D. Meaney, 1931; 1933).—About 8 miles south of New Bern, 0.1 mile west of United States route 70, and on right-of-way of Norfolk Southern Railroad, in southeast angle of railroad and dirt-road crossing, about 150 meters (492 feet) south of Riverdale station, 22.0 meters (72 feet) south of center line of dirt road, 11.58 meters (38.0 feet) east of center line of main track, 4.17 meters (13.7 feet) west of north-and-south wire fence, and 14.8 meters (49 feet) east-southeast of telephone pole. To reach from New Bern, go south 8.4 miles on route 70 to dirt crossroad with sign "Riverdale", turn west onto this road, and go 0.1 mile to railroad crossing and station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on railroad right-of-way, 1 foot west of north-and-south wire fence, 15.79 meters (51.8 feet) east of center line of main track, 15.18 meters (49.8 feet) northeast of northeast corner of section house, directly across from one-story white house, and 42.06 meters (138.0 feet) from station in azimuth $329^{\circ}52'$. No. 2 is in garden, 1 foot south of southeast corner post, 34.1 meters (112 feet) north of center line of road crossing tracks, 4.3 meters (14 feet) west of center line of road to railroad station, 24.7 meters (81 feet) west of center line of main tracks, and 57.18 meters (187.6 feet) from station in azimuth $117^{\circ}52'$. No. 3 is in southeast angle of railroad and dirt-road crossing, 7.27 meters (23.9 feet) east of east rail, 7 meters (23 feet) south of center line of dirt road, and about 1,529 meters (5,016 feet) from station in azimuth $155^{\circ}32'56''$.

Temple (Craven County, C. D. Meaney, 1931).—On south shore of Neuse River, about 21 miles southeast of New Bern, and at west side of Clubfoot Creek. To reach from Harlowe, go west 2.35 miles on route 101 to church in V of forks, turn right, continue 2.0 miles straight ahead past church at left fork, continue 2.05 miles to T-road south, go past this T-road about 60 feet, turn left (north) along side of cornfield, and continue about 250 feet to fence line and corners. Station is on this fence line, on property of E. H. Temple, and approximately 75 meters (246 feet) west of his house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is approximately 10 meters (33 feet) southwest of southwest corner of Temple's house, 0.3 meter (1 foot) west of north-and-south fence line, and 76.098 meters (249.66 feet) from station in azimuth $275^{\circ}22'$. No. 2 is at north corner of barn, 7 meters (23 feet) south of gate, 6 meters (20 feet) west of small potato field, 21 meters (69 feet) west of small

log meat house, and approximately $\frac{1}{2}$ mile from station in azimuth $2^{\circ}56'47''$. No. 3 is 1 meter (3 feet) east of gate, 6.5 meters (21 feet) south of center line of road, 3 meters (10 feet) southeast of corner of fence, and 133.67 meters (438.5 feet) from station in azimuth $32^{\circ}34'$.

Havelock (Craven County, C. D. Meaney, 1931).—About 17 miles from New Bern, on west side of route 70 at Havelock station, and is reached from New Bern directly by United States route 70. Land is owned by the Bryan Estate and is in charge of Mr. Russell at filling station 1 mile south of Havelock. Station is in open area, about 60 meters (197 feet) west of route 70, 59.37 meters (194.8 feet) northeast of northeast corner of Havelock railroad station, 34.08 meters (111.8 feet) east of center line of main track of Norfolk Southern Railroad, 14.0 meters (46 feet) southeast of 24-inch pine tree, and 14.0 meters (46 feet) west-northwest of center line of dirt road leading from highway to railroad. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in triangular plot of ground bounded by roads, 10.7 meters (35 feet) west of center line of route 70 at curve, 10.4 meters (34 feet) north of most northerly pine tree in group, and 54.59 meters (179.1 feet) from station in azimuth $248^{\circ}08'$. No. 2 is in north side of road which runs past station and through the village of Havelock, 7 meters (23 feet) north of center line of road, 6 meters (20 feet) east-southeast of lone pine tree, 6 meters (20 feet) northeast of north-and-south fence, and approximately 0.75 mile from station in azimuth $26^{\circ}04'26''$. No. 3 is 3 meters (10 feet) west of center line of dim road leading north into woods, 15.54 meters (51.0 feet) east of center line of main track, 23.37 meters (76.7 feet) southeast of switch post, and 55.29 meters (181.4 feet) from station in azimuth $131^{\circ}03'$.

Harlowe (Carteret County, C. D. Meaney, 1931; 1933).—About 10 miles east of Havelock, 10 miles north-northwest of Beaufort, in village of Harlowe, on land owned and occupied by C. D. Taylor, in front of Mr. Taylor's house, in northeast corner of uncultivated field, 5 paces south of east-and-west fence, 15 paces east of north-and-south fence, 14.3 meters (47 feet) west of center line of route 101, and 8 paces north of 24-inch pine. To reach from junction of United States route 70 and North Carolina route 101 which is 0.9 mile south of Havelock, go east 9 miles on route 101 to Harlowe and station site. To reach from Beaufort, go north 1 mile on route 10 to its junction with route 101, turn left onto route 101, and follow 12.4 miles to Harlowe. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 4.7 meters (15 feet) east of center line of route 101, 0.24 meter (0.8 foot) west of corner post in fence, 20 feet west of barn, and 181.53 feet from station in azimuth $306^{\circ}04'$. No. 2 is 6.1 meters (20 feet) east of center line of route 101, 4 feet west of ditch, and approximately $\frac{1}{4}$ mile from station in azimuth $147^{\circ}36'11''$. No. 3 is 6.1 meters (20 feet) east of center line of route 101, 47.5 feet southeast of Craven-Carteret County boundary monument, and 144.67 feet from station in azimuth $172^{\circ}53'$. Azimuth from station to highest stack of three in Beaufort is $326^{\circ}55'40''$.

Newport (Carteret County, C. D. Meaney, 1931; 1933).—Nine miles north-west of Morehead City, 0.7 mile south of Newport, on land owned by Murray McCane, of Newport, in pine-grove area opposite "Side Road" sign on east side of route 70, 25.6 meters (84 feet) west-southwest of center line of highway, 122 feet west of telephone pole no. 367, 26.8 meters (88 feet) southwest of west end of concrete culvert just south of a "Curve" sign on west side of highway, and 54 feet south of center line of wagon road leading west into woods. To reach, follow United States route 70 to Newport which is 9 miles south of Havelock, and continue south 0.7 mile from railroad crossing to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 meter (3 feet) northeast of mail box, 9.45 meters (31.0 feet) east of center line of highway, 60 feet south of southwest corner of small house or shack occupied by J. H. McCane, 84 feet north of telephone pole no. 368, and 234.1 feet from station in azimuth $215^{\circ}52'$. No. 2 is 10 meters (33 feet) south of center line of route 70, 1 meter (3 feet) west of ditch along highway, about 25 meters (82 feet) south of point where highway curves to northeast going north, 4 feet west of telephone pole, 28 paces southwest of telephone pole no. 358 on east side of highway, and approximately 0.2 mile from station in azimuth $346^{\circ}49'22''$. No. 3 is in pine grove, about 80 yards west of route 70, 42 feet west of the center line of wagon road, 4 paces southwest of 12-inch pine tree, and 57.79 meters (189.6 feet) from station in azimuth $75^{\circ}07'$.

Knoll (Carteret County, C. D. Meaney, 1931).—About 13 miles west of Morehead City, about 6 miles southwest of Newport, on south side of North Carolina route 24, just east of junction of this road with paved road to Newport, on knoll in pine woods, 38.4 meters (126 feet) south of center line of route 24, 8.23 meters (27.0 feet) north of 10-inch blazed pine tree, and 95.1 meters (312 feet) southwest of center line of T-intersection of route 24 and paved road to Newport. To reach from Morehead City, go west 5 miles on route 70 to junction with route 24 leading to left, and follow route 24 (16-foot asphalt road) west 8.0 miles to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in pine woods, 10.1 meters (33 feet) north of center line of route 24, about 69 meters (226 feet) east of "Side Road" sign on north side of route 24, and 82.39 meters (270.3 feet) from station in azimuth $224^{\circ}55'$. No. 2 is directly opposite small church, 8 meters (26 feet) north of center line of route 24, and approximately 0.45 mile from station in azimuth $257^{\circ}13'02''$. No. 3 is in northeast angle of T-road intersection, 9.67 meters (31.7 feet) north of center line of route 24, 11.3 meters (37 feet) east of center line of paved road leading to Newport, and 87.84 meters (288.2 feet) from station in azimuth $113^{\circ}30'$.

Verona (Onslow County, C. D. Meaney, 1932; 1933).—About $7\frac{1}{2}$ miles southwest of Jacksonville. To reach from Verona which is about 8 miles southwest of Jacksonville on route 17, go south 1.8 miles on route 17 from Verona railroad station direct to station site. Station is between highway and railroad, 10.9 meters (36 feet) west of center line of highway, 14.2 meters (47 feet) from center line of railroad, across road from small pine tree with triangular blaze, and about 400 feet south of a "N. C. 30, U. S. 17" highway sign. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in southeast corner of dim crossroads, 0.6 meter (2 feet) south of "Railroad Crossing" sign, 7 meters (23 feet) east of center line of highway, 32 meters (105 feet) east of center line of railroad, 12 meters (39 feet) west of 14-inch pine tree, and approximately one-half mile from station in azimuth $192^{\circ}14'33''$. No. 2 is 8.4 meters (28 feet) east of center line of highway, 33.4 meters (110 feet) east of center line of railroad, and 154 feet from station in azimuth $215^{\circ}39'$. No. 3 is 6.8 meters (22 feet) west of center line of highway, 17.8 meters (58 feet) east of center line of railroad, and 159.93 feet from station in azimuth $6^{\circ}40'$.

Truesdale (Onslow County, C. D. Meaney, 1932; 1933).—One mile west of crossroads at Piney Green, on grounds of Truesdale colored church, opposite rear window on west side of church, 37.6 feet northwest of southwest corner of church, and about 90 feet south of center line of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 meters (20 feet) north of center line of road, 19 meters (62 feet) north of north side of church, and 122.4 feet from station in azimuth $216^{\circ}48'$. Mark has been partially destroyed in an effort to remove bronze tablet, but it is still in correct position. No. 2 is 139.4 feet from station in azimuth $340^{\circ}21'$. No. 3 is in woods, and approximately 0.25 mile from station in azimuth $149^{\circ}25'43''$.

Duck Creek (Onslow County, C. D. Meaney, 1932).—Three and one-half miles east of Marines post office. To reach from Piney Green on route 24, take road leading south at crossroad, keep main road straight ahead at 9.55 miles, turn right at forks with mileage sign "Jacksonville 19", proceed 0.55 mile, turn right at forks with tobacco barn in V, and proceed 0.6 mile to Frank Dennis' house back off road to right. Station is in open area, 65.2 meters (214 feet) south-southwest of southwest corner of Frank Dennis' house, 14.3 meters (47 feet) north of wagon road leading past station, and 7.2 meters (24 feet) west of lone 12-inch persimmon tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at southwest corner of Frank Dennis' house, and 65.10 meters (213.6 feet) from station in azimuth $185^{\circ}48'$. No. 2 is in cut-over timber land, 11.7 meters (38 feet) south of center line of road leading to station, and 36.21 meters (118.8 feet) from station in azimuth $284^{\circ}54'$. No. 3 is in northwest corner of garden lot, 20 meters (66 feet) northwest of northwest corner of Negro house, 30 meters (98 feet) north of center line of road leading past station, and approximately 0.25 mile from station in azimuth $58^{\circ}23'06''$.

Grant (Onslow County, C. D. Meaney, 1932).—On land belonging to Jim Grant, 2.15 miles from Sneads Ferry post office, and 5.4 miles from Folkstone on United States route 17, in small open area, 19.8 meters (65 feet) southeast of

center line of route 301, 3.8 meters (12 feet) southeast of diagonal dim crossroad leading into woods, and 30.5 meters (100 feet) southwest of center line of intersection of route 301 and crossroad. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in northeast angle between route 301 and dim crossroad, 2.0 meters (7 feet) southeast of center line of road, 7.9 meters (26 feet) north of center line of route 301, and 152.55 feet from station in azimuth $186^{\circ}28'$. No. 2 is at southeast corner of barn where lane terminates at farmyard, about 29 meters (95 feet) east of road, about 40 meters (131 feet) southeast of farmhouse, and approximately 0.3 mile from station in azimuth $188^{\circ}36'34''$. No. 3 is 72.2 meters (237 feet) west of center line of intersection of route 301 and crossroad, 7.6 meters (25 feet) north of center line of route 301, and 182.7 feet from station in azimuth $74^{\circ}30'$.

Bryan (Craven County, C. D. Meaney, 1931).—About 8 miles southwest of Havelock, on the Bryan Estate. To reach, follow United States route 70 to Havelock, proceed west across railroad track to small store, take dirt road which leads to Lakes at left of store and follow southwest 5 miles to T-intersection at point where main road turns squarely to right towards clubhouse and another road leads to left. Station is in brush area in southwest angle of T-road intersection, 9.1 meters (30 feet) south of east-and-west road, 9.4 meters (31 feet) west of road intersecting east-and-west road, and about 20 meters (66 feet) south of tall-timber grove. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in open field, on prolongation of road leading southeast from station, 1.5 meters (5 feet) west of center line of north-and-south ditch, about 300 meters (984 feet) south of road leading to station, and approximately 0.5 mile from station in azimuth $291^{\circ}24'07''$. No. 2 is on south side of tall timber, 2 meters (7 feet) east of twin hickory tree, 8.2 meters (27 feet) north of center line of east-and-west wagon road, and 36.70 meters (120.4 feet) from station in azimuth $68^{\circ}12'$. No. 3 is on south side of tall timber, 41.8 meters (137 feet) east-northeast of center line of T-intersection of roads, 4.6 meters (15 feet) north of center line of east-and-west wagon road, and 52.49 meters (172.2 feet) from station in azimuth $197^{\circ}15'$.

Simkins (Carteret County, C. D. Meaney, 1932).—About 20 miles west of Morehead City, 1.4 miles west of Bogue post office, on land owned by Mr. Simkins who is postmaster at Goldsboro, on sand knoll in pine woods, about $\frac{1}{4}$ mile beyond White Oak Consolidated School, 0.1 mile east of junction of road leading to Cedar Point, 48.5 meters (159 feet) east of center line of route 24, 62.2 meters (204 feet) west-northwest of Cedar Point Road, and about 90 meters (295 feet) northwest of white house. To reach from Morehead City, go west 5 miles on United States route 70 to junction with route 24, and continue west 15.1 miles on route 24 which is paved for 10 miles and then becomes sandy dirt to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 4 meters (13 feet) southeast of Cedar Point Road, about 40 meters (131 feet) northeast of route 24, and 66.93 meters (219.6 feet) from station in azimuth $275^{\circ}29'$. No. 2 is on east edge of timber, 3 meters (10 feet) west of narrow ditch, about 100 meters (328 feet) west of route 24, 3 meters (10 feet) west of 16-inch pine tree (largest in vicinity), and approximately 200 meters (656 feet) from station in azimuth $314^{\circ}06'51''$. No. 3 is in pine woods, 9.4 meters (31 feet) northeast of center line of route 24, 16.8 meters (55 feet) east of "Side Road" sign on east side of route 24, and 38.71 meters (127.0 feet) from station in azimuth $4^{\circ}15'$.

Pelletier (Carteret County, C. D. Meaney, 1932).—About 4 miles airline northwest of Morehead City, 2 miles northeast of Stella, on southwest side of temporary route 24, and on land owned by Pelletier Bros. of Stella. To reach from Maysville on United States route 17, follow Stella dirt road southeast 10 miles to junction with route 24, and continue southeast 0.45 mile on route 24 to station site. Station is in brushy cut-over pine woods, 14.0 meters (46 feet) south-southeast of 12-inch blazed pine tree, opposite curve in road, near point where wood road takes off to southwest, 16.5 meters (54 feet) south of center line of dirt route 24, 25.0 meters (82 feet) south-southeast of south corner post between cultivated fields on north side of route 24, and about 150 meters (492 feet) west of lone one-story house on north side of route 24. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in timber land, 9.0 meters (30 feet) south of center line of route 24, and 39.63 meters (130.2 feet)

¹For notes in regard to marking of stations see p. 135.

from station in azimuth $251^{\circ}19'$. No. 2 is in cultivated field, about 3.5 meters (11 feet) north of center line of route 24, and approximately 0.3 mile from station in azimuth $116^{\circ}51'32''$. No. 3 is in cut-over timber land, 4.6 meters (15 feet) south of center line of route 24, and 42.27 meters (138.7 feet) from station in azimuth $118^{\circ}46'$.

Russell (Onslow County, C. D. Meaney, 1932).—About 4 miles south-south-east of Hubert post office. To reach from Jacksonville, go northwest 4.0 miles from post office on United States route 17 to junction with route 24, turn right onto route 24, follow south 11.75 miles to Starling's store, turn right, proceed 0.2 mile, follow left fork at sign "Tapps Warehouse" 1.55 miles to right fork straight ahead, take right fork, follow main-traveled road 2.65 miles to T-road junction, turn left, and go 0.15 mile to T-road north just beyond schoolhouse on left. D. B. Dail's mail box is in northwest angle of this corner. Station is in open area, about 40 meters (131 feet) east of small graveyard in northwest angle of T-road junction, 12.2 meters (40 feet) east of center line of sand road, and 52.2 meters (171 feet) north of center line of T-road junction. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at foot of north-west corner of auto shed, on south side of road, about 20 meters (66 feet) south-west of house, and approximately 0.4 mile from station in azimuth $249^{\circ}03'47''$. No. 2 is at northwest angle of T-road junction, at southeast corner of small graveyard, 11.0 meters (36 feet) northwest of center line of T-road junction, 3.0 meters (10 feet) north of mail box, and 45.02 meters (147.7 feet) from station in azimuth $348^{\circ}35'$. No. 3 is in woods, 3 meters (10 feet) west of T-road north, 10 meters (33 feet) south-southwest of telephone pole of line running east and west, and 41.15 meters (135.0 feet) from station in azimuth $117^{\circ}55'$.

Hubert (Onslow County, C. D. Meaney, 1932).—Two and one-half miles north of Hubert post office. To reach from Jacksonville, go northwest 4.0 miles from post office on route 17, turn right (south) onto route 24, follow south 6.5 miles to P. L. Wynn's gas station and store at Piney Green, turn left (east) with route 24, follow 5.65 miles or 0.4 mile beyond Starling's store to point 0.5 mile from Hubert post office, turn left (north) onto road leading between barn and house, and follow main-traveled road 3.05 miles to Major Riggs' house on east side of road. Station is on high ground about 200 feet north of Riggs' house, 45 paces east of road, 25 paces south of rail fence enclosing hog pen. Tobacco barn about 100 feet distant is in azimuth 220° . Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is by corner of tobacco barn, and 140.5 feet from station in azimuth $28^{\circ}28'$. No. 2 is 4 meters (13 feet) from center line of road, and 160.5 feet from station in azimuth $102^{\circ}45'$. No. 3 is 4 meters (13 feet) west of center line of road, and approximately 500 feet from station in azimuth $150^{\circ}04'05''$.

Bryant (Horry County, S.C., C. D. Meaney, 1932; 1934).—About $5\frac{1}{2}$ miles southwest of Little River, on land owned by Mary Bryant, 37 meters (121 feet) north-northeast of center line of Ocean Drive Road, and approximately 50 meters (164 feet) south of Richard Bryant's house. To reach from Conway, follow route 38 to Myrtle Beach, take route 49 about 20 miles to Ocean Drive Road, turn right, and continue about 0.3 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on north side of Ocean Drive Road, and 121.6 feet from station in azimuth $344^{\circ}41'$. No. 2 is on northwest side of route 49, and approximately $\frac{1}{4}$ mile from station in azimuth $81^{\circ}06'28''$. No. 3 is on north side of Ocean Drive Road, and 181.1 feet from station in azimuth $96^{\circ}49'$. Distance between reference marks nos. 1 and 3 is 253.32 feet.

Leon (Horry County, S.C., C. D. Meaney, 1932; 1933).—Two miles west-southwest of Longs post office, 9 miles west-northwest of Little River, directly behind center of Mount Leon schoolhouse, 73.9 feet northeast of northwest corner, and 89.9 feet northwest of northeast corner of school. To reach from Little River, go west 2.9 miles on Conway Road to Nixons Crossroads (L. S. Bellamy Texaco station), turn north onto temporary route 9, proceed across river 7.15 miles to Longs Crossroads, turn sharp left, proceed 2.25 miles to crossroads, and turn right to schoolhouse about 100 yards north and on east side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in

For notes in regard to marking of stations see p. 135.

concrete, note 11a. No. 1 is 38.4 feet west-southwest of southwest corner of school, 25.0 feet east of center line of dirt road leading north, and 134.9 feet from station in azimuth $31^{\circ}38'$. No. 2 is in open field, and 217.0 feet from station in azimuth $125^{\circ}00'$. No. 3 is at northwest corner of cultivated field, about 5 feet southwest of T-intersection of ditches, about 15 feet east of center line of road leading north past station, and approximately 0.35 mile from station in azimuth $148^{\circ}07'30''$.

Little River (Horry County, S.C., C. D. Meaney, 1932; 1934).—Two miles east-northeast of Little River, 11 meters (36 feet) north of center line of road, and just west (on South Carolina side) of North Carolina-South Carolina boundary monument, an 8-inch square granite post standing about 4 feet above ground with cross on top to mark center. To reach from post office in Little River, go east about 200 feet, continue east at point where Shallotte Road turns north, take right-hand fork or old road at point 0.7 mile from post office where new road forks to left, and continue to State line which is about 150 feet beyond light-greenish house on south side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 8 meters (26 feet) south of center line of highway, and 227.4 feet from station in azimuth $278^{\circ}07'$. No. 2 is 9 meters (30 feet) south of center line of highway, approximately 15 meters (49 feet) northwest of the northwest corner of house, and 184.4 feet from station in azimuth $63^{\circ}09'$. No. 3 is 12 meters (39 feet) north of center line of highway, and approximately $\frac{1}{4}$ mile from station in azimuth $75^{\circ}00'21''$. Boundary monument is 14.5 feet from station in azimuth $258^{\circ}01'$.

Hughes (Brunswick County, C. D. Meaney, 1932; 1933).—About 10 miles west of Shallotte, 2 miles west of Longwood, 27.7 feet northwest of center line of road, 19.7 feet southwest of lane to Hughes' house, and 19.3 feet east of corner where rail fence joins slat fence. To reach from Shallotte, go west 7.1 miles on route 30, turn north at crossroads leading to Longwood, continue 4.75 miles to Longwood post office, turn left onto road opposite post office, follow 2.0 miles to a T-road on left with sign "Little River—9 miles", turn left, and go 0.2 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on south side of road leading past station, about 15 feet from center line of road, about 50 feet west of wood culvert, and approximately 0.1 mile from station in azimuth $213^{\circ}14'01''$. No. 2 is about 27 feet south of center line of road, about 3 feet north of fence, and 123.75 feet from station in azimuth $244^{\circ}06'$. No. 3 is 22.9 feet south of center line of road, 3 feet north of fence, and 180.85 feet from station in azimuth $24^{\circ}18'$.

Pigott (Brunswick County, C. D. Meaney, 1932; 1934).—Six miles southwest of Shallotte. To reach from Shallotte post office, proceed west 7.1 miles on route 30, turn left between two gas stations at mileage sign "Seaside 4", follow main road south 3.6 miles, turn left at T-road around store at mileage sign "Gause Landing 2", continue 2.45 miles, turn right at mileage signs and mail boxes on road to Gause Landing, and follow 0.1 mile to Lillie Pigott's house and station site. Station is about 152 feet north of north face of house, 27.65 feet north of north face of small store, and 29.0 feet east of sand road leading to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in northwest corner of cultivated field, about 16 feet east of center line of road, and 50.318 meters (165.08 feet) from station in azimuth $175^{\circ}46'$. No. 2 is 0.1 mile north of crossroads, about 5 feet west of center line of road leading north, and approximately 0.20 mile from station in azimuth $179^{\circ}11'38''$. No. 3 is in yard, 68.7 feet east-northeast of northeast corner of house, and 48.640 meters (159.58 feet) from station in azimuth $321^{\circ}00'$. Distance between reference marks nos. 1 and 3 is 94.410 meters (309.74 feet).

Piver (Brunswick County, C. D. Meaney, 1932).—About $5\frac{1}{2}$ miles from Shallotte, on east side of route 130, 6.6 miles from junction with route 30, 1.35 miles beyond T-road leading north, 0.15 mile beyond yellow house on east side of road, about 200 feet south of brownish-yellow house on west side of highway, 16 meters (53 feet) east of center line of temporary route 130, 11 meters (36 feet) east of fence line, and 7 meters (23 feet) south of east-and-west fence line. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in fence line on south side of sand road, about 50 meters (164 feet) east of center line of temporary route 130, and 123.0 feet from station in azimuth

186°25'. No. 2 is in fence line on east side of temporary route 130, and 126.5 feet from station in azimuth 313°18'. No. 3 is 8 meters (26 feet) west of center line of temporary route 130, and approximately $\frac{1}{2}$ mile from station in azimuth 124°56'00".

Boon (Brunswick County, C. D. Meaney, 1932; 1934).—About 8 miles southwest of Supply, and 5 miles south-southeast of Shallotte. To reach from post office at Supply, go northwest on narrow macadam 0.25 mile to junction with route 30, continue west 1.8 miles on route 30, turn left between gas stations, keep straight ahead 4.25 miles, take main fork to right at mileage sign "Boon Landing 5", go 2.8 miles to old abandoned schoolhouse on right, take fork just beyond this schoolhouse, and proceed about 75 yards. Station is south of abandoned church known as "Ocean View Church" which is about 60 yards to left on sand hill, on line with east face of church, 7.5 meters (25 feet) south of southeast corner, and 11.4 meters (37 feet) southeast of southwest corner. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 17.7 meters (58 feet) northeast of northeast corner of church, and 126.3 feet from station in azimuth 174°48'. No. 2 is at southwest corner of schoolhouse, 1 meter (3 feet) west of small porch at south entrance to school, and approximately 200 meters (656 feet) from station in azimuth 188°12'45". No. 3 is in path cleared through woods from station to mark, and 146.8 feet from station in azimuth 311°30'.

Gore (Brunswick County, C. D. Meaney, 1932).—About 6 miles northeast of Shallotte, on land posted in name of J. W. Gore, and 24 meters (79 feet) west of center line of county road. To reach from Shallotte, follow route 30 east about 6 miles to crossroad at two filling stations and sign "Makatoka", turn north, and follow main sandy road north and northwest 2.7 miles to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 102.75 feet from station in azimuth 308°41'. No. 2 is 141.88 feet from station in azimuth 42°33'. No. 3 is approximately one-fourth mile from station in azimuth 229°07'43".

Howell (Brunswick County, C. D. Meaney, 1932; 1934).—Seven miles south of Supply, and 10 miles west of Southport. To reach from Supply post office, go east 5.25 miles on route 130 to T-road turning south (barn is about 200 feet south from this corner), go south on main-traveled road 3.9 miles, take left fork, and proceed 0.4 mile to station site. Station is in wooded area, 8.8 meters (29 feet) west of center line of road leading to station site, and 12.5 meters (41 feet) west-southwest of 16-inch triangle-blazed pine tree on east side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in scrub-oak area, 2.5 meters (8 feet) east of center line of road leading past station, and 125.8 feet from station in azimuth 304°20'. No. 2 is about 2 meters (7 feet) west of center line of road leading past station, and approximately 0.35 mile from station in azimuth 314°38'52". No. 3 is in woods, 4.9 meters (16 feet) east of center line of road, and 133.7 feet from station in azimuth 160°06'. Distance between reference marks nos. 1 and 2 is 246.90 feet.

Supply (Brunswick County, C. D. Meaney, 1932).—Three miles east-northeast of Supply, on grounds of Mount Olive Baptist Church. To reach from Supply, go northeast 0.2 mile on route 130 to junction with route 30, and continue 2.8 miles northeast on route 30 to station site. This point is also $5\frac{1}{4}$ miles southwest of Bolivia on route 30. Station is on south side of highway, and 11 meters (36 feet) east of southeast corner of church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 14 meters (46 feet) south of center line of route 30, and 214.4 feet from station in azimuth 260°21'. No. 2 is in fence line where highway makes bend to left, 11 meters (36 feet) south of center line of route 30, and approximately one-half mile from station in azimuth 268°12'51". No. 3 is on north side of highway, just across from church, and 126.6 feet from station in azimuth 147°12'.

Southport west base (Brunswick County, C. D. Meaney, 1932; 1934).—About 9 miles northwest of Southport, on land owned by McNary Investment Co. To reach from Southport, go 9.2 miles northwest on route 130 direct to station site which is 1.35 miles beyond intersection of highway and dirt road leading to Bolivia and 1.2 miles beyond end of pavement. Station is 10.1 meters (33 feet)

south of center line of route 130. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 7.6 meters (25 feet) north of center line of route 130, and 150.50 feet from station in azimuth $263^{\circ}17'$. No. 2 is 6 meters (20 feet) northeast of center line of route 130, and approximately one-fourth mile from station in azimuth $283^{\circ}44'59''$. No. 3 is 7.8 meters (26 feet) north of center line of route 130, and 131.52 feet from station in azimuth $132^{\circ}07'$. Distance between reference marks nos. 1 and 3 is 256.93 feet. Reference mark no. 2 was not recovered in 1934, as it probably was covered by dirt excavated from ditch along road.

Harvell (Brunswick County, C. D. Meaney, 1932).—About 11 miles northwest of Southport, 2 miles south of Bolivia, on west side of county dirt road leading from Bolivia south to route 130, on land owned and occupied by D. A. Harvell, in easterly corner of field growing up in small long-leaf pine, about 10 yards back from fence, about 300 yards northeast of Harvell's house, about 120 yards south of barn, 15.8 meters (52 feet) west of center line of dirt road, and 13.7 meters (45 feet) northwest of southeast corner post of field. To reach from Wilmington, go southwest about 18 miles on route 30 to Bolivia, continue south 0.6 mile to county road turning left (south) at "Southport" and "Ward's Farm" signs, and follow this road south 1.6 miles to the station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 foot west of woven-wire fence, 2.7 meters (9 feet) south-southwest of west end of culvert, 7.0 meters (23 feet) west of center line of dirt road, and 131.9 feet from station in azimuth $195^{\circ}45'$. No. 2 is in open field, 5.8 meters (19 feet) east of center line of dirt road, and 134.8 feet from station in azimuth $332^{\circ}35'$. No. 3 is in southwest corner of field (northeast corner of garden lot adjoining house lot), about 9 meters (30 feet) north of driveway into house yard, about 5.5 meters (18 feet) west of center line of dirt road, and approximately 0.4 mile from station in azimuth $0^{\circ}50'50''$.

Southport east base (Brunswick County, C. D. Meaney, 1932; 1934).—About 3 miles north-northwest of Southport. To reach from Southport, go north 3.0 miles on route 130 to intersection with Fish Factory Road and station site. Station is 30.2 meters (99 feet) south of center line of route 130, and 18.8 meters (62 feet) east of center line of dirt road leading to Fish Factory and Caswell Beach. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 8.1 meters (27 feet) south of center line of route 130, 35.3 meters (116 feet) east of intersection of route 130 and dirt road to Caswell Beach, and 119.23 feet from station in azimuth $248^{\circ}20'$. No. 2 is 64.9 meters (213 feet) south of center line of route 130, 43 meters (141 feet) east of center line of dirt road, and 118.61 feet from station in azimuth $359^{\circ}07'$. No. 3 is 10 meters (33 feet) north of center line of route 130, and approximately one-fourth mile from station in azimuth $112^{\circ}18'36''$. Distance between reference marks nos. 1 and 2 is 195.73 feet.

Mill (Brunswick County, C. D. Meaney, 1932).—About 11 miles southwest of Wilmington, $12\frac{1}{2}$ miles north of Southport, in east corner of Mill Creek Baptist Church yard, 40 meters (131 feet) east of concrete steps to church, and 13 meters (43 feet) northwest of center line of route 303. To reach from Wilmington by route 30, go west from east end of bridges over rivers 3.4 miles or 0.2 mile beyond west end of last bridge over Brunswick River, continue 9.9 miles on route 30, take route 303 to left at forks, and proceed 2.8 miles to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 8 meters (26 feet) southeast of center line of route 303, 20 meters (66 feet) north of sand road leading approximately east from main highway, approximately 75 meters (246 feet) west of an unpainted partially dilapidated house, and approximately one-fourth mile from station in azimuth $215^{\circ}32'52''$. No. 2 is approximately 40 meters (131 feet) southeast of center line of route 303, approximately 10 meters (33 feet) south by west of sand road leading southeast from highway, and 161.70 feet from station in azimuth $317^{\circ}26'$. No. 3 is in second from bottom of concrete steps leading to church, and 133.69 feet from station in azimuth $69^{\circ}39'$.

Cypress (Brunswick County, C. D. Meaney, 1932).—About 15 miles south of Wilmington, 7 miles north of Southport, about 100 meters (328 feet) northwest of Cypress Lake School, about 100 meters (328 feet) north of sand road leading from Southport to station, and on sand knoll in scrub-oak area. To reach from South-

port, go 0.4 mile north on route 130 to junction with River Road, follow River Road north 8.0 miles to Cypress Lake School and church, turn left onto sandy road between buildings, proceed up hill about 100 yards to trimmed bush on left, turn left through brush, and follow blazes south about 60 yards to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on north side of dim sand road leading to station, and 103.25 feet from station in azimuth $204^{\circ}56'$. No. 2 is about 11 meters (36 feet) north of center line of sand road between Wilmington and Southport, about 4 meters (13 feet) southwest of southwest corner of green store with two brick pillars in front of it, about one-fourth mile east-northeast of Cypress Lake School, and approximately one-third mile from station in azimuth $240^{\circ}12'05''$. No. 3 is in scrub-oak area, 13.1 meters (43 feet) northwest of lone 16-inch pine tree, and 98.50 feet from station in azimuth $319^{\circ}30'$.

Johnson (Brunswick County, C. D. Meaney, 1932).—Three miles west of center of Wilmington. To reach from Wilmington, go west 3.3 miles on route 30 from east end of bridges over rivers, or about 0.1 mile beyond west end of last bridge over Brunswick River, turn left onto dirt road where sign reads "Southport 26", and follow this road 4.1 miles to station site. Station is in uninhabited country, in area cleared of heavy brush and trees, and 17 meters (56 feet) west of center line of sand road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 meters (20 feet) east of center line of dirt road, and approximately one-fourth mile from station in azimuth $195^{\circ}36'21''$. No. 2 is 9 meters (30 feet) east of center line of sand road, and 111.77 feet from station in azimuth $227^{\circ}07'$. No. 3 is 6 meters (20 feet) east of center line of road, and 148.75 feet from station in azimuth $328^{\circ}33'$.

Keyes (New Hanover County, C. D. Meaney, 1932; 1933).—About 9 miles south-southeast of center of Wilmington. To reach from Wilmington, take route 40 from Third and Market Streets and go south 11.0 miles to E. L. Robinson's Standard Oil station, turn sharp left onto secondary macadam road leading north, and follow 1.5 miles to station site. Station is in cultivated field, opposite point about 28 meters (92 feet) north along road from small abandoned store on west side of road, 9.7 meters (32 feet) southeast of center line of road, and 17.0 meters (56 feet) south-southwest of 6-inch triangle-blazed pine tree in fence line on south edge of woods. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in woods 5.8 meters (19 feet) northwest of center line of paved road, and 205.7 feet from station in azimuth $188^{\circ}50'$. No. 2 is in V-intersection of paved road leading past station and sand road, 2 meters (7 feet) north of center line of sand road, about 5 meters (16 feet) west of center line of paved road, and approximately 0.1 mile from station in azimuth $4^{\circ}03'48''$. No. 3 is in front of house on west side of road, 4.0 meters (13 feet) west of center line of paved road, 1.8 meters (6 feet) north of mail box, and 133.6 feet from station in azimuth $23^{\circ}13'$.

Wilmington (New Hanover County, C. D. Meaney, 1932).—One and one-half miles north of center of Wilmington. Reached by following Fourth Street north to its end, and continuing on through playgrounds and past reservoir to city water tank just south of railroad tracks. Station is 24.4 feet east of center of smallest water tank. Circumference of pipe of small water tank is 2.82 feet, circumference of pipe of large water tank is 3.05 feet, and distance between their centers is 46.85 feet. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in southeast corner of reservoir, and 114.20 feet from station in azimuth $2^{\circ}11'$. No. 2 is in northeast corner of the north reservoir, and 156.87 feet from station in azimuth $89^{\circ}09'$. Station *Bridge* (see description thereof) is at east end of Hilton Railroad bridge over Northeast River, and 360.09 feet from station in azimuth $119^{\circ}39'47''$. Azimuth from station to reference mark of station *Bridge* is $117^{\circ}22'02''$.

Pilgrim (New Hanover County, C. D. Meaney, 1932; 1933).—Seven-tenths mile west of Wrightsville post office, on north side of asphalt road paralleling car tracks, on grounds of St. Pilgrim's Rest colored church which is most westerly of two churches in this vicinity. Station in pine tree area in churchyard, 19.47 meters (64 feet) east of southwest corner of church, 12.03 meters (40 feet) south of southeast corner of main part of church building, and 57.9 meters (190 feet) east-northeast of center line of asphalt road at point opposite row of mail boxes.

Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 2.1 meters (7 feet) northeast of center line of easterly of two lines of tracks, 5.5 meters (18 feet) southwest of center line of paved road, 14.8 meters (49 feet) north of electric pole on south side of tracks having sign "Macumber Station", and 241.7 feet from station in azimuth 323°39'. No. 2 is 18.8 meters (62 feet) west-southwest of northwest corner of main part of church, 2.3 meters (8 feet) east of woven-wire fence, and 131.0 feet from station in azimuth 64°05'. No. 3 is on north side of triangular plot of ground, about 8 meters (26 feet) south of center line of private road belonging to Mrs. Harry Waters, 1 foot north of wire fence, and approximately one-fourth mile from station in azimuth 128°40'14".

Perry (New Hanover County, C. D. Meaney, 1932).—About 8 miles east of north of Wilmington, and one-half mile west of Castle Hayne, on land owned and occupied by J. A. Perry. To reach from Wilmington, go north 8.7 miles on United States route 17-1 (North Carolina route 40) to macadam crossroads at Shell filling station and "Castle Hayne" signboard to right, continue straight north 0.1 mile on route 40, turn left into lane leading to house in grove of trees 0.2 mile west of highway, and follow lane to house and station site. Station is 84.27 meters (277 feet) northeast of northeast corner of house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is approximately 9 meters (30 feet) northwest of center line of highway, about 40 meters (131 feet) east of large two-story house, and approximately one-fourth mile from station in azimuth 304°46'28". No. 2 is 34.29 meters (112.5 feet) northeast of northeast corner of house, and 49.87 meters (163.6 feet) from station in azimuth 10°50'. No. 3 is 50.53 meters (165.8 feet) from station in azimuth 75°42'.

Kirkland (New Hanover County, C. D. Meaney, 1932).—Ten and one-half miles east-northeast of Wilmington, 5½ miles southwest of Hamstead, in northeast corner of Kirkland School yard, 23.0 meters (76 feet) south of center line of route 17, 13.28 meters (44 feet) east of northeast corner of school building, and 13.56 meters (45 feet) east of southeast corner of school building. To reach from Hampstead, go southwest 5.6 miles on route 17 to Kirkland School on southeast side of highway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is between highway and railroad track, 9.7 meters (32 feet) north of center line of highway, 30.2 meters (99 feet) northwest of northwest corner of school, and 183.85 feet from station in azimuth 78°11'. No. 2 is between highway and railroad track, 14.7 meters (48 feet) south of center line of railroad track, 12.4 meters (41 feet) north of center line of highway, 15.0 meters (49 feet) west of center line of road leading to church on north side of railroad track, and 147.9 feet from station in azimuth 172°58'. No. 3 is between highway and railroad track, and approximately 0.25 mile from station in azimuth 217°16'49". No. 4 is on Pender-New Hanover County line, in Mr. Smith's backyard, about 100 meters (328 feet) south of highway, and approximately 0.9 mile from station in azimuth 223°42'55".

Bloodworth (Pender County, C. D. Meaney, 1932).—About 8 miles northwest of Hampstead, and 5 miles east of Rocky Point. To reach, follow United States route 17 to Hampstead, proceed northwest 3.9 miles on fair sandy-dirt road to fork at filling station, keep right-hand main-traveled road, and follow 5.0 miles to station site. Station is in pine-woods area owned by Mr. Bloodworth, in dim wagon road which leads north into woods, 25.9 meters (85 feet) north of center line of dirt-sand road leading towards station, about 100 meters (328 feet) west of sharp turn in road to west, about 75 meters (246 feet) east of new lone house on south side of road, and 10.0 meters (33 feet) east of 12-inch blazed pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in open field, 6.1 meters (20 feet) south of center line of road, and 146.5 feet from station in azimuth 325°39'. No. 2 is in wooded area, 7.4 meters (24 feet) north of center line of road, and 130.9 feet from station in azimuth 73°40'. No. 3 is 4 meters (13 feet) west of center line of road leading past station, about 25 meters (82 feet) west of northwest corner of wire fence, and approximately 200 meters (656 feet) from station in azimuth 91°53'02".

Hampstead (Pender County, C. D. Meaney, 1932).—About 19 miles by route 17 northeast of Wilmington, on grounds of Topsail High School which is large brick building on south side of highway, in southeast corner of school yard, approximately 30 meters (98 feet) southeast of southeast corner of school building,

and 6 meters (20 feet) east of east end of long metal garage. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on south side of route 17, 10 meters (33 feet) south of center line of road, 3 meters (10 feet) south of ditch on south side of road, and approximately one-fourth mile from station in azimuth $203^{\circ}24'41''$. No. 2 is just south of basketball field east of school, and 56.05 meters (183.9 feet) from station in azimuth $212^{\circ}30'$. No. 3 is at southwest corner of school building, 0.3 meter (1 foot) south of south wall, 1 meter (3 feet) east of west wall, and 39.56 meters (129.8 feet) from station in azimuth $83^{\circ}48'$.

Pender (Pender County, C. D. Meaney, 1932).—About 30 miles by road northeast of Wilmington, on north side of highway right-of-way, and is reached by following route 17 direct to station site. Station is 15 meters (49 feet) south of south rail of Atlantic Coast Line Railroad, 10 meters (33 feet) north of center line of route 17, and 13 meters (43 feet) west of intersection of sand road with highway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk, on south end of cement bridge on highway, and approximately one-fourth mile from station in azimuth $220^{\circ}39'45''$. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11a. No. 2 is 4 meters (13 feet) west of the center line of sand road leading south, and 45.29 meters (148.6 feet) from station in azimuth $284^{\circ}09'$. No. 3 is 10 meters (33 feet) north of center line of route 17, approximately 15 meters (49 feet) south of south rail of railroad, and 48.67 meters (159.7 feet) from station in azimuth $39^{\circ}23'$.

Onslow (Onslow County, C. D. Meaney, 1932).—About 5 miles north of Hollyridge (small crossroads village on United States route 17), and on land owned by Onslow Development Co., of Jacksonville. To reach from Jacksonville, go southwest about 21 miles on route 17 to Hollyridge, turn right (north) across railroad track, follow right-hand sandy road immediately north of track north 1.6 miles to fork, keep left fork 0.8 mile, and take right-hand main fork north 3.3 miles to station site. Station is in open field on slight rise of ground, directly across road from tumble-down house in cornfield east of road, 10.0 meters (33 feet) west of center line of dirt road leading to station, 15.8 meters (52 feet) west of gate and wooden fence on east side of road, and about one-fourth mile north of old house in open area on west side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 foot west of board fence, 5.5 meters (18 feet) east of center line of dirt road, and 116.8 feet from station in azimuth $184^{\circ}27'$. No. 2 is 1 foot west of board fence, 5.5 meters (18 feet) east of center line of dirt road, and 128.55 feet from station in azimuth $316^{\circ}48'$. No. 3 is 4 meters (13 feet) west of center line of dirt road leading past station, 5 meters (16 feet) east of 8-inch pine standing alone, 7 meters (23 feet) south of group of three pines standing on edge of road, and approximately 0.25 mile from station in azimuth $160^{\circ}20'23''$.

Betha (Onslow County, C. D. Meaney, 1932).—Two and three-fourths miles southeast of Hollyridge. To reach from Hollyridge (on route 17), go 0.25 mile on road from south side of Hollyridge service station which leads to Betha Landing, keep main road to left at forks, proceed 1.05 miles, take left-hand fork, continue 0.15 mile, keep straight ahead beyond school 0.25 mile, take right fork, and proceed on main-traveled road 1.3 miles to station. Station is near fence line, 6.0 meters (20 feet) north of road leading towards station, about 65 meters (213 feet) southwest of R. H. Betha's house, 9.44 meters (31 feet) west of 36-inch live oak, and 11.2 meters (37 feet) south of south face of most westerly of farm buildings. Station and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in old orchard, 12.8 meters (42 feet) northwest of 12-inch magnolia tree, 12.5 meters (41 feet) north of northwest corner of fence around house, and 170.3 feet from station in azimuth $225^{\circ}42'$. No. 2 is in open field, 13 meters (43 feet) northeast of road leading to station, and 140.2 feet from station in azimuth $106^{\circ}00'$. No. 3 is 1 foot east of north-and-south wire fence, about 5 meters (16 feet) west of dirt road at bend, about 75 meters (246 feet) south of tobacco house on west side of road, and approximately 0.2 mile from station in azimuth $112^{\circ}53'34''$.

Supplementary points

Virginia-North Carolina boundary monument (Currituck County, N. C.; Norfolk County, Va., C. D. Meaney, 1931).—About 2.0 miles north along North Carolina route 34 from Moyock, N. C., 6 miles south along Virginia route 27 (same highway) from Hickory, Va., and on east edge of highway at North Carolina-Virginia State line. Mark is granite post, 1 foot square, and shaped on top as inverted V, with ridge of V in State line. It is marked as follows: south side, "N. C."; north side, "Va."; west side, "1887"; and east side, "Latitude 36° 33'00".

Lee (Currituck County, E. B. Latham, 1911; 1931).—On west bank of North Landing River, about 4 miles above its entrance to Currituck Sound, and 3 miles above Currituck Courthouse. To reach from Moyock, go south 8 miles on route 34 to junction with route 344 at Sligo. This point is 14 miles north of Elizabeth City on route 34. Turn east at Sligo, go 2.7 miles on route 344 to dirt road turning north, follow this road 2.1 miles to lane leading to houses of F. C. Cotter and J. B. Lee just before main road turns sharp left, and continue along lane through Cotter's yard to Lee's house in woods. Mark is on south side of path leading from river bank to Mr. Lee's house, and 110 feet from high-water line. Surface mark is standard disk station mark in tile and concrete, note 18a. Underground mark is bottle, note 18c. Reference marks established in 1911 have been destroyed, but three new standard reference disks in concrete, note 11a, were placed in 1931 and stamped "1911-1931". No. 1 is at southeast corner of Mr. Lee's barn, and 52.57 meters (172.5 feet) from station in azimuth 23°32'. No. 2 is at corner of wire fence north of Mr. Lee's house, and 68.01 meters (223.1 feet) from station in azimuth 123°24'. No. 3 is 10 meters (33 feet) from edge of water, 0.6 meter (2 feet) south of fence line on edge of woods, and approximately 0.4 mile from station in azimuth 154°17'19". Witness mark, consisting of a triangle cut on cherry tree, is 42.4 meters (139 feet) from high water, and 8.96 meters (29.4 feet) from station in azimuth 86°22'.

Bell (Currituck County, E. B. Latham, 1911; 1931).—At upper end of Currituck Sound, about 1 mile west from point, at south end of entrance to North Landing River, and on narrow strip of land connecting Bells Island with mainland. To reach from Currituck, go south 1.2 miles from courthouse on route 344, turn left onto dirt road at white house with green trimmings in southeast angle, proceed east 0.4 mile, turn right onto main road, and continue 0.25 mile to lane on left leading to Lon Dozier's house. Enter gate, and follow lane one-fourth mile to house on shore. Station site is 0.3 mile south along shore from Mr. Dozier's house, 200 yards from high land, and about 30 meters (98 feet) from shore. Surface mark is standard disk station mark in tile and concrete, note 6b. Underground mark is bottle, note 7d. Reference marks placed in 1911 are nails in tiles, note 13b. No. 1 is 43.50 meters (142.7 feet) from station in azimuth 314°34'. No. 2 is 187.00 meters (613.5 feet) from station in azimuth 115°22'. Witness marks are triangular blazes on pine trees in azimuths: 44°26', 46°44', and 80°22', respectively. Three new standard reference disks in concrete, note 11a, were placed in 1931. No. 1 is in sand on shore, 6 meters (20 feet) from edge of water, and 48.42 meters (158.8 feet) from station in azimuth 272°23'. No. 2 is just south of east-and-west wooden fence, 1 meter (3 feet) west of gate leading into cultivated field, about 75 meters (246 feet) east of Lon Dozier's house, and approximately 0.3 mile from station in azimuth 115°25'46". No. 3 is in sand on shore, about 4 meters (13 feet) from edge of water, and 45.64 meters (149.8 feet) from station in azimuth 134°09'.

Shiloh eccentric (Camden County, C. D. Meaney, 1931).—About 6 miles southeast of Camden, on northeast shore of Pasquotank River, and on point of land known as Shiloh Landing. To reach from Camden which is on the direct road north from Elizabeth City, take Shiloh Road southeast out of town 6.8 miles, turn right onto side road about 200 feet before reaching Shiloh High School, and proceed down this road 1.3 miles to end at river. Station is 0.3 mile north-west up river, and at extreme end of first point (wooded). Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 19.845 meters (65.11 feet) from station in azimuth 178°47'. No. 2 is 13.646 meters (44.77 feet) from station in azimuth 224°53'. No. 3 is in southwest part of barnyard, 14 meters (46 feet) north of center line of lane, 2 meters (7 feet) east of river bank, 10 meters (33 feet) west of 36-inch oak, 0.6 meter (2 feet) east of north-and-south fence line, and approximately one-fifth mile from station in

azimuth $312^{\circ}01'55''$. Station *Shiloh* (see description thereof) is 13.870 meters (45.51 feet) from station in azimuth $3^{\circ}16'$. Azimuth from station to Miller Point light is $336^{\circ}48'35''$; and to Cobb Point light is $113^{\circ}05'58''$.

Brickhouse Point 2 (Pasquotank County, C. D. Meaney, 1931).—About $4\frac{1}{2}$ miles below Elizabeth City, on southwest shore of Pasquotank River, on point of land known as Brickhouse Point. To reach from Elizabeth City, follow Road Street south 0.6 mile from Main Street, turn left at cemetery entrance, follow brick road 3.6 miles to dirt road on left, turn left, proceed 1.7 miles down to river, around to right, turn left onto T-road at small grove of tall pines, follow this road about 200 yards, turn left into lane leading to B. F. Bray's house, and take road behind barn about one-half mile to river. Station site is about 200 yards down river, southeast of this point, and on first point with cypress trees. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 22.085 meters (72.46 feet) from station in azimuth $29^{\circ}14'$. No. 2 is 6.715 meters (22.03 feet) from station in azimuth $136^{\circ}00'$. This mark is in same position as 1916 reference mark. Three witness marks were established on cypress trees. No. 1 is blaze 6.19 meters (20.3 feet) from station in azimuth $266^{\circ}02'$. No. 2 is blaze 8.07 meters (26.5 feet) from station in azimuth $107^{\circ}35'$. No. 3 is ring in tree 23.3 meters (76 feet) from station in azimuth $190^{\circ}47'$. Azimuth from station to Elizabeth City municipal water tower is $123^{\circ}49'55''$. Azimuth from station to Cobb Point light is $130^{\circ}17'23''$.

Long Point eccentric (Pasquotank County, C. D. Meaney, 1931).—About 2 miles below Nixonton, on northeast shore of Little River. To reach from Nixonton which is on direct road from either Woodville or Weeksville, go southeast 2.35 miles from store in Nixonton on Weeksville Road to lane on right just before reaching white house on right, follow this lane 0.6 mile, turn right through gate at house, continue 0.25 mile to Mr. T. M. Hollowell's house on creek, and go about three-fourth mile down old wagon road to river. Station site is about one-fourth mile up river from this point, on first point of land. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 36.866 meters (120.95 feet) from station in azimuth $235^{\circ}54'$. No. 2 is 32.435 meters (106.41 feet) from station in azimuth $156^{\circ}42'$. Station *Long Point* (see description thereof) is 11.972 meters (39.28 feet) from station in azimuth $29^{\circ}50'$. Station *Long Point* has been disturbed, and is leaning slightly to northwest.

Stevenson Point 3 (Perquimans County, C. D. Meaney, 1931; 1933).—On point of land known as Stevenson Point, on north shore of Albemarle Sound, about 7 miles airline southeast of Durants Neck post office which is also called Newhope. To reach from Newhope, go east 0.9 mile on main road, take left fork, continue straight ahead 6.0 miles through Durants Neck, turn left onto crossroad with large brick house on right, proceed 0.5 mile to point where road goes straight ahead through gate, go to right 1.1 miles to gate on left, go through gate and across field 0.4 mile to another gate at house on left, turn left through this gate, and continue 0.1 mile to station site. Reference mark no. 2 of station "Stevenson Point 2" was replaced by standard disk station mark, and used for present station. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks, established in 1931, are standard reference disks in concrete, note 11a. Reference mark no. 1 (1917 bolt) is standard reference disk in concrete, note 13b. Concrete is broken away from pipe, and tablet partly broken off. It is 6 meters (20 feet) west of water's edge, 3 meters (10 feet) west of edge of bank which is 1.8 meters (6 feet) above water, and 32.92 meters (108.0 feet) from station in azimuth $260^{\circ}23'$. No. 1 (1931) is at south edge of garden, 9.1 meters (30 feet) northwest of southwest corner, 0.3 meter (1 foot) north of south fence, 5.5 meters (18 feet) southeast of gate, approximately 91 meters (299 feet) east of house, and 56.53 meters (185.5 feet) from station in azimuth $28^{\circ}21'$. No. 2 is in west edge of field, 10.7 meters (35 feet) north of water's edge, 3.3 meters (11 feet) north of edge of bank, 1.8 meters (6 feet) south of east-and-west drainage ditch, and approximately one-third mile from station in azimuth $36^{\circ}52'52''$. No. 3 is 18.6 meters (61 feet) south of water's edge, 3.4 meters (11 feet) southeast of 24-inch holly tree, and 57.45 meters (188.5 feet) from station in azimuth $97^{\circ}03'$.

Griffin (Perquimans County, C. D. Meaney, 1931).—On north shore of Albemarle Sound, on Reed Point, almost due north of Reed Point lighthouse, and on property belonging to C. W. Griffin. To reach from Durants Neck post office, go east on main road, keep left at 0.95 mile, turn right at about 3.0 miles, follow

main road straight ahead about $4\frac{1}{2}$ miles to Mr. Griffin's house (white house on right), enter gate at house lot, and follow farm road south along fence and ditch to station site. Station is on east side of cultivated field, about 125 meters (410 feet) north of shore line, about one-third mile south of Mr. Griffin's house, 3.5 meters (11 feet) west of north-and-south wire fence, 4.9 meters (16 feet) west of drainage ditch which divides fields and follows along old lane and roadway leading to shore, and 8.8 meters (29 feet) southwest of 18-inch cedar in fence line. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1.5 meters (5 feet) west of north-and-south wire fence, 4.8 meters (16 feet) west of center line of drainage ditch separating cultivated fields, and 33.64 meters (110.4 feet) from station in azimuth $341^{\circ}47'$. No. 2 is at west end of row of trees and shrubs on south side of field, about 10 meters (33 feet) north of shore line on south edge of field, and approximately 0.25 mile from station in azimuth $54^{\circ}33'24''$. No. 3 is on east side of field, 1 foot west of north-and-south wire fence, 3.0 meters (10 feet) west of center line of drainage ditch, 4.8 meters (16 feet) south of 22-inch cedar tree in fence line, and 36.27 meters (119.0 feet) from station in azimuth $166^{\circ}49'$. Reed Point light is approximately 1.5 miles from station in azimuth $356^{\circ}59'44''$.

Frog Island (Pasquotank County, C. D. Meaney, 1931; 1933).—About 4 miles south-southeast of Weeksville, on north shore of Albemarle Sound, just east of mouth of Flatty Creek, at village of Frog Island, 17 meters (56 feet) inland, 10.40 meters (34.1 feet) east of center line of road, and 17.0 meters (56 feet) east of pier with narrow-gage track leading to house in water. To reach from Weeksville, go east on brick pavement to Salem Baptist Church where pavement stops, continue 1.0 mile to old white church, turn right, proceed 1.6 miles to C. C. Mead's general store, turn left onto road opposite store, go 1.5 miles to road leading to right at 2-story house on right, and follow this road to village of Frog Island. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6.0 meters (20 feet) northeast of center line of road to village, and 36.18 meters (118.7 feet) from station in azimuth $203^{\circ}13'$. No. 2 is at northwest corner of abandoned pier, 21 meters (69 feet) southwest of southeast corner of house, and 78.12 meters (256.3 feet) from station in azimuth $343^{\circ}33'$. No. 3 is in northwest corner of field, 3 meters (10 feet) south of a 14-inch pine used as fence post, 0.3 meter (1 foot) east of west fence, 3 meters (10 feet) south of north fence, 8 meters (26 feet) northeast of small house, and approximately one-fourth mile from station in azimuth $104^{\circ}31'56''$.

Sutton 2 (Perquimans County, C. D. Meaney, 1931).—About 4 miles southeast of Hertford, on north shore of Perquimans River, in pasture land, 5.8 meters (19 feet) southeast of drainage ditch leading to river, 15.0 meters (49 feet) east of edge of water, 23.5 meters (77 feet) north of east-and-west wire fence, about 6 meters (20 feet) south of double tree, and about 50.9 meters (167 feet) west of north-and-south wire fence. To reach from Hertford, go north 0.85 mile on United States route 17 from Anderson's drug store (main corner), take asphalt road to right at forks at Pine Tree service station, follow this paved road 3.55 miles to dirt crossroad (small house in southeast angle), turn right, continue 0.75 mile to cluster of mail boxes, turn left, proceed 0.55 mile, follow main road to right 0.4 mile, and again to left 0.55 mile to lane on right leading to Wm. Tolson's house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in corner of cultivated field, 3 meters (10 feet) northwest of T-intersection of east-and-west ditch with north-and-south ditch, about 15 meters (49 feet) north of 14-inch cedar tree in ditch, and approximately 0.25 mile from station in azimuth $227^{\circ}23'21''$. No. 2 is 1 foot west of north-and-south wire fence, 15 meters (49 feet) north of southeast corner of pasture land, about 20 meters (66 feet) north of river shore line, and 51.21 meters (168.0 feet) from station in azimuth $243^{\circ}27'$. No. 3 is 3 meters (10 feet) south of ditch, 4 meters (13 feet) west of hog pen, about 60 meters (197 feet) southwest of house, about 10 meters (33 feet) east of river shore line, and 47.96 meters (157.3 feet) from station in azimuth $166^{\circ}50'$. Azimuth from station to Grassy Point light is $325^{\circ}35'27''$.

Halsey (Perquimans County, P. C. Whitney, 1915; 1931).—About 6 miles southeast of Hertford, on southwest bank of Perquimans River, and slightly above Grassy Point Beacon. To reach from Hertford, go south 5.2 miles from Anderson's drug store at point where United States route 17 turns west to end of

pavement and T-road on right, continue on road straight ahead 1.2 miles, turn left onto lane through woods, and follow one-fourth mile to Jerry Lyon's house. Station is about 250 yards from house towards river, at shore end of small point of land, about 65 yards southwest of tip of point, and 40 yards from water. Surface and underground marks were replaced in 1931 with standard disk station marks in concrete, notes 1a and 7a. Original reference mark had been destroyed, and three new standard reference disks in concrete, note 11a, were placed in 1931. All marks were stamped "1915-1917-1931." No. 1 is 35.28 meters (115.7 feet) from station in azimuth $337^{\circ}44'$. No. 2 is 63 meters (207 feet) southwest of house, 6.5 meters (21 feet) south of center line of road leading to house from highway, 8 meters (26 feet) north of 24-inch hickory tree, and approximately one-fourth mile from station in azimuth $37^{\circ}25'00''$. No. 3 is in fence line, 8.20 meters (27 feet) south of south side of old house, and 84.33 meters (276.7 feet) from station in azimuth $96^{\circ}37'$. Azimuth from station to Grassy Point beacon is $240^{\circ}24'38''$.

Whitehat (Perquimans County, P. C. Whitney, 1915; 1931).—About 7 miles north of Albemarle Sound, on east shore of Perquimans River, about 6 miles below Hertford, and on point of same name which is first prominent point north of Grassy Point Beacon, 3 yards from north side of point, about one-eighth mile below old log drive, and 10 yards from shore end of small fish wharf from which private road with wire fence on its south side runs inland. Mark is standard station disk in tile and concrete, note 6c. Original reference mark is standard reference disk in tile and concrete, note 13c, and 47.40 meters (155.5 feet) from station in azimuth $240^{\circ}45'$. Two trees, marked in accordance with note 15a, are 13.47 meters (44.2 feet) from station in azimuth $222^{\circ}55'$, and 19.25 meters (63.2 feet) from station. Three standard reference disks in concrete, note 11a, were placed in 1931. No. 1 is 4 meters (13 feet) from water, and 25.124 meters (82.43 feet) from station, in azimuth $254^{\circ}35'$. No. 2 is 2.5 meters (8 feet) from water, and 12.40 meters (40.7 feet) from station in azimuth $336^{\circ}08'$. No. 3 is 3.6 meters (12 feet) from top of bluff, 2.4 meters (8 feet) above high water, and approximately one-fourth mile from station in azimuth $184^{\circ}54'16''$.

Cactus (Chowan County, J. B. Boutelle, 1909; 1931).—On north shore of Albemarle Sound, about $6\frac{3}{4}$ miles west of Laurel Point Lighthouse, and about $6\frac{1}{2}$ miles southeast of Edenton. To reach from Edenton, go east on Church Street from its intersection with Broad Street to railroad crossing, continue on concrete road 2.1 miles to asphalt road leading right, follow asphalt road 3.5 miles to dirt T-road on right, continue on this dirt road 0.6 mile to cluster of mail boxes at point where main road turns right, keep straight ahead 0.3 mile from this point, take left fork after passing through gate, and proceed 0.7 mile to farmyard of J. C. Boyce at edge of water. Station site is about one-third mile down east shore line on narrow sandy point projecting into water. Mark is about 90 yards north from end of point, 40 yards from east shore, and 45 yards from west shore. Surface mark and reference mark, placed in 1909, have been uprooted. Underground mark is in correct position, and consists of nail in short section of 6-inch drain tile which is filled with and set in concrete about 3 feet below surface. Three standard reference disks in concrete, note 11a, were placed in 1931, and stamped "1909-1931." No. 1 is approximately one-half mile from station in azimuth $215^{\circ}19'12''$. No. 2 is 3 meters (10 feet) south of 10-inch pine, 18 meters (59 feet) west of water, and 47.33 meters (155.3 feet) from station in azimuth $230^{\circ}36'$. No. 3 is 0.3 meter (1 foot) north of 10-inch pine, 3 meters (10 feet) south of old stump, 15 meters (49 feet) north of edge of water, and 58.79 meters (192.9 feet) from station in azimuth $114^{\circ}38'$.

Lawrence (Bertie County, R. E. Halter, 1874; 1932).—On west shore of Chowan River, about 7 miles below Colerain, and 4 miles above Edenhous Point. To reach from west end of toll bridge over Chowan River, go west 1.8 miles on route 17 to dirt crossroad, turn right, follow dirt road 1.1 miles, turn onto T-road on left, continue 3.4 miles (keeping straight ahead at T-road on left), turn sharp right, and follow road 1.4 miles to Hermitage Landing. Station site is 1 mile north of this point, and can be easily reached on foot. Mark is on low sandy point partly wooded with cypress trees, 9 meters (30 feet) east of blaze on 20-inch sweetgum tree, 30.2 meters (99 feet) west of 36-inch blazed cypress tree which marks extreme point of shore, and 30.8 meters (101 feet) south of blaze on 18-inch cypress tree. Original surface mark had been broken off, and was replaced in 1931 by standard disk station mark in concrete, note 1a. Underground mark is tile filled with concrete, with nail marking center. No permanent reference marks were established when station was first marked. Two standard

reference disks in concrete, note 11a, were placed in 1931. No. 1 is 26 meters (85 feet) north of shore and 36.52 meters (119.8 feet) from station in azimuth $33^{\circ}27'$. No. 2 is 32.24 meters (105.8 feet) from station in azimuth $153^{\circ}07'$. All marks were stamped "1874-1915-1931." Azimuth from station to light on top center of control house on toll bridge over Chowan River at Edenhouse Point is $332^{\circ}58'27''$.

Bull Pond (Bertie County, R. E. Halter, 1874; 1932).—On west shore of Chowan River, 2 miles south of Colerain, and on sandy point known as Bull Pond Point. To reach from Colerain, go south 2.0 miles, turn left at "J. L. Parker Store" sign at Goose Pond, continue about 200 feet, turn right onto main road, proceed 0.15 mile following main road around bend to left, continue on main road 1.15 miles to its end at gate, pass through gate, and go down hill to end of road in pine trees at point of land in Chowan River. Station is about 75 meters (246 feet) west of point of land, about 5 meters (16 feet) southwest of end of road, and 5 meters (16 feet) west of 8-inch triangle-blazed pine tree. Standard disk station mark in concrete, note 1a, was established in 1931 for surface mark. Underground mark is block of concrete, 6 inches square, with nail in center, and 4 or 5 feet below ground. No permanent reference marks were established in 1874 when station was established. Two standard reference disks in concrete, note 11a, were established in 1931. No. 1 is in pine grove, 20 meters (66 feet) from edge of water, and 38.89 meters (127.6 feet) from station in azimuth $184^{\circ}33'$. No. 2 is on edge of pine grove, 30 meters (98 feet) north of shore line on south side of point, and 34.62 meters (113.6 feet) from station in azimuth $338^{\circ}44'$. Witness marks, consisting of nails in triangular blazes on trees, are at following distances and azimuths from station: Sycamore (1874), 14.17 meters (46.5 feet) $262^{\circ}56'$; cedar, 21.60 meters (70.9 feet), $87^{\circ}50'$; pine, 32.85 meters (107.8 feet), $140^{\circ}42'$; and cedar (1874), 49.2 meters (161.4 feet), $160^{\circ}17'$. Southwest corner of fish house is 47.70 meters (156.5 feet) from station in azimuth $213^{\circ}57'$.

Eden 2 reference mark no. 1 (Bertie County, J. B. Boutelle, 1909; 1934).—On west shore of Chowan River, at west end of toll bridge over Chowan River, and on Edenhouse Point. Original mark was nail in 8-inch square block of concrete surmounted by nail in top of 4-inch drain tile which was filled with and set in concrete with the bell of the tile placed upward. In 1931: Standard station disk in concrete, note 1a, stamped "EDEN 2 1909-1931" was used to re-mark reference point; and station *Eden 2* (see description thereof) was re-marked with standard reference disk in concrete, note 11a, stamped "R.M. 1 EDEN 2 1909-1931." Reference marks nos. 2 and 3, consisting of standard reference disks in concrete, note 11a, were established with arrows pointing toward original reference mark which had been re-marked with standard station disk. No. 2 was 27.36 meters (89.8 feet) (slope) distant in azimuth $286^{\circ}17'$; and no. 3 was approximately 82 meters (269 feet) distant in azimuth $323^{\circ}28'$. Station *Eden 2* which had been re-marked with standard reference disk was 36.64 meters (120.2 feet) distant in azimuth $244^{\circ}27'$. In 1934: Standard station disk was removed and replaced with standard reference disk stamped "EDEN 2 1909-31 R.M. 1"; and standard reference disk at station *Eden 2* was replaced with standard station disk stamped "EDEN 2 1909-31."

Eden 2 (Bertie County, J. B. Boutelle, 1909; 1934).—On west shore of Chowan River, at west end of toll bridge over Chowan River, on Edenhouse Point, which is a sand spit extending about 100 yards along outer edge of wooded swamp, 35 yards from woods, and between storm-water line and edge of water. Original station mark was a nail in 8-inch square block of concrete surmounted by nail in top of 4-inch drain tile which was filled with and set in concrete with the bell of the tile down. Reference mark was the same as station mark except that the bell of the tile was placed upward. In 1931: Standard reference disk in concrete, note 11a, stamped "R.M. 1 EDEN 2 1909-1931" was used to re-mark station and standard station disk in concrete, note 1a, stamped "EDEN 2 1909-1931" was used to re-mark reference mark. Two standard reference disks in concrete, note 11a, were established with arrows pointing toward reference mark no. 1. In 1934: Reference mark, which had been used to re-mark station in 1931, was found overturned. Underground mark was recovered and surface mark, consisting of standard disk stamped "EDEN 2 1909-31", was set in top of 8-inch square post of concrete which was imbedded in slab of concrete 2 feet square by 6 inches thick. Station disk was removed from reference mark no. 1 and replaced by standard reference disk stamped "EDEN 2 1909-31 R.M. 1." Distances and azimuths from station to following points are: *Eden 2 reference mark no. 1* (see description thereof), 36.64 meters (120.2 feet), $64^{\circ}27'$; reference mark no. 2, 24.47 meters

(80.3 feet), $16^{\circ}13'$; reference mark no. 3, about 75 meters (246 feet), $352^{\circ}01'$; small pine with square blaze, 177.02 meters (580.8 feet), $346^{\circ}29'$; large cypress with diamond-shaped blaze, 32.43 meters (106.4 feet), $61^{\circ}25'$; and large cypress with triangular blaze, 27.72 meters (90.9 feet), $78^{\circ}02'$.

Great Neck Point eccentric (Craven County, C. D. Meaney, 1931; 1932).—On south shore of Neuse River, about $1\frac{1}{2}$ miles west of mouth of Adams Creek, and on Great Neck Point. To reach from North Harlowe, go north 8.9 miles on main road, turn left just beyond negro shack on right, continue 2.1 miles on this road (rough), turn left with main road at point where dim road continues straight ahead, proceed 0.5 mile to dim road on right, and follow this road 0.4 mile to Chas. Belangia's house near river. Mark is in cultivated field, 14 meters (46 feet) from storm-water line, and 3 meters (10 feet) south of woods. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 (1920) is on storm-water line, and 452.77 feet from station in azimuth $226^{\circ}53'54''$. No. 1 (1931) is on edge of woods, and 25.50 meters (83.7 feet) from station in azimuth $293^{\circ}58'$. No. 2 is on edge of bluff, 3.7 meters (12 feet) from pine tree, and 43.67 meters (143.3 feet) from station in azimuth $49^{\circ}33'$.

Piersons Point 2 eccentric (Pamlico County, C. D. Meaney, 1931; 1932).—On north shore of Neuse River, about $5\frac{1}{2}$ miles up river from Oriental, and about 4 miles southeast of Arapahoe. To reach from New Bern, follow United States route 17 to Bridgeton, proceed east 10.6 miles on route 302 to Grantsboro, turn south onto route 306, go 8.0 miles to Arapahoe, turn east, go 0.5 mile to fork, follow right fork 2.5 miles to small store, keep right-hand road 1.8 miles to its end at house on bank of river, enter gate on southeast side of house, and follow road east 0.7 mile along shore to its end at southeast corner of field. Station site is about 0.3 mile east of this point, and is reached by walking. Station is 75 meters (246 feet) south of near side of cultivated field, about 8.5 meters (28 feet) from shore line, 2 meters (7 feet) from storm-water line, and about 4.5 meters (15 feet) east of 3-foot drainage ditch. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 19.16 meters (62.9 feet) from station in azimuth $204^{\circ}11'$. No. 2 is west of drainage ditch, and 23.71 meters (77.8 feet) from station in azimuth $86^{\circ}00'$. Station *Piersons Point 2* (see description thereof) is 16.474 meters (54.05 feet) from station in azimuth $345^{\circ}03'$. Station *Cherry Point 2 eccentric* is visible from ground in azimuth $41^{\circ}30'02''$.

Cherry Point 2 eccentric (Craven County, C. D. Meaney, 1931; 1932).—On south side of Neuse River, about 2 miles below mouth of Hancock Creek, and on Cherry Point (more recently known as Pine Cliff). To reach from Havelock (which is about 18 miles south of New Bern on United States route 70), go south 0.9 mile on route 70, follow route 101 for 7.2 miles to fork with church in V, take left fork, proceed 2.0 miles on main road to another left fork just before reaching church on right side of road, follow this left fork 2.35 miles on main-traveled road, turn right onto dim crossroad, continue 0.85 mile, take dim left fork which leads 0.45 mile to river, and keep to left up river one-fourth mile to end of road at abandoned stable on edge of water. Station site is 450 yards up river from this point, on first definite point of land where vision is clear up and down south side of river. Station is in woods, on 10-foot bluff, 50 meters (164 feet) from water's edge, about 200 paces northwest of small run, and 8 meters (26 feet) south of edge of bluff. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in pine woods, and 30.93 meters (101.5 feet) from station in azimuth $335^{\circ}20'$. No. 2 is in woods, and 39.83 meters (130.7 feet) from station in azimuth $29^{\circ}13'$. No. 3 is on point of land with three prominent dead trees, about 15 meters (49 feet) south of water's edge, about 20 meters (66 feet) southeast of dead trees, about 4 meters (13 feet) back from high-water line, and approximately one-half mile from station in azimuth $99^{\circ}34'17''$. Station *Cherry Point 2* (see description thereof) is 51.834 meters (170.06 feet) from station in azimuth $168^{\circ}57'$.

Cherry Point 2 (Craven County, H. P. Ritter, 1911; 1932).—On south shore of Neuse River, directly opposite Wilkinsons Point, and on sandy beach known as Cherry Point. Mark is 2-inch galvanized-iron pipe, note 17, and in 1931 was in water due to erosion of shore. Station *Cherry Point 2 eccentric* (see description thereof) is 51.834 meters (170.06 feet) from station in azimuth $348^{\circ}57'$.

Piersons Point 2 (Pamlico County, H. P. Ritter, 1911; 1932).—On north shore of Neuse River, about 4 miles southeast of Arapahoe. Marked by 2-inch gal-

vanized-iron pipe. In 1931, mark was in water due to bank erosion, and eccentric station was established. Station *Piersons Point 2 eccentric* (see description thereof) is 16.474 meters (54.05 feet) from station in azimuth $165^{\circ}03'$.

Guthrie (Carteret County, J. S. Hill, 1908; 1933).—On north side of Bogue Sound, about 5 miles northeast of Bogue Inlet, and on Guthrie Point. Surface and underground marks were replaced in 1932 with standard disk station marks in concrete, notes 1a and 7a. Three standard reference disks in concrete, note 11a, were also placed at this time. No. 1 is 10 meters (33 feet) west of shore, 28 meters (92 feet) southeast of southeast corner of old house, and 179.2 feet from station in azimuth $234^{\circ}28'$. No. 2 is in fence line on east edge of field, 3 meters (10 feet) west of center line of road, 25 meters (82 feet) south of small grove of trees, and approximately one-fourth mile from station in azimuth $124^{\circ}29'57''$. No. 3 is in fence line, 43 meters (141 feet) northwest of old house, and 205.5 feet from station in azimuth $163^{\circ}07'$. Station was marked "Guthrie 1908-1932."

Broad Creek 2 (Carteret County, J. S. Hill, 1908; 1933).—On western half of Bogue Sound, on shore of mainland, about one-half mile west of Broad Creek, on most prominent point of land, on line of fence running north, about 75 yards east of clump of cedar trees, and about 23 yards from shore. Original surface and underground marks were replaced in 1932 with standard station disks in concrete, notes 1a and 7a. Three standard reference disks in concrete, note 11a, were also placed at this time. No. 1 is in west edge of small field, and 102.99 feet from station in azimuth $78^{\circ}07'$. No. 2 is in east-and-west fence line, 78 meters (256 feet) east of old shack, and approximately one-half mile from station in azimuth $147^{\circ}47'35''$. No. 3 is in fence line, and 80.9 feet from station in azimuth $167^{\circ}45'$. Station was marked "Broad Creek 2 1915-1932."

Spooners eccentric (Carteret County, C. D. Meaney, 1931).—On north shore of Bogue Sound, about 300 yards west of mouth of Spooners Creek. Station mark is standard reference disk no. 3 of station *Spooners* (see description thereof). Azimuths from station are: Station *Spooners*, distant 32.641 meters (107.09 feet), $85^{\circ}59'$; reference mark no. 1, $84^{\circ}17'$; reference mark no. 2, $99^{\circ}02'$; water tank, $255^{\circ}05'24''$; and pole on dome-shaped building in Morehead City, $268^{\circ}59'54''$.

Spooners (Carteret County, E. H. Pagenhart, 1915; 1933).—On north shore of Bogue Sound, about 300 yards west of mouth of Spooners Creek. To reach, go west 0.9 mile on North Carolina route 24 from its junction with United States route 70 to sand road leading south into woods and which makes Y-junction with highway. Follow sand road one-fourth mile to near its end at bluff, and go 250 yards to southeast corner of open field. Station is along bluff about 300 yards east of field, 6 yards from edge of bluff, 100 yards west of shapely cedar tree at foot of hill, and about 25 yards south of clump of live oaks. Surface mark is spike in a 10 by 10 by 24-inch concrete block projecting about 4 inches. Underground mark is block of concrete 8 inches square with 1-inch hole through it vertically, buried 30 inches below ground. In 1927, two reference marks were established. They are wooden pegs in concrete blocks, 3 feet in height with 10 by 10-inch square top protruding about 5 inches from ground. Tops are inscribed "Ref. No. 1 U.S.C.S." and "Ref. No. 2 U.S.C.S.", and arrow is drawn through center point in direction of station. No. 1 is 13.860 meters (45.47 feet) from the station in azimuth $268^{\circ}19'$. No. 2 is 7.460 meters (24.48 feet) from the station in azimuth $196^{\circ}45'$. In 1931, standard reference disks were set in top of each of these posts, and new standard reference mark (no. 3) was established 32.641 meters (107.09 feet) from station in azimuth $265^{\circ}59'$. Tower was built over this mark and called *Spooners eccentric* (see description thereof). Witness mark no. 1 is spike and blaze in 16-inch pine tree, 10 yards from bluff, and 6.85 meters (22.5 feet) from station in azimuth $137^{\circ}20'$. Witness mark no. 2 is 18-inch pine tree marked in the same manner as no. 1, 12 yards from bluff, and 6.37 meters (20.9 feet) from station in azimuth $226^{\circ}23'$. Distances and azimuths from station to various trees are: Small cedar on knob, 3.24 meters (10.6 feet), $262^{\circ}56'$; cedar with 1 by 4-inch slats, 6.00 meters (19.7 feet), $316^{\circ}56'$; and double live oak stump, 22.3 meters (73.2 feet), $286^{\circ}56'$.

Camp Glen, steel tower (Glen) (Carteret County, F. L. Peacock, 1927).—On north shore of Bogue Sound, about 2 miles west of center of Morehead City, and on grounds of Camp Glen. Mark was center of metal block on top of abandoned wireless tower at Camp Glen. Tower was tripod about 200 feet high with legs bolted to concrete piers. Tower was torn down in 1932. There are no surface, underground, or reference marks.

Morehead City, Villa Hotel, water tank (Vi) (Carteret County, F. L. Peacock, 1927).—Center of Hotel Villa water tank, about one-fourth mile north of Villa Hotel which is about 4 miles west of Morehead City. There are no surface, underground, or reference marks.

Morehead City, water tank (Carteret County, J. B. Boutelle, 1913; 1933).—On Morehead City municipal water supply standpipe, in eastern part of town, just north of Arendell Street and near Fifth Street. Mark is center of top where final existed until 1918. Standpipe is about 120 feet in height and about 10 feet in diameter.

Queen (Onslow County, R. P. Strough, 1914; 1933).—About $2\frac{1}{2}$ miles inland, north-northwest of entrance to Bogue Inlet, on property owned by Dr. Sharp, and about 100 feet southeast of southeast corner of Dr. Sharp's house. Original surface mark was replaced in 1932 with standard disk station mark in concrete, note 1a, and stamped "Queen 1914-1932". Underground mark as described in note 10d was also found, but was not replaced at this time. Original reference mark is tile filled with and set in concrete, projecting about 6 inches, and 9.935 meters (32.59 feet) from station in azimuth $299^{\circ}19'$. Three standard reference disks in concrete, note 11a, were also placed in 1932. No. 2 is 93.122 meters (305.52 feet) from station in azimuth $131^{\circ}33'$. No. 3 is approximately one-half mile from station in azimuth $153^{\circ}41'37''$. No. 4 is 63.140 meters (207.15 feet) from station in azimuth $231^{\circ}27'$.

Free (Onslow County, R. P. Strough, 1914; 1933).—About $1\frac{1}{4}$ miles west of Browns Inlet, in Freeman's field, about 35 yards west of road which leads to Freeman Landing, about 450 yards from landing, 50 yards north of woods, about 300 yards east of high-water mark, and 40 yards west of head of ditch which drains field east of road. In 1932, surface mark was not found, but underground mark, note 10d, was recovered and station was re-marked with standard disk station mark stamped "Free 1914-1932" set in concrete block. Top of block is 10 inches below surface. Original reference mark is tile filled with and set in concrete, 1 yard west of road, and 31.582 meters (103.62 feet) from station in azimuth $231^{\circ}35'$. Three standard reference disks in concrete, note 11a, were placed in 1932. No. 2 is 53.242 meters (174.68 feet) from station in azimuth $297^{\circ}47'$. No. 3 is approximately 200 meters (656 feet) from station in azimuth $165^{\circ}48'52''$. No. 4 is 32.690 meters (107.25 feet) from station in azimuth $228^{\circ}31'$.

Swan Point eccentric (Onslow County, C. D. Meaney, 1932).—On Swan Point, on west side of New River. To reach from Sneads Ferry post office, go east 1.6 miles on main road to Hatch Point, turn right onto side road around house on south side of road and close to it, proceed 0.8 mile, take right-hand fork with blazed tree in V, continue 0.15 mile, turn through left-hand gate, follow dim road along edge of field just to right of timber line 0.3 mile to another gate, pass through gate, and continue along timber line 0.17 mile to point where road disappears opposite blazed pine tree at left of line of travel. Station is in open area, 16.8 meters (55 feet) northwest of 12-inch triangle-blazed pine tree, and about 8 meters (26 feet) west of edge of woods. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on west edge of woods, and 30.78 meters (101.0 feet) from station in azimuth $177^{\circ}01'$. No. 2 is in cleared path to old station, on west edge of woods, and 31.45 meters (103.2 feet) from station in azimuth $301^{\circ}28'$. No. 3 is 5 meters (16 feet) east of bank at water's edge (bank is 3 meters (10 feet) above water line at this point), about 15 meters (49 feet) northwest of group of three 10-inch trees, and approximately one-fourth mile from station in azimuth $43^{\circ}00'27''$. Station *Swan Point (U.S.E.)* (see description thereof) is 200.211 meters (656.86 feet) from station in azimuth $296^{\circ}33'45''$. Reference mark of station *Swan Point (U.S.E.)* is in azimuth $300^{\circ}03'30''$ from station. Path through woods has been made between this station and *Swan Point (U.S.E.)*.

Swan Point (U.S.E.) (Onslow County, R. P. Strough, 1914; 1932).—At west side of mouth of New River, on Swan Point. Surface mark is standard disk station mark in 4-inch tile, cemented to iron pipe which was original station mark. Tile projects 6 inches, and in 1932 was reinforced by 12-inch square cement collar. Reference mark is tile filled with and set in cement, about 4 yards from high water, and 14.69 meters (48.2 feet) from station in azimuth $64^{\circ}14'$. Station *Swan Point eccentric* (see description thereof) is 200.211 meters (656.86 feet) from station in azimuth $116^{\circ}33'49''$.

Long Point (Pasquotank County, F. B. T. Siems, 1917; 1931).—On northeast shore of Little River, on Long Point which is about three-fourths mile above

mouth of Symond Creek, in clear ground about 15 meters (49 feet) back from point, and 4 meters (13 feet) from high-water line. Surface mark is standard disk station mark, note 6c. Witness mark no. 1 is 4.95 meters (16.2 feet) from station in azimuth 159°33'. Witness mark no. 2 is 17.85 meters (58.6 feet) from station in azimuth 218°40'. Station *Long Point eccentric* (see description thereof) is 11.972 meters (39.23 feet) from station in azimuth 209°50'.

Shiloh (Camden County, O. W. Ferguson, 1916; 1931).—About 6 miles south-east of Camden, on northeast shore of Pasquotank River, and on point of land known as Shiloh Landing. Mark is nail in concrete in tile pipe. Original reference mark had been broken off at ground, and was replaced in 1931 with standard reference disk in concrete, note 11a. This mark was stamped "Shiloh Eccentric 1931 No. 1", and is 33.608 meters (110.26 feet) in azimuth 180°38' from station *Shiloh*, and 19.845 meters (65.11 feet) in azimuth 78°47' from station *Shiloh eccentric*. Station *Shiloh eccentric* (see description thereof) is 13.870 meters (45.51 feet) from station in azimuth 183°16'.

Nixon (Horry County, S. C., L. P. Raynor, 1923; 1934).—On Cherry Grove Beach, 3½ miles south-southwest of Little River, about 80 meters (262 feet) northeast of point where trail joins beach, about 10 meters (33 feet) from seaward end of porch which is common to northeast sides of three small fish shacks, and about 8 meters (26 feet) from high-water mark. To reach from Little River, go west 2.9 miles on Conway road to Nixon's crossroads, turn left onto new grade, follow 0.6 mile to road on left at sign "Oysters", follow this road 0.3 mile, take right fork at arrow "Cherry Grove Beach", and continue 1¼ miles to road leading onto strand at Cherry Grove Beach. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1, established in 1923, was between easterly corner of largest (central) shack and northerly corner of smaller shack (most seaward of group), directly under southwest edge of porch, and 13.638 meters (44.74 feet) from station in azimuth 186°37'. Mark was not recovered in 1934. No. 2, established in 1923, was 911.001 meters (2,988.84 feet) from station in approximate azimuth 239°. Mark was not recovered in 1932. No. 2, established in 1932, is 70 meters (230 feet) northwest of high water, 3 meters (10 feet) west of boardwalk leading to beach, 1 meter (3 feet) northwest of corner of frame building, and 45.918 meters (150.65 feet) from station in azimuth 97°53'. No. 3, established in 1932, is 3 meters (10 feet) west of old Cherry Grove Road, and approximately 500 yards from station in azimuth 129°02'22".

Fish (Brunswick County, L. P. Raynor, 1923; 1932).—On sand beach, about 19 miles west along coast from Fort Caswell, 8 miles southwest of Shallotte, 2 miles west of Holdens Beach, and west of no. 5 fishery. To reach from Shallotte, go northeast 1 mile on route 30 to sign "Holden Beach 9", turn right onto dirt road, follow about 9 miles to bridge across marsh in rear of sand dunes, cross bridge, keep left road 0.3 mile to fishery on beach, and proceed west along beach 2 miles to station site. Beach may be driven over at low tide only. Station is on small shell mound about 80 meters (262 feet) from high-water line, and about 300 meters (984 feet) west of west end of fish house no. 5. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. In 1932, these marks were found to be leaning slightly, and were reset as nearly as possible in their true vertical position. Original reference mark was found uprooted in 1932, and three standard reference disks in concrete, note 11a, were placed as follows: No. 1 is 40.49 meters (132.8 feet) from station in azimuth 210°13'. No. 2 is approximately three-eighths mile from station in azimuth 265°33'30". No. 3 is 45.32 meters (148.7 feet) from station in azimuth 81°43'. All reference marks are behind sand dunes, and approximately 80 meters (262 feet) from high-water line.

Fort (New Hanover County, W. C. Hodgkins, 1917; 1932).—On east shore of Cape Fear River, about 18 miles below Wilmington, and on most northerly of two sand hills which is site of old Fort Fisher. To reach from Carolina Beach, go south 4.4 miles on main road from opposite Bames Hotel to sign "Monument to be erected at Fort Fisher" and point where road makes bend to right. Station is on hill straight ahead before reaching bend. Station mark, established in 1917, was standard disk station mark in concrete at center of 3-inch drain tile which was embedded in and projecting about 3 inches above ground. There were no underground or reference marks. Station was re-marked in 1932 with standard disk station marks in concrete, notes 1a and 7a; and three standard reference disks in concrete, note 11a, were also established at this time. No. 1 is 10 meters (33 feet) east of center line of highway, and approximately one-

half mile from station in azimuth $196^{\circ}35'18''$. No. 2 is 4 meters (13 feet) east of the center line of highway, and 250.8 feet from station in azimuth $79^{\circ}15'$. No. 3 is 3 meters (10 feet) east of center line of highway, and 228.2 feet from station in azimuth $149^{\circ}27'$.

R (U.S.E.) (Brunswick County, L. P. Raynor, 1923; 1934).—On sand hill near mouth of Cape Fear River, one-half mile from Fort Caswell, and almost directly in front of Coast Guard station no. 194. To reach, go by boat from Southport to Fort Caswell Landing at Oak Island, and proceed west about 1 mile to Coast Guard station. Station is 82 yards from high-water mark, and 82 yards from Coast Guard station house. Surface mark is standard disk station mark cemented in center of 5-foot square concrete block. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 10 feet from large low building behind earth breastworks (used as Army observation station), and 47.858 meters (157.01 feet) from station in azimuth $152^{\circ}44'$. No. 2 projects 1 inch above top of 8-foot square concrete tower which is also behind breastworks, and is 59.695 meters (195.85 feet) from station in azimuth $209^{\circ}51'$.

Bend (New Hanover County, C. L. Garner, 1918; 1933).—About $1\frac{1}{2}$ miles northwest of Carolina Beach, on land owned by S. A. Lewis. To reach from Wilmington, go south from Third and Market Streets 13.9 miles or 0.55 mile beyond canal bridge on route 40, turn left onto sand road about 40 feet south of signs "Diamond Tire" and "Batsons Apartments", and follow main-traveled road 0.3 mile to large sawdust pile on right. Station is opposite sawdust pile, about 20 meters (66 feet) to left of road, about 25 yards west of dim road leading north and west from Lewis' house, 200 yards west of his field, and about 175 yards southwest of negro house in oak grove. Surface mark is standard disk station mark in concrete, note 1c. Underground mark is nail in concrete, note 7c. Reference mark, established in 1918, is standard reference disk in concrete, note 11c, 1.5 meters (5 feet) south of 12-inch live oak, and 24.57 meters (80.6 feet) from station in approximate azimuth $90^{\circ}20'$. Two standard reference disks in concrete, note 11a, were established in 1932. No. 1 is about 5 meters (16 feet) west of sawdust pile, and 108.59 feet from station in azimuth $321^{\circ}28'$. No. 2 is about 4 meters (13 feet) north of center line of road leading to station, 25 meters (82 feet) south of 12-inch pine tree, and approximately one-fourth mile from station in azimuth $44^{\circ}41'46''$.

Ruins (Brunswick County, W. C. Hodgkins, 1917; 1933).—On west shore of Cape Fear River, on point between Orton Cove and Brunswick Cove. To reach from Wilmington, cross Cape Fear River toll bridge, continue about 3.8 miles on United States route 17 to River Road which leads to Southport, follow this road 14.4 miles to road turning left at sign "St. Phillips Church", follow this road 0.3 mile, take right fork (following sign "St. Phillips Church") 0.2 mile; turn left and again right in 15 yards, and follow road to right of fence one-fourth mile to its end at old Fort Anderson Landing on river bank. Continue on foot south about 125 yards to station site. Station is on small sand spit, east-north-east of the ruins of "Old Brunswick", and about 75 yards north of small fisherman's shack. Surface mark is standard disk station mark in concrete, note 6b. In 1932, it was stamped "Ruins 1917-1932". Reference mark, established in 1917, was standard reference disk in concrete, note 13b, 12.535 meters (41.13 feet) from station in azimuth $56^{\circ}23'$. It was not recovered in 1932. Three standard reference disks in concrete, note 11a, were placed in 1932, and stamped "Ruins 1932". No. 1 is approximately one-half mile from station in azimuth $8^{\circ}22'45''$. No. 2 is 2 meters (7 feet) south of edge of woods, and 22.62 meters (74.2 feet) from station in azimuth $34^{\circ}19'$. No. 3 is 2 meters (7 feet) west of high-water mark, 2 meters (7 feet) east of edge of woods, and 23.11 meters (75.8 feet) from station in azimuth $160^{\circ}43'$.

Sprunt (Brunswick County, W. C. Hodgkins, 1917; 1933).—On west side of Cape Fear River, and on home grounds of Orton Plantation, which is owned by Dr. James Sprunt of Wilmington. To reach from Wilmington, cross Cape Fear River toll bridge, continue 3.8 miles on United States route 17 to River Road which is about 200 yards west of Brunswick River bridge, turn south onto this road, continue 12.7 miles to ornamental gate on left leading to Orton grounds, enter gate, and go 0.7 mile to mansion. Station is close to edge of high terrace, and in grove of trees east-northeast of house. Surface mark is standard disk station mark in concrete, note 6b. In 1932, it was stamped "Sprunt 1917-1932". Reference mark, established in 1917, was standard reference disk in concrete, note 13b, and 13.965 meters (45.82 feet) from station in azimuth $99^{\circ}22'$. It was

For notes in regard to marking of stations see p. 135.

not recovered in 1932. Standard reference disk in concrete, note 11a, was established in 1932, and stamped "Sprunt 1932". It is about 30 meters (98 feet) southeast of southeast corner of greenhouse, on top of dike just south of stable, and approximately one-third mile from station in azimuth $12^{\circ}37'12''$.

St. James Church (New Hanover County, C. P. Bolles, 1854; 1932).—On tower of St. James Church, at corner of Third and Market Streets, Wilmington. Marked by hole in roof boards and tin. Position is not central to tower; following distances are from station to inside corners of tower: Northwest corner (Third and Market Streets), 8.83 feet; northeast corner, 8.83 feet; southeast corner, 9.61 feet; and southwest corner, 9.58 feet. Lengths of sides of tower between points measured are as follows: North side (Market Street), 13.04 feet; east side, 12.90 feet; south side, 13.02 feet; and west side (Third Street), 13.10 feet.

Mason (New Hanover County, C. L. Garner, 1914; 1933).—About 11 miles north of east of Wilmington, on point of land between Topsail Sound and Paces Creek. To reach from Wilmington, go east $10\frac{1}{4}$ miles on United States route 17 to Kirkland, turn right onto shell road at sign "Porter's Neck", follow this road 1 mile, take right fork 1.2 miles to another shell road turning squarely to right, and go 0.4 mile on this road to its end at bungalow and wharf. Station is on beach of Sound, about one-fourth mile south of end of road, on sharp projecting point, about 40 yards from end of point, and 25 yards from high-water mark. Surface and underground marks are standard disk station marks in tile and concrete, notes 6b and 10d. In 1932, marks were stamped "Mason 1914-1932". Reference mark, established in 1914, is standard reference disk in tile and concrete, note 13b, and was also stamped "Mason 1914". It is on same strip of beach as station, and 17.40 meters (57.1 feet) from station in azimuth $37^{\circ}08'$. In 1932, standard reference disks in concrete, note 11a, were placed as follows: No. 1 is on same strip of beach as station, and 42.34 meters (138.9 feet) from station in azimuth $201^{\circ}41'$. No. 2 is approximately 30 meters (98 feet) southeast of southeast corner of bungalow, 30 meters (98 feet) north by west of edge of water, 10 meters (33 feet) northeast of pier leading into water, 10 meters (33 feet) north of 36-inch live oak, and approximately one-fourth mile from station in azimuth $207^{\circ}49'53''$. Azimuth from station to water tank at Wrightsville Beach is $22^{\circ}43'54''$.

Wrightsville northwest base eccentric (New Hanover County, C. D. Meaney, 1932; 1933).—In Wrightsville, on vacant lot, about 200 yards northwest of post office, approximately 60 meters (197 feet) southwest of paved road, 45 meters (148 feet) southwest of southwest rail of car line, and 17 meters (56 feet) northwest of northwest side of red house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 9 meters (30 feet) north of center line of paved road, 8 meters (26 feet) west of 24-inch cedar, and approximately one-fourth mile from station in azimuth $237^{\circ}04'41''$. No. 2 is 8 meters (26 feet) southwest of southwest rail of car line, 1 meter (3 feet) southwest of cinder road past house, 0.6 meter (2 feet) north of north corner of yard of red house, and 39.87 meters (130.8 feet) from station in azimuth $246^{\circ}15'$. No. 3 is northwest of west corner of yard of red house, approximately 17 meters (56 feet) west of west corner of red house, and 35.14 meters (115.3 feet) from station in azimuth $21^{\circ}35'$. Station *Wrightsville northwest base* (see description thereof) is 174.559 meters (572.70 feet) from station in azimuth $297^{\circ}36'18''$.

Wrightsville northwest base (New Hanover County, C. L. Garner, 1918; 1933).—In Wrightsville, 3.5 meters (12 feet) east of Tidewater Power Co. station, 4 yards from side rail of car track, and 8 yards from edge of water. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark is standard reference disk in concrete, note 11a, at northeast side of paved road, 18 yards from high water, and 25.130 meters (82.45 feet) from station in azimuth $74^{\circ}09'$. In 1927, reference mark was under corner of filling station. Station mark is so close to railroad track that signal could not be built over it; and station *Wrightsville northwest base eccentric* (see description thereof) was established in 1932, 174.559 meters (572.70 feet) from station in azimuth $117^{\circ}36'21''$.

Union (New Hanover County, M. Steinberg, 1918; 1933).—At Wilmington, at northeast corner of Red Cross and Front Streets, on top of general offices of Atlantic Coast Line Railroad, on topmost roof, about one-third of way over from east side, and 7 meters (23 feet) northeast of flagpole. Station mark is standard disk station mark in concrete roof. Reference mark is arrow chiseled in top of south parapet, 4 meters (13 feet) from east end, and 6.78 meters (22.2 feet) from station in azimuth $356^{\circ}42'$. Station *Bridge* (see description and geographic

position thereof) is visible from tripod head, 1,931.9 meters (6,338 feet) distant, in azimuth $184^{\circ}20'32''$.

Bridge (New Hanover County, M. Steinberg, 1918; 1933).—At Wilmington, on Atlantic Coast Line Railroad, at east end of Hilton Bridge over Northeast River, 1.5 meters (5 feet) north of north rail, 1 yard east of east end of bridge, and in top face of stone abutment. Station mark is standard disk station mark. Reference mark is United States Engineer's mark on opposite side of track in azimuth $327^{\circ}14'$. Station *Union* (see description and geographic position thereof) is visible from ground, 1,931.9 meters (6,338 feet) distant, in azimuth $4^{\circ}20'35''$. Station *Yadkin* (see description and geographic position thereof) is visible from ground, 1,336.49 meters (4,384.8 feet) distant, in azimuth $97^{\circ}35'42''$.

Atkinson (Pender County, R. P. Strough, 1914; 1933).—On back side of Topsail Sound, about 5 miles northeast of Hampstead, about three-fourths mile southeast of Virginia Creek, at Dick Jones Landing, and about 10 yards from high-water mark. To reach from Hampstead, go northeast 5 miles on United States route 17 to Woodside (Vista post office), turn onto road leading southeast off main highway opposite railroad station, continue 0.3 mile, keep main road ahead at dim right fork, continue 0.65 mile to tumbledown building, keep main road at dim right fork, proceed one-fourth mile, take left fork on left side of fence about 250 feet beyond large house on left, follow along fence 0.45 mile to left fork at end of field, and follow this road 0.7 mile to landing. Station, established in 1914, was marked with standard disk station mark in tile and concrete, note 6c. It was re-marked in 1932 in exactly same position with standard disk station marks in concrete, notes 1a and 7a. New marks were stamped "Atkinson 1914-1932". Reference mark, established in 1914, is tile filled with and set in cement, on edge of woods, and 45.77 feet from station in azimuth $97^{\circ}39'$. It was found to be in poor condition in 1932. Three reference marks, standard reference disks in concrete, note 11a, were established in 1932; disks stamped "Atkinson 1932". No. 2 is 88.15 feet from station in azimuth $88^{\circ}22'$. No. 3 is 4 meters (13 feet) west of center line of sandy road, and approximately 0.2 mile from station in azimuth $134^{\circ}49'00''$. No. 4 is 98.5 feet from station in azimuth $168^{\circ}55'$.

EASTERN OBLIQUE ARC TO JACKSONVILLE

Principal points

Stuart (Patrick County, Va., C. L. Garner, 1918; 1932).—About $3\frac{1}{4}$ miles north-northwest of Patrick Springs post office, and $3\frac{1}{4}$ miles northeast of Stuart, on south spur ridge of Bull Mountain. To reach from junction of routes 23 and 58 in Stuart, go east 1.3 miles on route 58, turn left (northeast) onto dirt road about 100 feet beyond Rhodie Creek (not road at end of bridge), follow this road 2.15 miles to top of grade or about 0.35 mile beyond stream crossing and 0.1 mile beyond 2 mail boxes and abandoned house on right to point between apple orchards on both sides of road. Proceed on foot to left through orchard up backbone of ridge leading to top of Bull Mountain. There are 2 definite summits on ridge of mountain, and station is on lower one, about $1\frac{1}{4}$ miles in distance and 1,300 feet in elevation from point where climb starts, and about 0.85 mile from top of mountain. Second summit is about one-half mile from top of mountain. Station is about 50 yards below point where ridge first levels out and a little west of center of backbone of ridge. A number of trees across ridge abreast station have been blazed. Station mark is standard disk station mark in boulder which projects about 1 foot above ground, note 5. Reference mark (1918) is standard reference disk in boulder, note 12d, and 5.80 meters (19.03 feet) from station in approximate azimuth 197° . Mark was not recovered in 1932. Two new standard reference disks were established in 1932, in rock outcrops. No. 1 is 9.335 meters (30.63 feet) from station in azimuth $287^{\circ}57'$. No. 2 is 6.20 meters (20.3 feet) from station in azimuth $46^{\circ}42'$. These marks were stamped "Stuart 1932".

Bull (Patrick County, Va., C. L. Garner, 1918; 1933).—About 4 miles north-northwest of Patrick Springs post office, and about $4\frac{1}{2}$ miles north-northeast of Stuart, on highest part of Bull Mountain. To reach from Stuart, follow directions given for reaching station *Stuart*. From this station continue up ridge about 1 mile in distance and 400 feet in elevation to top of mountain. Station mark is standard disk station mark in boulder, note 5. The reference mark is a standard reference disk in boulder, note 12d, 7.55 meters (24.8 feet) from station in azimuth $157^{\circ}33'$. When station was recovered in 1932, original disk had been

removed. It was replaced by another disk set in same drill hole. Cairns of stones were piled around station and reference marks. Station *Bull* (U.S.G.S.) (see description thereof) is 5.48 meters (18.0 feet) from this station in azimuth $351^{\circ}30'$.

Cedder Mountain (Rockingham County, C. L. Garner, 1918; 1933).—About 3 miles north-northeast of Madison, 3 miles south of Stoneville, 8 miles south of the Virginia-North Carolina State line, and one-fourth mile west of the Stoneville-Madison Road, in apple orchard at summit of prominent hill known locally as Cedder Mountain and owned by W. J. Brown. To reach from the intersection of routes 311 and 770 in Stoneville, go south 2.35 miles on route 311 and take dirt road at a left fork. There is also a dirt right fork at this point with sign "Ayersville 6 Miles." Follow road to left 0.25 mile across railroad track and continue 1.1 miles to lane at summit of grade about 100 yards south of transmission-line crossing. Turn right into lane and proceed about 500 feet to W. J. Brown's house on left. Continue up lane 0.15 mile and turn right about 200 feet beyond an abandoned house on left. Proceed about 100 feet and take dim left fork at point where main road goes through woods. Continue about 200 yards and turn left onto road along south edge of apple orchard. Follow this road about 180 yards to summit of hill and turn right into orchard about 75 feet to station site. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is bottle embedded in earth in an upright position, note 10a. Reference mark no. 1 is standard reference disk in a boulder, note 12c, 3 feet northeast of the center line of trail up hill, 20 feet east of 6-inch apple tree, and approximately 0.2 mile from station in azimuth $273^{\circ}15'48''$. Reference mark no. 2 (not described) is 6 feet north of center line of trail along south edge of orchard and 121.22 feet from station in azimuth $309^{\circ}08'$. Reference mark no. 3 is standard reference disk in concrete, note 11c, 18 feet north of trail along south edge of woods, and 77.70 feet from station in azimuth $355^{\circ}44'$. Ball on top of water tank of Stoneville Cabinet Co. is approximately 0.3 mile from station in azimuth $216^{\circ}45'52''$.

Chestnut (Henry County, Va., R. D. Horne, 1932).—About 6 miles southwest of Martinsville, and about 12 miles northwest of Leaksville, N. C., on summit of Chestnut Knob, the property of Mr. Will Murphy. To reach from Martinsville, go east about one-half mile to junction of routes 58 and 311 and turn right (south) on combined routes. Proceed 2.3 miles and turn left on route 311 at junction point at south end of bridge over Smith River. Continue 2.25 miles or 0.8 mile beyond crossing of "Double Branches", and turn right onto dirt fork at "Bellview Historic" sign. Proceed 0.3 mile, take main right-hand road and continue 3.7 miles, keeping straight ahead at point where road comes in from left rear. Continue 1.33 miles and keep straight ahead at T-road on right at church in Chestnut Knob settlement. Proceed from here about 50 yards and follow left fork (south) 0.8 mile up along east side of mountain to large pine with triangle blaze, on left side of road, at an opening where trucks can be turned around. Proceed on foot from this point following trail on right (west side) to top of knob. In case roads are wet, continue south 2.5 miles on route 58 from south end of bridge over Smith River to Craigs service station and turn left onto dirt road. Proceed 0.5 mile and turn sharp right. Follow this road 1.6 miles to church at Chestnut Knob and proceed as above. There is a clear space down the east side of the knob, making visible the church and the Chestnut Knob settlement. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in the Chestnut Knob settlement, 12 paces south of main road, 17 paces west of west side of 2-story house, 24 paces southwest of southwest corner of church, 3 feet west of lone locust tree, and approximately 0.75 mile from station in azimuth $228^{\circ}31'42''$. No. 2 is 31 feet southeast of the most southerly of 2 locust trees almost in line with mark (tree is blazed with triangle), and 24.06 meters (78.9 feet) from station in azimuth $14^{\circ}35'$. No. 3 is 40 feet southeast of the most northerly of locust trees, 38 feet northwest of most southerly locust tree, and 13.82 meters (45.3 feet) from station in azimuth $72^{\circ}44'$. Summit of the knob is covered with grass except for above-mentioned locust trees.

James (Pittsylvania County, Va., R. D. Horne, 1932).—About 12 miles east-southeast of Martinsville, $9\frac{1}{4}$ miles a little east of north of Draper, and 7 miles north of the Virginia-North Carolina State line. To reach from Danville, follow route 29 (Main Street) to Schoolfield and turn right (north) onto route 300. Cross Dan River bridge and continue three-fourths mile to junction of route 58

at Triangle service station. Turn left and proceed west 14 miles on route 58 or 2.4 miles beyond Oak Grove service station, and turn right onto paved T-road with triangular garden plot in junction of roads. Proceed 100 yards, cross old pavement of route 58, and continue 0.45 mile on gravel road to top of grade and station site. Station is 13.6 meters (45 feet) west by north of center line of gravel road, and about 45 yards south of tree 3 feet in diameter with top broken off, on west side of gravel road near dirt road leading west which is opposite mail box of Tom J. Wilson. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6.5 meters (21 feet) east by south of center line of gravel road, and 25.93 meters (85.1 feet) from station in azimuth $239^{\circ}44'$. No. 2 is 5.8 meters (19 feet) east by south of center line of gravel road, at northeast point of intersection of gravel road and wood road leading south, and 27.11 meters (88.9 feet) from station in azimuth $323^{\circ}09'$. No. 3 is 20 feet north-east of old pavement of route 58, 7 feet southeast of third telephone pole from intersection of this old pavement with road leading from route 58 to station, and approximately one-fourth mile from station in azimuth $33^{\circ}57'21''$.

Smith (Rockingham County, R. D. Horne, 1932).—About $4\frac{1}{2}$ miles north of Reidsville, and $6\frac{1}{4}$ miles southeast of Leaksville, on land owned by Robert A. Smith and occupied by Sam Lee Jones. To reach from intersection of routes 29 and 65 in Reidsville, go north 1.5 miles on dirt road to fork, take right-hand fork and continue 2.9 miles to Harrison Crossroads. From this point go east 1.1 miles on dirt road to summit of grade, with small grove of pines on left. Turn left and go through field about 100 yards to station site. Station is on highest point of hill, along east edge of timber line, about 225 feet west-southwest of Jones' log cabin, 22 feet southeast of 10-inch pine tree with triangular blaze on southeast side, and 25 feet northeast of 12-inch pine leaning to south. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11a. No. 1 is 10 feet west of center line of lane to Jones' cabin, 42 feet south of south-east corner of cabin, and 208.35 feet from station in azimuth $251^{\circ}25'$. No. 2 is on small knoll 12 feet west of lane through woods, 4 feet west of twin oak trees (one 8 inches and other 2 inches in diameter), about 250 feet south of main road, and approximately 0.2 mile from station in azimuth $297^{\circ}49'23''$. Reference mark no. 3 is a standard reference disk in a large slab of rock, note 12c, 10 feet east of 6-inch pine tree, 18 feet south-southeast of above-mentioned leaning pine tree, and 45.03 feet from station in azimuth $20^{\circ}49'$. Azimuth from station to most northerly of three water storage tanks at Lucky Strike factory in Reidsville is $326^{\circ}57'09''$; and to tall slender stack at same factory, $355^{\circ}46'18''$.

Pelham (Caswell County, R. D. Horne, 1932).—About $7\frac{1}{2}$ miles southwest of Danville, Va., $9\frac{1}{4}$ miles northwest of Yanceyville, and about one-fourth mile south of Pelham railroad station, on land owned by Thomas N. Pierce. To reach from Danville, go southwest 6 miles on United States route 29 to Virginia-North Carolina boundary, and continue south 2.85 miles to summit of grade 0.3 mile beyond Pelham railroad station. Station is in triangular area just east of highway formed by United States route 29, dirt road, and woods, 91 feet east of center line of route 29, 22 feet west of 6-inch oak tree with triangular blaze on west side, and 25 feet north-northwest of double 8-inch oak tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on line with north side of cabin, 54 feet west-northwest of northwest corner, 12 feet west-northwest of center line of dirt road, 88 feet north of 8-inch pine tree at north edge of grove of pine trees, and 118.37 feet from station in azimuth $245^{\circ}04'$. No. 2 is 27 feet east of center line of route 29, about 75 yards north of small house, 75 feet northwest of 4-foot oak tree, 3 feet north of telephone pole, and approximately 0.2 mile from station in azimuth $43^{\circ}42'58''$. No. 3 is 23 feet west of center line of route 29, 65 feet south of telephone pole, and 66.90 feet from station in azimuth $121^{\circ}08'$.

Mount Cross (Pittsylvania County, Va., R. D. Horne, 1932).—About $7\frac{1}{4}$ miles northwest of Danville, 14 miles northeast of Draper, and $7\frac{1}{4}$ miles north of the Virginia-North Carolina State line, in the yard of the Mount Airy Primitive Baptist Church. To reach from Danville, follow route 58 to the bridge at Sandy River and turn right (north) onto macadam road about 80 yards east of the bridge. Proceed along this road 7.25 miles, turn right at a T-road junction, and go 0.2 mile to station site. Station is 25.0 feet from northeast corner of church, and 33.8 feet from its southeast corner. Station mark is standard station disk in

a rock $3\frac{1}{2}$ feet long and 3 feet wide, projecting $2\frac{1}{2}$ feet above the ground, note 2. Reference marks nos. 1 and 2 are standard reference disks in bedrock. No. 1 is in a rock 7 by 2 feet, projecting $2\frac{1}{2}$ feet above the ground with the longest axis towards the station, and is 48.3 feet from station in azimuth $211^{\circ}19'$. No. 2 is in a rock 4 by 2 feet and projecting 2 feet above the ground, 14.5 feet southeast of the southeast corner of the church, and 42.65 feet from station in azimuth $21^{\circ}00'$. Reference mark no. 3 is a standard reference disk in concrete, note 11a, located on the property of I. Watson, on north side of drive, about 6 paces southwest of corner of house, 20 paces east of main road, and approximately one-half mile from station in azimuth $169^{\circ}57'57''$.

Kentuck (Pittsylvania County, Va., R. D. Horne, 1932).—About $7\frac{1}{4}$ miles northeast of Danville, 9 miles north-northwest of Milton, and 8 miles north of the Virginia-North Carolina State line, on the land of T. H. Dawson. To reach from Danville, follow United States route 29 and Virginia route 12 northeast out of Danville to point 0.7 mile beyond north end of bridge over Dan River. Keep straight ahead 7.4 miles on route 12 or 0.9 mile beyond large Gulf gas station on left, and turn right (southeast) at crossroads at W. T. Boyd's Standard gas station. Proceed 2.0 miles and turn left (east) at crossroads at Kentuck. Follow this road 0.7 mile to T-road intersection and station site. Station is in southwest corner of this road intersection, about 50 yards south-southwest of junction, 14.7 feet east of small pine with triangular blaze at east edge of timber line, and 34 feet west of center line of north-and-south dirt road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at southeast corner of small cemetery, 7 paces north of center line of main road, and approximately 0.2 mile from station in azimuth $204^{\circ}17'38''$. No. 2 is on the west edge of cultivated field, across road from station, on east bank of deep ditch, and 27.745 meters (91.03 feet) from station in azimuth $275^{\circ}52'$. No. 3 is on south side of main road, 70 feet west-southwest of T-intersection, 2 feet west of pole bracing telephone guy wire, and 30.461 meters (99.94 feet) from station in azimuth $140^{\circ}43'$. Azimuth from station to flagpole on Dan River High School is $121^{\circ}57'47''$.

Estelle (Caswell County, R. D. Horne, 1932).—About $4\frac{1}{2}$ miles southwest of Milton, 7 miles northeast of Yanceyville, and 4 miles south of the Virginia-North Carolina State line, on land owned by J. C. Bryant. To reach from Yanceyville, go northeast 7 miles on route 62 to N. J. Taylor's store and left-hand dirt road with sign "Blanch 3 miles", and continue northeast 0.35 mile on route 62 to summit of grade and station site. Station is in yard in front of Bryant's house, 53 feet west-northwest of center line of route 62, 18 feet north-northeast of center line of lane leading to house, and 35 feet north of 36-inch oak tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 20 feet northwest of center line of route 62, at northeast end of curve in highway, on fence line running northeast and southwest, and approximately 0.2 mile from station in azimuth $222^{\circ}08'25''$. No. 2 is 16 feet east-southeast of center line of route 62, 6 feet northwest of center line of lane, and 181.56 feet from station in azimuth $237^{\circ}07'$. No. 3 is 15 feet east-southeast of center line of route 62, 85 feet south-southwest of prolongation of center line of lane leading to house, and 144.22 feet from station in azimuth $354^{\circ}41'$.

Semora (Caswell County, R. D. Horne, 1932).—About 4 miles southeast of Milton, and 3.2 miles south of Virginia-North Carolina State line, at Semora, and in the Allen Burial Ground on the T. M. Allen estate. To reach from Milton, go southeast about 5 miles on route 47 to crossroads at Semora, turn right onto dirt road, and proceed 0.15 mile to fork in front of Semora Baptist Church. Take left fork and go about 200 feet to lane on left leading to small cemetery in pine grove. Follow lane to cemetery and station site. Station is in south edge of cemetery, about 100 feet north of 2-story yellow house, on line with south edge of tobacco barn and 30 feet west of southwest corner of barn, 12 feet southwest of 18-inch pine tree, and 45 feet south of Thomas Moore Allen's tombstone. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 25 feet east of 48-inch oak tree, 45 feet north-northeast of double 18-inch oak tree in north edge of cemetery, and 108.90 feet from station in azimuth $174^{\circ}50'$. No. 2 is on right-of-way of route 47, 22 feet southwest of center line of highway at point about 100 yards southeast of southeast end of first curve in highway east of Semora, and approximately 0.2 mile from station in azimuth $229^{\circ}28'03''$.

No. 3 is 18 feet east of center line of road, 7 feet north of apple tree, 10 feet southwest of another apple tree, and 139.60 feet (slope) from station in azimuth $63^{\circ}02'$.

White Oak (Halifax County, Va., R. D. Horne, 1932).—About $13\frac{1}{2}$ miles east-northeast of the center of Danville, $7\frac{1}{4}$ miles north-northeast of Milton, and 7 miles north of the Virginia-North Carolina State line. To reach from station *Kentuck*, go east on the main road 4.0 miles (keeping straight ahead) and take right fork at point with tobacco barns on left and "Smith fertilizer" sign on tree on right. Proceed 1.55 miles and take right fork at point with store on north side of road and white house on south side. Follow this road 3.55 miles to point opposite unoccupied store belonging to Kent Osborne (colored) and station site. Station is 74 feet north of door of this store, 43 feet north of center line of road, and 100 yards west of White Oak Church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 0.1 mile south of White Oak Church, 7 meters (23 feet) west of center line of dirt road leading south from church, and approximately 0.15 mile from station in azimuth $316^{\circ}49'11''$. No. 2 is 66 feet east of center of door of store, 16 feet south of center line of road, and 84.0 feet from station in azimuth $319^{\circ}26'$. No. 3 is 33 feet northwest of center of door of store, 17 feet south of center line of road, and 72.44 feet from station in azimuth $35^{\circ}10'$.

Crawley (Halifax County, Va., R. D. Horne, 1933).—About 8 miles southwest of South Boston, $3\frac{1}{4}$ miles south-southwest of Cluster Springs, and $3\frac{1}{4}$ miles north of the Virginia-North Carolina State line, on land owned by R. H. Crawley and occupied by J. E. Crawley. To reach from South Boston, go south 5.9 miles on route 501 from center line of bridge over Dan River to dirt road on left with sign "Cluster Springs". Follow this road 0.25 mile to Cluster Springs, cross railroad track, and turn left onto Alton Road. Proceed 0.8 mile on this road to fork with tobacco barn in the V and take right-hand fork. Proceed 1.35 miles, keep straight ahead at crossroads, and continue 1.25 miles farther to another fork about 400 feet west of J. E. Crawley's service station. Take right-hand fork 0.25 mile and turn right at a T-road intersection. Proceed about 250 feet to summit of grade and station site. Station is about 0.25 mile west of J. E. Crawley's house, about 250 feet north of east-and-west dirt road, 28 feet east of center line of another dirt road, and 22 feet northeast of 10-inch pine tree in fence corner. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at the southeast corner of cultivated field, on 4-foot embankment, 15 feet north of center line of south leg of Y-intersection, about 100 yards northeast of road intersection, and approximately 0.2 mile from station in azimuth $322^{\circ}44'02''$. No. 2 is 55 feet south of 10-inch pine tree in fence corner, 12 feet east of center line of road, and 82.10 feet from station in azimuth $346^{\circ}14'$. No. 3 is 0.5 foot west of fence, 78 feet north of 10-inch pine tree in fence corner, 12 feet east of center line of road, and 75.55 feet from station in azimuth $136^{\circ}26'$.

Hagers Mount (Person County, R. D. Horne, 1933).—About 5 miles a little east of north of Roxboro, $11\frac{1}{4}$ miles west-southwest of Virgilina, and $5\frac{1}{4}$ miles south of the Virginia-North Carolina State line, on a small hill known as "Hagers Mount". To reach from the junction of routes 57 and 501 in Roxboro, go north 3.5 miles on route 501 and turn left onto dirt road. Proceed north 1.6 miles toward Woodsdale or 0.25 mile beyond top of grade, and turn left (west) onto a rough country road at a cabin on left. Continue 0.5 mile keeping right-hand road just beyond the cabins, and proceed 0.3 mile farther to the end of truck travel at a dim trail on the right and pine with a triangular blaze. Proceed on foot up main left trail about 150 yards to pine with triangular blaze on the left. Take right-fork trail from this point and follow blazes to diamond-shaped blaze at foot of rocky-topped hill. Station is on rock at northwest side of top of this hill. Marked by standard station disk in rock, note 2. Reference mark no. 1 is standard reference disk in bedrock, note 12a, in the highest point of the rock, 7.68 meters (25.2 feet) from station in azimuth $213^{\circ}09'$. Reference mark no. 2 is standard reference disk in boulder, note 12c, 25 yards west of northwest corner of the only house in the clearing near road leading to station, and approximately 0.5 mile from station in azimuth $298^{\circ}48'07''$. Reference mark no. 3 is standard reference disk in bedrock, note 12a, in highest point of the rock, and 6.86 meters (22.5 feet) from station in azimuth $104^{\circ}41'$.

Leasburg (Caswell County, R. D. Horne, 1933).—In village of Leasburg, on route 48, midway between Yanceyville and Roxboro, on land of F. B. Newman. To reach from Roxboro, go west 11 miles on route 48 to Leasburg, then continue about 200 yards west on same road to Newman's house, a large yellow house on south side of road. Station is in barnyard, about 100 feet west of house, about 75 yards south of route 48, 20 feet west of northwest corner of garage, and 30 feet northwest of 48-inch oak tree, the most westerly of several large oaks in yard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on 6-foot embankment, 24 feet south of center line of route 48, 0.5 foot north of fence, 5 feet east of fence corner, 75 yards west of drive to Newman's house, and 235.35 feet (slope) from station in azimuth $157^{\circ}07'$. No. 2 is 16 feet west of center line of drive to Newman's house, 24 feet south of center line of route 48, 0.5 foot north of fence, 1.0 foot west of fence corner, and 259.91 feet (slope) from station, in azimuth $210^{\circ}38'$. No. 3 is 0.25 mile north of Leasburg school, 40 feet east of center line of road, 1.0 foot west of the northwest corner of tobacco barn, and approximately 0.5 mile from station in azimuth $215^{\circ}50'43''$. To reach this reference mark from station, go east about 0.3 mile on route 48 from point opposite station site and turn left onto dirt road with a sign "Semora". Follow this road 0.4 mile to mark.

Roxboro (Person County, R. D. Horne, 1933).—On grounds of Roxboro water works at south side of town. To reach from the courthouse, go south 0.6 mile on route 501 to right-hand asphalt road reached just after passing water tank on left. Proceed along this road about 250 feet, and turn left for 0.4 mile to pumping plant on top of hill. Station is about 125 feet southwest of filtration plant building, 126.2 feet south of the center of the water tank on west side of this building, about 75 feet southwest of the southwest corner of settling basin, and 30 feet west of dirt road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in outcropping bedrock or boulders, notes 12a or 12c. (No distinction apparently having been made.) No. 1 is 64.4 feet southeast of southwest corner of settling basin, 29.3 feet south of southeast corner of same basin, and 87.87 feet from station in azimuth $251^{\circ}52'$. No. 2 is in a boulder in the front yard of Amanda Bailey, 20 meters (66 feet) west of front porch entrance on west side of house, 17 meters (56 feet) east of center line of route 501, and approximately 0.5 mile from station in azimuth $265^{\circ}18'50''$. No. 3 is 50 feet southwest of center of water tank, 42.6 feet northwest of fire plug which is southwest of plant on west side of settling basin, and 82.32 feet from station in azimuth $164^{\circ}39'$. No. 4 is 27 feet south-southwest of southwest leg of the water tank, 20 feet north of 6-inch hickory tree on fence line, in boulder under fence, and 94.67 feet (slope) from station in azimuth $161^{\circ}26'$. Water tank is 126.2 feet from station in azimuth $177^{\circ}47'$. Another water tank is 0.5 mile from station in azimuth $239^{\circ}03'44''$.

Allen (Person County, R. D. Horne, 1932).—About 3.8 miles south of center of Roxboro, on property of Mrs. R. A. Allen. To reach from Roxboro, go south 3.5 miles from courthouse on route 501, turn right (west) onto dirt crossroad, proceed 0.45 mile, turn left onto main north-and-south dirt road, pass church on right, continue 0.35 mile, turn left (east) onto dirt T-road, and follow about 36 yards to top of grade and station site. Station is 20 feet south of center line of dirt T-road, and 36 yards east of intersection of this road and main north-and-south dirt road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks nos. 1 and 2 are standard reference disks in limestone outcrops, note 12b. No. 1 is in wheat field, in outcrop about $1\frac{1}{2}$ by 4 feet in size, and 243.50 feet (slope) from station in azimuth $313^{\circ}53'$. No. 2 is in southwest corner of field with few patches of cultivation, in outcrop about 16 by 18 inches in size, 10 yards north of northeast corner of strip of woods, 15 yards east of center line of north-and-south dirt road, and approximately 0.2 mile from station in azimuth $47^{\circ}46'55''$. Reference mark no. 3 is standard reference disk in concrete, note 11a, in northeast corner of road intersection, 23.5 feet east of center line of north-and-south dirt road, 15.5 feet north of center line of T-road which passes station, and 104.02 feet (slope) from station in azimuth $112^{\circ}40'$.

Laws (Orange County, R. D. Horne, 1933).—About 11 miles north of Hillsboro and 13 miles southwest of Roxboro, on land of Mrs. James Laws, jr. To reach from Hillsboro, go north 9.6 miles on route 14, and turn right onto gravel road at sign "Roxboro 18 miles". This road is 3.7 miles south of county line. Proceed along this road 0.75 mile and turn left at a T-road with sign "Roxboro 17 miles".

Proceed 2.1 miles, continuing straight ahead at T-road on left for 0.65 mile, or 0.3 mile east of gas station and group of buildings, to the summit of grade and station site. Station is in grove of pine trees, about 100 yards south of Orange-Person County line, 165 feet north of road, and 27 feet south-southeast of 10-inch pine tree with triangular blaze on east side. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in boulders, note 12c. No. 1 is in top of large boulder that projects 3 feet above ground, 80 feet north of road, 55 feet west of pine grove, and 84.38 feet from station in azimuth $8^{\circ}07'$. No. 2 is in top of boulder about 2 feet square projecting about 1 foot above ground, 225 feet south of road, 150 feet southeast of white house, at east edge of pine grove, and approximately 0.35 mile from station in azimuth $45^{\circ}28'05''$. No. 3 is in top of large boulder that projects about 4 feet above ground, at west edge of pine grove, 165 feet north of road, and 125.11 feet from station in azimuth $82^{\circ}07'$.

Red Mount (Durham County, R. D. Horne, 1933).—About 1.4 miles north-northeast of Rougemont, and $1\frac{1}{4}$ miles south-southeast of Roxboro, on summit of what is known as "Red Mount". To reach from Roxboro, go south about $1\frac{1}{2}$ miles on route 501 to Durham County line. Continue south 1.5 miles on route 501, and turn left onto asphalt road at arrow sign "Surl Church 12 miles". This junction is about 17 miles north of Durham on route 501. Follow this road 0.15 mile, cross railroad at Rougemont, continue straight ahead 0.5 mile, turn left into lane or dim road along east side of large white house opposite small yellow house on right at point where paved road starts downgrade. Proceed 0.15 mile, turn right at T-road intersection, go about 50 feet, then turn left towards woods, and follow winding road about 0.35 mile to Nat Parker's house. Continue southeast about 500 feet to tobacco barn, and straight ahead on dim road through orchard where main road turns to right around tobacco shed. Proceed about 300 yards to edge of woods, following blazes 0.2 mile to the top of hill, where tree with triangles blazed on east and west sides is on east side of the road. Station is 7.10 meters (23.3 feet) east of double-blazed tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is at ridge of hill, 14.435 meters (47.36 feet) from station in azimuth $284^{\circ}07'$. No. 2 is in isolated outcrop, 35.365 meters (116.03 feet) from station in azimuth $172^{\circ}05'$. No. 3 is in top of flat rock outcrop, 1 meter (3 feet) south of center of road leading to station, about 80 meters (262 feet) southwest of tobacco barn, 100 meters (328 feet) east-northeast of Parker's house, 1.5 meters (5 feet) north of lone oak tree, and approximately 0.5 mile from station in azimuth $5^{\circ}29'35''$.

Hillsboro (Orange County, R. D. Horne, 1933).—About $1\frac{1}{2}$ miles southwest of Hillsboro, on highest part and western end of the Occoneechee Mountains on property of Scott Gates. To reach from Hillsboro, go south across the Eno River on route 70 to its junction with route 14, and then bear right 0.65 mile on route 14 to fork with a sign "Atlantic Flash" in the V of the forks. Take right-hand gravel fork and proceed 0.8 mile to dirt road just beyond large oak with a triangular blaze on the left. Turn right and go about 100 yards to sharp right turn, and follow this field road about 250 yards along south edge of timber. Go through wire gate at this point, and follow road through pasture about 170 yards to left turn and drawbar gate. Pass through gate and proceed 200 yards to left turn at crossroads at a small double tree with triangular blaze. After turning left, go about 150 yards to dim road to left, and follow road along ridge about 600 yards to station site. Station is 13 meters (43 feet) southeast of 16-inch post oak, and 9.5 meters (31 feet) east of twin chestnut oak 2 feet in diameter at its fork. There is a 6-inch hickory between station and post-oak tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in stone outcrops, note 12a. No. 1 is in top of a 5 by 9-foot stone which projects 3.9 feet above ground, in a line with an aluminum water tank at foot of hill in town of Hillsboro and station, and 22.16 meters (72.7 feet) from station in azimuth $221^{\circ}52'$. No. 2 is in a depression about 5 feet below station, in top of 3 by 4-foot granite rock projecting 2 feet out of ground, 11 meters (36 feet) south of the center line of road to station, and 24.99 meters (82.0 feet) from station in azimuth $294^{\circ}44'$. Reference mark no. 3 is standard reference disk in concrete, note 11a, located across road from cleared field on north side of road, 11 paces south of center line of graded road, about 6 feet south of drainage ditch, 137 paces west-southwest of road leading from graded road to station, and approximately 0.3 mile from station in azimuth $327^{\circ}04'17''$. This mark is not visible from ground without

clearing. Azimuth from the station to left edge of white standpipe in Hillsboro is $221^{\circ}57'26''$ and to right edge of same standpipe is $222^{\circ}10'10''$.

Hunt (Durham County, R. D. Horne, 1933).—About $8\frac{1}{2}$ miles north-northwest of center of Durham, 7 miles south-southwest of Rougemont, and 10 miles east-northeast of Hillsboro, on land of Gattes Hunt. To reach from downtown Durham, go north about 6 miles on route 501 and cross the Eno River. Continue north 3.25 miles on route 501 or 0.45 mile beyond a school on left, turn left at a gravel crossroads with arrow sign "Hillsboro 15 miles", follow gravel road 2.4 miles to another crossroads with arrow sign "Durham 9 miles", turn left, follow this road 0.25 mile, turn right onto T-road to the southwest opposite lane leading to church on left, and continue 0.55 mile to Negro hut belonging to J. H. Richards on right side of the road. Station is on high ground, about 350 yards back of Richards' house, on north edge of cultivated field, at edge of woods, and 25 feet north of path leading to Russell School. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in boulders, note 12c. No. 1 is 10 feet south of path leading into woods to Russell School, 35 feet southwest of 18-inch oak tree, and 65.00 feet from station in azimuth $270^{\circ}59'$. No. 2 is in the cultivated field, about 175 feet north of timber line, 100 feet north of north-and-south fence line, about 150 yards north of road, and 0.25 mile from station in azimuth $7^{\circ}46'51''$. No. 3 is 5 feet east of 2-foot oak tree, and 109.52 feet from station in azimuth $112^{\circ}15'$. Azimuth from station to northwest corner finial of chapel tower of Duke University is $357^{\circ}59'12''$.

Durham (Durham County, R. D. Horne, 1933).—On roof of the Washington Duke Hotel, in southwest corner of roof, 5.65 feet east of southwest inside corner of coping. Marked by standard disk station mark set in concrete beneath tar covering. Reference marks are standard reference disks set in roof coping. No. 1 is 8 inches east of inside of coping, 3 feet north of southeast inside corner of coping, and 59.05 feet from station in azimuth $285^{\circ}53'$. No. 2 is 10 inches west of inside edge of coping, 16.85 feet southwest of west corner of penthouse, 28.5 feet northeast of southwest inside corner of coping, and 24.75 feet from station in azimuth $183^{\circ}03'$. Azimuth from station to northwest corner finial of chapel tower of Duke University is $99^{\circ}42'19''$; and to water tank marked "Chesterfield Cigarettes", $119^{\circ}41'30''$.

Chapel Hill (Orange County, R. D. Horne, 1933).—About $2\frac{1}{4}$ miles south of Chapel Hill, on land of Homer Bennet. To reach from Chapel Hill, go south from main street of town 1.65 miles on United States route 15 and turn left onto dirt road at south end of bridge over Morgan Creek. Follow this road 0.4 mile, take left-hand fork, proceed 0.25 mile to another left fork, and follow this 0.25 mile to old abandoned church at top of grade. Turn left onto dim road leading northeast past church and through woods, and go about 180 yards to an 18-inch pine on right with triangular blaze. Station is in small clearing with a few small pine trees, at summit of prominent hill, and 135 feet northeast of the 18-inch pine. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on east slope of hill, 70 feet north of 30-inch oak tree in edge of woods, and 92.78 feet (slope) from station in azimuth $299^{\circ}12'$. No. 2 is on ridge of hill, and 78.45 feet from station in azimuth $211^{\circ}48'$. The Bell Tower of the University of North Carolina, in Chapel Hill, is about 2 miles from station in azimuth $180^{\circ}16'32''$, and will be visible from ground with a small amount of clearing.

Durham north base (Durham County, C. I. Aslakson, 1932).—About 3 miles southeast of Durham. To reach from Durham, go east 1 mile from post office on Main Street to Allston Avenue. Turn right (south), proceed 0.1 mile, keep straight ahead at arrow "Lowes Grove 6 miles", and continue 2.2 miles to crossroads about 25 feet beyond railroad crossing. Turn left and go 0.25 mile to station site. Station is 22 feet north of center line of dirt road, and 25 feet south of south rail of spur line to loading trestle. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 28 feet north of center line of dirt road, 25 feet south of south rail of the spur line at first pier of loading trestle, and 86.60 feet from station in azimuth $248^{\circ}31'$. No. 2 is about 7 meters (23 feet) west of west rail of railroad, 10 meters (33 feet) east of center line of macadam road, in narrow strip of land between railroad and highway, about 30 meters (98 feet) west of grade crossing, and approximately 0.5 mile from station in azimuth $14^{\circ}31'03''$. No. 3 is 30 feet north of center line of dirt road, 38.5

feet south of south rail of main track, and 303.95 feet from station in azimuth $75^{\circ}53'$.

Durham south base (Durham County, C. I. Aslakson, 1932).—About $7\frac{1}{4}$ miles south of Durham, on right-of-way of the Durham and Southern Railway, at first curve south of station Lowes Grove. To reach from post office in Durham, go east one mile on Main Street to Allston Avenue, turn south 0.1 mile to point where route 70 turns left, and continue straight ahead on Lowes Grove road 2.2 miles to railroad crossing. Continue straight ahead (south) from this point on same road 4.0 miles to junction with route 54 at Lowes Grove. Continue straight ahead 0.45 mile to dirt road to southwest and follow this road 0.45 mile to Durham and Southern Railway tracks. Cross tracks, turn right (north), and proceed about 200 yards along railroad right-of-way to station site. Station is on line with west rail to north of curve, 45 feet west of center line of track, about 200 yards north of road crossing, and 55 feet north of fourth telephone pole north of crossing. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 100 feet south of fence near point of curve, opposite fifth telephone pole north of road crossing, 24 feet east of center line of track, and 112.60 feet (slope) from station in azimuth $215^{\circ}29'$. No. 2 is 15 feet north of highest point of an embankment at side of railroad, 25 feet east of center line of track, and 77.47 feet from station in azimuth $289^{\circ}15'$. No. 3 is 18 feet east of east rail of track, 150 feet south of center line of dirt road that crosses track, and approximately 0.15 mile from station, in azimuth $339^{\circ}41'12''$.

Durham middle base (Durham County, C. I. Aslakson, 1932).—About 5 miles south-southeast of Durham, on west edge of roadbed of the Durham and Southern Railway, opposite only curve in base line. To reach from Durham, go east 1 mile from post office on Main Street, and turn right (south) onto Allston Avenue. (Harris filling station is in southwest corner.) Keep straight ahead on this road (Lowes Grove Road) for 2.2 miles, and cross railroad and dirt road leading to station *Durham north base*. Continue on paved road 2.3 miles to faint wagon road running through woods to railroad and follow this road to station site. Station is 7.27 meters (23.9 feet) west of center of west rail, and at point of intersection of two tangents to west rail. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 25 yards south of white milepost, 5.1 meters (17 feet) east of edge of railroad cut, 9.08 meters (29.8 feet) east of center of east rail, and 47.76 meters (156.7 feet) from station in azimuth $207^{\circ}34'$. No. 2 is 2.4 meters (8 feet) east of edge of cut, 6.85 meters (22.5 feet) east of center of east rail, and 55.15 meters (180.9 feet) from station in azimuth $359^{\circ}15'$.

Carpenter (Wake County, R. D. Horne, 1933).—About 7 miles a little west of north of Apex, three-fourths mile north of Carpenter post office, and 6 miles west-northwest of Cary, on land of J. W. Hearst. To reach from Cary proceed to junction of routes 1 and 70, go west and north 4.0 miles toward Durham on route 70, and turn left onto dirt road at south side of Morrisville railroad station at arrow "Carpenter 3 miles". Follow this road 1.4 miles, keep straight ahead at crossroads with arrow "Apex 5 miles", go 1.3 miles, turn right at a T-road, proceed along this road 0.25 mile or 0.1 mile beyond Goodhope Church, and turn right into field road just at far end of left bend in main road. This road leads to Mr. Lynn's house and station site, about 80 yards north of main road. Station is 55.2 feet east-southeast of center of chimney on Mr. Lynn's house, and 58.8 feet east of center of well on south side of house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at bend in dirt field road leading to house, 35 feet east of intersection of two field roads, and 143.75 feet from station in azimuth $297^{\circ}43'$. No. 2 is at northwest corner of the Goodhope Baptist Church, and approximately 0.25 mile from station in azimuth $342^{\circ}27'10''$. No. 3 is 18 feet south of center of well, and 88.50 feet from station in azimuth $61^{\circ}15'$. Azimuth from station to water tank in Morrisville is $299^{\circ}42'24''$; and to Apex municipal water tank, $350^{\circ}05'35''$.

Tipplers (Wake County, R. D. Horne, 1933; 1934).—About $8\frac{1}{2}$ miles north of downtown Raleigh, 11 miles northeast of Cary, 4 miles northwest of Millbrook, and on land of Mrs. Mary Penny. To reach from Capitol Square in Raleigh, go east and north 3.1 miles on route 1 or 0.2 mile beyond Crabtree Creek crossing, turn left (northwest) onto gravel T-road at arrow sign "Bayleaf School 9 miles", and proceed 1.7 miles, keep straight ahead on main road at left fork and continue

2.0 miles, take left fork with arrow "Bayleaf School 6 miles" and proceed 2.85 miles to Tippers Crossroads, and continue straight ahead 0.3 mile on main road to station site at top of grade. Station is 47 feet west of center line of road and 44 feet southwest of twin oaks. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 was 45.6 feet northeast of twin oaks, 20 feet northeast of center line of road, and 84.65 feet from station in azimuth $231^{\circ}26'$. No. 2 is 21 feet north of center line of road and 91.45 feet from station in azimuth $343^{\circ}32'$. No. 3 is 15 feet north of center line of road, directly opposite northeast corner of old tenant house on south side of road, and approximately 0.3 mile from station in azimuth $49^{\circ}45'04''$. This mark is visible from ground by using a 15-foot range pole. In 1934: Reference mark no. 1 had been destroyed by widening of highway. A standard station disk (not stamped) in concrete was established 125 yards north of Tippers Crossroads, 4.6 feet northwest of northwest corner of L. R. Lassiter's stock lot, 17 feet southwest of center line of dirt road which leads northwest from Oxford Road just north of Lassiter's barn, about 70 feet west of center line of Oxford Road, and about one-fourth mile from station in azimuth $0^{\circ}06'28''$.

Cary High (Wake County, R. D. Horne, 1933).—In the city of Cary, in area enclosed by a group of buildings of the Cary High School, in front of west rear door of main high-school building, 50 feet south of south side of building, 63.3 feet southeast of southwest corner of building, and 111.2 feet south-southwest of southeast corner of building. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 25 feet east of center line of first street east of high school, about 0.1 mile north of street running east from high school, and approximately 0.25 mile from station in azimuth $239^{\circ}35'56''$. No. 2 is at east edge of high-school grounds, at south edge of drive into grounds, 18 feet east-northeast of northeast corner of Marcus Dry Building, and 258.95 feet from station in azimuth $283^{\circ}22'$. No. 3 is 3 feet north-northeast of northeast corner of gymnasium, and 141.00 feet from station in azimuth $19^{\circ}54'$. *Cary reference mark* (see description thereof) is 28.868 meters (94.71 feet) from station in azimuth $217^{\circ}27'$.

Raleigh 2 (Wake County, R. D. Horne, 1933).—In Raleigh, on roof of North Carolina Bank and Trust Co. Building, in approximately the same position as station *Raleigh* which could not be recovered due to a new roof having been built over it. Following distances are from station to roof of elevator house: 1.96 meters (6.4 feet) to northwest corner, 4.74 meters (15.6 feet) to southwest corner, 5.87 meters (19.3 feet) to southeast corner, and 3.31 meters (10.9 feet) to southwest corner of chimney in northeast corner of roof. Station mark is a standard disk station mark, note 1a. *Raleigh reference mark* (see description thereof) is 20.40 meters (66.9 feet) from station in azimuth $295^{\circ}56'$. Reference mark no. 1 is a standard reference disk cemented in west face of chimney on top of elevator house, 0.315 meter (1.03 feet) north of south corner of chimney, 0.34 meter (1.1 feet) above tarred roof, and 3.05 meters (10.0 feet) from station in azimuth $267^{\circ}49'$. Azimuth from station to stack of Dix Hill State Hospital is $58^{\circ}48'59''$; and to spire of Edenton Methodist Church, $144^{\circ}57'28''$.

Garner (Wake County, R. D. Horne, 1933).—About $6\frac{1}{4}$ miles south-southeast of the center of Raleigh, and $1\frac{1}{4}$ miles east-southeast of the town of Garner, on land owned by L. C. Yeargin and occupied by B. T. Hunt, tenant. To reach from Raleigh, go south and east $6\frac{1}{4}$ miles on route 70 to railroad station at Garner. Continue southeast 0.9 mile on route 70 to dirt crossroads, and follow road leading to the right 0.35 mile to railroad tracks. Turn right on the main road across tracks and continue about 50 feet to lane leading to Hunt's house. Turn right into lane and go about 125 feet to the station site. Station is on line between yard and cultivated field, 75 feet northwest of northwest corner of Hunt's house, and 58 feet southwest of 36-inch oak tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark projects 5 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 13 feet northeast of center line of drive to Hunt's house, 12 feet east-southeast of 24-inch oak at edge of drive, about 85 feet south of center line of road, and 133.05 feet (slope) from station in azimuth $226^{\circ}46'$. No. 2 is 2 feet northwest of the southwest corner of Hunt's house, and 130.72 feet from station in azimuth $339^{\circ}10'$. No. 3 is 25 feet southwest of the center line of route 70, about 60 yards northwest of crossroads that were passed in reaching the station, 30 feet southeast of barn on southwest side of highway, and approximately 0.5 mile from

station in azimuth $143^{\circ}15'18''$. Spire of the Methodist church in Garner is approximately 1 mile from station in azimuth $117^{\circ}22'19''$. Azimuth from station to municipal water tank in Cary is $118^{\circ}57'31''$.

Knight (Wake County, R. D. Horne, 1933).—About $9\frac{1}{4}$ miles a little north of east of center of Raleigh, $10\frac{1}{2}$ miles north of Clayton, and 6 miles a little north of west of Wendell, on property of S. D. Griffin. To reach from Capitol Square in Raleigh, go east 10.0 miles on route 90, cross Neuse River at 6.3 miles, pass Cooper Atlantic gas station on left side of highway at 9.3 miles, and turn left at dirt crossroads with arrow signs "Knightdale 1 mile" and "State Route 59, 7 miles." Proceed north 0.4 mile on this road to station site at point where main road turns to left. Station is 34 feet south of twin oak, 70 feet south of center line of road at fork, and 44.5 feet south of blazed pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 75 feet west of center line of road at left turn in road, 17 feet north of center line of road, and 129.28 feet from station in azimuth $47^{\circ}17'$. No. 2 is 7 meters (23 feet) south of center line of dirt road leading west from station, about 50 meters (164 feet) east of Negro house on south side of road, 30 meters (98 feet) northwest of tobacco shed, and approximately 0.25 mile from station in azimuth $94^{\circ}12'05''$. No. 3 is 19 feet south of center line of dirt road, 9 feet east of 18-inch oak tree on south side of road, and 107.80 feet from station in azimuth $172^{\circ}44'$. Azimuth from station to Clayton municipal water tank is $356^{\circ}30'38''$.

Clyde (Johnston County, R. D. Horne, 1933).—About 14 miles east-southeast of Raleigh, $6\frac{1}{2}$ miles northeast of Clayton, and 4 miles south-southwest of Wendell, on land of J. W. Harris. To reach from Clayton, go northeast 2.25 miles from northwest side of railroad station on main gravel road, and cross Neuse River on covered bridge. Continue 1.65 miles to fork and keep main road to right, follow arrow "Archer" from this fork, continue 2.65 miles to Archers crossroads and turn left (northwest) following arrow "Wendell." Proceed 2.6 miles or about 100 yards beyond T-road on right with arrows "Wendell 5" and "Selma 15", and turn left at arrow "Shotwell 5 miles." Proceed about 500 feet to top of grade and take left fork at two mail boxes, proceed about 150 feet to top of grade and station site. Station is 23 feet south of center line of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 16 feet south of center line of road, 37 feet northeast of northeast corner of an empty house (probably a school building), and 359.20 feet from station in azimuth $53^{\circ}48'$. No. 2 is 20 feet west of center line of road, 41 feet southeast of $2\frac{1}{2}$ -foot oak tree which is one of a prominent group north of station, and 413.00 feet from station in azimuth $150^{\circ}34'$. No. 3 is 8 meters (26 feet) north-northeast of center line of dirt road at west corner of churchyard, about 25 meters (82 feet) west of west corner of church, 7 meters (23 feet) west of covered well, and approximately 0.35 mile from station in azimuth $119^{\circ}58'22''$. Azimuth from station to municipal water tank at Clayton is $37^{\circ}23'33''$; and to tank at Wendell, $198^{\circ}04'14''$.

Clayton (Johnston County, R. D. Horne, 1933).—About $1\frac{1}{4}$ miles west-southwest of Clayton, on land owned by Henry Poole and occupied by Ed Hardee. To reach from Clayton, go southeast 1 block on route 70 from Clayton Banking Co. to dirt street at Barbour department store. Turn right onto this street and continue 1.05 miles to fork with school building on left. Continue straight ahead on right fork 0.95 mile to Ed Hardee's house on north side of road. Station is in barnyard across road from Hardee's house, 25 feet south of center line of road, 26 feet east of center of well, 46.7 feet west-southwest of northwest corner of barn, and 54.0 feet northwest of southwest corner of barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is 4 inches below surface. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 2 feet west of front steps of Hardee's house, 10 feet south of south (front) side of house, and 143.57 feet from station in azimuth $211^{\circ}59'$. No. 2 is 0.5 foot east of fence, 25 feet south of center line of road, and 224.55 feet (slope) from station in azimuth $92^{\circ}40'$. No. 3 is 22 feet south of center line of east-and-west road, 45 feet west of center line of north-and-south road, 13 feet northwest of north corner of old gas filling station, and 0.2 mile from station in azimuth $93^{\circ}14'36''$. Azimuth from station of ball on top of Clayton municipal water tank is $247^{\circ}25'34''$. A small amount of clearing will be necessary to see reference mark no. 3 and water tank from ground.

Hocutt (Johnston County, R. D. Horne, 1933).—About 8 miles east-northeast of Clayton and 7 miles south-southeast of Wendell, on land belonging to Dr. Hocutt, of Clayton, and occupied by C. Fowler. To reach from Clayton, go north-east on main graveled road 2.25 miles from northwest side of railroad station and cross Neuse River on covered bridge. Continue 1.65 miles and keep main right fork (following the "Archer" arrow) 2.65 miles to Archer crossroads. Turn right (east) and follow arrow "Route 23, 9 miles" for 2.6 miles or 0.9 mile beyond crossing of two creek bridges to another crossroads. Turn right and follow arrow "Selma 12 miles" for 1.1 miles to station site at top of grade. Station is in grassy uncultivated area, 4 paces south of young pine growth, 28 paces east-northeast of triangle-blazed pine tree on north edge of the main road, and 17.8 meters (58 feet) northeast of center line of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 0.1 mile east of intersection of the Selma-Wendell dirt roads, 26 paces east of northeast corner of Mr. Andrew Wise's residence, 6 paces south of center line of dirt road leading to Wilson, and approximately 0.3 mile from station in azimuth $310^{\circ}33'15''$. No. 2 is across road from the station, on edge of cultivated field, 5.2 meters (17 feet) southwest of center line of road, and 40.96 meters (134.4 feet) from station in azimuth $351^{\circ}53'$. No. 3 is on south edge of pine woods, 30 paces west of blazed 8-inch pine tree, 6.2 meters (20 feet) north of center line of road, and 54.06 meters (177.4 feet) from station in azimuth $122^{\circ}27'$.

Hall (Johnston County, R. D. Horne, 1933).—About 4 miles southeast of Clayton, and $7\frac{1}{4}$ miles north-northwest of Smithfield, on land owned by Exum E. Hall and occupied by W. N. Hoggard. To reach from Clayton, go southeast 4.1 miles on route 70 from the Clayton Banking Co. to Hoggard's house on west side of highway. Station is on edge of cotton field, 76.5 feet east of center line of route 70, 44 feet southeast of the southeast corner of barn, and 4 feet north of prolongation (eastward) of north side of garage. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark is about 3 inches below ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 31.5 feet east of center line of route 70, 135 feet southeast of southeast corner of Hoggard's house, 1 foot north of telephone pole, and 226.0 feet from station in azimuth $1^{\circ}12'$. No. 2 is 19 feet west of center line of route 70, on line with the south side of the barn on the east side of highway, 85 feet north-northeast of northeast corner of Hoggard's house, and 101.68 feet from station in azimuth $100^{\circ}12'$. No. 3 is 18 feet south of center line of dirt road, 36 feet west of northwest corner of house, 135 feet east of center line of route 70, and approximately 0.6 mile from station in azimuth $170^{\circ}48'14''$.

Albert (Johnston County, R. D. Horne, 1933).—About $3\frac{1}{4}$ miles north of Four Oaks, and $4\frac{1}{4}$ miles west-southwest of Smithfield, on land owned by Albert Johnson. To reach from courthouse in Smithfield, go northwest 0.65 mile on United States route 70 to point where it turns to left, and continue straight ahead on gravel road (temporary route 210) 1.65 miles to fork. Turn left with temporary route 210, continue 1.75 miles, take right-hand fork, and proceed 1.0 mile or 0.6 mile beyond Pisgah Church on left to dim sandy road to left which is just east of small service station on left, and 0.2 mile east of Johnston County Home. Turn left (south) onto this sandy road, and proceed 0.5 mile to station site. Station is about 150 feet southeast of J. A. Langdon's house, 15 feet east of center line of road, on line with south side of and 14 feet west of southwest corner of tobacco barn, and 22 feet east-northeast of 10-inch persimmon tree in southeast corner of fenced garden. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is 4 inches below surface. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at south edge of cultivated field in front of main buildings of Johnston County Home, 18 feet west of center line of east drive into grounds, 38 feet north of center line of highway, 4 feet west of 8-inch pecan tree, and approximately 0.55 mile from station in azimuth $172^{\circ}37'07''$. No. 2 is at southwest corner of barnyard, 10 feet southwest of 15-inch oak tree in barnyard, 48 feet south of south side of barn, 36 feet east of 36-inch oak tree in southeast corner of Langdon's yard, and 199.95 feet from station in azimuth $189^{\circ}50'$. No. 3 is in narrow strip of woods between sand road and cultivated field, 15 feet northwest of 24-inch pine tree, 78 feet east of center line of sand road through woods, 42 feet southwest of fence corner, and 170.20 feet from station in azimuth $359^{\circ}34'$.

Selma (Johnston County, R. D. Horne, 1933).—About 3 miles north of Selma, and $5\frac{1}{4}$ miles northeast of Smithfield, on land owned by B. F. Barnes and occupied

by Herman Anderson. To reach from Selma, follow North Massey Street to high school, turn left for one block, then right onto Wendell Road, proceed along dirt road 1.65 miles, keep straight ahead at crossroads, and follow arrow "Wendell 16 miles" for 1.05 miles from crossroads to station site on right side of road near Anderson's house. Station is 69 feet north of north side of house, 18 feet southwest of northwest corner of corn crib, and 34 feet east of center line of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark is 4 inches below surface. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 2 feet east of southeast corner of hog pen in center of cultivated field, 10 feet north of center line of dirt road running through field, and 283.99 feet from station in azimuth $68^{\circ}52'$. No. 2 is 7 meters (23 feet) west of center line of Wendell Road, 1 meter (3 feet) northeast of northeast corner of tobacco-drying shed, and approximately 0.5 mile from station in azimuth $146^{\circ}08'58''$. No. 3 is on west edge of cornfield, 20 feet east of center line of Wendell Road, and 171.12 feet from station in azimuth $142^{\circ}44'$.

Sanders (Johnston County, R. D. Horne, 1933).—About $5\frac{1}{4}$ miles southeast of Four Oaks and 9 miles west-southwest of Smithfield, on land of Rufus W. Sanders. To reach from the intersection of United States route 70 and North Carolina route 22 in Smithfield, go southwest 4.4 miles on route 22 to the junction with route 23. Turn left onto route 23 and proceed south 5.7 miles, or 1.75 miles beyond bridge over Hanna Creek to Sanders' house on south side of highway. Station is in the yard of Sanders' house, about 100 feet southwest of house, 48 feet east of center line of highway, 48 feet north of northwest corner of tobacco barn, and 34 feet southwest of 24-inch oak tree which is the most southwesterly of several large oak trees in yard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 24 feet east of center line of highway, 1 foot northeast of fence corner, about 250 feet west-southwest of Sanders' house, 36 feet southeast of east end of culvert under highway, and 248.32 feet from station in azimuth $352^{\circ}27'$. No. 2 is about 100 yards northeast of small house on west side of highway, at jog in right-of-way fence, 25 feet east of center line of highway, and approximately 1.25 miles from station in azimuth $355^{\circ}16'48''$. No. 3 is across the highway from Sanders' house, 30 feet west of center line of highway, 15 feet north of center line of lane leading into woods, 6 feet south of 24-inch oak tree on highway right-of-way, and 187.43 feet (slope) from station in azimuth $135^{\circ}03'$.

Braswell (Johnston County, R. D. Horne, 1933).—About $5\frac{1}{4}$ miles southeast of Selma, $2\frac{3}{4}$ miles south-southeast of Pine Level, and 4 miles west of Princeton, on land owned by F. B. Braswell. To reach from Smithfield or Selma, go east about 3 miles from Smithfield on route 70, or west about 1 mile from Selma on route 301 to junction of routes 70 and 301. From this point, proceed southeast 5.8 miles on route 70 to dirt crossroads 0.3 mile beyond "Gerald Siding" sign on railroad. This point is 3.2 miles west along route 70 from Princeton High School. Here turn right (southwest), continue 1.6 miles, and turn right at T-road at an arrow "Smithfield 7 miles." Proceed about 100 yards, turn left (south) at another T-road, and go 0.55 mile to Willie Braswell's house on west side of road. Station is 27 feet southeast of center line of road, and 49 feet southeast of 2-foot oak tree on west side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 5 meters (16 feet) west of center line of dirt road, about south of barn on west side of road on edge of cultivated field, and approximately 0.20 mile from station in azimuth $347^{\circ}40'02''$. No. 2 is 12 feet southwest of center of stone chimney on south side of Braswell's house, and 112.65 feet from station in azimuth $81^{\circ}55'$. No. 3 is 22 feet northwest of center line of road, 41.2 feet northeast of northwest corner of Braswell's house, at southeast corner of barn on north side of house, and 115.00 feet from station in azimuth $140^{\circ}48'$. Azimuth from station to water tank at Selma is $142^{\circ}49'07''$.

Flowers (Johnston County, R. D. Horne, 1933).—About 17 miles southwest of Goldsboro, $13\frac{1}{2}$ miles south-southeast of Smithfield, and $6\frac{1}{4}$ miles northeast of Newton Grove, in the yard of the Ebenezer Church. To reach from Goldsboro, go south about 5 miles on North Carolina route 40 to its junction with route 102. Turn right onto route 102 and continue southwest 12.7 miles to a T-road on right with a sign "Bentonville". Turn right onto this road and proceed 3.1 miles to crossroads, turn left and go 0.2 mile to the Ebenezer Church in the north angle of another crossroads. Station is in churchyard, 125 feet northwest of center line of

one road, 125 feet northeast of center line of other road, 54 feet north-northeast of north corner of church, 21 feet northwest of double 18-inch oak tree, and 15 feet southwest of drainage ditch. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 55 feet northeast of northeast corner of church, 22 feet south of center line of road, and approximately 0.35 mile from station in azimuth $270^{\circ}24'29''$. No. 2 is about 150 feet southwest of road intersection, 15 feet southeast of center line of road, 126 feet northeast of bridge over drainage ditch, and 228.70 feet from station in azimuth $272^{\circ}14'$. No. 3 is at the northwest end of first curve in road northwest of road intersection, 10 feet southwest of center line of road, 70 feet northwest of fence corner, and 251.15 feet from station in azimuth $95^{\circ}13'$.

Worley (Johnston-Wayne Counties, R. D. Horne, 1933).—About $3\frac{1}{2}$ miles a little east of south of Princeton, and 9 miles west of Goldsboro, on land of A. K. Worley. To reach from railroad station in Princeton, go east one block along south side of the track, and turn right. Follow this street and road 3.9 miles or 1.45 miles beyond small creek crossing and 0.3 mile beyond white house and red barn on left, and turn left onto dim road, along south side of fence just beyond three tobacco barns. Follow this road 0.3 mile to dim wood road coming in from left. Station is 23 feet east of blazed oak tree which is said to be on or near county line, and 67 feet east-southeast of road intersection. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on south edge of cultivated field, 50 feet west of its southeast corner, and 240.70 feet from station in azimuth $184^{\circ}45'$. No. 2 is 6 meters (20 feet) east of center line of north-and-south sand road opposite barn of George Gnontham, 0.15 mile north of crossroads on west side of barn, and approximately 0.7 mile from station in azimuth $266^{\circ}27'44''$. No. 3 is 11 feet south of center line of road leading to station, and 144.50 feet from station in azimuth $65^{\circ}57'$.

Dudley (Wayne County, R. D. Horne, 1933).—About 9 miles south of Goldsboro, in the village of Dudley, on the grounds of the Primitive Baptist Church. To reach from Goldsboro, go south about 9 miles on United States route 117 to crossroads at Dudley, turn left, proceed east 0.25 mile, cross railroad, and continue east 0.2 mile to station site. Station is 125 feet south of center line of road, 10 feet west of west edge of cotton field, and 45 feet southeast of southeast corner of church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 100 feet east along road from church, at southeast corner of yard of second house east of church on north side of road, 12 feet north of center line of road, and 225.00 feet from station in azimuth $239^{\circ}55'$. No. 2 is 15 feet north of center line of road that runs past church, across road from small yellow bungalow, and approximately 0.35 mile from station in azimuth $272^{\circ}29'20''$. No. 3 is opposite center of church, 15 feet north of center line of road, 50 feet west of driveway to house on north side of road, 12 feet west of 12-inch oak tree on north side of road, and 150.70 feet from station in azimuth $157^{\circ}27'$.

Goldsboro (Wayne County, R. D. Horne, 1933).—On main roof of Wayne National Bank Building in Goldsboro. Marked by standard disk station mark in north corner of roof, 6 feet southwest of northeast coping wall, and 10 feet southeast of northeast coping wall. Reference mark no. 1 is standard reference disk in concrete roof, 5 feet west of northeast coping wall, and 14.80 feet from station in azimuth $285^{\circ}14'$. Reference marks nos. 2 and 3 are standard reference disks in top of coping wall. No. 2 is 13.60 feet west of east inside corner of coping, and 35.65 feet from station in azimuth $303^{\circ}24'$. No. 3 is on northwest side of building, 25.65 feet west of inside of north corner, and 22.22 feet from station in azimuth $37^{\circ}27'$. *Goldsboro eccentric reference mark no. 4* (see description thereof) is 574.9 meters (1,886 feet) from station in azimuth $118^{\circ}27'28''$. Station *Goldsboro eccentric* (see description thereof) is 802.1 meters (2,632 feet) from station in azimuth $64^{\circ}16'17''$.

Beston (Wayne County, R. D. Horne, 1933).—Station is $8\frac{3}{4}$ miles east-southeast of Goldsboro, 4 miles west-northwest of Lagrange, and one-fourth mile south of Beston railroad station, on grounds of the Zion Church. To reach from Goldsboro or Lagrange, go east on route 70 about $9\frac{1}{2}$ miles from Goldsboro or 3.35 miles beyond crossing of Walnut Creek; or go west on route 70 about 4 miles from Lagrange or one-fourth mile beyond Wayne-Lenoir County line to dirt crossroad with arrow sign "Bests 2 miles". Follow this north road 1.6 miles to

Zion Church on east side of road. This point is reached one-fourth mile before crossing railroad. Station is 40 feet west of southwest corner and 54.7 feet southwest of northwest corner of church, and 57 feet north of sign "Zion" in front of church which is 10 feet northeast of center line of the road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 8 meters (26 feet) east of center line of road, about 200 yards north of railroad grade crossing at town of Bests, 12 meters (39 feet) west of west end of feed mill belonging to H. B. Eason, 11 meters (36 feet) south of small store also belonging to H. B. Eason, and approximately 0.3 mile from station in azimuth $183^{\circ}30'45''$. No. 2 is 71 feet north of center line of dirt road, 3 feet south of reinforced telephone pole, and 180.98 feet from station in azimuth $7^{\circ}53'$. No. 3 is 25.3 feet south of southeast corner of Negro house on west side of road, 46 feet south of center line of chimney on east side of house, 8 feet west of fence line corner, and 160.43 feet from station in azimuth $106^{\circ}41'$. The Holly Hill Church spire is 0.15 mile from station in azimuth $14^{\circ}19'36''$.

Whitehall (Wayne County, R. D. Horne, 1933).—About $1\frac{1}{4}$ miles southwest of Seven Springs, and $13\frac{1}{2}$ miles southeast of Goldsboro, on land owned by Will Uzzell estate. To reach from junction of United States route 70 and North Carolina temporary route 111 (Slocumb Street) in Goldsboro, go south and southeast 10.5 miles on route 111 to bridge over Neuse River. Turn left at south end of bridge and proceed 2.95 miles on route 111 to junction with route 117. Turn left and go 1.85 miles to second junction of routes 111 and 117. (This junction is about 1 mile west of Seven Springs on route 117.) Turn right on route 111 and continue 0.75 mile to station site. Station is at northwest corner of small pine grove, 30 feet east of center line of highway, 28 feet southwest of southwest corner of an abandoned house, 20 feet north of 10-inch oak tree with triangular blaze on west side, and 22 feet southeast of 2-foot oak tree on east edge of highway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 14 feet west of center line of highway, 130 feet south of row of trees along fence line, and 141.93 feet from station in azimuth $181^{\circ}57'$. No. 2 is 25 feet west of center line of highway, about 100 yards north of yellow house, 12 feet north of northeast corner of barnyard, and approximately 0.3 mile from station in azimuth $27^{\circ}15'00''$. No. 3 is 15 feet west of center line of highway, 88 feet northwest of 3-foot oak tree at southwest corner of pine grove on east side of highway, 100 feet south-southwest of 2-foot oak tree mentioned in description of station, and 113.35 feet from station in azimuth $55^{\circ}33'$. Distance between reference marks nos. 1 and 3 is 228.30 feet.

Brewer (Lenoir County, R. D. Horne, 1933).—About 8 miles west of Kinston and 4 miles east of Lagrange, on land owned and occupied by Miss Rachel Brewer. To reach from Kinston, go west from post office 6.8 miles on route 10 to yellow filling station just west of Falling Creek bridge. Turn right (northwest) onto dirt road and follow northwest 2.1 miles to top of hill. Turn south onto sandy farm road and go about 60 yards across fields to tobacco barn and station site. Station is 44.7 feet east of northeast corner and 45.1 feet east of southeast corner of tobacco barn, 27 feet north of timber line, and 132 feet west of center line of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in south corner of garden lot about 0.10 mile northeast of road leading past station, 1.5 meters (5 feet) northwest of center line of narrow field road that intersects dirt road 150 feet west of farmhouse on south side of road, and approximately 0.2 mile from station in azimuth $154^{\circ}58'29''$. No. 2 is on timber line, 19 feet west of center line of road, 55 feet north of an 18-inch blazed pine on west side of road, and 125.25 feet from station in azimuth $243^{\circ}12'$. No. 3 is 105 feet southwest of timber line, 40 feet east of tobacco barn, and 133.32 feet from station in azimuth $356^{\circ}48'$.

Deep Run (Lenoir County, R. D. Horne, 1933).—About 11 miles southwest of Kinston in the village of Deep Run, on lot owned by Mrs. Frances E. Sparrow. To reach from Kinston, go southwest 11.4 miles on route 11 to crossroads at Deep Run. Turn left one block to railroad, then turn left again and follow street along west side of railroad north 125 feet to station site. Station is between ruins of burned store and small white house, 70 feet west of center line of an abandoned railroad, 130 feet south of south side of white house, and 35 feet

For notes in regard to marking of stations see p. 135.

east of 24-inch hickory. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 5 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is across street from white house north of station, 26 feet west of center line of main track of railroad, 1 foot south of telephone pole, and 173.32 feet from station in azimuth $209^{\circ}55'$. No. 2 is at southwest corner of tobacco barn at north edge of cultivated field between main part of Deep Run and Deep Run High School, about 0.25 mile southeast of high school, 25 feet from dirt road running through field, 45 feet west of woven-wire fence, and approximately 0.3 mile from station in azimuth $211^{\circ}44'03''$. No. 3 is 22 feet south of center line of most southerly of two streets in village, 30 feet west of center line of main track of railroad, 2 feet east of telephone pole, and 146.58 feet from station in azimuth $355^{\circ}58'$.

Kinston (Lenoir County, R. D. Horne, 1933).—About $1\frac{1}{2}$ miles east of Kinston, on land of T. Spence. To reach from Kinston, go north on Queen Street one block from the Kinston Hotel, and turn east onto Washington Street. Keep straight ahead on this road 1.5 miles (passing brick school on right at 0.85 mile) to T-road on north with Mr. Spence's house in northeast angle. Station is about 35 yards east of Spence's barn, in hog yard, 37.2 feet northwest of 16-inch stump forming southeast corner of pen, 46.2 feet east of southeast corner of large concrete-block house, and 15.8 feet northeast of 2-foot, tall pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 13 paces east of northeast corner of St. Luke's Methodist Church (colored), 3 yards north of 30-inch oak, 5 paces east of center line of First Street in village of Georgetown, and approximately 0.2 mile from station in azimuth $317^{\circ}29'09''$. No. 2 is on south edge of Spence's cultivated field, 36 feet east of telephone pole at southeast corner of young orchard, 6 inches north of fence line, 18 feet north of center line of main road, and 252.7 feet from station in azimuth $6^{\circ}17'$. No. 3 is in hog yard, 2 feet east of west fence, 3 yards north of north side extended of tobacco barn, about 5 yards southwest of growth of holly bushes, and 174.4 feet from station in azimuth $123^{\circ}47'$. Azimuth from station to church spire about 0.2 mile from station is $319^{\circ}24'44''$.

Williams (Jones-Lenoir Counties, R. D. Horne, 1933).—About $8\frac{1}{2}$ miles south-southeast of Kinston, on land owned by Joe Williams and occupied by Alice Spence. To reach from post office in Kinston, go south 1.2 miles on Queen Street, turn left onto route 12, and proceed southeast about 8 miles to Jones-Lenoir County line where pavement changes from asphalt to concrete. Station is on county line, 27 feet west of center line of route 12. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 23 feet east of center line of route 12, and 123.58 feet from station in azimuth $297^{\circ}00'$. No. 2 is 6 meters (20 feet) east of center line of route 12, 6 meters (20 feet) south-southeast of center line of small bridge across ditch on east side of highway, at intersection of old Trenton Road with highway, and approximately 0.5 mile from station in azimuth $319^{\circ}48'03''$. No. 3 is 20 feet east of center line of route 12, 88.1 feet southwest of southwest corner of white house 90 feet east of highway, and 164.19 feet from station in azimuth $156^{\circ}06'$.

Hargett (Jones-Lenoir Counties, R. D. Horne, 1933).—About 11 miles northwest of Richlands and 15 miles south-southwest of Kinston, on or near the Jones-Lenoir County line. To reach from post office in Kinston, go south 15.6 miles on route 121 direct to station site. To reach from Richlands, go north 13.1 miles on route 121 or 3.45 miles beyond its junction with route 41 at Hargett's store direct to station site. Mark is in a grassy, sparsely timbered area, 53 feet east of center line of route 121, and in line with the Jones-Lenoir county-line signs on each side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11a. No. 1 is 33 feet west of center line of highway, 12 feet east of 16-inch pine tree, and 112.85 feet from station in azimuth $51^{\circ}49'$. No. 2 is 33 feet west of center line of highway, 2 feet west-southwest of 14-inch pine tree, and 143.95 feet from station in azimuth $143^{\circ}00'$. Reference mark no. 3 is a standard reference disk cemented in top of concrete culvert which crosses route 121, 6 yards east of center line of highway, and approximately 0.2 mile from station in azimuth $174^{\circ}04'21''$.

Humphrey (Jones County, R. D. Horne, 1933).—About 8 miles north-northwest of Richlands and 16 miles south of Kinston, on land owned by Clarence

Humphrey (J. E. Burney, tenant). To reach from the main corner in Richlands, go northwest 2.7 miles on route 24 to junction with route 121, and follow route 121 (right fork) 6.9 miles to junction with route 41 at Hargett's store. Turn right onto route 41 and go 2.85 miles or 0.55 mile beyond bridge over creek to T-road on left with abandoned store in northwest angle. Proceed north 1.2 miles on this road, turn left into lane between two large posts leading to J. E. Burney's house. Follow lane 0.25 mile, and turn left along west side of four tobacco barns to station site. Station is 39 feet south of 2-foot mulberry tree, 48 feet southwest of 18-inch elm tree, and 94.2 feet west-southwest of northwest corner of west tobacco barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 3 feet northwest of northwest corner of west tobacco barn, 49 feet east of 18-inch elm tree, and 95.00 feet from station in azimuth $90^{\circ}38'$. No. 2 is on west side of large post on north side of a dirt field road leading to J. E. Burney's house, 21 feet west of center line of road running northeast, and approximately 0.25 mile from station in azimuth $274^{\circ}18'35''$. No. 3 is 40 feet west of 2-foot mulberry tree at northwest corner of the plum trees, and 86.75 feet from station in azimuth $201^{\circ}27'$.

Duplin (Duplin County, R. D. Horne, 1933).—About 7 miles north of Beaulville and $2\frac{1}{2}$ miles south of Pink Hill, at the Duplin-Lenoir County line. To reach from Pink Hill, go south 0.1 mile on dirt road from point where route 11 turns west to railroad crossing. Cross the railroad and continue south 1.05 miles on right-hand main graded road to a T-road on left. Turn left (east) onto this graded road, follow 0.6 mile to crossroads, and continue straight ahead 20 yards to graded road on right just beyond house and barn. Turn right onto this road and continue south 0.8 mile to end of grading. Continue straight ahead on ungraded sandy road into woods and to dim road crossing at county line (marked by sign). To reach from Beaulville, go north 0.25 mile on temporary route 41 to point where it bears right. Continue north 7.8 miles on left-hand graded road to the T-road 1.05 miles south of Pink Hill, turn east, and follow above directions from this point. To reach from route 121, go west 6.5 miles on main dirt road from point on route 121 which is 1.3 miles north of Lenoir-Jones County line to fork in road. Take left fork, continue 0.8 mile to end of grading, and then follow ungraded sand road straight ahead 0.3 mile to station site as described above. Station is 48 feet west of center line of north-and-south road, and 45 feet south of east-and-west lane. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 4 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at angle in road, 0.2 mile south of first house north of station, 36 feet east of center line of road, 1 foot west of fence corner, and approximately 0.6 mile from station in azimuth $162^{\circ}00'58''$. No. 2 is 105 feet west of center line of road, 120 feet south of center line of lane, and 113.00 feet from station in azimuth $37^{\circ}54'$. No. 3 is 18 feet north of center line of lane, 140 feet west of center line of road, and 133.06 feet from station in azimuth $121^{\circ}35'$. The Duplin-Lenoir County boundary monument, 6-inch triangular concrete post with letters "L.O." or "L.D." molded in top, is 9 feet east of center line of road, 55 feet south of center line of lane, and 66.1 feet from station in azimuth $278^{\circ}36'$.

Huffman (Jones-Onslow Counties, R. D. Horne, 1933).—Station is $5\frac{1}{2}$ miles north-northwest of Richlands, at the Jones-Onslow County line. To reach from main corner in Richlands, go northwest 1.1 miles on route 24, and turn right onto dirt crossroad (yellow house in the north angle). Proceed about 500 feet and turn left onto a dirt T-road. Follow this road 0.35 mile keeping left on main road. Continue 0.1 mile, turn right at a T-road with arrow "To Route 41", follow this road for 3.45 miles, take main right-hand fork at tobacco sheds, and go 1.7 miles to county line and station site. Mark is 32 feet east of center line of new road to be built, and 140 feet northeast of Onslow-Jones county-line sign on east side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 meters (20 feet) west of center line of road, and approximately 0.25 mile from station in azimuth $175^{\circ}19'25''$. No. 2 is 18 feet east of center line of road, 8.5 feet northeast of the Onslow-Jones county-line sign, and 131.70 feet from station in azimuth $5^{\circ}56'$. No. 3 is 23 feet west of center line of road, and 107.14 feet from station in azimuth $145^{\circ}47'$.

Sandlin (Duplin County, R. D. Horne, 1933).—About 10 miles northwest of Richlands and $3\frac{1}{2}$ miles east of Beaulville, on land owned by R. J. Sandlin. To reach from Jacksonville, go north 13 miles on route 24 to Richlands, and continue northwest 2.7 miles on route 24 to junction with route 121. Keep left on route 24

and proceed 7.2 miles to station site. To reach from Sandlin's store in Beaulville, go east 3.3 miles on route 24 to station site. Station is 49.4 feet north of center line of route 24, 155 feet west of center line of dirt crossroads, and 15 feet west-northwest of 10-inch pine tree with triangular blaze on south side. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 0.25 mile west of west end of first curve in highway east of station, 36 feet south of center line of route 24, 220 feet west of dirt road leading south from highway, 6 feet west of lone pine tree, and approximately 0.7 mile from station in azimuth $278^{\circ}56'05''$. No. 2 is 37 feet south of center line of route 24, 13 feet east of center line of dirt road, and 195.43 feet from station in azimuth $303^{\circ}54'$. No. 3 is 33 feet south of center line of route 24, 230 feet west of center line of dirt road, 12 feet west of 12-inch pine tree, and 122.37 feet from station in azimuth $55^{\circ}18'$.

Richlands (Onslow County, R. D. Horne, 1933).—At main corner of the town of Richlands, in west corner of the Methodist Episcopal churchyard, 33.7 feet west of northwest corner of church, 16.4 feet southeast of curb around edge of church lawn, 47 feet southeast of center line of highway, 39 feet west of center line of walk to church entrance, and 13 feet east of property line. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is a standard reference disk, note 11c, in the sidewalk of the northeast angle of main corner of Richlands, 6.7 feet southwest of southwest corner of bank building, 34.2 feet northeast of center line of intersection of highway and dirt crossroad, and 202.40 feet from station in azimuth $189^{\circ}46'$. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11a. No. 2 is 4 meters (13 feet) northeast of center line of north-and-south dirt road, about 150 feet south of a T-road intersection, 1 foot northwest of fence corner formed by east-and-west and north-and-south fences, and approximately 0.25 mile from station in azimuth $321^{\circ}13'20''$. No. 3 is 36 feet north of center line of highway, 68.8 feet east of T-pole in northeast corner of T-road intersection, and 184.50 feet from station in azimuth $54^{\circ}55'$.

Fountain (Onslow-Duplin Counties, R. D. Horne, 1933).—About 14 miles northwest of Jacksonville, and 8 miles southwest of Richlands, at the Onslow-Duplin County line, on property of C. E. Fountain. To reach from Jacksonville, go north 7.3 miles on North Carolina route 24 and turn left (west) onto a dirt road with a sign "Catherine Lake." Follow this road 2.7 miles to Catherine Lake, and continue straight ahead 4.8 miles to road fork. Take right-hand main fork and proceed west 1.8 miles to C. E. Fountain's store at county line. Station is in yard behind store, 125 feet south of center line of road, 52 feet south-southeast of southwest corner of store, and 24 feet west of southwest corner of Fountain's house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark is about 2 inches below ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on right-of-way line, 16 feet north of center line of road, 10 feet east of county-line sign, and 140.3 feet from station in azimuth $205^{\circ}47'$. No. 2 is 125 feet south of center line of road, 34 feet south-southeast of southeast corner of east wing of house, 34 feet east-southeast of southeast corner of south wing of house, and 134.72 feet from station in azimuth $108^{\circ}19'$. No. 3 is 25 feet north of north side of road, 25 feet south of south end of barn, 110 feet east of southeast corner of store on north side of road, and approximately 0.3 mile from station in azimuth $116^{\circ}13'24''$. Line from station to reference mark no. 3 passes between the two wings of house referred to in description of reference mark no. 2.

Harris (Onslow County, R. D. Horne, 1933).—About $7\frac{1}{2}$ miles west of Jacksonville, on grounds of Harris Creek school. To reach from Jacksonville, go west 1.1 miles on United States Route 17 to junction with North Carolina route 24, continue straight ahead 1.2 miles on route 24 to junction with North Carolina temporary route 201, turn left onto route 201, proceed west 4.0 miles to fork, and follow right-hand main fork 1.9 miles to Harris Creek school. Station is in southwest corner of school yard, 80 feet southwest of southwest corner of school building, 25 feet north of center line of road, and 30 feet southwest of schoolhouse well. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 80 feet northwest of northwest corner of school building, 6 feet west of 24-inch pine tree, and 150.87 feet from station in azimuth $175^{\circ}02'$. No. 2 is 22 feet south of center line of road, 250 feet west of triple pipe culvert under road, and approximately 0.3 mile from station in azimuth $257^{\circ}56'05''$. No. 3 is 22 feet south of center line of road, 13 feet east of

center line of side road, 75 feet southeast of southeast corner of school building, and 208.90 feet from station in azimuth $258^{\circ}25'$.

Roper (Onslow County, R. D. Horne, 1933).—About 3 miles north of Jacksonville, on land owned by the John Roper Lumber Co., of Norfolk, Va. Reached from Jacksonville by going northeast 1.9 miles on route 17 to Gum Branch dirt road leading left, and following this road northwest 3.15 miles to station site. Station is 35.5 feet east of fence line on east side of road, 53 feet east of center line of dirt road, and 28.5 feet south of fence line running east. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 25.2 feet north of fence line, 175 feet east of road, and 172.91 feet from station in azimuth $216^{\circ}46'$. No. 2 is 5 meters (16 feet) west of center line of dirt road leading past station, 13 meters (43 feet) north of lane leading west to farmhouse, 2 meters (7 feet) north of a 3-foot pine tree on west side of road, 1 foot east of fence line, and approximately 0.25 mile from station in azimuth $343^{\circ}26'08''$. No. 3 is 14 feet west of center line of dirt road, 1 foot west of fence line on west side of road, and 141.70 feet from station in azimuth $130^{\circ}48'$.

Supplementary points

Spray (Pittsylvania County, Va., R. D. Horne, 1932).—Station is 3 miles northwest of Draper, 4 miles north-northeast of Leaksville, and about 200 feet north of the Virginia-North Carolina State line. To reach from Leaksville, go northeast about 1 mile on route 770 (Draper Road), turn left at Spray service station at point where route 770 turns right, follow paved road through Spray for 0.85 mile and take paved right branch at fork with church in V. Continue 0.6 mile, turn left at crossroads at east end of bridge over Smith River, and follow this road 1.8 miles (passing left fork and left T-road) to top of grade and station site. Station is about 200 feet north of Rockingham County sign at State line, 11.0 meters (36 feet) east of center line of road, and opposite north edge of small grove of evergreen trees on west side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 yards west of center line of road, 1 foot inside wire fence, and 41.15 meters (135.0 feet) from station in azimuth $39^{\circ}44'$. No. 2 is 6 yards west of center line of road, 7 inches inside fence line, and 24.90 meters (81.7 feet) from station in azimuth $153^{\circ}42'$. No. 3 is reached from station by going north on road that passes station to second road to left or west and leading to house and group of buildings just before main road curves to right. Mark is 6 feet north of center line of this second road, about 50 yards from main road, about on line with main road after it has made curve to right, and approximately $\frac{1}{4}$ mile from station in azimuth $180^{\circ}28'18''$.

Leak (Rockingham County, R. D. Horne, 1933).—Station is $10\frac{1}{4}$ miles south of Martinsville, 10 miles west-northwest of Leaksville, and about 25 yards south of Virginia-North Carolina State line, on property of Benny Leak. To reach from Martinsville, go south about 13 miles on route 311 or 3.9 miles beyond junction with route 201 at Ridgeway to the State line. Continue south 0.35 mile on route 311 and turn right (northeast) onto gravel road at south end of overhead bridge about $\frac{1}{4}$ mile north of Price railroad station. Proceed 0.95 mile and take left fork at sign "Sandy Ridge 12 Miles." Follow this road 0.35 mile to house on left with brick pillars on front porch and the letter "C" on front gable. Station is in front yard of this house, about one pace north of line of brick pillars of front porch, 10.28 meters (33.7 feet) east of most easterly pillar, 48 feet south of center line of road, and 6 feet east of large cherry tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 7 feet west of drainage ditch of dirt road, 24 feet east-southeast of northeast corner of tobacco barn, 3 feet southwest of corner post of wire fence, and approximately $\frac{1}{4}$ mile from station in azimuth $223^{\circ}57'17''$. No. 2 is 15 inches east of northeast corner of metal garage attached to tobacco shed, and 35.24 meters (115.6 feet) from station in azimuth $302^{\circ}35'$. No. 3 is 12.80 meters (42.0 feet) north-northwest of northwest corner of house, 29 feet south of center line of main road, and 26.59 meters (87.2 feet) from station in azimuth $68^{\circ}34'$.

Russell (Rockingham County, R. D. Horne, 1932).—About 10 miles east of Draper, 9 miles southwest of the center of Danville, about 2.6 miles south of Virginia-North Carolina State line, and near Rockingham County line, on land of Willie Russell. To reach from Danville, go southwest 8.85 miles on route 29 or 0.3

mile beyond Pelham railroad station. Continue 3.0 miles or 0.25 mile beyond semaphore no. 2473, turn right onto dirt road that crosses railroad tracks at four mail boxes (one of which is Strader's), continue 0.25 mile, and turn right (north) onto the main road. Proceed along this road 2.2 miles or about 250 feet beyond road coming in from right rear of Willie Russell's house to station site, which is across road from Edmund Noble's house. Station is opposite north end of Edmund Noble's yard, 10 paces east of center line of main road, and in small clearing surrounded by pine trees. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at a bend in main road, 9 feet east of drainage ditch on east side of road, 33 paces southeast of southeast corner of a log tobacco barn covered with metal roofing, and approximately $\frac{1}{2}$ mile from station in azimuth $346^{\circ}11'59''$. No. 2 is 2 feet west of west edge of a deep-cut left road fork, 8 paces north of road leading to Noble's house, in southeast corner of his yard, 51 paces east of his house, and 40.48 meters (132.8 feet) from station in azimuth $352^{\circ}26'$. No. 3 is 4 feet west of west edge of the deep-cut left fork, in northeast corner of Noble's yard, 92 paces south of tobacco barn on west side of road, and 24.30 meters (79.7 feet) from station in azimuth $64^{\circ}07'$.

G. S. Tie (Pittsylvania County, Va., R. D. Horne, 1932).—About 7 miles west-northwest of center of Danville, 12 miles northeast of Draper, and 5 miles north of the Virginia-North Carolina State line, on land owned by Porter Scarce and occupied by W. H. Pritchard. To reach from Danville, follow route 29 (Main Street) to Schoolfield which adjoins Danville on west side. Turn right onto route 300 in Schoolfield, cross Dan River bridge, and continue $\frac{1}{4}$ mile to junction with route 58 at Triangle service station. Turn left and proceed west 4.3 miles on route 58 to gravel road crossing at Scarce's service station. Turn right (north) and proceed 0.75 mile to crossroads. Station is at top of grade about 200 feet south along road from crossroads, in front yard of Pritchard's house, and 137.6 feet east of northeast corner of house. Surface and underground marks are standard disk station marks in concrete, note 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 7 feet northwest of center line of dirt road to house, $6\frac{1}{2}$ feet east of tree on north side of road, $27\frac{1}{2}$ feet east of northeast corner of house, and 97.62 feet from station in azimuth $53^{\circ}10'$. No. 2 is at top of grade in road, 4 meters (13 feet) east of center line of intersection of north-and-south road and T-road on left, at extreme west edge of front yard of W. H. Kink's house, 18 meters (59 feet) west of southwest corner of house, 6 meters (20 feet) north of southwest corner of front yard, and approximately 0.4 mile from station in azimuth $150^{\circ}22'21''$. *Primary traverse station no. 25 (U.S.G.S.)* (see description thereof) is 74.310 meters (243.80 feet) from station in azimuth $147^{\circ}27'$.

Primary traverse station no. 25 (U.S.G.S.) (Pittsylvania County, Va., R. D. Horne, 1932).—About 7 miles west-northwest of the center of Danville, 12 miles northeast of Draper, and 5 miles north of the Virginia-North Carolina State line. Station mark is a standard U.S. Geological Survey tablet set in a 6-inch cylinder of concrete and stamped "Prim. Trav. Sta. No. 25 Mc M R 1921 Elev. 633 feet." Station *G.S. Tie* (see description thereof) is 74.310 meters (243.80 feet) from station in azimuth $327^{\circ}27'$.

White (Pittsylvania County, Va., R. D. Horne, 1932; 1933).—About 4 miles southwest of the center of Danville, $10\frac{1}{2}$ miles north-northwest of Yanceyville, and about 200 yards north of the Virginia-North Carolina State line, on land owned by Kitty White and occupied by Albert Chewning. To reach from Danville, go southwest about 6 miles on route 29 to the State line and continue 0.4 mile to a dirt road on the left which is just beyond the Collins Granite Co.'s rock crusher on the right. Turn left (east) and proceed 1.25 miles keeping straight ahead at a T-road on the left with a school in the northwest angle at mileage 0.85 mile, and cross the State line. Continue 0.1 mile to Albert Chewning's house on left and station site. Station is behind the house, 27 meters (89 feet) north of northeast corner, 4 meters (13 feet) north of 15-inch oak tree, and 5.3 meters (17 feet) northwest of 20-inch oak tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 7 feet east of footpath, and 16.15 meters (53.0 feet) (slope) from station in azimuth $225^{\circ}48'$. No. 2 is in triangle formed by driveway of first house east of Chewning's, 6.8 meters (22 feet) south of center line of main road, and approximately 0.15 mile from station in azimuth $272^{\circ}33'37''$. No. 3 is 6.8 feet northeast of 10-inch

hickory tree, and 12.76 meters (41.9 feet) (slope) from station in azimuth $118^{\circ}07'$. Azimuth from the station to ball on top of water tank of Dan River Cotton Mills is $195^{\circ}39'30''$; and to largest and most westerly stack of same mill, $200^{\circ}19'21''$.

Williams (Pittsylvania County, Va.; Caswell County, N.C., R. D. Horne, 1932).—About 5 miles southeast of Danville, $6\frac{1}{2}$ miles west of Milton, and on the Virginia-North Carolina State line, on property of J. B. Williams. To reach from Danville, go north on route 29, cross the Dan River bridge, and continue to point 0.5 mile north of north end of bridge. Turn right (east) onto Thomas Street at an arrow "Chrystal Lake Park 4 miles", proceed 0.55 mile, cross railroad and keep straight ahead on paved route 58. Continue 1.95 miles and turn right (south) onto dirt road at arrow "Chrystal Lake 1 Mile." Proceed 0.65 mile and take main left fork. Proceed 0.25 mile, pass the Airport, and continue 1.65 miles to a small store at point where main road turns left. Continue straight ahead 1.15 miles from this point and turn right into lane at J. W. Poindexter's and J. B. Williams' mail boxes. Follow lane straight through Williams' yard to point about 0.1 mile beyond his house to station site at point where road starts down grade through shallow cut. Station is in fence line between J. B. Williams' and Thomas Dick's fields, and 26 feet southeast of most southerly of two large apple trees. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 12 inches west of north-and-south fence enclosing J. B. Williams' orchard and meadow, 24 feet south-west of bunch of honeysuckle covering stone property monument at corner of Saluda Hunt's property, and approximately 0.2 mile from station in azimuth $254^{\circ}20'37''$. No. 2 is 4 inches north of east-and-west fence, 1.9 feet west of fence post, and 24.59 meters (80.7 feet) from station in azimuth $267^{\circ}13'$. No. 3 is on the south side of lane running through the yard, 14.4 feet south of fence line between the orchard and cow pasture, and 40.27 meters (132.1 feet) from station in azimuth $139^{\circ}30'$.

Cunningham (Halifax County, Va., R. D. Horne, 1933).—About $5\frac{1}{2}$ miles east-northeast of Semora, $7\frac{1}{2}$ miles east of Milton, 11 miles north-northwest of Roxboro, and about 100 yards north of the Virginia-North Carolina State line. To reach from Semora follow Alton Road which follows the Southern Railway tracks about $6\frac{1}{4}$ miles or 0.25 mile beyond State-line sign on north side of road, to the station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 23 feet north of center line of dirt road, 50 feet north of triangular blaze on oak tree, and 56.90 feet from station in azimuth $182^{\circ}14'$. No. 2 is 5 meters (16 feet) north of center line of dirt road, 29 meters (95 feet) north of Southern Railway tracks, about 50 meters (164 feet) west of grade crossing, and approximately 0.2 mile from station in azimuth $250^{\circ}33'56''$. No. 3 is 27 feet south of center line of dirt road, about 80 feet north of Southern Railway tracks, and 70.42 feet from station in azimuth $75^{\circ}34'$.

Lebanon (Caswell County, R. D. Horne, 1933).—About three-fourths mile northeast of Semora, near Person County line, and in yard of the Lebanon Christian Church. To reach from Semora, go northeast about three-fourths mile on Alton Road along railroad tracks to church on north side of road. Station is about 30 yards northwest of church, 11 yards west of fence around graveyard behind church, and 18.0 meters (59 feet) north-northwest of southwest corner of graveyard fence. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on south side of railroad tracks, 7 feet northeast of second telephone pole from the intersection of road leading from Alton Road across tracks to 2-story farmhouse, 12 feet north of the center line of road leading east from above intersection, and approximately 0.3 mile from station in azimuth $41^{\circ}43'22''$. No. 2 is on east edge of cultivated field, 19.3 meters (63 feet) east-northeast of northeast corner of small log cabin, and 26.59 meters (87.2 feet) from station in azimuth $55^{\circ}54'$. No. 3 is in trees north of station, 19 paces south of faint road running along south side of cultivated field, 7 paces west of old road running past church, 6 paces east of footpath through woods, and 31.31 meters (102.7 feet) from station in azimuth $168^{\circ}00'$.

Garrard (Durham-Orange Counties, R. D. Horne, 1933).—About $8\frac{3}{4}$ miles north-northwest of Durham, and $7\frac{1}{2}$ miles east-northeast of Hillsboro, on the land of O. B. Garrard. To reach from downtown Durham, go north about 6 miles on route 501, and cross the Eno River. Continue north 3.25 miles on

route 501 or 0.45 mile beyond a school on the left, and turn left at gravel cross-roads at arrow sign "Hillsboro 15 Miles." Proceed 2.4 miles and follow Hillsboro arrow at the sign "Durham 9 Miles" for 2.0 miles or 0.3 mile beyond the Orange County line, and turn left onto a T-road opposite a house on a hill to the right. From this point proceed 0.6 mile to Durham County sign on right and station site. Station is 10.77 meters (35.3 feet) southwest of Durham county-line sign, 11.9 meters (39 feet) west of center line of road, and at the edge of the trees. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in boulders, note 12c. No. 1 is in top of a 2- by 3½-foot boulder projecting 15 inches above ground, 8 meters (26 feet) west of center line of road, 10.7 meters (35 feet) north of Durham County sign, and 17.89 meters (58.7 feet) from station in azimuth 143°22'. No. 2 is in top of a 2- by 3-foot boulder projecting 1 foot above ground, across road from station, 113 meters (371 feet) east of center line of main road, 9.7 meters (32 feet) west by south of center line of lane leading south from main road along edge of woods opposite station, and 36.94 meters (121.2 feet) from station in azimuth 276°07'. No. 3 is standard reference disk in concrete, note 11a, about 100 paces east of Bevin's dirt road, 30 inches southwest of southwest corner of Mrs. Mary J. Bevin's tobacco barn, and approximately 0.3 mile from station in azimuth 329°23'37".

University (Orange County, R. D. Horne, 1933).—At north end of quadrangle in front of library at University of North Carolina, Chapel Hill, on line between centers of library and south buildings, and 2.6 feet north of small brick ditch encircling the circular intersection of seven gravel walks. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is a standard reference disk in concrete, note 11a, located 24 inches east of east curbing of street leading from Cameron Street to front gate of Emerson Stadium, 26 paces west-southwest of southwest corner of Grimms Dormitory, and approximately 200 yards from station in azimuth 241°38'00'. Reference marks nos. 2 and 3 are standard reference disks in concrete steps, note 11c. No. 2 is in top of lowest concrete step of entrance to Saunders Hall, and 41.21 meters (135.2 feet) from station in azimuth 267°27'. No. 3 is 0.8 foot from west edge of top of lowest step of South Building, and 48.07 meters (157.7 feet) from station in azimuth 148°17'. Azimuth from station to university bell tower is 334°40'32", and to a black water tank is 58°14'51".

Nelson (Durham County, R. D. Horne, 1933).—About 10 miles southeast of Durham, near house of Mr. R. L. Stone. To reach from the "Five Points" in Durham, go towards Raleigh on either of 2 routes 70 to their reunion, continue 4.6 miles on route 70, turn left into lane 100 feet north of or before reaching sign "Nelson" which is about 0.1 mile north of junction of routes 70 and 54, and follow lane to Mr. Stone's house and station site. Station is 11.6 feet south of middle of 1-car garage which is south of house, 9 feet south of line of 3 poles carrying electric-light wires to house, and 34.5 feet east of most easterly one. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at south side of brick church, 24 feet north of center line of dirt road leading east from route 70, just northeast of and across road from second telephone pole from route 70, and 339.25 feet from station in azimuth 5°23'. No. 2 is 0.05 mile south of intersection of routes 70 and 54, 24 feet west of center line of route 70, 2 feet north of telephone pole, 42 feet north of group of 7 mail boxes, directly opposite driveway to small white house, and approximately 0.2 mile from station in azimuth 23°04'57". No. 3 is 18 feet east of center line of route 70, 36 feet north of center line of lane leading to Mr. Stone's house, 129 feet north of sign "Nelson", and 503.60 feet from station in azimuth 114°42'41". Azimuth from station to spire of University Methodist Church at Chapel Hill is 98°26'29" and to water tank at Chapel Hill, 98°11'02".

Barbee (Durham County, R. D. Horne, 1933).—About 9¼ miles south of center of Durham, 8¼ miles northeast of Cary, and 50 yards north of the Durham-Wake County line, on land of J. M. Barbee. To reach follow Lowes Grove Road (Allston Avenue) south 2.5 miles from junction with route 54. Station is about 50 yards north of the end of pavement, in small uncultivated field, across the road from large 2-story white house, 16.7 meters (55 feet) west of center line of road, and 15.2 meters (50 feet) north-northwest of northwest corner of wagon shed and corner. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 11 paces south of center line of paved

road, 44 paces west-southwest of curve in road at guyed telephone pole, and approximately 200 yards from station in azimuth $233^{\circ}22'49''$. This mark is not visible from ground. No. 2 is at south apex of cornfield, 8 paces west of center line of paved road, 7 paces north of north face extended of two-story house, and 21.45 meters (70.4 feet) from station in azimuth $236^{\circ}08'$. No. 3 is 5 paces west of center line of paved road, 1.42 meters (4.7 feet) east of and in line with north face of wagon shed and corn crib, 1 foot northwest of mail box, and 19.07 meters (62.6 feet) from station in azimuth $353^{\circ}11'$.

Duke (Durham County, R. D. Horne, 1933).—In the grounds of Duke University, about 200 feet east of main entrance gates to stadium, 192 feet west of center line of road leading from route 751 to university, 151 feet south of center line of walk leading into stadium, 16 feet from northeast corner of small cemetery (near entrance gate) and north of the prolongation of east wall of cemetery. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is 6 inches below the surface. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 29 feet west of road leading from route 751 to university, 121 feet southeast of southeast 6- by 6-inch concrete post marking outlines of gravel walk leading to main gate of stadium, and 163.05 feet from station in azimuth $258^{\circ}57'$. No. 2 is on 10-foot built-up embankment, on south side of athletic-practice field, 56.3 feet west of water drain from field, 30 yards north of pine woods, 24 yards north of dirt road leading to stadium, and approximately 0.6 mile from station in azimuth $89^{\circ}01'01''$. No. 3 is 17 feet north of center line of gravel walk leading to stadium, 6 inches north of a row of 6- by 6-inch concrete posts lining this walk, 57 yards east of main gate of stadium, and 169.0 feet from station in azimuth $160^{\circ}20'$. Azimuth from station to northwest pinnacle of the university chapel is $177^{\circ}36'$; and to stack of Durham Cotton Mills, $221^{\circ}35'47''$.

Fair (Wake County, R. D. Horne, 1933).—About 4 miles west-northwest of Raleigh, on the North Carolina State Fair Grounds. To reach from Raleigh, go west 4.0 miles on United States route 1 (Hillsboro Street) from the State Capitol to State Fair Grounds. Station is 12.1 meters (40 feet) north of center line of route 1, 9.6 meters (31 feet) west of center line of road leading to west entrance of fair grounds, in grassy area between this road and fence around equipment depot of State Highway Commission, and 5.8 meters (19 feet) north-east of southeast corner of fence. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in grassy area between road leading to west entrance of fair grounds and road forming circular drive to center and main entrance, 15.4 meters (51 feet) north of center line of route 1, 5.4 meters (18 feet) west of center line of drive, 1 foot from curbing around drive, 2 feet southwest of 4- by 4-inch end post of low fence around drive, and 30.30 meters (99.4 feet) from station in azimuth $234^{\circ}15'$. No. 2 is 8 paces west of center line of dirt road leading north from route 1, 66 paces southwest of center line of crossroad which is about 100 yards southwest of small tenant house, and approximately 1.1 miles from station in azimuth $246^{\circ}13'46''$. No. 3 is 6.2 meters (20 feet) south of center line of route 1, 2 feet east of fence line extended around equipment depot, 28 paces north of railroad tracks, and 18.84 meters (61.8 feet) from station in azimuth $343^{\circ}14'$. Azimuth from the station to the brick stack of the North Carolina State College is $285^{\circ}27'37''$.

Airport (Wake County, R. D. Horne, 1933).—On Municipal Airport of Raleigh. To reach from Raleigh, go south 3.4 miles from Carolina Hotel on route 21 to airport on west side of highway. Mark is in southwest angle formed by driveway into airport and route 21, 9.8 meters (32 feet) south of center line of driveway, 22.7 meters (74 feet) west of center line of route 21, 100 yards southeast of main building of airport, and 80.38 meters (263.7 feet) southeast of center of airport-beacon tower. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 7.9 meters (26 feet) east of center line of route 21, 7.47 meters (25 feet) southwest of southwest gatepost of entrance to Montlawn Memorial Park, and approximately 0.2 mile from station in azimuth $193^{\circ}33'19''$. No. 2 is 13.5 meters (44 feet) west of center line of route 21, 1.5 feet north of telephone pole (first pole to south in westerly of 2 rows of poles), and 29.17 meters (95.7 feet) from station in azimuth $352^{\circ}05'$. No. 3 is 20 feet south of center line of driveway to airport, 37.5 feet northwest of telephone pole, and 28.74 meters (94.3 feet) from station in azimuth $101^{\circ}35'$. Spindle of beacon

on airport's beacon tower is 80.38 meters (263.7 feet) from station in azimuth $114^{\circ}50'$. Azimuth from station to air beacon on top of Carolina Hotel, in Raleigh, is $187^{\circ}59'50''$; and to water tank near junction of routes 10 and 70, $266^{\circ}43'16''$.

Briggs (Wake County, R. D. Horne, 1933).—About 4 miles a little east of north of the center of Raleigh, on land owned by W. G. Briggs, and occupied by Lumford. To reach from Raleigh, go north about 2.9 miles on route 1 and cross Crabtree Creek. Continue north 1.1 miles passing side road at A. J. Honeycutt's Standard oil station, at 1.4 miles turn left (west) onto dim road at stone pillar on left and an "Orange Crush" sign. Follow this road up hill, through peach orchard, about 150 yards to top, and to holly tree on north side of road and at east side of flat top. Station is 7.50 feet west of this holly tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 9 feet south of road that passes station and 25.90 meters (85.0 feet) from station in azimuth $336^{\circ}27'$. No. 2 is 14 feet south of center line of dirt road leading northeast from route 1 at Honeycutt's service station, 0.08 mile northeast of route 1, 6 feet west of third telephone pole from route 1 (of row nearest dirt road), 1.3 feet north of fence line with 6- by 6-inch creosoted posts, and approximately 0.5 mile from station in azimuth $4^{\circ}03'49''$. No. 3 is 6 feet south of dim road that leads to station, and 18.19 meters (59.7 feet) from station in azimuth $93^{\circ}49'$.

State College (Wake County, R. D. Horne, 1933).—About $3\frac{1}{4}$ miles west of Raleigh, on grounds of State Experimental Station. To reach from Raleigh, go west about 3 miles on United States route 70 and North Carolina route 10 to Sheep Research Division of State Experimental Station. Station is in southwest corner of cultivated field, directly across road from sheep pens, 11 meters (36 feet) northeast of center line of highway, and 17.9 meters (59 feet) southeast of southeast corner of small yellow house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on north side of large rectangular plot of ground behind Patterson Hall on State College campus, 54 feet south of curbing bounding north side of plot, 15 feet south of roadway between Patterson Hall and the plot of ground, 94 feet west of line of east curb bounding plot, and approximately three-fourths mile from station in azimuth $259^{\circ}18'13''$. No. 2 is in grassy area 1.5 feet north of fence around sheep pens, 4.3 meters (14 feet) south of highway, 2.1 meters (7 feet) east of junction of fences along north- and east sides of sheep barns, and 20.93 meters (68.7 feet) from station in azimuth $14^{\circ}45'$. No. 3 is in northeast corner of cultivated field, 4.9 meters (16 feet) west of center line of dirt road running along west side of sheep pens, 8.5 meters (28 feet) south of center line of highway, and 48.34 meters (158.6 feet) from station in azimuth $93^{\circ}48'$. Azimuth from station to brick stack of State College is $269^{\circ}25'53''$; and to spire of Edenton Methodist Church, in Raleigh, is $275^{\circ}02'14''$.

Bull (U.S.G.S.) (Patrick County, Va., C. L. Garner, 1918).—About 4 miles north-northwest of Patrick Springs Post Office, and about $4\frac{1}{2}$ miles north-northeast of Stuart, on highest part of Bull Mountain. Type of mark not described. Station *Bull* (see description thereof) is 5.48 meters (18.0 feet) from station in azimuth $171^{\circ}30'$.

Moriah (Johnston County, R. D. Horne, 1933).—About 6 miles east-southeast of Garner railroad station, $3\frac{1}{2}$ miles west-northwest of Clayton, and 0.2 mile northeast of Southern Railway. To reach from Clayton, go northwest 3.5 miles on route 70 from main corner to Wake-Johnston County line as marked by highway signs. This point is 6.0 miles east-southeast of Garner railroad station on route 70. Station is about 175 feet southeast along road from county line, 34.2 feet east of east edge of highway pavement, and 42.1 feet southeast of highway "Curve" sign. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 20 feet south of "Quaker State Oil" sign, 18.8 feet west of west edge of pavement, and 125.65 feet from station in azimuth $346^{\circ}14'$. No. 2 is 25 feet southwest of center line of highway, 30 feet south of southeast corner of barn, 50 yards west of house on east side of road, $1\frac{1}{2}$ feet south of telephone pole, and approximately 0.3 mile from station in azimuth $109^{\circ}16'50''$. No. 3 is 8.4 feet west of west edge of pavement, 1 foot west of county-line sign, and 204.00 feet from station in azimuth $114^{\circ}29'$.

Cary reference mark (Wake County, M. Steinberg, 1918; 1933).—On top of Cary High School building at Cary, in north face of eastern chimney, and 2 feet

above roof. Marked by standard reference disk. Station *Cary* (see description thereof) is 10.600 meters (34.78 feet) from station in azimuth $148^{\circ}25'$. Station *Cary High* (see description thereof) is 28.868 meters (94.71 feet) from station in azimuth $37^{\circ}27'$.

Raleigh reference mark (Wake County, M. Steinberg, 1918; 1933).—At Raleigh, on roof of North Carolina Bank and Trust Co. Building, and in inner side of parapet at southeast corner. Marked by standard reference disk. Station *Raleigh* (see description thereof) is 20.600 meters (67.59 feet) from station in azimuth $115^{\circ}11'$. Station *Raleigh 2* (see description thereof) is 20.40 meters (66.9 feet) from station in azimuth $115^{\circ}56'$.

Dail (Johnston County, R. D. Horne, 1933).—About $1\frac{1}{2}$ miles east-northeast of Smithfield, on the land of J. F. Dail. To reach from courthouse at Smithfield, go north and east 1.85 miles on United States route 70 or 1.1 miles beyond Johnston County hospital to Mr. Dail's house on north side of road. There are two small pines and a magnolia tree in front of house. Station is behind barn, on south edge of cultivated field, 3 feet east of line of east side of barn extended, and about 50 yards north of house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in back of house, 1.4 feet northwest of northwest corner of center brick footing, 3.3 feet west of west edge of back door, 21 feet southeast of southeast corner of well, and 45.25 meters (148.5 feet) from station in azimuth $335^{\circ}30'$. No. 2 is in grassy area at southwest corner of Mr. Dail's field, 1.2 meters (4 feet) east of south post of large signboard "Austin & Hamilton, Clothing and Shoes", 9.4 meters (31 feet) north of center line of route 70, and 156.21 meters (512.5 feet) from station in azimuth $36^{\circ}16'25''$. No. 3 is 53 paces west of most westerly of three log tobacco sheds, 9 paces south of center line of route 70, 3 feet east of telephone pole, in line with poles, and approximately 0.3 mile from station in azimuth $56^{\circ}18'06''$. Azimuth from station to tall brick stack of cotton mills near Smithfield is $57^{\circ}00'33''$.

Samway (Sampson-Wayne Counties, R. D. Horne, 1933).—Station is 3.85 miles east of junction of routes 23 and 102 at Newton Grove, on route 102, 12.8 meters (42 feet) south of center line of route 102, and 3.8 meters (12 feet) west of county-line signs. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at northwest corner of T-road to north, 9.35 meters (30.7 feet) north of center line of route 102, 6.7 meters (22 feet) west of center line of T-road, and 78.55 meters (257.7 feet) from station in azimuth $246^{\circ}00'$. No. 2 is in southwest corner of junction of a narrow lane and route 102, 5 feet west of center line of lane, 40 meters (131 feet) beyond junction of T-road, 27 feet south of center line of route 102, and approximately 0.8 mile from station in azimuth $262^{\circ}22'33''$. No. 3 is 6 meters (20 feet) north of center line of route 102, 12.2 meters (40 feet) west of 12-inch pine tree on same side of route 102, and 71.7 meters (235 feet) from station in azimuth $98^{\circ}30'$.

Edmondson (Johnston-Wayne Counties, R. D. Horne, 1933).—About $1\frac{1}{4}$ miles southeast of Princeton, on the property of Mr. Edmondson. To reach from the high school in Princeton, go southeast 1.6 miles on route 70 or about 50 yards beyond the Johnston-Wayne County line, and turn right (south) onto a dirt road. Follow this road about 250 yards to the station site. Mark is in cultivated field, 8.3 meters (27 feet) east of dirt road, about 30 yards south of Southern Railway's tracks, 7 yards south of line of telephone poles, 11.4 meters (37 feet) southwest of first pole on east side of road, and directly across road from N. B. Hinton's barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 15 paces south of the center line of route 70, about 8 inches west of center of large "Coca Cola" signboard, and approximately 0.5 mile from station in azimuth $278^{\circ}05'47''$. No. 2 is on the north edge of cultivated field, 7 paces south of south track of railroad, 39 paces north of third telephone pole on east side of road, and 116.89 meters (383.5 feet) from station in azimuth $287^{\circ}36'$. No. 3 is 4.8 meters (16 feet) east of center line of dirt road, 17.0 meters (56 feet) east of east side of log tobacco barn on west side of road, 0.4 meter (1 foot) north of steel "RR" signpost, and 43.66 meters (143.2 feet) from station in azimuth $18^{\circ}59'$.

Watson (Wayne County, R. D. Horne, 1933).—About 7 miles southwest of Goldsboro, and $7\frac{1}{2}$ miles north of Mount Olive, on right-of-way of North Carolina route 102. To reach from Goldsboro, go south about $4\frac{1}{4}$ miles on route 40 to junction with route 102 at Five Points service station at Genoa. Turn west onto

route 102 and proceed 2.75 miles to A. Watson's Oak Plain service station and station site. Station is 9.1 meters (30 feet) south of center line of route 102 and 5.0 meters (16 feet) northwest of northwest corner of log tobacco barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 8.1 meters (27 feet) north of center line of route 102, at junction of dirt road leading from route 102 to farmhouse in back of service station, 0.4 meter (1 foot) west of first telephone pole east of service station, and 41.96 meters (137.7 feet) from station in azimuth $202^{\circ}38'$. No. 2 is 7 paces north of center line of route 102, 53 paces west of southwest corner of blacksmith shop, 1 foot south of telephone pole, and approximately one-half mile from station in azimuth $231^{\circ}40'18''$. No. 3 is 9.3 meters (31 feet) north of center line of route 102, 14.7 meters (48 feet) west of southwest of corner of service station, 1.05 meters (3.4 feet) northeast of first telephone pole west of station, and 31.38 meters (103.0 feet) from station in azimuth $79^{\circ}07'$.

Goldsboro eccentric reference mark no. 4 (Wayne County, R. D. Horne, 1933).—On right-of-way of Atlantic Coast Line Railroad at Goldsboro, 2.12 meters (7.0 feet) west of west rail of the most westerly of several sets of tracks, about 150 yards northwest of Union Depot, and 19.3 meters (63 feet) south of center line of Mulberry Street. Marked by standard reference disk in concrete, note 11a. Station *Goldsboro* (see description thereof) is 574.9 meters (1,886 feet) from station in azimuth $298^{\circ}27'16''$. Station *Goldsboro eccentric* (see description thereof) is 658.964 meters (2,161.95 feet) from station in azimuth $19^{\circ}14'18''$.

Goldsboro eccentric (Wayne County, R. D. Horne, 1933).—On the right-of-way of the Atlantic Coast Line Railroad, 1.898 meters (6.23 feet) west of west rail of single track which runs north and south along west side of the Union Depot at Goldsboro, and 8.5 meters (28 feet) north of center line of School Street. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Station *Goldsboro eccentric reference mark no. 4* (see description thereof) is 658.964 meters (2,161.95 feet) from station in azimuth $199^{\circ}14'14''$. Station *Goldsboro* (see description thereof) is 802.1 meters (2,632 feet) from station in azimuth $244^{\circ}16'00''$.

Lenway (Wayne County, R. D. Horne, 1933).—About 11 miles east of Goldsboro and 3 miles west of Lagrange, on right-of-way of route 70. To reach from Lagrange, go west 3.0 miles on route 70 direct to station site. Mark is 150 yards west of Wayne-Lenoir County line, across highway from large "Tapp's Warehouse" sign and mileage sign "Lagrange 3-Beaufort 94", about 10 yards east of southeast corner of cultivated field, on southwest corner of pine woods, 28 feet north of center line of highway, and 5 yards north of a "Curve" sign on north side of highway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on south edge of pine woods, 34 feet north of center line of route 70, and 122.16 feet from station in azimuth $249^{\circ}01'$. No. 2 is 6 yards south of center line of highway, 58 yards north-northeast of large persimmon tree in cultivated field, and approximately 0.3 mile from station in azimuth $253^{\circ}23'14''$. No. 3 is 21 feet south of center line of highway, 1 foot north of fence line, 1 foot east of fence post, and 144.87 feet from station in azimuth $52^{\circ}01'$.

Liddell (Wayne-Duplin-Lenoir Counties, R. D. Horne, 1933).—About $1\frac{1}{2}$ miles west of Liddell, on land of Annie Smith. To reach from Liddell, go west about 1.3 miles on a dirt road from its junction with route 111 or about 0.1 mile west of Walter Lofton's house on north side of road, turn north onto dim bushy road on west side of open field, proceed about 0.15 mile to small double tree with triangular blaze on left side of road, and turn right into open field and station site. Station is 120.1 feet from 20-foot persimmon tree in magnetic azimuth $197\frac{1}{2}^{\circ}$, 65.3 feet from 12-foot bushy sassafras tree in magnetic azimuth 297° , and about 250 yards from Walter Lofton's house in magnetic azimuth 345° . Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. The mark replaces old triangular county monument, which was broken. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at west edge of woods, at east edge of open field, 1.4 feet northwest of Duplin-Lenoir county-line monument, 29.5 feet south of center line of dirt road from Liddell, and approximately 0.5 mile from station in azimuth $300^{\circ}59'59''$. No. 2 is on the west side of open field in which station is located, 15 feet east of dim dirt road running north from highway along east side of timber, and 136.36 feet

from station in azimuth $39^{\circ}38'$. No. 3 is on east edge of woods, on west side of dirt road along edge of woods, and 169.58 feet from station in azimuth $162^{\circ}26'$.

Paradise eccentric (Jacksonville County, R. D. Horne, 1933).—On Paradise Point, on east bank of New River, and about 3 miles southeast of Jacksonville. To reach from crossroads at Piney Green, go west on dirt road until New River is reached. Turn left and proceed along river to Paradise Point. Station is in grove of pine trees, 177 feet northeast of back of point, and 47 feet southeast of center line of sandy road leading into point. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 12 feet south from center line of right-hand curve that road marks in running out to point, and 116.30 feet from station in azimuth $182^{\circ}10'$. No. 2 is 8 feet north of river bank, 10 paces south of road, and approximately 450 paces from station in azimuth $299^{\circ}04'08''$. No. 3 is 12 feet west of center line of road at point where it turns out onto point, 29 feet west of a 2-foot deciduous tree which is the only one on west side of road, and 123.45 feet from station in azimuth $33^{\circ}47'$. Station *Paradise (U.S.E.)* (see description thereof) is 52.014 meters (170.65 feet) from station in azimuth $31^{\circ}17'$. Station *Town Point eccentric* (see description thereof) is visible from ground, 5,265.3 meters (17,275 feet) distant, in azimuth $346^{\circ}21'45''$.

Town Point eccentric (Onslow County, R. D. Horne, 1933).—Station is 8 miles south-southeast of Jacksonville, and 5 miles east-southeast of Verona, on Town Point, on west bank of New River. To reach from Jacksonville, go south-southwest 8 miles on United States route 17 to settlement of Verona, turn left onto dirt road at Shell service station, keep main road ahead at left fork at 1.1 miles and continue 1.4 miles to gate with two stone pillars. Turn left through gate and proceed 2.0 miles to another gate on right. Pass through this gate, go past two large barns on right, through a second barnyard gate and through a gate with Negro cabins on right at 0.8 mile, and continue 3.3 miles to Town Point. Station is 15 feet east of center line of road leading to station, 45 feet south of 10-foot bluff which marks high-water line, about 50 yards northwest of tip of a sand point, and 23.9 feet north of 6-inch pine blazed with triangle. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is across Town Creek Inlet from station, on west bank of river at most westerly point of bay between Town Point and Spring Point, 12 feet west of edge of river bluff, about 150 yards north of Frank Robinson's residence and on his property, 8 feet northwest of 15-inch hickory tree, just north of several evergreen-oak trees on river bluff, and approximately 0.5 mile from station in azimuth $7^{\circ}04'52''$. This mark cannot easily be reached from station except by boat. To drive truck to mark would involve an 8-mile drive over rough dirt roads. No. 2 is on south edge of road leading to station, on northeast edge of high knoll, 33 feet north of 2-foot oak tree on edge of river bluff, and 208.80 feet from station in azimuth $27^{\circ}02'$. No. 3 is 6 feet east of center line of road leading to station, 9 feet west of edge of 15-foot river bluff, and 127.90 feet from station in azimuth $132^{\circ}23'$. Station *Town Point (U.S.E.)* (see description thereof) is 33.699 meters (110.56 feet) from station in azimuth $259^{\circ}19'$. Station *Paradise eccentric* (see description thereof) is visible from ground, 5,265.3 meters (17,275 feet) distant, in azimuth $166^{\circ}22'13''$.

Jodup (Jones-Duplin Counties, R. D. Horne, 1933).—Station is 11 miles northwest of Richlands, on the Jones-Duplin County line. To reach from Richlands, go northwest on route 24 to junction with route 121. Turn right onto route 121 and go 6.9 miles to junction with route 41 at Hargett's store. Turn west onto route 41 and go 3.5 miles to county line and station site. To reach from Kinston, go south on route 121 to Hargett's store and then proceed as above. Station is in small clearing with woods to north, east, and west, and 42.5 feet north of center line of route 41. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 112.0 feet east of county-line signs on the south side of route 41, 20.0 feet south of center line of route 41, and 128.6 feet from station in azimuth $286^{\circ}32'$. No. 2 is 23.0 feet south of center line of route 41, 15 feet east of small telephone pole, and approximately 0.55 mile from station in azimuth $47^{\circ}08'49''$. No. 3 is 127.3 feet west of county-line signs, 20.0 feet south of center line of route 41, and 143.6 feet from station in azimuth $49^{\circ}28'$.

Walton (Onslow County, R. D. Horne, 1933).—About 1 mile west of Jacksonville, in V of forks formed by junction of United States route 17 (North Carolina route 30) and United States route 258 (North Carolina route 24), 92.8 feet west

of west side of J. S. Walton's Standard service station, 75 feet north of center line of route 17, and 57 feet south of center line of route 258. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on north edge of cultivated field opposite east side of Walton's service station, 32 feet south of center line of route 17, and 172.50 feet from station in azimuth $292^{\circ}35'$. No. 2 is on south edge of grassy uncultivated V area between the two highways, 31 feet north of center line of route 17, and 141.75 feet from station in azimuth $50^{\circ}50'$. No. 3 is 11 paces south of center line of route 258, 30 paces west-northwest of two-room cabin, in line with telephone poles, and approximately 0.3 mile from station in azimuth $98^{\circ}51'39''$.

Town Point (U.S.E.) (Onslow County, R. D. Horne, 1933).—Station is 8 miles south-southeast of Jacksonville and 5 miles east-southeast of Verona, on west bank of New River, and about 40 feet back from extremity of Town Point. Station mark is concrete monument marked "U.S.E.D. 1931." Station *Town Point* *eccentric* (see description thereof) is 33.699 meters (110.56 feet) from station in azimuth $79^{\circ}19'$.

Paradise (U.S.E.) (Onslow County, R. D. Horne, 1933).—About 3 miles south-east of Jacksonville, on east bank of New River, on Paradise Point (formerly known as Simmons Point), and about 3 meters (10 feet) from river bank. Station mark, established in 1931, is 6-inch cylindrical concrete monument with 1-inch hole in center of top. Station *Paradise* *eccentric* (see description thereof) is 52.014 meters (170.65 feet) from station in azimuth $211^{\circ}17'$.

Malone (Caswell County, R. D. Horne, 1933).—At Prospect Hill, on property of F. J. Malone, in southeast corner of intersection of routes 14 and 144, 69 feet east of center line of route 14, 97 feet south of center line of route 144, 20 feet north of small 7-inch pine tree, and directly across route 14 from large white two-story house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 4 feet from 2-foot hickory tree, 12 feet north of 18-inch hickory tree, 12 feet east of a 3-foot oak tree, 43 feet south of center line of route 144, and 133.88 feet from station in azimuth $246^{\circ}36'$. The three trees form a triangle and are just across route 144 from the post office. Reference mark no. 2 is about on the Orange-Caswell County line, 270 feet east of route 14, on south edge of faint woods road, 9 feet west or toward road from large 20-inch twin white oak behind which is a 16-inch pine tree, 9 feet south of center line of woods road, and approximately one-half mile from station in azimuth $353^{\circ}10'27''$. No. 3 is in northeast corner of intersection of routes 14 and 144, 55 feet east of center line of route 14, 43 feet north of center line of route 144, 25 feet southeast of 20-inch oak, 23 feet south of 28-inch oak, and 152.0 feet from station in azimuth $159^{\circ}32'$.

NORTH CAROLINA-VIRGINIA BOUNDARY ARC

Principal points

Vulture (Northampton County, J. P. Lushene, 1933).—About 9 miles west-northwest of Roanoke Rapids, about 1 mile west of crossroads at Vulture, and on property of St. Lukes Episcopal Church. To reach from Roanoke Rapids, go north on route 40-A, cross Roanoke River, continue about $1\frac{1}{2}$ miles to junction with route 46, proceed west 7.5 miles on route 46 to Vulture crossroads, and continue straight ahead 1 mile to St. Lukes Episcopal Church on south side of road. Station is 35 feet south of south bank of highway and 100 feet due north of northwest corner of church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at northwest corner of church hall, about 1 foot north of corner, and 28.46 meters (93.4 feet) from station in azimuth $306^{\circ}50'$. No. 2 is 1 foot west of west fence of graveyard near church, 16 feet north of southwest corner of graveyard, and 71.22 meters (233.7 feet) from station in azimuth $22^{\circ}32'$. No. 3 is 39 feet west of mail box of B. G. and E. C. Wilkins, 25 feet from route 46, 56 feet west of center line of side dirt road, and approximately three-eighths mile from station in azimuth $118^{\circ}43'42''$. Surface mark of azimuth mark "Auto" is spike projecting about $1\frac{1}{2}$ inches from concrete monument. Underground mark is a stake with nail set in concrete post. To reach from station, return to Vulture crossroads, turn left onto dirt road, and proceed about 100 yards to first gate on left. Enter gate and proceed 0.3 mile west along

fence row on south side of green-and-white house owned by R. E. Cleaton. Mark is 40 feet due south of fence dividing plowed field from uncleared ground and $3\frac{1}{2}$ feet northwest of base of 10-inch persimmon tree. "Auto" is approximately 1 mile from station in azimuth $299^{\circ}29'49''$.

Powell (Brunswick County, Va., R. D. Horne, 1933).—About 15 miles west of Emporia, and 6 miles southeast of Lawrenceville, on grounds of Powellton School. To reach from Lawrenceville, go west 0.8 mile on route 58 to fork, turn south onto Virginia route 401 and follow south 3.5 miles to dirt road left at large dairy farm just south of Meherrin River. Turn left onto this road and proceed southeast 3.6 miles to station site. Station is about 100 yards north of north corner of school building, 55 feet northeast of outhouse belonging to school, 55 feet southwest of center line of highway, and about 100 yards northwest of T-road intersection. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 16 feet north of center line of highway, directly opposite station, and 70.93 feet from station in azimuth $230^{\circ}47'$. No. 2 is 7 meters (23 feet) north of center line of road, 15 meters (49 feet) south of southwest corner of barn, near corner of board fence, and approximately 0.2 mile from station in azimuth $298^{\circ}20'55''$. No. 3 is 21 feet southwest of center line of road, 90 feet northwest of 12-inch oak tree, and 83.53 feet from station in azimuth $306^{\circ}26'$.

Rawlings (Greenville County, Va., R. D. Horne, 1933).—Station is 5 miles west-southwest of Emporia, on land of G. L. Rawlings. To reach from main corner in Emporia, go south 0.9 mile on route 17-1, take dirt right fork (Texaco gas station in V) 1.4 miles, then left fork straight ahead 2 miles, turn right onto sandy T-road just south of railroad crossing 0.3 mile, take left fork 0.15 mile, keep straight ahead past house on right, continue 0.25 mile, take left fork straight ahead down grade, continue 0.45 mile, keep straight ahead at crossroads for 0.1 mile, turn right onto main road to Mr. Rawlings' house, pass house on road leading north through yard 0.2 mile, turn left onto sand T-road and proceed 0.1 mile to station site. Station is on north side of plowed field which is north boundary of farm, 20 feet south of center line of dirt field road, and about 150 feet west of point where this road emerges from woods. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is 1 foot below ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 feet north of center line of dirt field road leading to station, 70 feet west of point where it emerges from woods, at edge of brush and small trees on north side of road, and 90.00 feet from station in azimuth $269^{\circ}47'$. No. 2 is 6 feet west of center line of road leading to Rawlings' house, 3 feet north of post at point where road turns north to house, at southeast corner of cornfield, and approximately 0.35 mile from station in azimuth $355^{\circ}06'36''$. No. 3 is 6 feet north of field road leading to station, opposite northeast corner of watermelon patch on opposite side of road, and 94.75 feet from station in azimuth $120^{\circ}31'$.

Stancell (Northampton County, N.C., Greenville County, Va., R. D. Horne, 1933).—About 7 miles northwest of Roanoke Rapids, at Virginia-North Carolina State line. To reach from junction of routes 40-A and 46 at site of station *Camp*, go west 7.5 miles on route 46 to Vulture crossroads with store in east angle, turn right (northeast) and follow main road 2.7 miles to lane crossing main road close to State line. This point is about 700 feet beyond church on right at left-hand bend on road. To reach from main corner in Emporia, go south 0.9 mile on route 17-1, take right dirt fork with Texaco gas station in V, proceed 1.4 miles, take left fork, and follow main road 12.8 miles to station site. Station is 26 paces south of lane crossing, 29 feet west of center line of road, 27 feet southeast of center line of lane, 42 feet south of blazed tree, 51 feet southeast of telephone pole, and about 100 yards north of cemetery. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 48 paces east of lane crossing, 8 feet south of center line of lane, 47 feet southwest of large sweetgum tree, and 211.5 feet from station in azimuth $261^{\circ}16'$. No. 2 is 24 feet west of center line of road, 12 feet north of north fence of cemetery lot containing grave of S. William Clements, in southeast corner of cultivated but stumpy field, and 211.1 feet from station in azimuth $26^{\circ}43'$. No. 3 is 10 paces west of center line of dirt road between Vulture and Barley, 16 paces west of telephone pole, 6 paces northwest of intersection of old road and main road,

about 100 yards north-northwest of E. M. Columbus' store, and approximately 0.3 mile from station in azimuth $52^{\circ}04'33''$.

Jordon (Northampton County, R. D. Horne, 1933).—About 3 miles northeast of Roanoke Rapids, on land of L. A. Jordon. To reach from junction of United States route 17-1 and North Carolina route 40-A, go west 3.7 miles on route 40-A, turn left 0.9 mile to crossroads, continue straight ahead 1.1 miles, turn right onto road leading into Mr. Jordon's place, and bear to right around house to point just beyond well. Station is 27 feet northwest of center of well, 135 feet north-northwest of northwest corner of dwelling foundation, and 490 feet west of center line of public road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches above ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in small orchard, and 108.94 feet from station in azimuth $183^{\circ}48'$. No. 2 is 5 meters (16 feet) west of center line of public road, 4 meters (13 feet) north of farm entrance road in front of an old dwelling house, and approximately 0.3 mile from station in azimuth $201^{\circ}03'53''$. No. 3 is 4 meters (13 feet) west of center line of public road, 14 meters (46 feet) south of farm entrance road that lies east of public road, and 477 feet (slope) from station in azimuth $278^{\circ}04'46''$.

Lilly (Camden County, R. D. Horne, 1933).—About $5\frac{1}{2}$ miles north-northwest of South Mills and $10\frac{1}{4}$ miles west of Moyock, on bank of Dismal Swamp Canal. To reach from South Mills, go north 5.6 miles on route 17 from bridge over canal direct to station site. Station is 57 feet west of center line of concrete pavement, 22 feet east of east bank of canal, 24 feet southeast of most northerly tree of group of pine trees, and 20 paces south of fifth telephone pole north of ditch crossing road at northwest corner of cultivated field. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 13 feet east of center line of highway, and 129.2 feet from station in azimuth $190^{\circ}58'$. No. 2 is 13 feet east of center line of highway, and 154.5 feet from station in azimuth $312^{\circ}24'$. No. 3 is 15 feet east of center line of highway and approximately 0.3 mile from station in azimuth $336^{\circ}16'02''$. Mark is not visible from ground without clearing.

Wallaceton (Norfolk County, Va., R. D. Horne, 1933).—Station is $6\frac{1}{2}$ miles a little west of south of Deep Creek, and 9 miles west of Hickory, along Dismal Swamp Canal. To reach from South Mills, go north 7.7 miles on route 17 from bridge over canal to State line, and continue north 7.3 miles to narrow asphalt T-road to east and station site. This point is $6\frac{1}{2}$ miles south along route 17 from crossing at Deep Creek. Station is 53 feet west of center line of highway, 30 feet east of northeast corner of canal dock, and at gravel pile on west side of road just east of canal. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in northeast angle of asphalt T-road junction, 40 feet east of center line of highway, 30 feet north of center line of asphalt road, and 218.00 feet from station in azimuth $217^{\circ}14'$. No. 2 is 24 feet east of center line of highway, opposite telephone pole no. 377 plus 39, and approximately 0.2 mile from station in azimuth $6^{\circ}42'54''$. No. 3 is 20 feet east of center line of highway, 6 feet north of lone 18-inch pine tree on east side of highway, and 142.33 feet from station in azimuth $339^{\circ}28'$.

Corapeake (Gates County, R. D. Horne, 1933).—Station is 14 miles south of Suffolk, $1\frac{1}{2}$ miles east-southeast of Corapeake, and 1.5 miles south of Virginia-North Carolina State line, on land of William Roundtree. To reach from east side of railroad crossing at Corapeake, go north about 200 yards on dirt road along tracks, turn right around store onto dirt T-road leading east just south of railroad station, proceed 0.75 mile, continue straight ahead at point where main road turns left at jogged crossroads, continue 0.25 mile, continue straight ahead at T-road right, continue 0.6 mile, and pass through gate to Roundtree's house at end of road. Station is about 270 feet southeast of southeast corner of house, on east edge of cultivated field which also contains a few peach trees, just north of small clump of pine trees, 43 feet north of southeast corner of cultivated field, about 83 yards south-southeast of southwest corner of old plank barn, 226 feet east of north-and-south farm road, 9 paces southwest of pine stump in wire fence, and 7 paces west of wire fence. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at southeast corner of Roundtree's yard, 1.4 feet east of corner fence post, 7 feet northeast of 48-inch maple, 15.5 feet south-southwest of 8-inch pear tree, 30 feet east-southeast of southeast

corner of Roundtree's house, 43 feet south-southeast of southeast corner of brick chimney on east side of house, and 240.4 feet from station in azimuth $123^{\circ}26'$. No. 2 is 5 meters (16 feet) south of center line of road, 40 meters (131 feet) south-east of two-story farmhouse, 12 meters (39 feet) south of west side of gate leading to farmhouse, and approximately 0.4 mile from station in azimuth $158^{\circ}20'58''$. No. 3 is in uncultivated area, 1.7 feet southeast of old post, 28 feet south-southeast of southwest corner of old plank barn with lightning rods, 82.2 feet southeast of southeast corner of log barn, about 28 yards southwest of chinaberry tree in pig lot, and 231.8 feet from station in azimuth $158^{\circ}17'$.

Baines (Nansemond County, Va., R. D. Horne, 1933).—About 4 miles south-southeast of Suffolk, on land of J. C. Baines. To reach from intersection of East Washington and Main Streets in Suffolk, go east 0.7 mile on East Washington Street, turn right at Y-fork, proceed 4.0 miles to lane on west side of highway leading to Baines' place, enter lane and proceed to station site. Station is 42 feet west of center line of highway, and 17 feet north of center line of lane. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 18 feet west of center line of highway, and 156.28 feet from station in azimuth $187^{\circ}58'$. No. 2 is 194 feet west of center line of highway, in fence line, 30 feet from center line of lane, and 152.24 feet from station in azimuth $96^{\circ}39'$. No. 3 is 35 feet south of field-separating line marked by fence on east side of highway and drainage ditch on west side of highway, 21 feet east of center line of highway, 3 feet south of telephone pole, and approximately 0.4 mile from station in azimuth $179^{\circ}03'22''$.

Harrell (Nansemond County, Va., R. D. Horne, 1933).—About $8\frac{1}{2}$ miles south-southwest of Suffolk, and $3\frac{1}{4}$ miles northeast of Whaleyville, on land of V. B. Harrell. To reach from Suffolk, go south 3.6 miles on route 505, turn right onto route 506, proceed 4.65 miles or 1.0 mile beyond right dirt fork at Liberty Spring Church, turn left onto dirt T-road, proceed 1.15 miles to Atlantic Coast Line Railroad crossing at Harrell's Siding, take left dirt fork and proceed 100 paces to station site. Station is 37 feet north of center line of road, in uncultivated area, 76.0 feet S. 5° E. (magnetic) from southwest corner of V. B. Harrell's metal cotton gin, 18 feet east of vine-covered fence, about 167 feet east-southeast of east rail of main track of railroad, and 198 feet N. 57° W. (magnetic) from 14-inch slender cedar which stands in northeast corner of F. J. Brinkley's yard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in front of Brinkley's house, 23 feet south of center line of road, 9 feet east-northeast of cedar in front yard, 1.4 feet north of northeast corner post, and 204.75 feet from station in azimuth $283^{\circ}31'$. No. 2 is 25.4 feet east of east rail of main track of railroad, 33.7 feet south-southwest of switch block, 97 feet north of center line of dirt road, and 142.2 feet from station in azimuth $110^{\circ}58'$. No. 3 is at farm road leading east from main road to P. H. Wilkin's house, 8 paces west-southwest of center line of main road, 17 paces west-southwest of wood culvert, and approximately 0.3 mile from station in azimuth $130^{\circ}13'15''$.

Morgan (Nansemond County, Va., R. D. Horne, 1933).—About $3\frac{1}{2}$ miles a little west of north of Whaleyville, 9 miles southwest of Suffolk, and $12\frac{1}{4}$ miles a little south of east of Franklin, on land of Clarence Morgan. To reach from Suffolk, go south 3.5 miles on route 505, turn right onto route 506, proceed 3.65 miles, take right-hand dirt fork at Liberty Spring Church, proceed 2.3 miles, turn left at T-road junction, proceed 500 feet, keep straight ahead at T-road junction on right, and continue 0.65 mile to Morgan's house on left. Station is in northwest corner of cultivated field on south side of Morgan's house, 26 feet east of center line of dirt road, 8.7 feet southeast of 8-inch fence post in northwest corner of field, and 30 feet south of peach tree in southwest corner of garden lot on south side of house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is 18 inches below surface. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 18 feet west of center line of road, at southeast corner of field, 13 feet north of northeast corner of small shed on west side of road, 91 feet west of center line of middle of center step of concrete steps, and 133.00 feet from station in azimuth $221^{\circ}28'$. No. 2 is 3 feet southeast of 3 mail boxes, 18 feet east of center line of road, 27 feet south of T-road junction to east, and approximately 0.2 mile from station in azimuth $236^{\circ}10'27''$. No. 3 is 1 foot west of fence line on west

For notes in regard to marking of stations see p. 135.

side of cultivated field, 20 feet east of center line of road, 72 feet south of center of wood culvert across road, and 137.55 feet from station in azimuth $51^{\circ}33'$.

Vann (Gates County, R. D. Horne, 1933).—About $3\frac{1}{2}$ miles east-northeast of Gates, $5\frac{1}{2}$ miles south of Whaleyville, and 2.6 miles south of Virginia-North Carolina State line, on land of Mrs. A. O. Vann (colored). To reach from junction of routes 30, 32, and 34 at Sunbury, go west 5.1 miles on route 30, turn right at dirt crossroads with arrow "Willeyton $4\frac{1}{2}$ miles", follow 4.4 miles, turn right (northeast) at jogged crossroads, and continue 1.6 miles to station site on south side of road in front of house just before reaching S curve. To reach from Whaleyville, go southwest on route 506 to first dirt road leading to left (0.75 mile beyond end of pavement), turn left onto route 123, follow 2.9 miles to railroad crossing at Drumhill, continue straight ahead (Hazelton Road) southeast 2.35 miles to T-road junction, turn right and proceed 0.6 mile to station site on left. Station is in north corner of Mrs. Vann's yard, 30 feet south-southeast of center line of road, 10.4 feet south-southeast of mail box post no. 102, 13 feet southwest of southwest edge of cultivated field, and with magnetic bearings and distances to following objects: 30-inch cedar tree, N. 8° W., 87 feet; chimney on yellow house, N. 66° E., approximately 0.1 mile; chimney on 2-story unpainted house, N. 50° E., approximately 0.3 mile; and apple tree, S. 46° E., approximately 100 yards. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 9 paces northwest of center line of road, 1.2 feet south of wire fence of Mrs. Draper's yard, 6 paces northeast of southeast corner of yard, 18 paces west of mail box, and approximately 0.25 mile from station in azimuth $230^{\circ}15'26''$. No. 2 is on northeast edge of yard, 2 feet southwest of southwest edge of cultivated field, 16.2 feet north of north side of house, 20.8 feet northwest of northeast corner of house, and 136.3 feet from station in azimuth $320^{\circ}21'$. No. 3 is 11 feet north-northwest of center line of road, 10 feet east of charred stump, 11.3 feet south of pine stump, 38 feet south-southeast of 26-inch pine tree, and 132.9 feet from station in azimuth $71^{\circ}37'$.

Quay (Nansemond County, Va., R. D. Horne, 1933).—Station is 5 miles south-east of Franklin, $6\frac{1}{2}$ miles southwest of Holland, and $4\frac{1}{2}$ miles north of Virginia-North Carolina State line, on land of Joe Johnson. To reach from junction of United States route 58 and Virginia route 535 at Holland, go south 5.8 miles on route 535 or 0.8 mile beyond P. O. Duck's store to fork with two mail boxes in V, turn left and proceed 0.8 mile to station site in Johnson's yard. Station is in northeast corner of yard, 15 feet south of north fence, 12 feet west of west right-of-way fence of road, 29 feet west of center line of road, 106 feet northeast of northeast corner of unoccupied house, and 81 feet east of southeast corner of barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 16 feet east of center line of north-and-south road, 42 feet northeast of southeast corner of Johnson's yard, and 116.6 feet from station in azimuth $348^{\circ}33'$. No. 2 is 15 meters (49 feet) south of intersection of two roads, about 100 meters (328 feet) north of farmhouse, and approximately 0.3 mile from station in azimuth $357^{\circ}11'00''$. No. 3 is 1 foot east of west fence line of Johnson's yard, 4 feet south of southeast corner of shed, 42 feet northwest of northwest corner of farmhouse, and 141.4 feet from station in azimuth $83^{\circ}05'$.

Gatling (Gates County, R. D. Horne, 1933).—Station is $3\frac{1}{2}$ miles west of Gates, $9\frac{1}{2}$ miles northeast of Winton, and 3.3 miles south of Virginia-North Carolina State line, on land of G. G. Gatling. To reach from Fanny's store in Gates, follow arrow "Reynoldson $2\frac{1}{2}$ miles" west 0.55 mile, keep straight ahead at crossroads, continue 0.9 mile, turn left at T-road junction, proceed about 250 feet, turn right at another T-road, continue 0.85 mile, turn right at T-road junction with large dead snag at triangle of junction, proceed 0.4 mile to Savages crossroads, keep straight ahead, and continue 1.0 mile to T-road on left and station site. Station is 18.5 feet south of center line of road, 60 feet east of 2-foot cedar tree in northwest angle of T-road to right which is opposite entrance to Gatling's house, and 80 feet east of gate entrance. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete note 11a. No. 1 is 57 feet southeast of center line of road at intersection of T-road to east, 5 feet southwest of northwest corner of plowed field which is northwest of house, and 95.58 feet from station in azimuth $281^{\circ}19'$. No. 2 is 84 feet west of center of gate and entrance to house, 20 feet south of center line of road at fence line intersection on north side of fence, and 161.60 feet from station in azimuth $88^{\circ}00'$. No. 3 is 24 feet north

of center line of road, 24 feet west of fence corner, on west side of road north of point where road curves to southeast, and approximately 0.25 mile from station in azimuth $92^{\circ}36'09''$.

Camp (Southampton County, Va., R. D. Horne, 1933).—Station is $3\frac{1}{4}$ miles south of Franklin, 9 miles west-southwest of Holland, and 6.1 miles north of Virginia-North Carolina State line, on land owned by J. M. Camp and occupied by E. P. Lowe, tenant. To reach from Franklin, go south 2 miles on United States route 158 to Four Brothers Cafe, and continue south 1.85 miles on same highway or 0.2 mile beyond long low dairy barn on east side of road to station site in E. P. Lowe's yard. Station is in northwest corner of yard, 58 feet north of center of gate, 77 feet east of northwest corner of yard at fence line intersection, and 50 feet north of center line of route 158. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 foot south of fence on northwest side of yard, 76 feet west of center line of driveway to house, 230 feet north of highway, and 177.32 feet from station in azimuth $222^{\circ}11'$. No. 2 is 25 feet southwest of center line of highway, 18 feet south-southeast of farm lane leading northwest from highway, 65 feet southeast of lone pine tree on southeast of farm lane in northeast corner of small cultivated field, and approximately 0.25 mile from station in azimuth $331^{\circ}19'36''$. No. 3 is 63 feet south of center of entrance gate, 3 feet northeast of T-pole at southwest corner of yard, 26 feet east of center line of highway, and 119.85 feet from station in azimuth $341^{\circ}57'$.

Como (Hertford County, R. D. Horne, 1933).—About $6\frac{1}{2}$ miles northeast of Murfreesboro, $8\frac{1}{2}$ miles north-northwest of Winton, 3.8 miles southwest along route 158 from point where it crosses Virginia-North Carolina State line, and at main corner in Como, on property owned by J. B. Majette. To reach from Murfreesboro, go north about $6\frac{1}{2}$ miles on route 158 direct to station site. Station is 46 feet northwest of center line of route 158, 48 feet south of east corner of large barn, and 24 feet northeast of southeast end of large advertising signboard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11c. No. 1 is in middle of top and 3 feet south of north end of concrete foundation of gas pump of Texaco gas station and store owned by Mrs. Barrett, 34 feet southeast of highway, and 136.3 feet from station in azimuth $259^{\circ}10'$. No. 2 is in north end of concrete culvert headwall, 8 feet west of west corner of concrete porch foundation of small store, 19 feet southeast of center line of highway, and 142.5 feet from station in azimuth $17^{\circ}29'$. Reference mark no. 3 is standard reference disk in concrete, note 11a, 28 feet southeast of center line of paved highway, opposite curve in highway, 1 foot west of north corner of front yard of last house of row of three or four, 7 feet northeast of most northerly of row of four trees in front of house, and approximately 0.1 mile from station in azimuth $37^{\circ}05'23''$. *Primary traverse station no. 9 (U.S.G.S.)* (see description thereof) is 71.93 meters (236.0 feet) from station in azimuth $227^{\circ}33'$.

Beale (Southampton County, Va., R. D. Horne, 1933).—About $7\frac{1}{4}$ miles west-southwest of Franklin and 5.9 miles north of Virginia-North Carolina State line, on land of W. E. Beale. To reach from either Franklin or Murfreesboro, follow route 158 to point 1.4 miles south of crossing of Nottaway River or 0.65 mile north of point where highway crosses State line, turn west onto dirt crossroads at Texaco gas station on east side and Standard gas station on west side of highway, proceed 1.95 miles or 0.4 mile beyond two schools on left, take right fork, follow main road 3.05 miles to crossroads at E. F. Drake's store at Sunbeam, keep straight ahead 2.25 miles, cross over crossroads with small Texaco and Gulf gas stations, and continue 0.85 mile to station site at Beale's house which is about 150 yards east of road. Station is just inside fence, 24 feet north of south fence of drive to house, 23 feet east of large tree on fence line opposite station, 32 feet east of center of iron gate to driveway, and 47 feet northeast of center line of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 66 feet west of 3-foot sycamore tree, 1 foot east of west fence of drive, 72 feet east of east corner of barn in northwest corner of yard, and 141.95 feet from station in azimuth $217^{\circ}52'$. No. 2 is 32 feet northwest of 2-foot oak tree, 16 feet southwest of center line of road, and 138.85 feet from station in azimuth $4^{\circ}47'$. No. 3 is 15 feet southwest of center line of road, in northwest corner of cultivated field, 12 feet southeast of 10-inch oak tree and 6-inch cedar tree that stand in northwest corner of field, opposite wild-cherry tree on opposite side of road, and approximately 0.25 mile from station in azimuth $156^{\circ}06'48''$.

Severn (Northampton County, R. D. Horne, 1933).—About $\frac{3}{4}$ mile south-southwest of Severn, $4\frac{1}{4}$ miles north-northeast of Conway, and 2.8 miles south of Virginia-North Carolina State line, on land owned by J. R. Taylor and occupied by C. C. Barnes, tenant. To reach from Severn, go south 0.75 mile on route 45 to Barnes' house on east side of road. Station is about 30 yards east of Barnes' house, on north side of barnyard, 14 feet east of southeast corner of shed, 14 feet south of north fence line, 45 feet west of northwest corner of barn, and 59 feet north of south fence line. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 feet south of center line of dirt farm road, in north edge of cotton field, just south of small apple orchard, and 219.7 feet from station in azimuth $17^{\circ}32'$. No. 2 is 12 paces east of center line of highway, 5 meters (16 feet) north of telephone pole no. 3207, 17 paces north of lane leading into farmhouse, in northwest corner of yard of farmhouse, and approximately 0.2 mile from station in azimuth $32^{\circ}04'46''$. No. 3 is 6 paces west of center line of highway, in east edge of cotton field, opposite road to Barnes' house, and 238.5 feet from station in azimuth $104^{\circ}37'$.

Shiloh (Southampton County, Va., R. D. Horne, 1933).—Station is 2.9 miles north of Boykins, on land owned by Ben E. Worrell and occupied by J. R. Artis. To reach from railroad crossing in Boykins, go north 3.1 miles on route 35 to crossroads with old red-brick building in northeast angle, turn left (northeast) onto dirt road, and proceed 0.7 mile to J. R. Artis' house in northeast angle of T-road intersection. Station is in northeast corner of barnyard, 53 feet west of southeast corner of barn at fence on west side of peanut patch, and 88 feet north of northwest corner of barn on southeast corner of yard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in southeast corner of field where crossroads meet, 25 feet from road leading northeast into woods, 25 feet north of center of road, and approximately 0.3 mile from station in azimuth $275^{\circ}05'21''$. No. 2 is 88 feet south of northwest corner of barn on east side of house, 15 feet north of center line of road, 55 feet west of center of gate entrance, and 175.90 feet from station in azimuth $4^{\circ}26'$. No. 3 is 15 feet west of lane running north from road, 130 feet northwest of northwest corner of house, and 143.20 feet from station in azimuth $89^{\circ}55'$.

Woodard (Northampton County, R. D. Horne, 1933).—About 8 miles northwest of Conway, 2 miles south of Margaret, $5\frac{1}{2}$ miles east-northeast of Seaboard, and 2.8 miles south of Virginia-North Carolina State line, on property of L. D. Woodard. To reach from railroad crossing at Margaret, go east 1.6 miles on main road to crossroads with arrows to Seaboard, Severn, Galatia, and Margaret. Turn right following arrow to Seaboard, proceed 1.2 miles to narrow country road, turn right, and follow narrow road about 200 feet to station site. Station is in south edge of woods, about 100 yards northeast of Woodard's house, 58 feet north of center line of country road, and 17 feet north of northwest corner of old ramshackle hog house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 8 paces west of center line of dirt road, about 25 yards north of narrow country road leading to station, in east edge of woods, and 171.9 feet from station in azimuth $294^{\circ}27'$. No. 2 is in south edge of woods in forks of road, 4 paces north of center line of southerly road, 5 paces south of center line of northerly road, and approximately 0.2 mile from station in azimuth $294^{\circ}27'05''$. No. 3 is 1 foot north of east end of gate, 4 paces east of southeast corner of shed, at northwest corner of barnyard which is north of Woodard's house, and 209.5 feet from station in azimuth $41^{\circ}58'$.

Ellis (Southampton County, Va. R. D. Horne, 1933).—Station is 9 miles west-northwest of Boykins, 11 miles north-northeast of Seaboard, and 5.9 miles north of Virginia-North Carolina State line, on property owned by Mrs. D. D. Ellis and occupied by C. P. Rawls, tenant. To reach from railroad crossing in Margaret, go west 1.6 miles on main road, turn right onto T-road with "Coca Cola" sign and white house in northeast angle, proceed 3.0 miles, turn right onto route 509 at "Nehi" sign on tree in southwest angle and United States Geological Survey pipe in southeast angle, continue 0.8 mile to T-road on left and follow this road to station site at top of grade. Station is in northwest corner of barnyard, 90 feet west of center of well in back yard, 45 feet south of north fence, and 50 feet east of west fence. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in north-and-south fence line, 12 feet east of center

line of road, 0.10 mile north of T-road to right, and 0.30 mile from station in azimuth $215^{\circ}18'13''$. No. 2 is 38 feet north of northwest corner of house, on north side of fence line, 41 feet east of barnyard fence separating barnyard from back yard of house, and 125.15 feet from station in azimuth $262^{\circ}45'$. No. 3 is 6 feet west of southwest corner of barn, in southwest corner of south barnyard fence, and 97.00 feet from station in azimuth $333^{\circ}32'$.

Daniel (Northampton County, R. D. Horne, 1933).—About $8\frac{1}{4}$ miles northeast of Weldon, $2\frac{1}{2}$ miles west-northwest of Seaboard, and 2.7 miles south of Virginia-North Carolina State line, on property of R. A. Daniel. To reach from Weldon, go north 3.8 miles on United States route 301, turn right onto gravel North Carolina route 305, continue east 4.1 miles to road to north with "Braser Drink" sign on south edge of road, turn left, and proceed 2.4 miles to Daniel's house on east side of road. Station is in barnyard, about 90 yards east of Mr. Daniel's brick house, 27 feet east of fence line, 14 feet southeast of southeast corner of child's playhouse, 18 feet south of another fence line, 23 feet southwest of southwest corner of shed, and 25 feet west of northwest corner of small barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 2 feet east of northeast corner of country filling station and store, and 167.4 feet from station in azimuth $35^{\circ}19'$. No. 2 is 10 paces south of red farmhouse, 9 paces northwest of well, 1 foot east of garden fence, and approximately 250 yards from station in azimuth $51^{\circ}32'36''$. No. 3 is $1\frac{1}{2}$ feet east of north-and-south fence, 6 feet south of east-and-west fence, 9 feet west of well, and 90.15 feet (slope) from station in azimuth $135^{\circ}53'$.

Emporia (Greenville County, Va., R. D. Horne, 1933).—Station is 3 miles a little east of south of Emporia, on land of Alec. B. Batt. To reach from main corner at post office at Emporia, go south 0.6 mile on route 301, turn left onto route 509, proceed 1.55 miles to T-road on right with abandoned store in southeast angle, proceed 1.25 miles, turn right (west) into lane opposite 2 mail boxes on left, follow lane (passing chimney on north side of lane about 250 yards west of main road) 0.3 mile, turn right onto T-road just beyond ditch crossing into woods, and continue 0.15 mile to top of grade and station site. Station is 28 feet west of blazed gum tree, 39 feet west of fork of dim woods roads, and 19 feet southwest of center line of lane. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 104 feet north of center line of lane, and 123.20 feet from station in azimuth $222^{\circ}14'$. No. 2 is 80 feet east-southeast of blazed gum tree, 10 feet east of center line of lane, and 105.52 feet from station in azimuth $308^{\circ}32'$. No. 3 is in southeast corner of woods, 8 feet south of center line of east-and-west lane, 150 feet west of west corner of apple orchard, and approximately 0.25 mile from station in azimuth $55^{\circ}01'30''$.

Bethel Hill (Person County, R. D. Horne, 1933).—Station is $8\frac{1}{4}$ miles north-northeast of Roxboro, $8\frac{1}{4}$ miles west-southwest of Virgilina, and $2\frac{1}{2}$ miles south of Virginia-North Carolina State line, on grounds of Bethel Hill school. To reach from South Boston, go south about 15 miles or 3.25 miles beyond State line on route 501 direct to station site. To reach from main corner in Roxboro, go north 9.35 miles or 3.1 miles beyond S. P. Gentry & Co.'s store on east side of highway on route 501 direct to station site. Station is 64 feet south of northwest corner and 59 feet west of southwest corner of main school building. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11a. No. 1 is 100 feet northeast of negro farmhouse, 35 feet east of east corner of log shed, 10 feet south of east-and-west road between fields, 10 feet northwest of 12-inch cherry tree, and 0.25 mile from station in azimuth $9^{\circ}33'30''$. No. 2 is at south edge of school grounds, 51 feet north of road on south side of school, and 180.89 feet from station in azimuth $78^{\circ}48'$. Reference mark no. 3 is a standard reference disk, note 11c, in east side of inclined concrete walk to school gymnasium, 13 feet south of gymnasium door, and 123.12 feet from station in azimuth $177^{\circ}02'$.

Halloway (Person County, R. D. Horne, 1933).—Station is $11\frac{1}{4}$ miles northeast of Roxboro, 4 miles a little west of south of Virgilina, $3\frac{1}{4}$ miles south of Virginia-North Carolina State line, and about 250 yards west of Person-Granville County line. To reach from railroad station in Virgilina, go south 1.7 miles on route 144, take left fork at arrow "Allensville 11 Miles", proceed 0.2 mile, take right fork 0.6 mile and cross county line into Person County, continue 1.75 miles, turn left directly opposite whitewashed mail box on right and at south side of small open field on left, proceed 0.3 mile, take left fork just beyond tobacco shed, con-

tinue 0.55 mile or 0.35 mile after fording small creek, and turn right onto main road at May Faulkner's house on left. Proceed 0.15 mile, turn up hill to right onto dim road, and follow about 250 yards to triangle-blazed pine on left at edge of woods. Station is in southwest corner of plowed field, at corner of timber lines at top of hill which slopes east from station 127 feet south of blazed pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 209 feet north of 12-inch blazed pine tree, in south end of small grove of pine and oak trees on east side of road which leads to station through plowed field, and 324.10 feet from station in azimuth $190^{\circ}49'58''$. No. 2 is at northeast edge of field, 6 feet south of center line of dim east-and-west road, 40 feet east of dim crossroads, opposite 14-inch oak tree on north side of road, and approximately 350 yards from station in azimuth $205^{\circ}10'14''$. No. 3 is at south edge of plowed field, near top of hill where slope becomes steeper, and 98.88 feet from station in azimuth $293^{\circ}10'$.

Moon (Halifax County, Va., R. D. Horne, 1933).—About 11 miles west of Clarksville, $9\frac{1}{2}$ miles east-southeast of South Boston, 7 miles north of Virginia-North Carolina State line, on top of what is known locally as High Hill, and property of Chas. H. Moon. To reach from railroad crossing at South Clarksville railroad station, go west 10.0 miles on route 58 or 1.2 miles beyond Aarons Creek, turn left (south) onto graded T-road, proceed 1.45 miles, turn right at road junction at store (midway), proceed 1.0 mile, keep straight ahead at T-road left (road from Virgilina), continue 0.95 mile to T-road at top of grade, turn right onto lane leading through woods at sign "J. S. Owen & Co.", and proceed about 100 yards to burned ruins of old house. Station is 72.3 feet south of south side of chimney of burned house, 50 feet west of 20-inch oak blazed with 8-inch triangle, and $24\frac{1}{2}$ feet north of 3-foot oak. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 9 feet east of center line of road past burned house, 7 feet south of 20-inch oak, 96.5 feet east of northeast corner of chimney, and 137.85 feet from station in azimuth $230^{\circ}44'$. No. 2 is 39 feet east of center line of lane past front of school, 60.5 feet south of large 3-foot oak which divides into 2 trunks at 3 feet from ground and into 3 trunks at 6 feet from ground, and approximately 131 paces from station in azimuth $307^{\circ}19'51''$. No. 3 is 15 feet west of center line of left branch of fork in road running from main road past burned house, 59.6 feet north of 2-foot pine very much scarred at lower 2 feet of its base, and 161.65 feet (slope) from station in azimuth $319^{\circ}19'$.

Averett (Mecklenburg County, Va., R. D. Horne, 1933).—Station is $5\frac{1}{2}$ miles southwest of Clarksville, 8 miles east-northeast of Virgilina, $2\frac{1}{2}$ miles north of State line, and near Averett siding on Southern Railway, on land of Mrs. Ella Sizemore. To reach from South Clarksville railroad station, go west 2.7 miles on route 58 to junction with route 59, turn left on route 59, proceed 1.4 miles and cross railroad at Buffalo Junction, continue 2.15 miles on main road which follows railroad or 0.95 mile beyond another railroad crossing, turn left onto T-road at top of grade, proceed 0.35 mile or 0.2 mile beyond railroad crossing and turn right into Mrs. Sizemore's yard. Station is on west side of small apple orchard, 68 feet southeast of center of well in back of house, 43 feet south of more northerly of 2 large oak trees, and 26 feet east of more southerly of these trees. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is a standard reference disk in a boulder, note 12c, in plowed field, 50 feet south of center line of east-and-west road, 80 feet southwest of more easterly of 2 old tobacco sheds on south side of east-and-west road, 125 feet east of more westerly of these sheds, and approximately 0.2 mile from station in azimuth $262^{\circ}23'33''$. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11a. No. 2 is $1\frac{1}{2}$ feet east of fence on west side of hog pen, 35 feet, south of southeast corner of log barn in back yard, and 95.14 feet from station in azimuth $15^{\circ}59'$. No. 3 is in southwest corner of 10-foot base of well which projects 4 inches above ground, and 67.10 feet from station in azimuth $147^{\circ}31'$.

Bullock (Granville County, R. D. Horne, 1933).—Station is $6\frac{1}{2}$ miles west of Townsville, 3 miles north-northeast of Stovall, $3\frac{1}{2}$ miles south of Virginia-North Carolina State line, and 0.2 mile south of crossroads at Bullock post office, on land of Chas. Royster. To reach from Clarksville, go south 10.5 miles or 3.75 miles beyond State line on route 58 to Bullock, and continue 0.2 mile beyond crossroads to top of slight grade and station site. Station is 38 feet west of center line of highway, opposite south end of black center-line mark on highway, and 63

feet west of telephone pole no. 350. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 27.5 feet east of center line of highway, and 103.45 feet from station in azimuth $258^{\circ}20'$. No. 2 is 28 feet east of center line of highway, and 98.95 feet from station in azimuth $357^{\circ}45'$. No. 3 is 28 feet east of center line of highway, at edge of woods and cultivated field on opposite side of highway, 12 feet southwest of 18-inch oak tree, 45 feet south of telephone pole no. 354, and approximately 0.1 mile from station in azimuth $33^{\circ}20'52''$.

Clarksville (Mecklenburg County, Va., R. D. Horne, 1933).—About $2\frac{1}{4}$ miles east-northeast of Clarksville, $6\frac{1}{2}$ miles north of Virginia-North Carolina State line, and $7\frac{1}{2}$ miles west-southwest of Boydton. To reach from Clarksville, go east on route 58, cross river to junction with route 15, and continue 1.25 miles on route 58 to station site. Station is on high part of hill, about 75 paces north of highway, 40 feet north of 24-inch oak tree, 45 feet east of another 24-inch oak tree, and 30 feet southeast of east face of stone and brick chimney of abandoned log cabin. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 67 feet north of center line of route 58, 64 feet southeast of triangle blaze on 12-inch wild-cherry tree, and 162.1 feet (slope) from station in azimuth $322^{\circ}45'$. No. 2 is 30 paces south of center line of route 58, in northeast corner of field, 5 paces east of dim road crossing corner of field into woods, and approximately 0.1 mile from station in azimuth $27^{\circ}19'25''$. No. 3 is 32 feet northwest of northwest corner of log cabin, 16 paces east of east edge of woods, and 81.22 feet from station in azimuth $130^{\circ}14'$. Azimuth from station to final of silver municipal water tank at Clarksville is $62^{\circ}05'21''$.

Townsville (Vance County, R. D. Horne, 1933).—At Townsville, on property of Robert Taylor, 87 feet east of north-and-south road, and 168 feet south of southeast corner of negro church. To reach from Clarksville, go south 5 miles on route 15, turn left onto gravel road at north side of Soudan railroad station, proceed east 4.8 miles to T-road and battery of 14 mail boxes, turn right on T-road and go 3.9 miles (temporary route 501 when North Carolina is reached), turn right at slanting T-road junction at Rock Spring Church, and continue straight ahead 2 miles to Townsville. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 meters (20 feet) southeast of center line of gravel road, 1 foot northwest of fence line on east side of road, and approximately 0.2 mile from station in azimuth $284^{\circ}39'06''$. No. 2 is 21 feet west of center line of road, 74 feet northeast of northeast corner of schoolhouse on west side of road, and 133.41 feet from station in azimuth $31^{\circ}39'$. No. 3 is 80 feet east of center line of road, 6 feet west of southeast corner of negro church, and 166.73 feet from station in azimuth $141^{\circ}47'$.

Anderson (Mecklenburg County, Va., R. D. Horne, 1933).—About $3\frac{1}{4}$ miles south-southwest of Boydton, 8 miles east of Clarksville, and $5\frac{1}{2}$ miles north of Virginia-North Carolina State line, on land owned by J. M. Anderson and occupied by Z. V. Poteat. To reach from Boydton, go west about 1 mile on route 58 to Randolph-Macon College on north side of highway, turn south onto gravel road at "Taylor's Ferry" historic sign, keep left at first fork at 0.3 mile, continue 2.1 miles to fork opposite white church on right, turn right and continue 0.25 mile to Poteat's house on top of hill. Station is in midst of group of tall oak trees, 60 feet northwest of northeast corner of house, 52 feet northeast of northwest corner of house, 39 feet east of northeast corner of shed, and 42 feet southeast of south corner of another shed. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11a. No. 1 is 5 meters (16 feet) west of center line of north-and-south road, 3 meters (10 feet) north of drainage ditch, and approximately 0.3 mile from station in azimuth $290^{\circ}12'58''$. No. 2 is 7 feet east of northeast corner of Poteat's house, and 66.79 feet from station in azimuth $315^{\circ}39'$. Reference mark no. 3 is a standard reference disk in a boulder, note 12c, 10 feet west of northwest corner of shed nearest to house, 7 paces south of 30-inch oak tree, and 77.00 feet from station in azimuth $85^{\circ}28'$.

Buchanan (Warren County, R. D. Horne, 1933).—About $6\frac{1}{4}$ miles east of Townsville, $6\frac{1}{4}$ miles northwest of Norlina, 3 miles north of Drewry, and 3 miles south of Virginia-North Carolina State line, on property of R. L. Buchanan. To reach from Drewry, go north about 3 miles from main intersection with well in northwest corner, turn right, and continue about 150 yards to station site at

top of rise. Station is 28 feet north of center line of east-and-west sand road, 15 feet north of right-of-way fence, and 13 feet east of fence line separating wooded yard and cultivated field. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk in concrete, note 11a, 8 meters (26 feet) west of north-and-south road from Drewry, opposite yellow farmhouse, 32 meters (105 feet) north of farm road, and approximately 0.3 mile from station in azimuth $180^{\circ}36'09''$. Reference mark no. 2 is standard reference disk in limestone outcrop 18 inches high by 7 feet long, note 12a, 7 feet southeast of 18-inch oak tree, about 40 paces west of west side of 2-story white frame farmhouse, and 185.18 feet from station in azimuth $235^{\circ}09'$. Reference mark no. 3 is a standard reference disk in concrete, note 11a, 15 feet north of center line of east-and-west road, about 100 yards east of north-and-south road, 2 feet north of right-of-way fence, and 117.54 feet from station in azimuth $80^{\circ}22'$.

Bethany (Mecklenburg County, Va., R. D. Horne, 1933).—In yard of Bethany Baptist Church, $8\frac{3}{4}$ miles west-southwest of South Hill, 7 miles east of Boydton, and 8 miles north of Virginia-North Carolina State line. To reach from railroad crossing at South Hill, go south 6.2 miles on United States route 1, turn right onto route 58, continue 2.6 miles, turn left onto dirt crossroad at American and Shell gas stations (this point is 7.8 miles east along route 58 from Boydton), and proceed south 0.7 mile to T-road intersection with Bethany Baptist Church in southwest angle. Station is 23 feet east of northeast fence corner of cultivated field on south side of church, 73 feet west of center line of road, and 177 feet south of entrance to church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 35 feet east of center line of road, 6 feet south of driveway to house on east side of road, 100 feet west of southwest corner of house, in south edge of grass plot in front of house, and approximately 0.3 mile from station in azimuth $14^{\circ}10'16''$. No. 2 is 2 feet east of fence line, 45 feet west of center line of dirt road, and 122.35 feet from station in azimuth $25^{\circ}10'$. No. 3 is 2 feet south of fence line, 108 feet west of fence corner, and 131.20 feet from station in azimuth $116^{\circ}48'$.

Oakville (Warren County, R. D. Horne, 1933).—Station is $6\frac{1}{2}$ miles northeast of Norlina, $7\frac{1}{2}$ miles north-northeast of Warrenton, and 3 miles south of Virginia-North Carolina State line, on land of W. P. Rodwell. To reach from Wise which is 4 miles north along United States route 1 from Norlina, go east 0.4 mile on gravel road at arrows "Paschall $4\frac{1}{2}$ miles—Oakville 5 miles", keep straight ahead at T-road to north, keep straight ahead 3.8 miles (passing right fork), turn sharp left (north) at Oakville crossroads with arrows "Macon 6 miles—Wise 5 miles", and proceed north 0.15 mile to station site. Station is 27 feet east of center line of dirt road, and 64.5 feet west of lone 2-foot oak tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 0.20 mile northeast of crossroads at Oakville, 125 feet south of fork in road, 25 feet northwest of center line of road, on east edge of and 100 feet south of northeast corner of cultivated field, and approximately 0.25 mile from station in azimuth $281^{\circ}04'17''$. No. 2 is 16 feet east of center line of road, 120 feet north of northwest corner of old cotton gin, 97 feet south of lone 2-foot oak tree on west side of Negro house which is north of cotton gin, and 154.59 feet from station in azimuth $353^{\circ}38'$. No. 3 is 15 feet north of center line of road, on west end of curve, and 278.40 feet from station in azimuth $134^{\circ}07'$.

Hagood (Mecklenburg County, Va., R. D. Horne, 1933).—About $5\frac{1}{2}$ miles south of South Hill, 6 miles southwest of Brodnax, and 7 miles north of Virginia-North Carolina State line, on land of Mrs. Sally Rice. To reach from junction of United States route 58 and Virginia route 416, go south 1.5 miles on route 416, turn left along east side of Seaboard Air Line Railway at point where secondary road goes straight ahead across tracks, proceed 2.4 miles or 0.25 mile beyond railroad crossing to T-road intersection on right and station site. Station is 66 feet northwest of center line of asphalt pavement of route 416, 26 feet northeast of center line of branch road, and 67 feet south of southeast corner of house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk in concrete, note 11a, 37 feet southwest of center line of branch road, 22 feet northwest of center line of route 416, and 79.65 feet from station in azimuth $6^{\circ}48'$. Reference mark no. 2 is standard reference disk in vertical north wall near northwest corner of concrete base of railroad signal lamp no. 829 on west side of track, and approx-

imately 0.3 mile from station in azimuth $19^{\circ}14'37''$. Reference mark no. 3 is a standard reference disk in concrete, note 11a, 18 feet southeast of center line of branch road, 4 feet east of south corner of corner, and 86.84 feet from station in azimuth $110^{\circ}19'$.

Howard (Warren County, R. D. Horne, 1933).—Station is $4\frac{1}{2}$ miles north of Vaughan, $5\frac{1}{2}$ miles northwest of Littleton, and $3\frac{3}{4}$ miles south of Virginia-North Carolina State line. To reach from railroad station in Littleton, go west 1.55 miles on route 158, take right-hand dirt fork at arrow "Elams 11 miles", cross railroad, follow main road left, proceed 0.2 mile, follow main road right, continue 2.3 miles, take left fork at arrow "Littleton 4 miles", proceed 2.9 miles to T-road junction known as "Howard's store" at arrow "Vaughan 5 miles", turn right, and proceed 0.1 mile to top of grade and station site at abandoned building on left. Station is 64 feet west of center line of dirt road, 23 feet southwest of lone 2-foot oak tree, and 48 feet north of northeast corner of abandoned store. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 25 feet east of center line of road, 100 feet south of intersection of north-and-south road and T-road, 200 feet northwest of farmhouse, on west edge of yard surrounding house, and approximately 0.35 mile from station in azimuth $225^{\circ}21'32''$. No. 2 is 15 feet east of center line of road, opposite mail box on west side of road, and 136.00 feet from station in azimuth $236^{\circ}37'$. No. 3 is 22 feet west of center line of road, on north side of dim woods road leading to abandoned store, and 89.78 feet from station in azimuth $354^{\circ}18'$.

Lynch (Brunswick County, Va., R. D. Horne, 1933).—About $7\frac{1}{2}$ miles southeast of Brodnax, 4 miles a little south of west of Brunswick post office, and 6.0 miles north of Virginia-North Carolina State line, on land of C. T. Lynch. To reach from Lawrenceville, go west 0.8 mile on route 58 to fork, turn south onto Virginia route 401, and continue 9.2 miles to crossroads at Brunswick post office. Follow gravel road west 1.4 miles to fork to right, and keep straight ahead 3.15 miles to station site. Station is 35 feet north of center line of gravel road, 15 feet north of north right-of-way fence, 44 feet west of large lone oak tree, about 100 yards northeast of William Thrower's house, and about 200 yards northwest of Oak Grove Church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 17 feet south of center line of east-and-west gravel road, 46 feet south of the large oak tree, and 68.21 feet from station in azimuth $315^{\circ}19'$. No. 2 is 6.0 meters (20 feet) north of center line of gravel road, 4 meters (13 feet) west of concrete culvert, 36 meters (118 feet) east of point where highway curves to northwest, and approximately 0.25 mile from station in azimuth $87^{\circ}20'24''$. No. 3 is 18 feet north of center line of gravel road, directly opposite farm road leading to Thrower's house, and 98.20 feet from station in azimuth $78^{\circ}29'$.

Supplementary points

Callahan (Granville County, R. D. Horne, 1933).—About $7\frac{1}{2}$ miles northwest of Stovall, 7 miles southwest of Clarksville, and about 300 yards south of Virginia-North Carolina State line, on land of A. L. Noblin. To reach from railroad station at South Clarksville, go west 2.7 miles on route 58, turn left onto route 59, proceed 1.4 miles and cross railroad, continue 2.15 miles on main road which follows railroad to T-road on left at top of grade (this road leads to station *Averett*), and continue straight ahead 0.15 mile on main road to crossroads at *Averett*. To reach from main corner in Virgilina, follow Clarksville Road east 7.8 miles or 3.25 miles beyond Nelson railroad station and post office. Take left fork about 200 feet east of store, proceed south 0.15 mile on main road to railroad crossing, continue 1.4 miles, keep straight-ahead at left fork, continue 0.3 mile, cross creek on weak wooden bridge, continue 0.8 mile, turn sharp left at slanting T-road junction, follow main road east 1.0 mile to Callahan's store and house on north side of road, and continue about 200 yards from store or 130 paces from large oak that overhangs road to hedgerow dividing two fields on north side of road. Station is in small cleared space in hedgerow, about 350 feet from road, 20 feet southeast of old stump, 19 feet north of black-oak tree with triangular blaze on west side, and 41 feet northwest of 8-inch gum tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in fence line, across road from small graveyard, 15 feet north of center line of road, 23 feet north of 18-inch white-oak tree, and 395 feet (slope) from station in azimuth

346°02'. No. 2 is across road from and 63 feet south of edge of porch of Callahan's house, 31 feet south of center line of road, 24.6 feet east-south east of 10-inch cedar, 44.5 feet northwest of more westerly of twin oaks, 26 paces east-southeast of southeast corner of store, about 50 paces west-southwest of large white oak which overhangs road directly opposite small shed, and approximately 0.3 mile from station in azimuth 48°39'55". No. 3 is in edge of wood on slope of hill at northwest end of terrace in cornfield, 15 feet south of 10-inch pine tree, and 152.6 feet (slope) from station in azimuth 145°52'.

Virgilina (Granville County, R. D. Horne, 1933).—About three-fourths mile south-southwest of Virgilina. To reach from railroad station in Virgilina, go south 0.85 mile on main road which becomes North Carolina route 144 at State line to oak tree with triangular blaze opposite two Negro cabins on west side of road. The northerly cabin has 2 cedar trees in its yard and the southerly one has 3 oak trees in its yard. Station is 92 feet northeast of the most northerly of these 3 oaks, 82 feet south-southwest of blazed oak tree, and 27 feet east of center line of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is in large mass of rock in woods, 7 yards east-southeast of large pine, 10 yards east-southeast of large oak, about 17 yards east-southeast of blazed oak, 23 yards east of center line of road, and 116.0 feet from station in azimuth 248°00'. No. 2 is 18 feet north of largest of small clump of cedars, 10.5 feet northeast of 10-inch oak tree, and 68.7 feet from station in azimuth 309°59'. No. 3 is in west edge of small clump of trees, about 50 feet west of center line of road, 60 feet southwest of "Winding Road" sign, about 20 feet southwest of large outcropping rock on west side of road, and approximately 400 feet from station in azimuth 193°57'11".

Woody (Person County, R. D. Horne, 1933).—Station is 10¼ miles north-northeast of Roxboro, 7 miles west of Virgilina, and about 250 yards south of Virginia-North Carolina State line, on property of G. G. Woody. To reach from South Boston, go south about 12 miles on United States route 501 (11 miles from junction of routes 501 and 58 and about 3 miles south from junction of route 501 and North Carolina route 59) to State line, continue south 0.15 mile, turn left just after passing a shed on each side of a road into lane leading to Woody's house, and follow to station site. Station is about 75 paces east of center line of highway, 42.3 feet south of south side of Woody's house, 37 feet southwest of 24-inch elm tree, and 44 feet east-southeast of 30-inch elm tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 24.1 feet east-northeast of northeast corner of Woody's house, 71 feet northeast of 24-inch elm, 20 feet northwest of northwest corner of concrete around well, 21 feet west-southwest of southwest corner of barn, and 103.9 feet from station in azimuth 200°56'. No. 2 is in edge of wood, approximately opposite point of tangency of route 501, 27.5 feet south of center line of road, 125.6 feet east-northeast of "Winding Road" sign, and approximately 0.2 mile from station in azimuth 22°23'08". No. 3 is in culvert headwall, 17.2 feet east of center line of road, 70 feet south of center line of lane leading to Woody's house, and 259 feet (slope) from station in azimuth 48°47'.

Buffalo (Mecklenburg County, Va., R. D. Horne, 1933).—About 8 miles north of Virginia-North Carolina State line, 7½ miles north-northwest of Clarksville, and 1½ miles west-northwest of Buffalo Springs, on land of E. L. Baptist. To reach from railroad crossing at South Clarksville railroad station, go west 8.3 miles on United States route 58 or 2.8 miles beyond crossing Big Buffalo Creek, turn right at bottom of grade onto T-road, and proceed 0.45 mile to lane on left at top of grade and station site. Station is 24 paces north of center line of lane, and 5 paces west of center line of road. Station was established by United States Engineers, and is stamped "A209" and "U.S.E.D. Norfolk District". Mark not described.

Walker (Vance County, R. D. Horne, 1933).—About 8½ miles south of Boydton, 4½ miles northeast of Townsville, and about 150 yards south of Virginia-North Carolina State line, on property of T. J. Walker. To reach from Townsville, go north about 2 miles on route 501 to Rock Spring Church, take right fork (northeast), proceed 1.8 miles to fork at arrow "Va. line 1 mile", take right fork, follow main road 1.0 mile, take right fork at abandoned store in V, continue 150 yards and turn left into barnyard behind Walker's house. Station is in northeast corner of barnyard, about 65 yards east of Walker's house, 46 paces east of yard fence, 24 paces east of small smokehouse, 50 feet east of lane leading into

field, about 240 feet north of center line of east-and-west road, 21 feet southwest of fence corner, and 72 feet northeast of northeast corner of barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1.5 feet west of fence line, 5 feet northeast of northeast corner of small chicken house, 122 feet north of center line of east-and-west road, 15 paces northeast of 18-inch cedar, 18 paces northeast of northeast corner of larger barn, and 119.35 feet from station in azimuth $352^{\circ}10'$. No. 2 is 1.6 feet south of fence line, 4 feet east of leaning apple tree, 8.7 feet north of long low shed, 20.6 feet northwest of northwest corner of smokehouse, and 110.43 feet from station in azimuth $105^{\circ}55'$. No. 3 is 6 paces west of center line of road, 7 paces south of 20-inch locust, in line with north end of J. H. Pearson's house, 37 paces east of east side of this house, about 4 feet west of Pearson's mail box, and approximately 0.4 mile from station in azimuth $182^{\circ}00'26''$.

Drewry (Vance County, R. D. Horne, 1933).—At Drewry, 6 miles west-northwest of Norlina, $10\frac{1}{2}$ miles north-northeast of Henderson, and 6 miles south of Virginia-North Carolina State line. To reach from Manson which is 5 miles southwest of Norlina and 10 miles northeast of Henderson on United States route 1, take dirt fork leading northeast from west side of railroad station with arrow "Drewry 3 miles", and proceed 2.95 miles to main corner at Drewry. Turn left 0.15 mile to crossroads with well in northwest angle, turn right (north), and proceed 500 feet to Drewry Methodist Episcopal Church on west side of road. Station is 119 feet west of center line of road, 59 feet north of northeast corner of church, 76.5 feet northeast of northwest corner of church, and 17 feet northeast of 6-inch iron pipe which protrudes 12 inches above ground. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 26 feet west of center line of dirt road, 225 feet north of entrance to church, and 186.90 feet from station in azimuth $217^{\circ}06'$. No. 2 is at north edge of pine woods, 60 feet southeast of southeast corner of abandoned stone building, 100 feet south of center line of road to Ridgeway, 60 feet east of east edge of small cultivated plot, and approximately 0.5 mile from station in azimuth $315^{\circ}07'13''$. No. 3 is 91 feet east-northeast of southeast corner of church, 21 feet west of center line of dirt road, and 159.90 feet from station in azimuth $335^{\circ}48'$.

Daz eccentric (Vance County, R. D. Horne, 1933).—Station is $1\frac{1}{4}$ miles northeast of Henderson on property of American Agricultural Chemical Co. To reach from Henderson, go north 1.35 miles on United States route 1 beyond city limits to point where highway pavement changes from asphalt to concrete, take right dirt fork at arrows "Afton 11 miles—Brookston 3 miles", proceed 100 feet, turn right, continue 200 feet, and take right fork at gate of American Agricultural Chemical Co. Continue about 100 yards, cross Seaboard Air Line Railway tracks, turn right, and follow along south side of tracks 0.2 mile to first house and station site. Station is 47.8 feet north of north rail of main track, 18 feet north of line of telegraph poles, 15.4 feet southeast of small sweetgum tree, and 28 paces northeast of 15-inch gum tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is a standard reference disk in top of headwall, 1 foot northeast of the southeast corner of culvert on route 1, 6 paces east of center line of highway, 80 paces north of Shell service station, 3 feet west of west fence line of pasture, and approximately 0.2 mile from station in azimuth $76^{\circ}17'55''$. Station *Daz* (see description thereof) is 15.21 meters (49.9 feet) from station in azimuth $47^{\circ}00'$. Reference mark of station *Daz* is standard reference disk in west face of northeast brick pillar under small white house, and 137.6 feet from station in azimuth $12^{\circ}27'$. Azimuth from station to American Agricultural Co. water tank, ball on top, is $240^{\circ}23'55''$; and to Henderson Cotton Mills aluminum water tank, $36^{\circ}29'02''$.

Daz (Vance County, M. Steinberg, 1918; 1933).—About $1\frac{1}{4}$ miles north of railway station at Henderson, 35 meters (115 feet) south of milepost 112 of Seaboard Air Line Railway, on prolongation of tangent to left rail towards north, 7.06 meters (23.2 feet) west of west rail, across ditch from track, 10 meters (33 feet) north of small house on opposite side of track, and directly in line with same house and larger house on same side of track about 200 meters (656 feet) distant. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in west face of northeast brick pier under the house of L. Kittrells, and 30.88 meters (101.3 feet) from station in azimuth $356^{\circ}31'$. Station *Daz eccentric* (see description thereof) is 15.21 meters (49.9 feet) from station in azimuth $227^{\circ}00'$. Station

Deb (see description and geographic position thereof) is visible from ground in azimuth $53^{\circ}47'15''$. Station *Day* (see description and geographic position thereof) is visible from ground in azimuth $263^{\circ}35'51''$.

Wise (Warren County, R. D. Horne, 1933).—Station is $3\frac{1}{2}$ miles south of Virginia-North Carolina State line, $3\frac{1}{4}$ miles north-northeast of Norlina, and $6\frac{1}{2}$ miles a little west of north of Warrenton, in yard of Wise Baptist Church at Wise. To reach from Norlina, go north about 4 miles on United States route 1 direct to church which is gray granite building on east side of highway at point where road to Paschall leads to east. Station is in group of oak trees, 36 feet east of southeast corner of church, 64 feet southeast of northeast corner of church, and about 30 paces north of center line of dirt road to Paschall. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 49 feet south of dirt road to Paschall, 18 feet southeast of dirt trail, and 184.74 feet from station in azimuth $290^{\circ}41'$. No. 2 is 26 feet east of center line of route 1, 61 feet south of southeast corner of church, 2 feet northeast of power-line pole, and 103.21 feet from station in azimuth $39^{\circ}36'$. No. 3 is 7 meters (23 feet) southeast of southeast corner of old house, 10 meters (33 feet) west of center line of route 1, and approximately 0.2 mile from station in azimuth $153^{\circ}46'03''$.

Paschall (Vance County, R. D. Horne, 1933).—About 10 miles north of Warrenton, $15\frac{1}{2}$ miles west-northwest of Littleton, and on Virginia-North Carolina State line near Paschall railroad station. To reach from Wise, go north 0.55 mile on route 1 from Rochelle Standard gas station, turn east onto gravel road at arrows "Paschall 4 miles—Oakville 5 miles", and continue 3.5 miles or 0.1 mile beyond Paschall railroad station to T-road junction and station site. Station is about 50 yards east of T-road junction, 34 feet north of center line of road, 78 feet northeast of pine which stands on southeast corner of T-road intersection, 25 feet northwest of wooden-fence corner, 60 feet south of old well, 82 feet south of wood fence, and 89 feet southeast of the most easterly of two 15-inch pine trees at gate in fence. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 75 yards north of southeast corner of field (or northwest corner of T-road which leads to ferry), 10 paces west of center line of ferry road, in edge of cultivated field, and approximately three-fourths mile from station in azimuth $266^{\circ}39'13''$. No. 2 is 2 feet north of wire fence, 5 feet east of pine in southeast corner of T-road, 15 feet south of center line of road, 82 feet southwest of large oak on north side of road, and 75.2 feet from station in azimuth $52^{\circ}04'$. No. 3 is 38 feet west of the most easterly of pines at gate in fence, 2 feet south of fence, 63 feet east of stone gatepost, 5 paces south of southwest corner of small artificial pond, 21 paces northeast of large oak, 27 paces north of center line of road, and 108.1 feet from station in azimuth $130^{\circ}12'$.

Sykes (Northampton-Warren Counties, N.C., Brunswick County, Va., R. D. Horne, 1933).—Station is at Virginia-North Carolina State line and Northampton-Warren county line, on property of T. W. Sykes. To reach from station *Vulture*, go west 1.4 miles on main road (route 46), keep straight ahead at T. A. Bradley's store at point where route 46 turns north, proceed 6.6 miles or 2.7 miles beyond narrow bridge over creek, turn sharp right (north) onto T-road at O. C. Harrison's mail box, follow straight road 0.9 mile or 0.55 mile beyond T. W. Sykes' mail box at T-road on left, and turn right (east) at cross lane. To reach this lane from Brunswick crossroads and post office, go south 2.7 miles on route 401, turn right (southwest) onto gravel T-road with Standard gas station in south angle, follow straight ahead 3.35 miles, keep main road to right at T-junction, continue about 100 yards, turn left (south) opposite white church, proceed 0.45 mile, take left fork just beyond low white house on right, and continue 1.25 miles to cross lane. Proceed east on lane 100 yards to edge of woods and station site. Station is 33 feet east of west edge of wood, 22 feet south of lane, 22 feet southeast of 18-inch pine tree blazed on north side, 20 feet north of another blazed pine tree, and 22 feet west-southwest of twin pine trees. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 paces east of center line of Eden Ferry Road, 5 paces west-northwest of center line of farm road, 8 feet north-northeast of W. M. Owen's mail box in triangle formed by intersection of roads, and approximately 0.35 mile from station in azimuth $34^{\circ}39'59''$. No. 2 is at southeast corner of T-road intersection, 13.5 feet south of center line of lane, 20 feet east of center

line of road, 65 feet east-northeast of 12-inch apple tree, 10 paces northeast of east end of galvanized-iron pipe culvert, and 247.7 feet from station in azimuth $98^{\circ}22'$. No. 3 is $2\frac{1}{2}$ feet east of wire fence, 7 paces west of dim woods road, 33 feet north of center line of lane, 46 feet north of wire fence, 3 paces east of west edge of cultivated field, and 69.1 feet from station in azimuth $160^{\circ}43'$.

Camp (Northampton County, R. D. Horne, 1933).—About 2 miles north of Roanoke Rapids, at Camp's Corner, (the junction of routes 40-A and 46), on property of the Carolina Farms Inc., 43 feet east of center line of paved route 40-A, and 48 feet north of center line of east-and-west dirt road. To reach from Roanoke Rapids, go north about 2 miles on route 40-A direct to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 23 feet west of center line of route 40-A, 70 feet south of southwest corner of house in southwest corner of crossroads, 2 feet north of power-line pole, and 208.30 feet (slope) from station in azimuth $15^{\circ}35'$. No. 2 is 38 feet west of center line of north-and-south dirt road, at northeast corner of peanut warehouse, and 151.05 feet (slope) from station in azimuth $141^{\circ}23'$. No. 3 is 6 paces west of center line of north-and-south dirt road, 33 paces southwest of lone peach tree in cultivated field, 3 paces southwest of center line of farm road to northwest across cultivated field, and approximately 0.6 mile from station in azimuth $173^{\circ}57'09''$. *Primary traverse station no. 11 (U.S.G.S.)* (see description thereof) is 22.534 meters (73.93 feet) from station in azimuth $0^{\circ}55'$.

Primary traverse station no. 11 (U.S.G.S.) (Northampton County, R. D. Horne, 1933).—About 2 miles north of Roanoke Rapids, in southeast corner of crossroads at Camp's Corner, and 3 feet north of northeast corner of porch of store. Marked by iron pipe tilted slightly from vertical. Station *Camp* (see description thereof) is 22.534 meters (73.93 feet) from station in azimuth $180^{\circ}55'$.

Mason (Northampton County, N.C.; Greenville County, Va., R. D. Horne, 1933).—Station is 10 miles a little west of south of Emporia and 6 miles north-northeast of Roanoke Rapids, on North Carolina-Virginia State line, on property owned by Martha Mason (colored). To reach from either Weldon or Emporia, go to junction of United States route 301 and North Carolina route 40-A, just north of Pleasant Hill, proceed northwest 3.5 miles on route 40-A, turn sharp right (north) onto dirt crossroads about 100 yards beyond yellow house on south side of road and with abandoned building in southeast angle of crossroads. Proceed north 1.75 miles, turn left into dim lane leading to Martha Mason's house at point about 200 feet north of top of grade and opposite 2 posts on east side of road, and continue 0.2 mile to house and station site. Station is 116 feet due south of south side of house, 8 paces south of center line of lane, 10 paces south of south edge of cultivated field surrounding house, 3 paces south of south edge of ditch, 3 paces west of east side extended of house, 8 paces east of line extended through 3 large trees in back of house, 22 paces east-southeast of 4-inch cedar, 47 paces north of the nearest power-line pole, and 31 paces west-northwest of center of power line. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 18 feet west of center line of gravel road, 82 paces north of center line of lane leading to Martha Mason's house, 35 paces south of path with 3-foot oak tree leading east to John Ingram's house, and approximately 0.2 mile from station in azimuth $257^{\circ}50'16''$. No. 2 is 1 pace south of south edge of field, 3 paces east of path across ditch, 8 paces south of center line of lane, 11 paces west-northwest of center of power line, 6 paces north of north edge of cultivated field, and 74.6 feet from station in azimuth $271^{\circ}57'$. No. 3 is at southwest corner of small log house in back of main house, 7 paces east of east edge of cultivated field, 6 paces north of south side extended of main house, 27 paces north of center line of lane, 12 paces west of line of three trees, 17 paces west of back of house, and 148.7 feet from station in azimuth $155^{\circ}05'$.

Concord (Northampton County, N.C.; Greenville County, Va., R. D. Horne, 1933).—On Northampton-Greenville County line, on North Carolina side of so-called State-line road. To reach from Weldon, go north on route 301 to south end of bridge over Roanoke River, continue north 1.9 miles on same highway, turn left with route 301, continue 1.9 miles, turn right onto route 305, proceed 0.75 mile, turn right with route 305, continue 3.4 miles, and turn left away from route 305. This point is 2.5 miles west of Seaboard. Proceed north 3.15 miles or 0.75 mile beyond station *Daniel*, turn right (east) at T-road junction, proceed

1.05 miles, take left fork, continue 0.2 mile, turn left just after passing Concord Church, proceed 0.5 mile, turn sharp left onto main road, continue 250 feet, turn sharp right (north), proceed 0.8 mile to State-line road, turn left, and continue 0.25 mile or 130 feet beyond north-and-south farm road to station site. Station is 135 feet south-southwest of intersection of State-line road and north-and-south farm road, 42 feet south of center line of State-line road, and 8.7 feet south of 3-foot length of railroad rail which projects 2 feet above ground. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. Station and all reference marks project 6 inches above ground. No. 1 is at south-east corner of outhouse, 18 feet west of center line of farm road, about 275 feet south of farmhouse, and approximately 0.3 mile from station in azimuth $185^{\circ}41'08''$. No. 2 is 38 feet west of center line of farm road, 5 feet south of center line of State-line road, and 96.09 feet from station in azimuth $250^{\circ}37'$. No. 3 is 200 feet west of center line of farm road, 9 feet south of center line of State-line road, and 81.87 feet from station in azimuth $113^{\circ}20'$.

Pit (Northampton County, R. D. Horne, 1933).—About 6 miles north-north-east of Weldon, $6\frac{1}{2}$ miles east-northeast of Roanoke Rapids, and 2.8 miles south of Virginia-North Carolina State line, on right-of-way of United States route 301. To reach from Weldon, go north 6.7 miles on route 301 direct to station site at top of grade just east of sand pit. Station is 35 feet west of center line of pavement, about 135 yards east of Atlantic Coast Line Railroad tracks, and 25 feet east of blaze on small pine tree at east edge of sand pit between highway and railroad. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at slight curve in highway, 10 paces east of center line, about 125 yards south of sharp curve in highway, and approximately 0.2 mile from station in azimuth $209^{\circ}03'28''$. No. 2 is 23 feet east of center line of highway, at north-west corner of small tract of pine trees on east side of highway, and 156.4 feet from station in azimuth $227^{\circ}13'$. No. 3 is 22 feet west of center line of highway, 8 feet southwest of road marker, and 134.7 feet from station in azimuth $19^{\circ}44'$.

Can eccentric (Southampton County, Va., R. D. Horne, 1933).—On right-of-way of Seaboard Air Line Railway, about 2 miles west of Newsoms, and 3.1 miles northeast of Boykins. To reach from north of railway crossing at Boykins, go north 3.1 miles on Virginia route 35 to point where paved road curves to left and dirt road continues straight ahead toward old red brick house. Follow dirt road 100 feet, turn right, follow main-traveled winding road 2.15 miles or 0.2 mile beyond T-road on left, turn left about 75 feet before reaching railway tracks, and follow road along northwest side of tracks 0.35 mile. Station is across tracks from this point, 2 meters (7 feet) northwest of northwest edge of woods, about 200 yards west of milepost 51, 11 paces east of telephone pole, and 12.40 meters (40.7 feet) southeast of southeast rail. The following objects are approximate distance and azimuth from station: "R.R." warning sign at crossing, 0.35 mile, 62° ; "W" signal, 19.20 meters (63.0 feet), 121° ; and triangle-blazed oak tree, 20.6 meters (68 feet), 248° . Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark is standard reference disk in concrete, note 11a, 20 paces northwest of northwest rail, 8 paces northwest of center line of road paralleling track, about 3 feet southwest of tenth telephone pole from station, and approximately 0.3 mile from station in azimuth $229^{\circ}34'29''$. Station *Can* (see description thereof) is 23.61 meters (77.5 feet) from station in azimuth $217^{\circ}57'$. Reference mark of station *Can* is standard reference disk in concrete, note 11a, about 7 feet north of blazed oak tree, and 23.26 meters (76.3 feet) from station in azimuth $238^{\circ}01'$.

Cal eccentric (Southampton County, Va., R. D. Horne, 1933; 1934).—On right-of-way of Seaboard Air Line Railway, $7\frac{1}{2}$ miles east-northeast of Boykins, $9\frac{1}{2}$ miles west-southwest of Franklin, and about half-way between railway stations Newsoms and Handsom. To reach from railway crossing at Newsoms, go north 0.5 mile, turn right, proceed 2.0 miles, turn south, and continue 0.2 mile to station site at railway crossing. Station is 17.1 feet north of north edge of north rail, 21 feet southeast of center line of grade crossing, 46 feet east of "R.R." crossing sign, and 45 feet south of telephone pole no. 1318. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Station *Cal*, established in 1918, is standard station disk in concrete, note 1a, and nail in concrete, note 7c, 16.6 feet south of south edge of south rail, 43 feet southeast of "R.R." crossing sign, 24 feet southeast of center line of dirt road, 26 feet northeast of large oak tree in northwest corner of farmer's yard, and 45.50

feet from station in azimuth $15^{\circ}26'$. Reference mark of station *Cal* is standard reference disk in concrete, note 11a, 27.8 feet north of north edge of north rail, 31 feet west of above-mentioned crossing, 52 feet west of center line of dirt road, about 4 paces south of dim road along track, and 75.82 feet from station in azimuth $81^{\circ}56'$. Reference mark no. 3 is standard reference disk in concrete, note 11a, 4 meters (13 feet) north of north side of railway cut, 21 meters (69 feet) south of center line of dim road along north side of track, and approximately 0.3 mile from station in azimuth $253^{\circ}17'19''$.

Can (Southampton County, Va., M. Steinberg, 1918; 1933).—About 3.1 miles northeast of Boykins, 2 miles west of railway station at Newsoms, 567 feet southwest of milepost 51 (to Portsmouth) of Seaboard Air Line Railway, $2\frac{1}{2}$ rail lengths northeast of whistle post, 5.71 meters (18.7 feet) southeast of southeast rail, about 7 feet north of triangle-blazed tree, and on top of small rise about 10 feet above track. Surface mark is standard hydrographic station disk in concrete. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 8.182 meters (26.84 feet) from station in azimuth $320^{\circ}20'$. Station *Can eccentric* (see description thereof) is 23.61 meters (77.5 feet) from station in azimuth $37^{\circ}57'$.

Primary traverse station no. 12 (U.S.G.S.) (Southampton County, Va., R. D. Horne, 1918; 1933).—About $4\frac{1}{2}$ miles north-northwest of Boykins, on land owned by Paul Drewry and occupied by Mr. Griffin, tenant. To reach from railroad crossing at Boykins, go north 3.2 miles on route 35 to dirt road at old red brick house, turn left, proceed 0.8 mile, keep straight ahead at T-road right, go 0.6 mile, turn right at T-road junction, and continue 1.4 miles or 1.0 mile beyond creek bridge to station site in front of house that is set back from road. Station is 13.5 feet west of center line of road, 7.0 feet east of wooden fence, 12.4 feet east-southeast of south gatepost, 5.4 feet northwest of mail box no. 66 of Q. A. Dunlow, 11 feet north of line extended through row of trees which line south side of drive to house, 43 feet west-southwest of north tree of row of cedars on east side of road, 64.5 feet north of cedar at fence corner, 68.5 feet north of mulberry tree, and 32 feet northeast of 10-inch holly tree. Mark is cast-iron pipe about 4 inches in diameter, marked "U.S. Geological Survey Primary Traverse Station No. 12, 1918, B.M.P. 1918, Elev. above Sea Level 104 ft."

Knight (Southampton County, Va., R. D. Horne, 1933).—Near Virginia-North Carolina State line, 2.7 miles a little east of south of Boykins, and $7\frac{1}{2}$ miles north-northeast of Conway, on land of H. F. Knight. To reach from Conway, go north 9.0 miles on North Carolina route 45 or 0.55 mile beyond crossing of Meherrin River to station site at State line where road changes from graded dirt to asphalt. To reach from railroad crossing at Boykins, go south 2.75 miles on Virginia route 35 to State line and station site. Station is 44 feet east of center line of road, 91 feet northeast of North Carolina speed-law sign, 27.5 feet north of east-and-west fence which is said to be on State line, and in southwest corner of cornfield. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 foot north of fence on State line, 5 feet south of lane leading east from road, and 152.55 feet from station in azimuth $275^{\circ}42'$. No. 2 is 2 feet west of fence line on east side of road, 15 feet east of center line of road, 65 feet south of North Carolina speed-law sign, and 164.90 feet from station in azimuth $337^{\circ}39'$. No. 3 is 18 feet east of center line of road, 30 feet south of northeast corner of cultivated field, 1 foot east of fence line, and approximately 0.3 mile from station in azimuth $151^{\circ}16'59''$.

Statesville (Hertford County, N.C.; Southampton County, Va., R. D. Horne, 1933).—About 8 miles east-southeast of Boykins and $7\frac{1}{4}$ miles a little east of north of Murfreesboro, near Virginia-North Carolina State line at Statesville. To reach from Franklin or Murfreesboro, follow route 158 to point 1.4 miles south of crossing of Nottaway River or 0.65 mile north of State line to dirt crossroads with Texas gas station on east and Standard gas station on west side of highway. Proceed west 1.95 miles or 0.4 mile beyond 2 schools on left, take right fork, follow main road 3.05 miles to E. F. Drake's store at Sunbeam, turn left (southwest), proceed 1.1 miles to fork with abandoned building in V, take left fork, continue 1.15 miles, take right fork, proceed 1.8 miles, turn left at T-road at Statesville, and continue 0.2 mile to small gas station and store on left. Station is opposite door on south side of gas station, 9.62 meters (31.6 feet) south of northeast corner of station, directly across road from lane leading to negro house, 6.75 meters (22.1 feet) southwest of southwest corner of garage, 5.2 meters (17 feet) north of wire fence on north side of cultivated field, 13.5 meters (44 feet)

northeast of center line of road, and approximately 15.2 meters (50 feet) south of State line. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on uncultivated strip between road and cultivated field, 7 meters (23 feet) southwest of center line of road, 16 paces southeast of first telephone pole from gas station on south side of road, 35 paces southeast of lane leading to negro house, and 39.43 meters (129.4 feet) from station in azimuth $0^{\circ}38'$. No. 2 is in yard of negro house, at southeast corner of cultivated field 6 paces northwest of center line of lane, 13 paces northeast of northwest corner of house, and approximately 270 paces from station in azimuth $61^{\circ}09'42''$. No. 3 is on uncultivated strip between road and cultivated field, 8 meters (26 feet) southwest of center line of road, 11.42 meters (37.5 feet) from and directly across road from gas tank, 4.0 meters (13 feet) southeast of telephone pole, 19.9 meters (65 feet) south of 24-inch tree in corner of fence line, 14.2 meters (47 feet) northwest of center line of lane leading to negro house, and 25.57 meters (83.9 feet) from station in azimuth $91^{\circ}36'$.

Futrell (Northampton County, R. D. Horne, 1933).—Station is $5\frac{1}{2}$ miles southeast of Severn, 4 miles east of Conway, and 3.0 miles west of Murfreesboro, on land of K. E. Futrell. To reach from Peoples Bank Building in Murfreesboro, go west 3.0 miles on route 158 or 0.75 mile beyond junction with route 258 direct to Mr. Futrell's house. Station is in rear of Futrell's house, 219 feet south of center line of highway, 39 feet west-northwest of west post of gate between barn lot and cultivated field, and 23.5 feet south-southwest of barn foundation. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is 1 foot below ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 37.5 feet west of northwest corner of concrete post in northwest corner of front yard of Futrell's house, 25 feet south of center line of highway, and 193.91 feet from station in azimuth $190^{\circ}30'$. No. 2 is at west gatepost at north end of fenced lane, and 199.57 feet from station in azimuth $359^{\circ}54'$. No. 3 is at T-intersection of route 158 and secondary road from south, 30 feet south of center line of highway, 27 feet east of center line of secondary road, and approximately 0.2 mile from station in azimuth $109^{\circ}50'09''$. All reference marks project about 6 inches above ground.

Winton (Hertford County, C. A. Egner, 1932; 1933).—At east edge of Winton, on bluff overlooking Chowan River, on land owned by Captain B. C. Willis, near center of open space about 50 meters (164 feet) in diameter formed by circle of large oaks between street and E. N. Brickell's house, 37.90 meters (124.3 feet) southwest of southwest corner of Brickell's house, 95.70 meters (314.0 feet) south from water's edge, 62.40 meters (204.7 feet) from center line of Main Street, and about 10 meters (33 feet) from edge of ravine to south. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 2 meters (7 feet) east of 3-foot oak tree, and 18.91 meters (62.0 feet) from station in azimuth $167^{\circ}53'$. No. 2 is 8 meters (26 feet) south of 3-foot oak tree, 0.5 meter (2 feet) west of property line, 17.30 meters (56.8 feet) from southwest corner of Brickell's house, and 22.67 meters (74.4 feet) from station in azimuth $279^{\circ}37'$. Azimuth from station of east gable (toward river) of brick county jail is $77^{\circ}55'36''$. Azimuth of southwest corner of Brickell's house (above) is 275° .

Parker (Gates County, C. A. Egner, 1932; 1933).—Station is $4\frac{1}{2}$ miles northwest of Winton, $7\frac{1}{2}$ miles northwest of Gatesville, and one-half mile west of Tinkhams Crossroads, on property of H. F. Parker. To reach from Winton, go north on route 30, cross Chowan River, and continue 4.4 miles from center of bridge or 0.2 mile north of side road to southeast with sign "Cool Spring Church $1\frac{1}{2}$ Mi." to a lane to left just south of telephone pole no. 1720. Station is in growth of scrub pine, about 300 meters (984 feet) west of Mr. Parker's farmhouse, 52 meters (171 feet) north of center line of route 30, 36 meters (118 feet) west of fence line of cultivated field, and 125 feet southwest of lane fence which forms northwest boundary of lane from route 30. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 3 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 32 feet northwest of center line of highway, 13 feet southwest of center line of lane, 172 feet southwest of southwest end of concrete culvert with arrow cut in it, on northwest side of road, and 50.050 meters (164.21 feet) from station in azimuth $280^{\circ}02'$. No. 2 is 2 feet southwest of lane fence, 274 feet northwest of center line of route 30, and 49.350 meters (161.91 feet) from station in azimuth $183^{\circ}59'$. No. 3 is 0.1 mile west of route 30, 4 meters (13 feet) north of center line

of east-and-west road, 1 foot north of woven-wire right-of-way fence, and approximately 0.3 mile from station in azimuth $210^{\circ}45'51''$. Lightning rod on Willie Smith's house is approximately 600 meters (1,968 feet) from station in azimuth $184^{\circ}06'31''$; south edge of chimney of Parker's house is approximately 250 meters (820 feet) from station in azimuth $229^{\circ}11'51''$; and base of forked tree is approximately 400 meters (1,312 feet) from station in azimuth $193^{\circ}46'06''$. Tip of arrow on west end of concrete culvert on north side of highway is 62.100 meters (203.74 feet) from station in azimuth $253^{\circ}16'$.

Gatesville (Gates County, C. A. Egner, 1932; 1933).—Station is 0.3 mile west of county courthouse at Gatesville, 23.9 meters (78 feet) north of center line of Court Street, 51 meters (167 feet) south of center line of High Street, about 60 meters (197 feet) southwest of school building, approximately on line between properties of W. T. Cross and T. L. Carter, and across street from property of Fletcher Turner. Surface mark is standard disk station mark in concrete, note 1a, projecting 4 inches. Underground mark is piece of 2-inch gas pipe 1-foot long in mass of concrete. Reference mark no. 1 is standard reference disk in concrete, note 11a, on line between properties of W. T. Cross and T. L. Carter, fronting on High Street, and 42.77 meters (140.3 feet) from station in azimuth $180^{\circ}54'$. Reference mark no. 2 is standard reference disk, note 11c, in corner of concrete steps on west side of schoolhouse, and 49.72 meters (163.1 feet) from station in azimuth $259^{\circ}47'$. Azimuth mark is standard reference disk in concrete, note 11a, about 1.5 feet west of line of fence diagonally across open field of Fletcher Turner, and approximately 500 meters (1,640 feet) from station in azimuth $335^{\circ}31'27''$. Coast and Geodetic Survey standard magnetic station disk is in granite post projecting about 8 inches above ground, and 6.41 meters (21.0 feet) from station in azimuth $19^{\circ}39'$. Southwest corner of base of "KKK" monument marking grave of W. Vernon Eason is 39.66 meters (130.1 feet) from station in azimuth $106^{\circ}47'$. The "I" in Smith of monument of J. T. Smith is 34.19 meters (112.2 feet) from station in azimuth $77^{\circ}30'$.

Primary traverse station no. 9 (U.S.G.S.) (Hertford County, R. D. Horne, 1933).—About $6\frac{1}{2}$ miles northeast of Murfreesboro, $8\frac{1}{2}$ miles north-northwest of Winton, near main corner of Como, 33 feet west of center line of route 158, 5 feet east of sign "This is Como", and 15 inches east of south corner of brick foundation of store owned by G. C. Picot. Marked by cast-iron pipe broken off even with ground. Station *Como* (see description thereof) is 71.93 meters (236.0 feet) from station in azimuth $47^{\circ}33'$.

Primary traverse station no. 11 (U.S.G.S.) (Gates County, R. D. Horne, 1933).—At Gates, 17 miles south-southwest of Suffolk, 7 miles north of Gatesville, 55 feet north of center line of east-and-west highway, about 6 inches east of west edge of sidewalk on west side of highway, and about 3 inches above surface of sidewalk. Mark is stamped "No. 11, Elev. 72 feet, 1905, 1918." Station *Gates* (see description thereof) is 36.052 meters (118.28 feet) from station in azimuth $92^{\circ}09'$.

Freeman (Gates County, N.C.; Nansemond County, Va., R. D. Horne, 1933).—Station is about $3\frac{1}{2}$ miles a little east of north of Gates, 5 miles southwest of Whaleyville, and 2 miles west-northwest of Drumhill, on Virginia-North Carolina State line, on the E. J. Freeman estate. To reach from road junction about one-fourth mile north of Gatesville, go northwest towards Winton 1.25 miles on route 30, take right dirt fork (route 321), follow $5\frac{1}{2}$ miles to Fanny's store at Gates, and continue north 3.5 miles on route 312 (Whaleyville road) or 0.2 mile beyond T-road on right with arrow "Drumhill 2 Miles" to station site at State line. To reach from Whaleyville, go southwest 4.2 miles on Virginia route 506, follow left at arrow pointing direction to Gatesville, and continue 1.4 miles or 0.7 mile beyond T-road on left to station site at State line. Station is in cultivated field directly across road from Mrs. E. V. Freeman's house, 8 paces north of south side extended of house, 12 paces north-northwest of west leg of North Carolina State-line speed-law sign, 16 paces north of north gatepost, 10 feet west of wire fence, 57 feet west of sign "Virginia State Line", 37 feet west of center line of dirt road, 61.5 feet southwest of mail box, 56.5 feet south of 6-inch persimmon tree, 86.5 feet west-southwest of most northerly sycamore tree, 91 feet west-northwest of southerly sycamore tree, 82 feet west of large elm tree, and 62.19 feet west of State-line boundary monument no. 20. This stone is marked: north side, "Va."; south side, "N.C."; west side, "1887"; and east side, "No. 20." Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is 1 foot below ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in southeast corner of pasture, 1.7

For notes in regard to marking of stations see p. 135.

feet west of fence, 7 feet south-southwest of gatepost, 21 feet west of center line of road, 29 feet east-southeast of cedar tree, 45.5 feet west-southwest of 14-inch walnut tree, and 180.2 feet from station in azimuth $188^{\circ}50'$. No. 2 is 8 paces east of center line of road, 8 paces south of northwest corner of cultivated field, 8 inches west of wire fence, 90.3 feet south of boundary monument, 76 feet southeast of west leg of North Carolina State-line speed-law sign, 16 paces south of and 8 paces west of southerly sycamore tree, 15 paces east-northeast of "Load Limit" sign, and 108.12 feet from station in azimuth $329^{\circ}56'$. No. 3 is 18 paces southeast of intersection of dirt roads, 2 paces north of sign "Drumhill 2 Miles", and approximately 0.15 mile from station in azimuth $9^{\circ}55'39''$. State boundary monument no. 20 is 62.19 feet from station in azimuth $273^{\circ}19'$.

Gates (Gates County, R. D. Horne, 1933).—At Gates, 17 miles south-southwest of Suffolk and 7 miles north of Gatesville. To reach from Gatesville, go north 0.25 mile to junction with route 30, proceed northwest 1.25 miles towards Winton on route 30, turn right onto route 321, proceed 5.5 miles or 0.1 mile beyond crossing of Atlantic Coast Line Railroad tracks, turn left, and proceed about 150 feet to station site on right. Station is 34 feet north of center line of east-and-west highway, 155 feet west of north-and-south highway (Gatesville-Suffolk road), and 24 feet south of metal building. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference mark no. 1 is standard reference disk in concrete, note 11c, 1.5 feet south of north end and 0.5 foot east of west end of concrete foundation of service-station gasoline pumps, and 123.00 feet from station in azimuth $307^{\circ}36'$. Reference mark no. 2 is standard reference disk in concrete, note 11a, 115 feet south of center line of east-and-west highway, 150 feet west of center line of north-and-south highway, and 149.56 feet from station in azimuth $12^{\circ}43'$. Reference mark no. 3 is standard reference disk in concrete, note 11c, 1.0 foot north-northwest of south-southeast edge of sidewalk which is in front of Gates High School building, 6 feet north-northwest of most north-northwesterly wall of school building, 15 feet west-southwest of wall, and approximately 0.3 mile from station in azimuth $66^{\circ}48'07''$. *Primary traverse station no. 11 (U.S.G.S.)* (see description thereof) is 36.052 meters (118.28 feet) from station in azimuth $272^{\circ}09'$.

Saunders (Gates County, R. D. Horne, 1933).—About 14 miles south of Suffolk, at Virginia-North Carolina State line, on property of B. L. Saunders & Co. of Suffolk. To reach from corner of West Washington and South Saratoga Streets in Suffolk, go south 0.3 mile on South Saratoga Street, turn left at Y-fork onto Virginia route 52 just after crossing railroad, continue 3.4 miles to junction with route 53, keep left on route 52 and continue 9.4 miles to State line which is well marked with signs and boundary monument. Station is 74 feet east of center line of highway, 37 feet south of State line, and 61.25 feet southeast of top center of granite boundary monument no. 14. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk in concrete, note 11a, on east side of road, 20.8 feet west of center line of railroad main track, 6 feet north of center line of lane along State line, and 102.36 feet from station in azimuth $240^{\circ}06'$. *Virginia-North Carolina boundary monument no. 14* (see description thereof) is 18.669 meters (61.25 feet) from station in azimuth $122^{\circ}21'$. Reference mark no. 3 is standard reference disk in concrete, note 11a, in northeast corner of field, at southeast corner of woods, 30 feet west of center line of highway pavement, and 0.05 mile from station in azimuth $166^{\circ}48'24''$. *Primary traverse station no. 3P (U.S.G.S.)* is cemented in east side of above-mentioned boundary monument, and 18.541 meters (60.83 feet) from station in azimuth $122^{\circ}34'$.

Virginia-North Carolina boundary monument no. 14 (Gates County, N.C.; Nansemond County, Va., R. D. Horne, 1933).—About 14 miles south of Suffolk at Virginia-North Carolina State line, and 10 feet east of east edge of pavement of Virginia route 52. Marked by 1-foot square granite post projecting about 3 feet above ground. Top is truncated wedge shape with longest dimension parallel to State line. North side is marked "Va"; west side "1887"; south side "N.C."; and east side "No. 14". *Primary traverse station no. 3P (U.S.G.S.)* is cemented in east side of post near top. *Station Saunders* (see description thereof) is 18.669 meters (61.25 feet) from station in azimuth $302^{\circ}21'$.

Primary traverse station no. 3P (U.S.G.S.) (Gates County, N.C.; Nansemond County, Va., R. D. Horne, 1933).—About 14 miles south of Suffolk, at Virginia-North Carolina State line, and in east side near top of *Virginia-North Carolina*

boundary monument no. 14 (see description thereof). Station *Saunders* (see description thereof) is 18.541 meters (60.83 feet) from station in azimuth $302^{\circ}34'$.

Drummond (Camden County, N.C.; Norfolk County, Va., R. D. Horne, 1933).—About $7\frac{1}{2}$ miles north-northwest of South Mills, and $11\frac{1}{4}$ miles a little north of west of Moyock, along Dismal Swamp Canal, at Virginia-North Carolina State line. To reach from bridge over canal at South Mills, go north 7.7 miles on route 17 direct to station site at State line. Station is at foot of levee on uncultivated strip of land between highway and canal, 30 feet west of center line of highway, 60.3 feet west of northwest corner of beer stand on east side of highway, 12.0 feet southwest of historical tablet no. Z-225, and 44.4 feet north-northwest of north-west end of North Carolina speed-law sign. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is just off shoulder of highway, 20 feet east of center line, 4.6 feet south-southeast of "George Washington Highway" sign, 10 paces south of speed-limit sign, 29 paces south of United States route 17 highway marker, and 259.6 feet from station in azimuth $169^{\circ}29'$. No. 2 is 8 paces east of center line of route 17, at foot of grade, 24 paces east-northeast of sixth telephone pole from station, and approximately 0.09 mile from station in azimuth $335^{\circ}27'04''$. No. 3 is 3 feet east of east edge of 30-inch pine, 25 feet west of center line of highway, 22.4 feet southwest of United States route 17 marker, about 10 yards east of east edge of canal, 63 feet south of north-west end of North Carolina speed-law sign, and 107.7 feet from station in azimuth $336^{\circ}16'$. Virginia-North Carolina stone boundary monument is 11.82 feet from station in azimuth $230^{\circ}11'$.

JACKSONVILLE NORTHWARD TO VIRGINIA BOUNDARY

Principal points

Greenville (Pitt County, R. D. Horne, 1933).—At western city limits of Greenville, in yard of Negro Industrial High School, 66.9 feet south-southeast of southeast corner of school building, 58.5 feet north of center line of North Carolina Route 43, 30 feet west of projected plane of "Welcome To Greenville" sign which arches highway, and 71.8 feet west-northwest of fire hydrant. To reach from Five Points corner in downtown Greenville, go west 0.45 mile, south about 75 feet, and west 0.55 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark projects 6 inches. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11a. No. 1 is 25 feet south of center line of pavement of route 43, 5 feet west-southwest of crocoted telephone pole, and 190.65 feet (slope) from station in azimuth $296^{\circ}31'$. No. 2 is 22 feet south of center line of pavement of route 43, 35 feet west-northwest of "Myrtle Bend" service station, 100 feet west of intersection of route 43 and secondary road leading south, and approximately 0.15 mile from station in azimuth $84^{\circ}15'53''$. Reference mark no. 3 is a standard reference disk, note 11c, in top step of south entrance to school, 1 foot north of south edge, 6 inches east of west wall of entrance, and 98.68 feet (slope) from station in azimuth $123^{\circ}53'$. Following azimuths are from station: Greenville, municipal power plant brick stack, $250^{\circ}08'43''$; taller of two stacks (center of top) Imperial Tobacco Co., $294^{\circ}29'08''$; taller of two water tanks Imperial Tobacco Co., $292^{\circ}01'07''$; and water tank on feed pipe on cotton mill, $6^{\circ}40'03''$.

Moore (Pitt County, R. D. Horne, 1933).—Station is 9 miles a little east of north of Greenville, on land of Mrs. G. L. Moore. To reach from junction of routes 11 and 91 in center of Greenville (Joyner's warehouse) go north on route 11, cross Tar River, continue north 8.6 miles from south end of bridge or 2.0 miles beyond bridge over creek to dirt road coming in from southeast. Station is in this road fork, 40 feet east of center line of route 11, 22 feet north of 2-foot pine tree, and 23 feet east-southeast of 2-foot blazed pine tree on east side of highway ditch. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 42 feet west-southwest of center line of route 11, 108 feet south of southeast corner of large signboard advertising Farmville Tobacco Warehouse, $1\frac{1}{2}$ feet north-northeast of T-pole, and 0.33 mile from station in azimuth $349^{\circ}59'44''$. No. 2 is 36 feet west of center line of highway, 68 feet west-southwest of slanting road intersection, 2 feet north of T-pole, and 136.50 feet from station in azimuth $24^{\circ}06'$. No. 3 is 35 feet west of center line of highway, 60 feet north of dirt T-road west at mail box, 2 feet south of T-pole, and 132.35 feet from station in azimuth $130^{\circ}10'$.

Eureka (Pitt County, R. D. Horne, 1933).—About 10 miles north-northwest of Greenville, on property of Eureka Lumber Co., 39 feet east of center line of wide north-and-south dirt road, in west edge of large tract of large pine trees, about 150 yards south of large white farmhouse on west side of highway, 88 feet southeast of 40-inch pine tree on west side of road, and 41 feet south of 18-inch pine tree on east side of road. To reach from Greenville, follow route 11 north to point 1.05 miles beyond south end of bridge over Tar River, take left sand-clay fork opposite Gulf gas station (arrow "Bells Crossroads $7\frac{1}{2}$ miles"), proceed 5.1 miles, keep straight ahead at right fork, continue 2.25 miles, turn right at Bells Crossroads (store in east angle), and proceed 2.1 miles or 0.9 mile beyond T-road on right to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 50 paces southeast of house on west side of road, 8 paces west of center line of road, and approximately 0.3 mile from station in azimuth $7^{\circ}20'15''$. No. 2 is 32 feet west of center line of road, 82 feet east of northeast corner of dilapidated house on west side of road, 30 feet east of southeast corner of garden, and 172.5 feet from station in azimuth $29^{\circ}22'$. No. 3 is 35 feet west of center line of road, 50 feet north of the large 40-inch pine tree mentioned above, and 123.4 feet from station in azimuth $149^{\circ}47'$.

Farmville (Pitt County, R. D. Horne, 1933).—Station is 4 miles north-northeast of Farmville, on the J. L. Fountain Estate. To reach from Farmville, go northeast on Main Street, keep straight ahead 1.3 miles beyond point where route 91 turns right, keep straight ahead at crossroads at Joyness service station, continue 2.0 miles, take left fork at "7 Pines Service Station", proceed 1.0 mile, take T-road to left between two tobacco barns, continue 0.4 mile, turn left (south) onto T-lane at west side of small white house on left, and follow 0.2 mile to first house on left and station site. Station is behind white house (now vacant), 19 feet east of window in center of back of house, and 19 feet southwest of southwest corner of barn in back yard and northeast of house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 27 feet west of center line of Farmville-Falkland dirt road, in east edge of this road and Fountain Road, 3 feet west-northwest of telephone pole on edge of triangle formed by roads, 18 feet west-northwest of three mail boxes on wagon wheel, and 0.50 mile from station in azimuth $265^{\circ}47'48''$. No. 2 is 6 feet west of center line of farm road leading past house, 125 feet southwest of southwest corner of house, and 145.15 feet from station in azimuth $61^{\circ}26'$. No. 3 is on east side of cornfield, 6 feet west of center line of road leading south on west side of house, and 222.00 feet from station in azimuth $175^{\circ}56'$.

Mosley (Edgecombe County, R. D. Horne, 1933).—About 6 miles north of Fountain, $3\frac{1}{2}$ miles southeast of Pinetops, and 2 miles east of Crisp, on land of J. A. Mosley. To reach from Pinetops, go north about 1.8 miles on combined routes 42 and 43 to dirt road to east, follow this road east and south 2.1 miles to station site at crossroads with arrows "Crisp", "Pinetops", and "Route 43". Station is 128 feet west of center line of north-and-south dirt road, 40 yards north of center line of east-and-west dirt road, 17 feet south of southwest corner of log tobacco barn, 71 feet northwest of northwest corner of galvanized-iron tobacco barn, and 42 feet north of northeast corner of shed. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 9 paces east of north-and-south road, in southwest corner of Webb's yard, 26 paces southwest of southwest corner of house, and 154.0 feet from station in azimuth $276^{\circ}48'$. No. 2 is 10 paces southeast of center line of T-road intersection, 3 feet east of highway mileage sign, and approximately 0.3 mile from station in azimuth $313^{\circ}37'08''$. No. 3 is 7 paces south of center line of east-and-west road, 5 feet southwest of 15-inch oak tree, 24 paces west of center line of intersection of roads, and 134.0 feet from station in azimuth $356^{\circ}23'$.

Owens (Wilson-Pitt-Edgecombe Counties, R. D. Horne, 1933).—About $1\frac{1}{2}$ miles west of Fountain, on land of B. B. Owens. To reach from route 12 at Fountain, go west from main street 1.2 miles to Ellis filling station at crossroads, turn north 0.2 mile to farm lane leading west at point just south of house, follow lane 0.3 mile to Owen's house on south side of lane, turn right into woods opposite house, proceed 35 yards to old trace crossing at right angles, turn left and follow 75 yards to station site. Station is in midst of brushy woods, about 80 yards north of west of James Owen's house, and 103 feet north of center line of woods road. Surface and underground marks are standard

disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 5 feet south of trace, and 99.2 feet from station in azimuth $264^{\circ}46'$. No. 2 is 5 paces east of center line of north-and-south dirt road, 3 paces north of center line of farm road, in southwest corner of tobacco field, 1 foot north of wooden post, and approximately 0.3 mile from station in azimuth $270^{\circ}34'46''$. Mark is not visible from ground without clearing 100 yards of heavy brush and small trees. No. 3 is 162 feet west of west corner of James Owen's house, 6 feet south of farm road, and 109.3 feet from station in azimuth $330^{\circ}13'$.

Shackleford (Wilson County, R. D. Horne, 1933).—About 9 miles northwest of Farmville, 5 miles west of Fountain, and about 12 miles east-southeast of Wilson, on land of Jasper Shackleford of Farmville. To reach from Farmville, go west 6.4 miles on United States route 264 to dirt road which leads south to Walstonburg, continue 0.8 mile on route 264, turn north onto dirt road at west end of fill, proceed 1.85 miles, keeping straight ahead at crossroad at 1.25 miles, and take left fork (northwest) 1.4 miles or 1.0 mile beyond county line to station site. To reach from Wilson, go southeast on route 264 to Saratoga, turn left (northeast) onto dirt road at corner with Esso station, brick store, Pure Oil station, and L. G. Gardners Co., and arrows "Fountain 9—Stantonburg $4\frac{1}{2}$ —Falkland 17," proceed 1.0 mile, take T-road to right, proceed 2.3 miles, take T-road to right, and follow 0.85 mile to station site, 0.25 mile beyond group of farmhouses close to road. Station is 32 feet northwest of center line of road in woods, 12 feet west of 8-inch blazed oak tree, 17 feet southeast of small twin-oak trees, 22 feet northwest of small twin-oak trees, 37 feet east of 12-inch crooked pine tree, and 57 feet south-southeast of 12-inch pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in west edge of cultivated field, 15 feet northeast of center line of road, 90 feet northwest of drainage ditch between fields, and 162 feet from station in azimuth $295^{\circ}04'$. No. 2 is across road from farmhouse, 63 paces east of center line of road, 20 paces south-southeast of well, 12 paces south of 14-inch oak tree, 7 paces north of garden fence, and approximately 0.2 mile from station in azimuth $160^{\circ}00'22''$. No. 3 is in west edge of cultivated field, 13 feet northeast of center line of road, 15 feet south of center of drainage ditch between fields, 98 feet south of lone 20-inch pine, and 131.0 feet from station in azimuth $152^{\circ}44'$. Walnut tree in field opposite station is in approximate azimuth from station of 248° .

Wooten (Wilson County, R. D. Horne, 1933).—About 9 miles northwest of Fountain, 5 miles west of Macclesfield, and 7 miles west-southwest of Pinetops, on land of Wardell Wooten. To reach from junction of routes 42 and 43 in Pinetops, go west-southwest 7.1 miles on route 42 to Bridgersville crossroads. This point is 1.5 miles west of junction with route 124 in Macclesfield, and about 7.5 miles along route 42 from Wilson. Filling station is on south side of route 42 with "Amos Robbins" on Coca-Cola sign and "Cummins" over door. Turn right and continue 0.45 mile to church on right. Station is across road from church, just east of dim road leading into woods, 43 feet south of center line of road, 2 feet west of east side extended of church, 99 feet south of southeast corner of church, 74 feet south of 14-inch oak stump in churchyard, 119 feet southeast of pump in churchyard, 34 feet southeast of 30-inch pine with triangular blaze on east side, and 38 feet east of 10-inch oak. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in south edge of cultivated field, 18 feet north of center line of road, 140 feet southeast of southeast corner of church, 112 feet southeast of 14-inch oak stump, and 122.2 feet from station in azimuth $265^{\circ}03'$. No. 2 is in north edge of woods, 17 feet south of center line of road, and approximately 0.2 mile from station in azimuth $118^{\circ}33'34''$. No. 3 is in churchyard, 7 feet southwest of pump, 19 feet north of center line of road, 6 feet east of 8-inch oak, 50 feet west of southwest corner of church, and 117.85 feet from station in azimuth $146^{\circ}16'$.

Brown (Edgecombe County, R. D. Horne, 1933).—Station is 8.6 miles southeast of Rocky Mount, on property of Bob Brown, 200 feet south of route 43, 30 feet west of center line of dirt road, and 14 feet south of 6-inch blazed pine tree. Surface mark is standard station disk in concrete, note 1a. Underground mark is an alemite grease cup. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 33 feet north of center line of highway, 9 feet

west of center line of dirt road leading north from three mail boxes on south side of highway, and 223.90 feet from station in azimuth $211^{\circ}07'$. No. 2 is 30 feet south of center line of highway, 18 feet west of road leading from northwest to A. N. Hamlet's house, and 0.3 mile from station in azimuth $280^{\circ}16'42''$. No. 3 is 20.5 feet east of center line of dirt road to south, and 187.60 feet from station in azimuth $344^{\circ}05'$.

Rocky Mount east base (Edgecombe County, C. I. Aslakson, 1932).—About $11\frac{1}{2}$ miles east of Rocky Mount, on top of bank of large cut on the Atlantic Coast Line Railroad, about 125 yards west of section foreman's house, and 16.10 meters (52.8 feet) north of south rail. To reach from junction of routes 12 and 90 in Tarboro, go west 5.0 miles on route 90, turn left (south) 1.1 miles, turn right (west) alongside of Atlantic Coast Line Railroad tracks, and continue 0.3 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 3 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 25 feet east of center line of road, 10 meters (33 feet) north of gate to churchyard, 25 meters (82 feet) northwest of northwest corner of church, and approximately 0.3 mile from station in azimuth $265^{\circ}39'54''$. No. 2 is opposite third telephone pole west of section foreman's house, 39 feet south of south rail of tracks, 10 feet south of top of slope on south side of railroad cut, and 28.122 meters (92.26 feet) from station in azimuth $5^{\circ}02'$. No. 3 is about 100 feet west of third telephone pole west of section foreman's house, 15 feet north of top of slope of railroad cut, and 40.689 meters (133.49 feet) from station in azimuth $89^{\circ}35'$.

Rocky Mount west base (Edgecombe County, R. D. Horne, 1933).—Station is about 2 miles southeast of Rocky Mount, on top of bank of small cut along Atlantic Coast Line Railroad, on line formed by center line of east-and-west tangents of dirt road, 9.02 meters (29.6 feet) south of south rail of tracks, 12 feet north-east of center line of road, 16 feet northwest of northwest corner of wire fence, 62 feet east-southeast of railroad warning signal, and 151 feet east of line formed by east side of yellow house. To reach from railroad crossing on Main Street in Rocky Mount, go east 1.15 miles on United States route 64, turn right onto dirt T-road at Sinclair service station opposite American gas station, proceed 1.1 miles or about 100 yards beyond right turn at gate leading to fairground's grandstand, turn left onto T-road leading south into woods, continue 0.2 mile, follow to left at railroad, continue along north side of tracks 0.3 mile, cross tracks in front of above-mentioned yellow house, and follow road to left about 50 yards to where it turns south toward a Negro house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is alongside road leading south, at southwest corner of wire fence, 2 feet north of corner post, 38 feet north of northwest corner of Negro house, 5 feet east of center line of road, 84 feet north of well, 81 feet north of 48-inch oak, and 155.9 feet from station in azimuth $356^{\circ}23'$. No. 2 is along telephone line on north side of tracks, about 50 yards east of point where road turns east, 9 paces north of north rail, 9 feet southwest of twin pines, 4 paces south of path, and approximately 0.3 mile from station in azimuth $98^{\circ}28'52''$. No. 3 is about 25 feet east of road crossing, 21.44 feet south of south rail, 31 feet east of east side of yellow house, and 121.55 feet from station in azimuth $99^{\circ}35'$. B.M.X 33 is $29\frac{1}{2}$ feet south of south rail, 10 feet north of northwest wire fence corner, and 8.84 feet from station in azimuth $274^{\circ}16'$. Azimuth from station to Planters Oil Co. black water tank is $98^{\circ}19'53''$.

Battleboro (Nash County, R. D. Horne, 1933).—In Battleboro, on property line between lot belonging to village and one owned by Mrs. Braswell, 55 yards west of center line of right-of-way of Atlantic Coast Line Railroad which is also Nash-Edgecombe County line, 87 feet west of center line of dirt road, 70 feet northwest of 6-foot Spanish oak tree, and 16 feet southwest of southwest corner of old wooden building. To reach station, follow route 301 to Battleboro, go east 0.2 mile on main street to cross street just west of railroad, and follow south 70 yards to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 foot west of southeast corner of Braswell's buggy house, and 141.90 feet from station in azimuth $183^{\circ}03'$. No. 2 is 25 feet east of center line of railroad double track, 5 feet east of second T-pole at top of cut south of grade crossing, and 200.25 feet from station in azimuth $307^{\circ}26'$. No. 3 is 20 feet east of center line of road leading to cemetery, 50 yards north of granite

For notes in regard to marking of stations see p. 135.

tomb with names "Braswell Bryan", 100 yards east of railroad, and 0.25 mile from station in azimuth $0^{\circ}06'41''$.

O'Neal (Edgecombe County, R. D. Horne, 1933).—Station is $8\frac{1}{4}$ miles east of Battleboro and $7\frac{1}{2}$ miles southeast of Whitakers, on land of Miss Nancy O'Neal. To reach from junction of routes 90 and 301 in Rocky Mount, go north 2.2 miles on route 301, turn right onto route 95 opposite Sinclair station, follow 12.3 miles to Leggett, turn left onto route 44, keep straight ahead 4.8 miles, turn right (east) onto 7-road with reddish-brown house in northeast angle, and continue 1.45 miles to station site in grove of trees. Station is on south edge of grove, 54 feet north of center line of east-and-west dirt road, and 15 feet southwest of 10-inch blazed pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 7 paces north of center line of road, 7 paces south of 18-inch white oak in G. M. O'Neal's yard, 27 paces southeast of southwest corner of O'Neal's house, 11 paces east of O'Neal's mail box, and approximately 0.2 mile from station in azimuth $258^{\circ}25'09''$. No. 2 is 16 feet south of center line of road, 46 feet east of telephone pole, and 123.2 feet from station in azimuth $283^{\circ}18'$. No. 3 is 3 feet east of telephone pole, 16 feet south of center line of road, 40 feet east of center line of farm lane leading to north with a corrugated-iron culvert at point where it leaves dirt road, and 148.8 feet from station in azimuth $39^{\circ}00'$.

Mann (Nash County, R. D. Horne, 1933).—Station is $2\frac{1}{2}$ miles west of Whitakers, on land owned by C. D. Mann of Whitakers. To reach from Whitakers, turn west onto dirt road, follow northwest past public school 2.1 miles to crossroads, turn left 0.3 mile, take left fork, and continue 0.9 mile to lane leading right to house. Station is opposite lane, 30 feet south of center line of road, 18.2 feet south of mail box marked "Elzie Battle—13", 3 feet west of center line extended of lane, 54 feet west of west edge of cultivated field, 26.5 feet west-northwest of 10-inch oak with triangular blaze, and 81 feet east-northeast of molasses mill. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 13 feet north of center line of road, 3 feet north of edge of drainage ditch, in south edge of cultivated field, 159 feet east-southeast of center line of lane, and 162.76 feet from station in azimuth $249^{\circ}55'$. No. 2 is 14 feet northwest of center line of road, 45 feet west-southwest of lone 30-inch oak tree that stands in southeast angle of intersection of road and lane to negro house on southeast side of road, on east side of cultivated field, about 225 feet north-northeast of negro house on northwest side of road, and approximately 0.2 mile from station in azimuth $257^{\circ}25'22''$. Arrow on mark points to left of station. No. 3 is in front yard of house, 47 feet south of edge of porch, 6 feet west of center line of lane, and 306.75 feet from station in azimuth $169^{\circ}07'57''$.

Chapel (Halifax County, R. D. Horne, 1933).—About 5 miles southeast of Enfield, in yard of Whitaker Chapel Church, 106.2 feet north of northeast corner of most northerly wall, 61 feet west of 48-inch twin white oak, and 55 feet south-east of center line of highway. To reach from intersection of Whitaker Street and United States route 301 in Enfield, go southeast on Whitaker Street 4.85 miles, turn left, and continue 0.4 mile to church and graveyard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches above ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 12 feet north-northwest of center line of highway, 80 feet east-northeast of secondary road leading north from highway, and 151.71 feet from station in azimuth $229^{\circ}06'$. No. 2 is 6 meters (20 feet) south-southeast of center line of highway, about 50 meters (164 feet) north of large dwelling house, and approximately 0.3 mile from station in azimuth $257^{\circ}12'58''$. No. 3 is 25 feet north-northeast of center line of highway, and 145.26 feet from station in azimuth $111^{\circ}58'$.

Haywood (Halifax County, R. D. Horne, 1933).—Station is about 5 miles northeast of Enfield, 58.5 feet south of southwest corner of brick-pillar foundation of log-house service station, 65 feet south of southwest end of gasoline-pump foundation, 45 feet southeast of center line of highway pavement, and 35 feet north of lone 24-inch pine tree. To reach from intersection of Whitaker Street and United States route 301 in Enfield, go north 4.7 miles to service station on the site of old Haywood Church and station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 projects 1 foot, is 41 feet south of center line of

pavement, 77.5 feet north of northwest corner of brick-pillar foundation of service station, 82 feet north of northeast end of concrete gasoline-pump foundation, and 160.52 feet from station in azimuth $215^{\circ}21'$. No. 2 projects 6 inches, is 9 meters (30 feet) west of center line of highway, 1 foot northeast of northeast corner of yard fence, approximately 40 meters (131 feet) northeast of dwelling house, and approximately 0.3 mile from station in azimuth $40^{\circ}03'47''$. No. 3 is 122 feet northeast of center line of highway, 13 feet north of center line of farm road, and 229.44 feet from station in azimuth $83^{\circ}41'$.

Pettitt (Halifax County, R. D. Horne, 1933).—About 8 miles northwest of Enfield and 13 miles southwest of Halifax, on property owned by R. L. Pettitt, of Richmond, and in charge of C. G. Lee. To reach from Halifax, go south 0.9 mile from courthouse on United States route 301, turn right onto dirt road (temporary route 561), proceed 4.5 miles, keep straight ahead at crossroads with H. B. Willey's service station in northwest angle, continue 3.0 miles to T-road at Beaver Dam filling station, turn right, continue 2.0 miles to deserted filling station at point where main road curves right and another road forks to left. Take left fork leaving route 561, proceed 0.7 mile to T-road on right and white church on left, turn right 0.3 mile, take T-road left, and proceed 1.8 miles or 0.5 mile beyond bridge to lane on right leading to house occupied by C. G. Lee. To reach from Enfield, go west from traffic light, jog left across railroad tracks, follow main street out of town three-fourths mile to fork of graded roads at "Ringwood" sign, turn right (northwest) and follow main road 7.5 miles to T-road with an old store on right and "Halifax" sign, turn right (northeast) 0.1 mile, keep straight ahead on right-hand fork, and continue 0.6 mile to lane leading to house. Turn into lane and proceed 80 yards to station site in front of house. Station is on line with center line of lane and door of house, 64 feet east of edge of porch, 81.8 feet east-southeast of northeast corner of base of chimney, 95 feet southeast of center of well, 65 feet southwest of nearest apple tree, 48 feet southeast of nearest of three large oaks, and 53 feet north of north end of old barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on north side of lane leading to Elliot William's house, 32 paces west-southwest of well, in southwest corner of garden, 25 yards southwest of southwest corner of small 3-room house, and approximately 760 paces from station in azimuth $268^{\circ}13'42''$. No. 2 is at entrance to lane, 26 feet west of center line of road, 13 feet south of center line of lane, 65 feet east-southeast of apple tree, 42 feet northwest of three mail boxes, and 181.1 feet from station in azimuth $314^{\circ}17'$. No. 3 is 2 feet east of wire fence, 20 paces north of southeast corner of chicken yard, 4 paces south of northeast corner of chicken yard, 3 paces southeast of 4-inch tree, 2 paces west of center line of lane, 89.4 feet southwest of southwest corner of chimney of house, and 167 feet from station in azimuth $97^{\circ}43'$.

Taylor (Halifax County, R. D. Horne, 1933).—About 10 miles northwest of Enfield, $3\frac{1}{2}$ miles south of Aurelian Springs, and 11 miles west-southwest of Halifax, on land owned by Mr. Taylor, who operates a store 1 mile south of station. To reach from Halifax, go west about 11 miles on North Carolina route 561 to Heathsville, continue straight ahead through village 2.4 miles on temporary route 561, turn right at crossroads with store in northwest corner and white house in northeast corner, and proceed 1.5 miles to Mr. Taylor's store and T-road on right. Continue straight ahead 1.1 miles to top of grade, turn left up hill onto dim lane, proceed about 100 yards, turn left just after passing through a small line of woods, follow west edge of woods 0.1 mile, turn left at small blazed pine about 20 yards east of corner of uncultivated area, and continue 50 yards into woods. Station is 10 paces east of this point, between 4 trees bearing triangular blazes on sides toward station, 17 feet west-northwest of 12-inch pine, 16 feet east-southeast of 10-inch pine, 18 feet northeast of 8-inch pine, 36 feet southwest of 12-inch pine, and 17 paces east-northeast of largest tree in small plum thicket. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 3 paces south of south edge of cultivated field, 8 paces west of point where dim trail leads into woods, 6 paces north-northwest of small blazed pine, 22 paces southeast of northwest corner of uncultivated area, and 161.2 feet from station in azimuth $182^{\circ}25'$. No. 2 is at northeast corner of tobacco barn, 5 paces east of center line of lane leading to white house, and approximately 0.3 mile from station in azimuth $19^{\circ}03'50''$. No. 3 is at east edge of cultivated field, just south of small plum thicket, 11 paces

east of peach tree, 14 paces southwest of 14-inch pine, 31 paces north-northwest of twin-oak tree, and 98.35 feet from station in azimuth $46^{\circ}03'$.

Halifax (Halifax County, R. D. Horne, 1933).—About 2 miles southwest of Halifax, on land of W. A. Wilcox. To reach from courthouse in Halifax, go south 0.9 mile on United States route 301, turn right onto North Carolina route 561 (dirt) at top of short grade, and follow 1.65 miles to station site. Station is in grove of post-oak trees in front of deserted dwelling on right (northwest) side of road, 61 feet northwest of center line of highway, 62 feet northeast of farm entrance road, and 90 feet southeast of northeast corner of largest (northeast) chimney of deserted dwelling. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark projects about 1 foot above ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 20 feet southeast of center line of highway, and 131.77 feet from station in azimuth $269^{\circ}37'$. No. 2 is 25 feet southeast of center line of highway, and 106.98 feet from station in azimuth $356^{\circ}00'$. No. 3 is 7 meters (23 feet) southeast of center line of highway, 4 meters (13 feet) northwest of center line of road leading to farmhouse, 50 meters (164 feet) west of farmhouse, and approximately 0.3 mile from station in azimuth $36^{\circ}45'04''$.

Alston (Halifax County, R. D. Horne, 1933).—Station is 11 miles southwest of Weldon, 9 miles southwest of Roanoke Rapids, 6 miles southeast of Littleton and 3 miles north of Aurelian Springs, on land of C. H. Alston. To reach from Halifax, go north 9.0 miles on dirt road from west side of courthouse, pass Pierce's Crossroads and Quankey Church, take left fork in road, continue 0.9 mile to fork near school, turn left and go 2.4 miles to station site. Station is 200 feet south of C. H. Alston's house, 104 feet west of northwest corner of Negro log cabin, 45 feet southwest of 3-foot oak tree, and 29 feet southeast of $2\frac{1}{2}$ -foot oak tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 150 feet north of main dirt road, 2 feet north of northwest corner of Negro log cabin, and 104.15 feet from station in azimuth $316^{\circ}42'$. No. 2 is 24 feet south of center line of dirt road, 50 feet east of northwest corner of long narrow clearing, and 0.25 mile from station in azimuth $347^{\circ}30'10''$. No. 3 is at east edge of grove of small trees, 33 feet south of cherry tree, and 92.00 feet from station in azimuth $62^{\circ}13'$.

Adams (Halifax County, R. D. Horne, 1933).—About 3 miles west-southwest of Weldon and about $2\frac{1}{2}$ miles south of Roanoke Rapids, on land of Mrs. G. W. Adams. To reach from junction of United States routes 158 and 301 in Weldon, go south 1.0 mile on route 301 to Shell gas station in northeast angle of T-road to west, turn right and continue 1.3 miles following main road and arrows "Aurelian Springs" to fork with mileage arrows "Littleton 19 Mi." Take right fork 1.3 miles to crossroads with mileage sign in southeast angle "Weldon 3.0 Miles", turn right and continue 0.4 mile to station site at top of grade. Station is 28 feet west of center line of north-and-south dirt road to Roanoke Rapids, 31 feet south of small wild-cherry tree in small clump of bushes, and 161 feet west of southwest corner of Turner's house on east side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in northwest corner of field, 15 feet east of center line of road, 20 feet south of east-and-west fence line, 50 feet west-southwest of lone pine tree in fence line, opposite driveway to farmhouse, and approximately 0.3 mile from station in azimuth $192^{\circ}04'17''$. No. 2 is 13 feet east of center line of highway, in south edge of grass lane into Turner's house, and 87.3 feet from station in azimuth $217^{\circ}49'$. No. 3 is 18 feet east of center line of road, 125 feet northeast of lane into Adam's house, and 82.1 feet from station in azimuth $336^{\circ}38'$. Azimuths from station are: Roanoke Rapids, silver municipal water tank, final, $174^{\circ}58'59''$; and Weldon, Eastern Cotton Oil Co., black water tank, final, $262^{\circ}28'10''$.

Roanoke eccentric (Northampton County, R. D. Horne, 1933).—In south part of Roanoke Rapids, near Seaboard Air Line Railway, on high bluff about 180 feet east of east end of depot, 79 feet north of north rail of main track, about 50 feet east of 2 outhouses, and about 50 yards southwest of Mr. Turner's house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 20 paces south of center line of United States route 158, 10 paces south of easternmost telegraph pole on south side of road, 15 feet north of south end of advertising signboard, and approximately 0.2 mile from station in azimuth $330^{\circ}16'39''$. No. 2 is on high bank between railway and highway.

39 feet south of south rail of main track, 47 feet north of center line of highway, 12 feet southwest of telephone pole no. 142-L31, and 121.7 feet (slope) from station in azimuth $45^{\circ}00'$. No. 3 is at southwest corner of garden, 3 feet north of power-line pole, 9 feet southeast of southeast corner of garage, and 97.8 feet from station in azimuth $156^{\circ}28'$. Station *Roanoke* (see description thereof), marked with bronze disks, notes 1a and 7a, is 17.7 feet south of south rail of main track, 83 feet southeast of southeast corner of depot, and 56.97 meters (186.9 feet) from station in azimuth $102^{\circ}54'$. Following azimuths are from station: Rosemary Mills, black tank, final, $167^{\circ}32'56''$; and final silver-colored municipal tank, Roanoke Rapids, $235^{\circ}08'25''$.

Supplementary points

Dawson (Lenoir County, R. D. Horne, 1933).—About 7 miles northwest of Kinston, at Dawson railway station on right-of-way of Carolina Railway. To reach from post office in Kinston, go north 6.35 miles on United States route 258 to Bizzell's filling station at Mewborns Crossroads, turn west onto dirt road, and follow 2.45 miles to station site. To reach from junction of United States route 258 and North Carolina route 102 in Snow Hill, go south 7.6 miles on route 258 or 0.8 mile beyond Lenoir County line to Wootens Crossroads, turn west onto dirt road and follow 2.45 miles to station site. Station is 33 feet west of center line of dirt road, 16.85 feet east of center of east rail of side track, 36.40 feet east of center of west rail of main line, 30.7 feet north-northeast of northwest corner of northwest brick pillar of depot, 39.85 feet northwest of northeast corner of northeast brick pillar, and 60.2 feet west-southwest of southwest corner of old abandoned store. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is near side of yellow house, on north side of walk, 66 feet east of center line of road, 1.6 feet west of brick pillar, 19 feet southeast of center of well, 27 feet southeast of southeast corner of abandoned store, 13 feet north of 4-inch chinaberry tree, and 99.51 feet from station in azimuth $261^{\circ}38'$. No. 2 is in strip of uncultivated land between road and railroad, 26.1 feet east of east rail of main line, 20 feet west of center line of road, 12 feet north of rear side extended of house on east side of road, and 160.05 feet from station in azimuth $169^{\circ}25'$. No. 3 is 15 feet west of center line of road, 25 feet east of east rail, 100 feet south of turn in road, 75 feet southwest of southwest corner of tobacco barn in southeast angle of turn in road, and approximately 0.2 mile from station in azimuth $170^{\circ}52'46''$.

Arba (Greene County, R. D. Horne, 1933).—About 11 miles northwest of Kinston, 5 miles south of Snow Hill, and 1 mile south of Arba Crossroads, on grounds of small Negro church. To reach from junction of United States route 258 and North Carolina route 102 in Snow Hill, go southwest 0.6 mile on route 102, turn left, follow dirt road southwest 0.5 mile, take left fork, and continue 3.4 miles to Arba Crossroads. Continue straight ahead (south) 0.6 mile, take left fork, and follow 0.35 mile to station site. To reach from post office in Kinston, go north 6.35 miles on United States route 258 to Bizzell's filling station at Mewborns Crossroads, turn west onto dirt road, and follow 2.45 miles to station *Dawson*. Continue west 2.5 miles to crossroads at Wheat Swamp School (a large brick building), take road to right, and follow 3.7 miles to station site. Station is 169 feet north of T-road intersection with arrows: East, "Brown-ton X Rd. 2"; north, "Snow Hill 5—Arba 1"; 35 feet east of center line of road, 28 feet west-northwest of northwest corner of church, 33 feet southwest of 14-inch pine tree, and 37 feet northwest of 12-inch pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 30 feet west of center line of road, 10 feet west of west edge of ditch, about 80 yards north of point where road turns southeast, 30 feet north of 12-inch pine tree which stands out from rest of woods, and approximately 0.25 mile from station in azimuth $4^{\circ}28'36''$. No. 2 is 16 feet south of mileage post at T-road intersection, 31 feet west-southwest of this intersection, 25 feet west of center line of road, and 185.55 feet from station in azimuth $15^{\circ}10'$. No. 3 is 29 feet west of center line of road, 9.5 feet west of west edge of ditch, 14 feet northeast of 12-inch pine tree, and 169.95 feet from station in azimuth $150^{\circ}54'$.

Eason (Lenoir County, R. D. Horne, 1933).—About $3\frac{1}{2}$ miles southeast of Hookerton, and $9\frac{1}{2}$ miles a little east of north of Kinston, on land owned by Beulah Eason and occupied by David Dickson, tenant. To reach from post

office in Snow Hill, go south 3.3 miles on United States route 258, turn east on dirt crossroad and follow $2\frac{1}{2}$ miles to Hookerton. Take main dirt road south from Hookerton and proceed $3\frac{1}{2}$ miles or 0.2 mile south of Lenoir-Greene County line to station site. Station is north of Dickson's house, 28 feet east of north-and-south dirt road, 103 feet northeast of northeast corner of tobacco-curing barn on west side of highway, and about 250 feet north of crossroads. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 100 yards south of crossroads, 8 paces west of center line of north-and-south dirt road, and approximately 0.15 mile from station in azimuth $355^{\circ}16'58''$. No. 2 is 30 feet west of center line of highway, 1 foot east of southeast corner of tobacco-curing barn, and 116.1 feet from station in azimuth $21^{\circ}00'$. No. 3 is 17 feet east of center line of highway, 8 feet south of old rotten 20-inch stump, and 109.9 feet from station in azimuth $165^{\circ}41'$.

Flanigan (Greene County, R. D. Horne, 1933).—About 6 miles northwest of Snow Hill and 9 miles southwest of Farmville, on land owned by E. G. Flanigan of Greenville and in charge of Carl Hicks of Walstonburg. To reach from Snow Hill, go north 0.8 mile on route 258 and turn left onto dirt road at arrows "Wooten Xrds. $5\frac{1}{2}$ —Castoria 5". This road forks about 50 yards from highway and either fork may be followed to station site. By taking left fork, follow main-traveled road 5.7 miles to Wooten Crossroads (where six roads converge), take road leading west, proceed 1.3 miles to T-road, cross this road and enter drive to house. Station is in front of house, in west edge of small cultivated plot, 122 feet west of center line of road, 37 paces north of T-road, 1 foot south of line along south side of Negro house, 4 feet west of line along west side of tobacco barn, 96.6 feet east of southeast corner of chimney on south side of house, 70.4 feet north of northwest corner of tobacco barn, 40 feet southeast of 30-inch walnut tree, and 32 feet east of nearest cedar tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 17 feet east of center line of road, near northwest corner of cultivated field, 58 feet south of T-road intersection, 54 feet east-southeast of southeast corner of tobacco barn, and 217.74 feet from station in azimuth $301^{\circ}49'$. No. 2 is in north edge of uncultivated area south of house, 9 feet south of center line of farm road, 58.4 feet south of southeast corner of chimney, and 131.35 feet from station in azimuth $50^{\circ}40'$. No. 3 is 18 feet east of center line of road, opposite white house, 18 feet southwest of southwest corner of log tobacco barn, 20 feet north of center line of driveway to farmyard, 75 feet northwest of northwest corner of log tobacco barn, and approximately 0.6 mile from station in azimuth $349^{\circ}30'43''$.

Carr (Greene County, R. D. Horne, 1933).—About $5\frac{1}{2}$ miles south-southeast of Farmville, and $7\frac{1}{2}$ miles northeast of Snow Hill, on land owned by Mrs. Carr. To reach from main intersection in Farmville, go south 6.6 miles to road junction at Lizzie, which is on route 258. Turn east 0.4 mile to fork, and follow left fork (dirt road) 3.3 miles to station site. Station is in front yard, 29 feet north of center line of east-and-west dirt road, 60 feet north of northeast corner of tobacco-curing barn on south side of road, 63 feet southwest of southwest corner of large barn, and about 5 paces northwest of 20-inch oak stump. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 40 paces east of east end of tobacco-curing barn, 8 paces south of center line of road, 1 foot north of south right-of-way fence of road, and 150.6 feet from station in azimuth $299^{\circ}08'$. No. 2 is 6 paces south of center line of road, 50 paces east of east side of farmhouse, at northeast corner of hog fence, and approximately 0.3 mile from station in azimuth $89^{\circ}52'18''$. No. 3 is 41 feet southwest of southwest corner of Carr's house, 15 feet southwest of yard fence line, and 181.8 feet from station in azimuth $162^{\circ}46'$.

Cox eccentric (Halifax County, R. D. Horne, 1933).—In east end of Littleton, 25 feet west of center line of dirt road running north from railway grade crossing, 96.7 feet north of north rail of main line, 90 feet north of milepost 98 of Seaboard Air Line Railway, and 100 feet northwest of grade crossing. To reach from junction of routes 48 and 482 in Littleton, go east 0.3 mile on route 48 to ball park, turn north opposite gate, and proceed north 0.1 mile across railway track to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on west side of mill, 25 feet south of northwest corner of building, and 92.02 feet from station in azimuth $212^{\circ}17'$. No. 2 is 21 feet east

of center line of Roanoke Avenue, 48 feet north of southeast corner of Miss Mary Murphy's garden, and 0.25 mile from station in azimuth $86^{\circ}20'50''$. Station *Cox* (see description thereof) is 38.220 meters (125.40 feet) from station in azimuth $283^{\circ}14'$. Azimuth from station to Littleton water tank is $41^{\circ}48'02''$.

Cox (B.M. N 3) (Halifax County, M. Steinberg, 1918; 1933).—Station is at east end of Littleton, on right-of-way of Seaboard Air Line Railway, about 600 yards east of railway station, 1.31 meters (4.3 feet) north of north rail, 30 yards south of boiler room of sawmill, 35.7 feet south of southwest corner of corrugated-iron storehouse, 50 yards west of tanks of Littleton Oil Co., 98.5 feet east of milepost 98, 50 yards north of gray frame church, and 19.4 feet east of center line of grade crossing. Surface mark is standard station disk in concrete, note 1a. Underground mark is a nail in concrete, note 7c. Reference mark was standard reference disk in southwest corner of brick foundation of cottonseed house, about 1 foot above ground, and 10.875 meters (35.68 feet) from station in azimuth $140^{\circ}07'$. Reference mark was not recovered in 1933. Station *Cox eccentric* (see description thereof) is 38.220 meters (125.40 feet) from station in azimuth $103^{\circ}14'$.

Roanoke (B.M. Z 1) (Halifax County, M. Steinberg, 1918; 1933).—In south part of Roanoke Rapids (formerly known as Roanoke Junction), 20 yards east of Seaboard Air Line Railway depot, 5.326 meters (17.47 feet) south of south rail and on top of 6-foot rise. Surface mark is standard disk station mark in concrete, note 1a. In 1934, concrete post was found lying on ground. Underground mark is nail in concrete, note 7c. Reference mark (B.M. Y 1) is standard reference disk in south face of bay in front of depot, 1.3 feet west of east corner of bay, 31.9 feet north of north rail of main track, 1 foot above top of rail, and 31.665 meters (103.89 feet) from station in azimuth $166^{\circ}44'$. Reference mark was recovered in 1934. Station *Roanoke eccentric* (see description thereof) is 56.97 meters (186.9 feet) from station in azimuth $282^{\circ}54'$.

Ruggles (Halifax County, R. D. Horne, 1933).—Station is 3.6 miles south of Halifax, in triangle on highway right-of-way at junction of United States route 301 and North Carolina route 125, 38 feet east of center line of route 301, 29 feet west of center line of route 125, and 18.4 feet south of intersection caution signal. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 25 feet east of center line of route 125, 70 feet northeast of road marker on north side of road, and 194.10 feet from station in azimuth $314^{\circ}45'$. No. 2 is 30 feet west of center line of route 125, in southeast corner of cultivated field, 6 feet west-southwest of drainage ditch, and 0.45 mile from station in azimuth $327^{\circ}40'25''$. No. 3 is 25 feet east of center line of route 301, in northwest corner of cotton field, 1 foot east of telephone pole, and 109.10 feet from station in azimuth $24^{\circ}59'$.

Leggett (Edgecombe County, R. D. Horne, 1933).—In Leggett, in high-school yard, 275 feet north-northwest of intersection of routes 44 and 95, 65 feet east-northeast of southeast corner of school building, 37 feet west-southwest of center line of pavement of route 95, 26 feet southwest of southwest corner of culvert headwall, and 5 feet north of line of south wall extended of school building. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 145 feet north of intersection of routes 44 and 95, 27 feet east-northeast of center line of pavement of route 95, and 162.78 feet from station in azimuth $307^{\circ}29'$. No. 2 is between 1,000 and 1,100 feet west-southwest of intersection of routes 44 and 95, 30 feet north-northwest of center line of pavement of route 44, and approximately 0.25 mile from station in azimuth $43^{\circ}06'22''$. No. 3 is 20 feet east-southeast of center line of route 95, 10 feet south of center line of street along north side of school building, and 184.36 feet from station in azimuth $169^{\circ}44'$.

Penelo (Edgecombe County, R. D. Horne, 1933).—About 6 miles a little south of east of Rocky Mount, on Penelo plantation, now owned by H. C. Bourne of Rocky Mount. To reach from railroad crossing on Main Street in Rocky Mount, go east 6.5 miles on United States route 64, or 2.55 miles beyond Standard Oil station "Red's Place", and 0.3 mile beyond standard highway mileage sign "Tarboro 10—Williamston 42" to west end of long left curve (concave north) and house on right. Turn right into lane on east side of house and proceed about 50 yards to station, in cultivated field, about 100 yards southeast of house, 217 feet south-southwest of center line of highway, 28 paces east of center line of lane, 40 feet east-southeast of northeast corner of pig lot, 51 feet east of northeast

corner of shed, 47 feet north of north edge of woods, 68 feet north of 36-inch oak, and 30 paces east of garden fence. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at northeast corner of wire fence, at intersection of lane and highway, 6 feet west of center line of lane, 26 feet south of center line of highway, 2 feet east of wire fence, 35 feet north of edge extended of porch, 64 feet east of east side extended of house, and 211.26 feet from station in azimuth $179^{\circ}55'$. No. 2 is 27 feet south of center line of highway, $2\frac{1}{2}$ feet north-northeast of west tangent extended of highway center line, 3 feet south of ditch, 3 feet north of north edge of cultivated field, and 258.25 feet from station in azimuth $242^{\circ}27'$. No. 3 is 40 yards northwest of small red house, 7 paces north of center line of highway, 2 feet north of ditch, 2 feet west of telephone pole no. 270-A, 3 feet south of edge of cultivated field, and approximately 0.3 mile from station in azimuth $262^{\circ}46'13''$.

Sharpsburg (Wilson County, R. D. Horne, 1933).—About 5 miles south of Rocky Mount, in Sharpsburg, near corner of Nash, Edgecombe, and Wilson Counties, 51.8 feet east of east rail of Atlantic Coast Line Railroad, 98.5 feet south of center line of road crossing railroad, and 62.0 feet southeast of nearest corner of metal base of signal tower no. 1250. To reach from Rocky Mount, go south 5.0 miles on United States route 301 and then east 0.1 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11a. No. 1 is south of bridge over ditch, 8 paces west of the most westerly rail of railroad, 16 paces southeast of telegraph pole no. H-3, and approximately 0.3 mile from station in azimuth $200^{\circ}57'20''$. No. 2 is 62.4 feet east of east rail, 2.5 feet southwest of second telephone pole south of station, and 136.4 feet from station in azimuth $19^{\circ}36'$. Reference mark no. 3 is standard reference disk in vertical south face of well curb, 49.4 feet west of west rail, 50.5 feet south of center line of road crossing tracks, and 128.25 feet from station in azimuth $135^{\circ}55'$.

Crisp (Edgecombe County, R. D. Horne, 1933).—At Crisp, in yard of Crisp Elementary School, 51 feet north of center line of road, 177 feet south of southeast corner of balustrade on east side of east entrance to school, and 145.5 feet south of 3-foot red oak tree in school yard near southeast corner of building. To reach from junction of routes 12 and 124, go west about 250 yards on route 124 direct to school on north side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 52.5 feet north of center line of dirt road, 21 feet north of fence corner in southeast corner of school yard, 2 feet east of hedge on east side of school grounds, and 131.00 feet from station in azimuth $281^{\circ}38'$. No. 2 is 27 feet south of center line of dirt road, 2 feet east of a T-pole, and 214.35 feet from station in azimuth $83^{\circ}24'$. No. 3 is 30 feet south of center line of route 124, 3 feet south of drainage ditch of highway, 18 feet east of drainage ditch between cultivated fields, and 0.25 mile from station in azimuth $100^{\circ}06'06''$.

Snow Hill (Greene County, R. D. Horne, 1933).—Station is 1 mile west of Snow Hill, 18 feet east of center line of combined routes 58 and 102, and 0.95 mile west of their junction with route 258. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 32.5 feet west of center line of highway, at east edge of cornfield, and 170.86 feet from station in azimuth $323^{\circ}40'$. No. 2 is 35 feet west of center line of highway, 10 feet south of 6-inch oak tree on right-of-way at top of cut, 73 feet east of Negro house on south side of highway, and 156.30 feet from station in azimuth $108^{\circ}35'$. No. 3 is 33 feet north of center line of highway, 30 feet south-southeast of large chinaberry tree, 60 feet south-southeast of tenant house, and 0.35 mile from station in azimuth $123^{\circ}33'07''$.

Primary traverse station no. 9 (U.S.G.S.) (Lenoir County, R. D. Horne, 1933).—About 5 miles southeast of Hookerton, in ditch at northeast angle of T-road intersection. To reach from intersection of United States route 258 and North Carolina route 102 in Snow Hill, go south 3.1 miles on route 258, turn left and proceed 2.7 miles to Hookerton. Continue straight through Hookerton, follow zigzag road on edge of town, proceed 1.7 miles, take left fork, proceed 2.3 miles, and turn left (east). Station *Eason* is 250 feet north of this point. Continue east 2.25 miles (keeping straight ahead at crossroad 0.45 mile) to T-road intersection and station site. There are several mileage arrows at this point: One pointing north reads, "Ayden $9\frac{1}{4}$ "; and another pointing west reads "Grifton

4." Mark is standard United States Geological Survey bronze-capped iron pipe, projecting about 1 foot above ground, and stamped "Prim. Trav. Sta. No. 9, 1913, elev. 73 feet, datum—".

Primary traverse station no. 13 (U.S.G.S.) (Lenoir County, R. D. Horne, 1933).—About 11 miles northwest of Kinston and 0.8 mile north of Institute, on land owned by Adolph Gray, 15 feet east of north-and-south road running from Institute to Snow Hill, 18 feet north of east-and-west road, and about 50 feet southeast of house. To reach from post office in Kinston, go north 6.35 miles on United States route 258 to Bizzell's filling station at Mewborns Crossroads, turn west onto dirt road, proceed 2.45 miles to Dawson, continue straight ahead (west) 4.8 miles via Wheat Swamp School to Institute, turn north onto Snow Hill Road, and continue 0.85 mile to station site. To reach from junction of United States route 258 and North Carolina route 102 in Snow Hill, go west 0.6 mile on route 102, turn left (southwest) onto dirt road, follow 0.5 mile, take left fork 3.4 miles to Arba, continue straight ahead 0.6 mile, take right fork 0.2 mile, keep straight ahead at crossroads, and continue 1.9 miles or 0.6 mile beyond Lenoir County line to station site. Mark is a standard United States Geological Survey bronze-capped iron pipe, projecting about 2 feet above ground.

Glenfield (Greene County, R. D. Horne, 1933).—About 5 miles south-south-east of Snow Hill, 35 feet east-northeast of center line of United States route 258, and 130 feet north of intersection of highway and west branch of crossroad. To reach from junction of United States route 258 and North Carolina route 102 in Snow Hill, go east and south 5.4 miles on route 258 to crossroad (the east branch of which goes to Hookerton) and station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches above ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 15 paces northeast of well, 5 paces west-southwest of center line of pavement of route 258, 4 paces northwest of yard entrance gatepost, and 0.45 mile from station in azimuth $330^{\circ}29'43''$. No. 2 is 27 feet north of center line of west branch of crossroad, 26 feet west-southwest of center line of route 258, 4 feet north of electric-power-line pole, and 111.9 feet from station in azimuth $3^{\circ}02'$. No. 3 is 27 feet west-southwest of center line of route 258, and 140.7 feet from station in azimuth $125^{\circ}55'$. All reference marks project about 6 inches.

Heath (Lenoir County, R. D. Horne, 1933).—About $2\frac{1}{4}$ miles east of Kinston, at junction of United States route 70 and North Carolina route 11, 40 feet south of center line of road, and 41 feet west of pump well on west side of Purol service station. To reach from junction of United States routes 70 and 258 about 4 blocks north of Kinston Hotel in Kinston, go east about 0.5 mile, turn left with route 70, and follow 2.55 miles to station site on right side of highway at junction. Gooding service station is in V facing highway junction. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 24 feet north of center line of route 11, 30 feet south of southwest corner of small red cottage, 7 feet southeast of small water oak, 15 feet southwest of another small water oak, and 0.22 mile from station in azimuth $224^{\circ}37'19''$. No. 2 is 21 feet north of center line of route 70, 4 feet north of south guard rail of triangle of road junction, and 206.09 feet from station in azimuth $225^{\circ}03'$. No. 3 is 23.5 feet north of center line of road, 15 feet south of south corner of sign of Eagle warehouse in Kinston, and 133.55 feet from station in azimuth $76^{\circ}46'$.

Monk (Pitt County, R. D. Horne, 1933).—In Farmville, on property of Mr. Monk, about 4 blocks from center of town, 1 block south of point where route 258 turns sharply to left at north edge of town, 38 feet northeast of center line of route 258, 48 feet north of northwest corner of Bobbitt-Bell tobacco warehouse, and 88.5 feet southeast of south corner of column of canopy of Texaco service station. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 17 feet southwest of center line of route 258, 4 feet south of T-pole on west side of street, 66 feet southeast of southwest corner of Bobbitt-Bell tobacco warehouse, and 110.60 feet from station in azimuth $339^{\circ}23'$. No. 2 is 29 feet west of center line of route 258 and dirt side street, 52 feet west of hydrant on east corner of this intersection, and 101.90 feet from station in azimuth $112^{\circ}27'$. No. 3 is 18 feet west-southwest of center line of continuation of highway north past station, 3 feet west-southwest of curb, 150 feet west-northwest of street intersection and point where route 258 turns east, and 0.10 mile from station in azimuth $125^{\circ}13'59''$.

WASHINGTON TO PAMLICO SOUND

Principal points

James (Beaufort County, R. D. Horne, 1933).—Station is in pine timber at James Crossroads, 8.3 miles east of Washington, 7.5 miles south-southeast of Chocowinity, near site of old James Chapel, which has been destroyed, and on property of Mr. William Bragaw. To reach from Chocowinity at junction of routes 17 and 264, go southeast 5 miles on route 33 to Ecland School on south side of highway, turn left onto dirt road just beyond school, continue on this road 2.3 miles (cross railroad at 1.8 miles) to crossroad, turn right, go 0.2 mile, turn left onto slanting road, follow this road 1.5 miles to forks with arrow "Gilead 2½ miles", and take left fork 0.6 mile to station site. James Crossroads is marked by arrow signs: "Washington 11 miles", "Gilead 1½ miles", and "Toler's Store 1½ miles". Station is 41 feet east of north-and-south dirt road, 49 feet north of east-and-west dirt road, and 25 feet west of 15-inch pine tree with large blaze. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 8 paces south of center line of east-and-west road, and approximately 0.2 mile from station in azimuth $82^{\circ}15'08''$. No. 2 is 4 paces west of center line of north-and-south road, 148 feet north of center of crossroads, and 96.7 feet from station in azimuth $176^{\circ}20'$. No. 3 is 38 feet west of post with the mileage arrows, 21 feet south of center line of east-and-west road, and 110.6 feet from station in azimuth $61^{\circ}28'$.

Fort (Beaufort County, C. D. Meaney, 1931; 1933).—On south shore of Pamlico River, on Hills Point, about 6 miles southeast of Washington, and on summit of bluff overlooking river. To reach from Washington, follow route 17 to Chocowinity, go southeast 1.5 miles on route 33 to dirt road on left crossing railroad tracks, continue southeast on this road 3.8 miles, take left fork 2.0 miles to farm road leading north, and proceed north along this road 6.6 mile to fish landing at river shore. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark (1914) is standard reference disk in tile and concrete, note 13c; (established to mark station *Fort (U.S.E.)*) on the summit of bluff, and 16.16 meters (53.0 feet) from station in azimuth $282^{\circ}32'$. Reference marks, established in 1931, are standard reference disks in concrete, note 11a. No. 2 is on summit of bluff, and 42.50 meters (139.4 feet) from station in azimuth $306^{\circ}36'$. No. 3 is in fence line on southwest side of cultivated field, and approximately one-fourth mile from station in azimuth $16^{\circ}56'48''$. Station *Fort (U.S.E.)* (see description thereof) is 27.899 meters (91.53 feet) from station in azimuth $238^{\circ}16'$.

Core eccentric (Beaufort County, C. D. Meaney, 1931; 1933).—On south shore of Pamlico River, on Core Point, and about 15 miles southeast of Washington. To reach from Washington, go 3 miles on route 17 to Chocowinity, turn left onto route 33, follow southeast 13.75 miles, turn left at Blounts Creek Crossroads, proceed north 1.6 miles to old Baptist Church, take right-hand fork, continue 4.2 miles, turn left, go 2.0 miles, turn right, and continue southeast 0.25 mile along river bank to house of Mr. C. E. McCafferty. Station is about 60 yards northwest of this house, about 15 feet south of topmost break in river bank, and in narrow open space just north of sweetpotato patch. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks. No. 1, established in 1914, is in tile and concrete, note 13c, located half-way between topmost break in bank and edge of water, and 25.493 meters (85.11 feet) from station in azimuth $270^{\circ}07'$. Mark is now stamped "Core No. 1 1914-1931". No. 2 is in concrete, note 11a, on top of bank, 11 feet north of fence line, about 50 yards from beech tree, and 51.3 meters (168 feet) from station in azimuth $307^{\circ}09'$. No. 3 is in concrete, note 11a, at corner of barn, about 50 yards east of Jones Avenue, 0.3 mile south of Water Street, and approximately one-half mile from station in azimuth $65^{\circ}14'10''$. Station *Core* (see description thereof) is on beach, 5 feet from foot of bluff, and 43.498 meters (142.71 feet) from station in azimuth $242^{\circ}46'$.

Reka (Beaufort County, R. D. Horne, 1933).—Station is on property of Eureka Lumber Co., in triangle formed by route 91, county road to Pinetown, and county road to Washington, 24 feet east of road running northwest, 33 feet west of road running north, and 16 feet west of 18-inch blazed tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a.

No. 1 is 20 feet east of center line of road, 5 feet east of road ditch, and 179.10 feet from station in azimuth $327^{\circ}38'$. No. 2 is 15 feet east of center line of road, 3 feet east of road ditch, and about 190 paces from station in azimuth $337^{\circ}41'38''$. No. 3 is 15 feet west of center line of road, and 154.40 feet from station in azimuth $110^{\circ}28'$.

Rose (Beaufort County, R. D. Horne, 1933).—On property of Mr. H. F. Rose, along southeast side of United States route 264, 1.7 miles southwest of Pantego, 4.5 miles northeast of Yeatesville, and 4.0 miles north-northwest of Belhaven, at dirt T-road leading west to Terra Ceia. To reach from Pantego, go southwest 2 miles on United States route 264 (North Carolina route 91) to Mr. Rose's house. To reach from Washington, go east about 20 miles on United States route 264 to Yeatesville, and continue on same highway 4.5 miles or 0.35 mile beyond Broad Creek to Mr. Rose's house. Station is in south side of front yard, 23 feet north-northeast of north edge of cultivated field, 73.8 feet east-southeast of east edge of pavement, 63 feet west of southwest corner of house, 53 feet east-southeast of 36-inch sycamore, 37 feet north of 14-inch cedar, and 63 feet east-southwest of line between center line of dirt road and front door of house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 foot south of wire fence, 47.1 feet east-southeast of east edge of pavement, 66 feet northwest of northwest corner of house, 14 feet southeast of 12-inch cedar, 31 feet east of 10-inch magnolia, and 106.06 feet from station in azimuth $199^{\circ}08'$. No. 2 is near end of curve, just beyond end of crude bridge over drainage ditch, 27.6 feet southeast of south edge of pavement, 71.5 feet northeast of third telephone pole from station (also third from Broad Creek), about 60 paces southwest of two water oaks on east side of highway, 4 feet southeast of south edge of drainage ditch, 6 feet southwest of center line of dim woods road leading south, 22 feet north of 24-inch pine, and approximately 350 yards from station in azimuth $40^{\circ}58'35''$. No. 3 is directly across highway from dirt road leading southeast and in range with its center line, 24.5 feet northwest of west edge of pavement, 21 feet east of 48-inch oak tree, 5 feet northwest of west edge of north-and-south ditch, 11 feet southwest of south edge of east-and-west ditch, 57 feet northwest of "Side Road" sign, and 240.9 feet from station in azimuth $62^{\circ}01'$.

Spring (Beaufort County, R. D. Horne, 1933).—About 20 miles east-southeast of Washington. To reach from Washington, follow United States route 264 from point where it turns left (northeast) off main street for 9.6 miles toward Belhaven to junction with North Carolina route 92, keep straight ahead on route 92 for 5.6 miles to bronze tablet on granite-rock monument in town of Bath, turn right at this point, continue 0.25 mile to left turn, and proceed along this road (which is road to Bayview and Ransomville) in an east-and-southeast direction for 8.1 miles to crossroads at "Spring Green" colored church and station site. Station may also be reached from Yeatesville by going south on main road for 6.85 miles to crossroads. Station is in churchyard, 39 feet west-northwest of northwest corner of church, 48 feet east of center line of north-and-south road, and 72 feet south of center line of east-and-west road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 225 feet south of crossroads, 18 feet west of center line of road to Yeatesville, and 154.11 feet from station in azimuth $1^{\circ}20'$. No. 2 is 42 feet west of southwest corner of concrete foundation of store in northeast angle of crossroads, 34 feet north of center line of east-and-west road, and 159.07 feet from station in azimuth $128^{\circ}54'$. No. 3 is in northwest corner of farmhouse yard, 27 paces northwest of northwest corner of farmhouse, 6 paces east of center line of road to Yeatesville, and approximately 0.2 mile from station in azimuth $137^{\circ}43'24''$.

Way (Beaufort County, R. D. Horne, 1933).—At Cox's crossroads, 7.7 miles east-southeast of Pantego, 5.0 miles east of Belhaven, 1.7 miles west of Leechville, 1.8 miles west of Beaufort-Hyde County line at Pungo River at Leechville, in uncultivated area owned by Mr. W. R. Way, 58 feet south-southwest (concave side) of center line of highway, 83 feet southwest of 36-inch sycamore tree, 78 feet west-northwest of dirt road, 99 feet north-northwest of northwest corner of wood fence, and 6 feet north of line along north side of large unpainted house east of station. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 45 yards south of Negro church, 45 yards west of north of northwest corner of Leechville colored school, 27 feet south of center line of highway, 3 feet south of ditch, and approximately 680 paces from station

in azimuth $264^{\circ}05'41''$. No. 2 is 28 feet southeast of center line of highway, 3 feet east of ditch, 40.5 feet east-northeast of highway "Curve" sign, and 137.6 feet from station in azimuth $65^{\circ}46'$. No. 3 is in wire fence line, 1.5 feet west of second post from fence corner, 48 feet northwest of center line of highway, 22 feet north of center line of dirt road, and 107.785 feet from station in azimuth $159^{\circ}17'$. *Primary traverse station no. 5 (U.S.G.S.)* (see description thereof) is 252.27 meters (827.7 feet) from station in azimuth $100^{\circ}31'37''$, but is not directly visible from ground.

Makleyville (Hyde County, G. C. Mattison, 1933).—On south shore of Slade Creek, about 1.4 miles upstream from point known locally as Sandy Point, and in settlement of Makelyville. To reach from Scranton, follow United States route 264 toward Swanquarter. About three-fourth mile from bridge over Scranton River turn right, proceed south 1 mile and again turn right, continue 1.5 miles, turn left and continue 1.5 miles, bear right 0.2 mile to main crossroads at village of Sladesville, turn left at this point, go west 1 mile to another crossroad, turn right onto this main road, proceed 2.5 miles to fork, take right-hand fork, and continue 1.3 miles to station site. Station is at fork of two creeks, on site of old hotel, and about 80 meters (262 feet) northwest of residence of C. W. Ayres. Surface mark is standard disk station mark, note 6a. Reference marks nos. 1 and 2 are standard reference disks, note 13a. No. 1 is 16 yards northeast of line of cedar trees, 9 yards southwest of very large pecan tree, and 35.55 meters (116.6 feet) from station in azimuth $295^{\circ}40'$. No. 2 is 20 yards north of Mr. Ayres' residence, 8 yards southwest of large cedar, 5 yards north of 18-inch walnut tree, and 51.30 meters (168.3 feet) from station in azimuth $357^{\circ}10'$. Reference mark no. 3 is a standard reference disk in concrete, note 11a, across small creek from station, 5 meters (16 feet) south of water line, 5 meters (16 feet) east of 18-inch lone pine tree, and approximately 0.2 mile from station in azimuth $331^{\circ}06'37''$.

Scranton (Hyde County, R. D. Horne, 1933).—In the settlement of Scranton on United States route 264 about 8.5 miles northwest of Swanquarter, in triangular space bounded by long curve in highway and two secondary roads, 0.4 mile south of bridge over Scranton River, 60 feet west of center line of route 264, 57 feet east of north-and-south secondary road, and 130 feet north-northeast of intersection of secondary roads. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 15 feet west of center line of route 264, 120 feet southwest of south end of bridge over Scranton River, and approximately 0.3 mile from station in azimuth $221^{\circ}35'26''$. No. 2 is 47 feet west of intersection of secondary roads, and 176.06 feet from station in azimuth $66^{\circ}02'$. No. 3 is 15 feet west of center line of north-and-south secondary road, just north of entrance gate to barnyard, and 118.46 feet from station in azimuth $170^{\circ}55'$.

Swan (Hyde County, R. D. Horne, 1933).—In north edge of Swanquarter, on grounds of Swanquarter High School, about 0.3 mile north of Hyde County courthouse, in northwest corner of athletic field, 38 feet northeast of northeast corner of school garage or bus shelter, 237.8 feet west-northwest of southwest corner of the school building, and 296.5 feet west of northwest corner of school building. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11a. No. 1 is 6 feet southeast of drainage ditch along northwest side of school grounds, and 152.24 feet from station in azimuth $211^{\circ}22'$. No. 2 is 25 feet northeast of center line of road that passes in front of school, at the northwest end of semicircular drive, and 200.52 feet from station in azimuth $335^{\circ}35'$. No. 3 is standard reference disk in top of east headwall of concrete culvert under United States route 264, and approximately 0.3 mile from station in azimuth $45^{\circ}57'52''$. Azimuth from station to top point of bell tower of brick church in Swanquarter is $343^{\circ}48'51''$.

Post (Hyde County, R. D. Horne, 1933).—About 7.5 miles east-northeast of Scranton and 8.5 miles north of Swanquarter, on property of Roper Lumber Co. To reach from Swanquarter, go northwest 4.6 miles on United States route 264, and turn right onto dirt road (North Carolina route 6, temporary) at Rose Bay. This road is about 5 miles southeast of Scranton on route 91. Proceed 3.25 miles on dirt road to T-road junction, turn left across bridge onto route 94 (temporary), and follow route 94 for 3.70 miles to station site. The junction of routes 6 and 94 at bridge may also be reached from Swindle Fork by going north about 5 miles on route 94. Station is in cut-over swamp land, 19 feet

For notes in regard to marking of stations see p. 135.

southeast or center line of road, 17 feet northwest of west edge of ditch, and about 50 yards north of point of curvature of curve. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 15 feet northwest of center line of road, 3 feet southeast of ditch, and 127.8 feet from station in azimuth $205^{\circ}03'$. No. 2 is on shoulder of road, 5 paces northwest of center line, 4 feet southeast of east bank of ditch, 26 paces south-southwest of pipe culvert, 95 paces south-southwest of highway marker "N. C. Route 94 Temporary", and approximately 0.5 mile from station in azimuth $34^{\circ}37'14''$. No. 3 is 16 feet northwest of center line of road, 2 feet east of ditch, 14 feet southeast of stump, 30 feet south of log, and 133.9 feet from station in azimuth $52^{\circ}58'$.

Jones (Hyde County, R. D. Horne, 1933).—Station is about 3.3 miles east of Fairfield and 6.5 miles north-northeast of New Holland, on property of Mr. Thomas Jones. To reach from Fairfield, go east 3.85 miles on Lake Road to T-road on left and station site in pecan orchard in northeast angle formed by two roads. Station is in southwest corner of orchard, 50 feet north of center line of Lake Road, 34 feet east of center line of T-road, 54 feet southwest of 12-inch pecan tree, and 99 feet south-southeast of south end of small frame house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in wire fence line, 25 feet north of center line of Lake Road, 37 feet south-southwest of 14-inch pecan tree, across road and 5 paces from deserted Negro cabin, and 122.2 feet from station in azimuth $240^{\circ}39'$. No. 2 is 7 paces south of center line of Lake Road, $1\frac{1}{2}$ feet north of east gatepost at barnyard, about 18 paces east of house, and approximately 250 paces from station in azimuth $53^{\circ}03'38''$. No. 3 is in fence line, 14 feet east of center line of road, 7 feet south-southwest of southwest corner of small frame house, and 95.57 feet from station in azimuth $148^{\circ}13'$.

New Holland (Hyde County, R. D. Horne, 1933).—Station is northeast of Swanquarter near the Outfall Canal. To reach from the courthouse in Swanquarter, go northeast and east 11.0 miles on United States route 264 to station site. Station is 294 feet west-southwest of center of drawbridge over canal, and 53 feet south of center line of highway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in fence line, 187 feet south of center line of highway, and 134.18 feet (slope) from station in azimuth $334^{\circ}11'$. No. 2 is at northwest corner of farmhouse yard fence, 35 feet south of center line of highway, 40 feet west of line between two 30-inch pecan trees (nearer of which is about 150 feet south of center line of highway), and approximately 0.35 mile from station in azimuth $78^{\circ}55'55''$. No. 3 is at entrance gate to pasture, 35 feet south of center line of road, and 145.97 feet from station in azimuth $85^{\circ}00'$.

Englehard (Hyde County, R. D. Horne, 1933).—Three miles north of Englehard and 14 miles east of Fairfield. To reach from Englehard, go north from town 0.5 mile to T-road to left and bridge, continue straight ahead 0.1 mile across another bridge, and for total distance of 2.9 miles to station site. Station is in north end of borrow pit, 27 feet east of center line of road, and 38 feet west of west edge of bank of borrow pit which is now filled with water. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 11 feet west of center line of road, and 117.95 feet from station in azimuth $204^{\circ}27'$. No. 2 is in southeast corner of borrow pit, 44 feet east of center line of road, 18 feet west of west edge of water-filled pit, and 176.75 feet from station in azimuth $37^{\circ}30'$. No. 3 is 11 feet west of the center line of road, and approximately 250 paces from station in azimuth $45^{\circ}48'15''$.

Mount Pleasant (Hyde County, J. P. Lushene, 1933).—In village of Mount Pleasant (post office Gull Rock). To reach from the post office of Lake Landing on United States route 264 and 17 miles east of Swanquarter, cross canal and turn right, proceed 1.5 miles along west side of canal, cross and follow east side 0.45 mile, and turn right just beyond the second of two bridges that are close together, go about 250 feet, turn left, continue 1.1 miles, again turn right, proceed 1.5 miles, turn left, go 0.9 mile, again turn left, continue 0.5 mile to another left turn, and follow this road 0.3 mile to station site. Station is between school and church, 25 meters (82 feet) south of southeast corner of school, 16 meters (52 feet) north of northeast corner of church, and 16 meters (52 feet) west of center line of road. Surface mark is standard disk station mark in concrete, note 1a.

Reference marks are standard reference disks in concrete, note 11a. No. 1 is 7 meters (23 feet) east of center line of road, and 21.08 meters (69.2 feet) from station in azimuth $271^{\circ}52'$. No. 2 is 15 meters (49 feet) east of center line of road, 5 meters (16 feet) north of 20-inch elm tree, and approximately 0.25 mile from station in azimuth $20^{\circ}58'20''$. No. 3 is 2 feet northeast of northeast corner of church, and 15.85 meters (52.0 feet) from station in azimuth $39^{\circ}30'$. No. 3A is on projected center-line of north-and-south portion of road, 11 paces south of east-and-west portion at turn, and approximately 0.3 mile from station in azimuth $23^{\circ}36'05''$.

Durant (Dare County, R. D. Horne, 1933).—On Durants Point on Cape Hatteras, about 9.5 miles west-southwest of Hatteras Lighthouse, 1.5 miles north-northwest of Durants Coast Guard Station, and 1 mile east-northeast of pier at Hatteras settlement. Station site may be reached on foot by crossing creek on foot bridge east of Hatteras settlement, and following dim path through marsh land. It may also be reached (preferred) by poling light boat along north creek. Station is in clearing on slight ridge between two creeks, 30 paces south-southeast of south bank of more northerly of two creeks, and 21 paces south-southeast of edge of marsh along creek. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is across low area from station, north-northwest of T-shaped house, north of white house with red roof, and 139 feet from station in azimuth $317^{\circ}58'$. No. 2 is about 30 feet south of south bank of north creek, 4 feet north of old bottom section of water tank, south-southeast of old boiler and other wreckage on beach, northeast of weather vane at Weather Bureau, and approximately one-fourth mile from station in azimuth $57^{\circ}31'12''$. No. 3 is about 20 paces south-southwest of south bank of north creek, and 88.0 feet from station in azimuth $68^{\circ}56'$. Azimuth from station to Hatteras Lighthouse is $258^{\circ}30'39''$; and to Hatteras Inlet Beacon, $119^{\circ}25'08''$.

Ocracoke (Hyde County, G. C. Mattison, 1933).—On east coast of Hatteras Spit, near west end of Ocracoke Island, near Gap Point and Silver Lake, on high ground directly in front of and west of residence of Preston Garris, about one-half mile northwest of community store and dock, 50 yards north along road from small cedar and stone monument which stands at northwest corner of Howard Cemetery, 64 yards north of fence between two graveyards, and 11 yards west of center line of road. Surface and underground marks are standard disk station marks. Surface mark is in tile and concrete, note 6a; and underground mark in concrete, note 7a. Reference marks are standard reference disks in tile and concrete, note 13a. No. 1 is 2 paces north-northwest of 6-inch cedar, 3 paces southwest of 5-inch cedar, 5 paces southeast of 8-inch cedar, and 19.145 meters (62.81 feet) from station in azimuth $92^{\circ}38'$. No. 2 is 11 paces west of center line of road, and 19.22 meters (63.1 feet) from station in azimuth $178^{\circ}48'$. No. 3 is across swamp from station, close to rear yard fence of residence of George M. Gaskins, and approximately 200 meters (656 feet) from station in azimuth $101^{\circ}13'10''$. Later in 1933, reference marks nos. 1 and 2 were recovered, and new azimuth mark, standard reference disk in concrete, note 11a, established. Disk stamped: "No. 3." It is at southwest corner of yard fence, 6 paces north of north side of small outhouse, 20 paces southwest of southwest corner of porch, and approximately 100 yards from station in azimuth $304^{\circ}10'15''$. The following objects will be visible from station at small elevations above ground: M.E. North church spire, 20 feet from ground, in azimuth $6^{\circ}38'03''$; Ocracoke Lighthouse, 10 feet from ground, in azimuth $25^{\circ}43'41''$; and Coast Guard Station flagpole, 14 feet from ground, in azimuth $71^{\circ}37'28''$.

Salvo (Dare County, R. D. Horne, 1933).—On west shore of Hatteras Island, just south of settlement of Salvo, about 4 miles south of Chicamacomico Coast Guard Station, about 100 feet east of water line and just south of small indentation in shore line in partially fenced enclosure. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is near dwelling house, and approximately 0.3 mile from station in azimuth $189^{\circ}39'58''$. No. 2 is in corner of enclosing fence, and 245.72 feet from station in azimuth $233^{\circ}25'$. No. 3 is 20 feet northeast of northeast corner of small shanty barn, and 148.2 feet from station in azimuth $16^{\circ}16'$.

Metropolitan (Dare County, R. D. Horne, 1933).—Two miles from Stumpy Point, in fork of roads opposite Wise fish-loading pier and road leading to farm of Metropolitan Life Insurance Co., and 100 feet south of bridge going north. Surface and underground marks are standard disk station marks in concrete,

notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 10 feet south of center line of road to Englehard, and 204.65 feet from station in azimuth $41^{\circ}37'$. No. 2 is 12 feet east of center line of road, and about 375 paces from station in azimuth $50^{\circ}17'59''$. No. 3 is 10 feet north of center line of road leading to farm of Metropolitan Life Insurance Co., and 320.21 feet from station in azimuth $96^{\circ}13'$.

Pea Island (Dare County, G. A. Fairfield, 1874; 1933).—On east side of Pamlico Sound, about 5 miles south of Oregon Inlet, and near southwest corner of Pea Island. Can be reached by small boat from Stumpy Point. Station is on west side of island, about $1\frac{1}{2}$ miles northwest of Pea Island Coast Guard Station, and on point of marsh southwest of flagpole of old clubhouse which was destroyed in 1917. Station mark is long iron screw pile driven into ground with 8- or 10-inch cap on which is chiseled "U.S. Coast Survey 1860" with "G.P." in center of mark, and a triangle. Original reference marks have been lost. In 1933, three standard reference disks in concrete, note 13b, were established. No. 1 is flush with ground in tall marsh grass, and 22.45 meters (73.7 feet) from station in azimuth $271^{\circ}38'$. No. 2 is flush with ground in tall marsh grass, and 19.12 meters (62.7 feet) from station in azimuth $189^{\circ}52'$. No. 3 is on west point of second island due south of station, and approximately 0.25 mile from station in azimuth $340^{\circ}28'39''$.

Supplementary points

Core (Beaufort County, P. C. Whitney, 1914; 1932).—On south shore of Pamlico River, on eastern part of Core Point which is nearly opposite Bath Creek, on small grass-covered plain projecting out over sand beach, about 5 yards from average high water, 5 feet from foot of clay bluff, and $6\frac{1}{2}$ meters (21 feet) upstream from wooden wharf. Surface mark is standard disk station mark in tile and concrete, note 6c. In 1932, it was strengthened by building 12-inch square concrete pyramid around tile without disturbing disk. Reference mark is standard reference disk in tile and concrete, note 13c, 23.72 meters (77.8 feet) from station in azimuth $32^{\circ}39'$. Standard reference disk in tile and concrete, note 13a, established in 1932, is on slope inshore, 9 feet from large pine tree, and 50.97 meters (167.2 feet) from station in azimuth $357^{\circ}28'$. Station *Core eccentric* (see description thereof) is on top of bank, and 43.498 meters (142.71 feet) from station in azimuth $62^{\circ}46'$.

Fort (U.S.E.) (Beaufort County, P. C. Whitney, 1914; 1933).—On the south shore of Pamlico River, one-fourth mile northwest of Hills Point, on sandy beach, about 10 yards from foot of clay bluff 20 feet high, and 5 yards back from average high water. Marked by 8-inch square concrete monument, placed by Army Engineers, and marked "U.S.E.D. 1913" on the top. Reference mark is standard reference disk in tile and concrete, note 13c, on top of bluff, and 19.80 meters (65.0 feet) from station in azimuth $23^{\circ}33'$. Station *Fort* (see description thereof) is 27.899 meters (91.53 feet) from station in azimuth $58^{\circ}16'$. Standard reference disk in tile and concrete, note 13c, established in 1933, is 14.165 meters (46.47 feet) from station in azimuth $69^{\circ}58'$.

Primary traverse station no. 5 (U.S.G.S.) (Beaufort County, R. D. Horne, 1933).—Near Cox's Crossroads, 7.7 miles east-southeast of Pantego, 5.0 miles east of Belhaven, 1.7 miles west of Leechville, 1.8 miles west of Beaufort-Hyde County line at Pungo River at Leechville, on south side of road leading west, just opposite T-road on right, and just beyond negro cabin on left. Marked by cast-iron pipe projecting about 16 inches above ground. Station *Way* (see description thereof) is 252.27 meters (827.7 feet) from station in azimuth $280^{\circ}31'32''$, but is not directly visible from ground.

NEWPORT TO CORE SOUND

Principal points

Park eccentric (Carteret County, R. D. Horne, 1933).—On north shore of Bogue Sound, 1.4 miles west of railroad station in Morehead City, in development area known as Bogue Park, 49 feet east of northwest corner of house lot at fence corner, 29 feet south of center line of Shepard Street at south Twenty-first Street, in southwest angle of street intersection, and at point opposite end of pavement of Shepard Street. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark

no. 1 is standard reference disk established in 1927 for station *Park*. It is cemented in curb on west side of Twenty-first Street, 9 meters (30 feet) north of north curb of Shepard Street, and 87.10 feet from station in azimuth $196^{\circ}51'$. Reference mark no. 2 is standard reference disk, also established in 1927 for station *Park*, in south curb of Shepard Street, 8.7 meters (29 feet) east of east curb of Twenty-first Street, and 77.70 feet from station in azimuth $253^{\circ}57'$. Reference mark no. 3 is standard reference disk in north curb of Crendell Street, 17 meters (56 feet) east of east gas pump of Pure Oil service station, 8 meters (26 feet) west of southwest corner of two-story brown house, and approximately 0.2 mile from station in azimuth $151^{\circ}18'48''$. Station *Park* (see description thereof) is 7.586 meters (24.89 feet) from station in azimuth $208^{\circ}15'$.

Park (Carteret County, F. L. Peacock, 1927; 1933).—On north shore of Bogue Sound, 1.4 miles west of railroad station at Morehead City, in land development known as Bogue Park, just inside curb line in southwest corner of intersection of Twenty-first and Shepard Streets, approximately in line with row of electric-lamp posts on west side of Twenty-first Street, 2 meters (7 feet) south of south curb, and 2 meters (7 feet) west of west curb. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is point of nail set in concrete block, note 7c. Reference mark no. 1 is a standard reference disk stamped "Park 1927-1933" in west curb of Twenty-first Street, 9 meters (30 feet) north of north curb of Shepard Street, and 19.40 meters (63.6 feet) from station in azimuth $192^{\circ}36'$. No. 2 is a standard reference disk stamped "Park 1927-1933" in south curb of Shepard Street, 8.7 meters (29 feet) east of east curb of Twenty-first Street, and 19.24 meters (63.1 feet) from station in azimuth $269^{\circ}45'$. Station *Park eccentric* (see description thereof) is 7.586 meters (24.89 feet) from station in azimuth $28^{\circ}15'$.

Adam (Carteret County, C. D. Meaney, 1931; 1933).—About 4 miles southeast of Harlowe, on route 101, near Adams Creek Bridge, in an uncultivated field, 134 feet north of center line of bridge, 135 feet north-northeast of northeast corner of bridge, 61 feet east of east creek bank, and 189 feet west of center line of road leading north towards red barn. Reached from Harlowe by going southeast 4.7 miles on route 101 direct to station site. To reach from Beaufort, go north 1 mile on United States route 70 to junction with route 101, and turn left onto route 101 for 7.5 miles to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a, with exception of no. 3 which is according to note 11c. No. 1 is in fence line, near northwest corner of cultivated field, on east bank of creek, and approximately 1 mile from station in azimuth $186^{\circ}34'28''$. No. 2 is in uncultivated field, 25 feet west of center line of road leading to red barn, 136 feet north of center line of route 101, and 50.75 meters (166.5 feet) from station in azimuth $282^{\circ}23'$. No. 3 is in north end of east abutment of bridge, and 40.92 meters (134.3 feet) from station in azimuth $33^{\circ}20'$.

Gaskill (Carteret County, R. D. Horne, 1933).—On Gaskill Point, about $5\frac{1}{2}$ miles east of Beaufort, at north end of main shore of the "Straights", and opposite west end of Harkers Island, on land belonging to Mr. Gaskill. To reach from Beaufort, go north 1 mile on route 70 to junction with route 101, turn right with route 70 and go 8.7 miles or 0.95 mile beyond center of bridge over Wards Creek to crossroads at Otway. Here turn right and go 0.6 mile, then turn left and follow main road 2.65 miles, then again to right for 0.95 mile and then left for 0.5 mile to Gaskill Point and station site. Station is 23 feet south of southwest corner of large cultivated field south of Mr. Gaskill's house, 26 feet east of wooden-and-wire fence which is east right-of-way of road leading to station, and 54 feet northwest of point where wire fence crosses old fish wharf in water. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 2 feet southwest of fence corner, about 30 yards north of grassy bank that is boundary of ordinary high tide, and 145.1 feet from station in azimuth $267^{\circ}27'$. No. 2 is 2 feet east of wooden fence, about 17 feet east of center line of road, and 133.3 feet from station in azimuth $155^{\circ}00'$. No. 3 is in southwest corner of woods, 5 paces east of center line of road, and approximately 0.3 mile from station in azimuth $161^{\circ}16'51''$. Station *Near* (see description thereof) is 53.34 meters (175.0 feet) from station in azimuth $297^{\circ}54'$, and is covered at high tide.

Simpson (Carteret County, R. D. Horne, 1933).—About 7 miles north-northeast of Beaufort. To reach from Beaufort, go north on United States route 70 to junction with North Carolina route 101, take right fork, and follow route 70

for 6.15 miles, or 0.65 mile beyond center of bridge over North River, to road on left. Continue on this road 0.2 mile, turn left again, and go 0.8 mile to station site. Station is 35 feet west of center line of road, 26.5 feet northwest of center of 18-inch pine with triangle blazed about 6 feet above ground, and 170 feet north of ditch that now separates cultivated fields from woodland. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 57 feet north of two-foot bridge that crosses the ditch mentioned above, 10 feet west of center line of road, and 130.11 feet from station in azimuth $314^{\circ}53'$. No. 2 is 10 feet east of center line of road and approximately 0.1 mile from station in azimuth $336^{\circ}15'26''$. No. 3 is 10 feet east of center line of road, and 237.71 feet from station in azimuth $168^{\circ}26'$.

Shore (Carteret County, G. C. Mattison, 1933).—Station is on west shore of Core Sound, on property of C. F. Davis. To reach from Beaufort, go north 17.8 miles on United States route 70 to town of Davis, turn right onto dirt road opposite point where the highway turns sharp left, and follow dirt road 0.4 mile to crossroads at church. Here turn left and proceed 0.2 mile to Mr. Davis' house and pier at edge of water. Station is across road from house, 17 paces south of center line of road, 14 paces west-northwest of high-water line, 39 feet west of 24-inch pine bearing triangular blaze on west side, 98 feet southwest of southwest corner of red building, $77\frac{1}{2}$ feet south of nearest of five chinaberry trees, 6 paces east of line of three chinaberry trees, 7 paces east of line extended from east side of Davis' house, and 11 paces northeast of northwest corner of wire fence. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 4 feet east of center line of ditch, 3 paces north of 16-inch pine, 3 paces west of 14-inch pine, 20 paces west of high-water line, and 31.663 meters (103.88 feet) from station in azimuth $50^{\circ}09'$. No. 2 is on west bank of drainage ditch, about 30 feet north of center line of road, and 40.515 meters (132.92 feet) from station in azimuth $130^{\circ}12'$. No. 3 is in edge of brush, 6 feet east of a dim path leading north, 8 paces northeast of northeast corner of cultivated field, 19 paces northeast of northeast corner of a deserted house, and approximately 150 yards from station in azimuth $187^{\circ}15'22''$. Chimney on Davis' store is 61.2 meters (201 feet) from station in azimuth $172^{\circ}36'$.

Nowhere (Carteret County, R. D. Horne, 1933).—Along the "Open Ground Road", 14 miles northeast of Beaufort, $8\frac{1}{4}$ miles north of Smyrna, and $10\frac{1}{2}$ miles west of Atlantic. To reach from Beaufort, go north about 1 mile on route 70 to junction with route 101, keep right on route 70 and continue 4.45 miles to point where route 70 bends to right and dirt road continues straight ahead towards Merriam, follow dirt road 2.65 miles to dirt T-road on left, continue 1.95 miles straight ahead on same road, turn right onto dirt T-road, follow arrow "Open Ground Road", continue 1.25 miles, turn left onto main road, continue 4.0 miles or 3.0 miles beyond Buck Head Lodge, turn left, proceed 1 mile, turn right, and continue 1 mile or 0.3 mile beyond small plank bridge to station site. Station is 15 feet south of center line of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on south bank of canal, 15 feet north of center line of road, and 176.80 feet from station in azimuth $260^{\circ}52'$. No. 2 is on south bank of canal, 10 feet north of center line of road, and approximately 0.25 mile from station in azimuth $268^{\circ}25'50''$. No. 3 is on south bank of canal, 10 feet north of center line of road, and 182.00 feet from station in azimuth $97^{\circ}36'$.

Stacy (Carteret County, G. C. Mattison, 1933).—Station is on northwest side of Core Sound, about 16 miles northeast of Beaufort, at southeast end of Piney Point, and on property of Zebedee Fulcher. To reach from Beaufort, go north 1 mile to junction of routes 70 and 101. Follow route 70 for 20.3 miles or 0.25 mile beyond bridge over Maria Creek, turn right onto side road, and proceed along this road 0.3 mile to Stacy post office and station site. Station is on high land, 300 meters (984 feet) northwest of Piney Point, about 200 yards southeast of post office, and 10 meters (33 feet) southeast of dwelling of Zebedee Fulcher. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 2 feet northeast of fence line, 5 feet west of 10-inch oak tree, 20 feet northwest of north end of wooden gate, and 39.96 meters (131.1 feet) from station in azimuth $55^{\circ}36'$. No. 2 is in hedgerow separating two cultivated fields, about 50 yards north of north end of Fulcher's house, about 40 yards southeast of another

house, and 62.69 meters (205.7 feet) from station in azimuth $185^{\circ}25'$. No. 3 is 9 paces northwest of center line of curve in road, 12 paces west of north end of wooden culvert, and approximately 150 meters (492 feet) from station in azimuth $164^{\circ}19'44''$.

Russell (Carteret County, H. Odessey, 1933).—Station is about $2\frac{1}{2}$ miles north of Beaufort, on east shore of Newport River, on first point south of entrance to Russell Creek, and on land owned by Mrs. Helen Russell. To reach from Beaufort, follow United States route 70, from point where it turns sharp to north off Ann Street, 0.9 mile to junction with route 101. Take left fork which is route 101, and continue 2.7 miles to schoolhouse just east of Russell Creek. Turn left onto road that passes on west side of schoolhouse, and go along farm lane 0.2 mile to point just north of farmhouse. Turn left for about 100 feet and then right, and follow south along lane 0.35 mile, through cultivated field, and bear right and towards water when just west of Russell cemetery. Station is on river bank, on highest point in immediate vicinity, on hard ground, 1 meter (3 feet) outside fence line, 11 meters (36 feet) inside high-water mark, and about 30 yards southwest of private burial ground. Surface mark is standard disk station mark in tile and concrete, note 6 a. Underground mark is a standard disk station mark in concrete, note 7a. Reference marks nos. 1 and 2 are standard reference disks in tile and concrete, note 13a. No. 1 is just south of pine-and-cedar thicket, 7.5 meters (25 feet) east of fence line, and 39.216 meters (128.66 feet) from station in azimuth $183^{\circ}09'$. No. 2 is 35 feet east of high-water line, and 11.366 meters (37.29 feet) from station in azimuth $345^{\circ}14'$. Reference mark no. 3 is a standard reference disk in concrete, note 11a, 75 feet west-northwest of southwest corner of base of twin-shaft tombstone of John B. Russell and wife, 116 feet northwest of southwest corner of base of tombstone of Leo V. Norman, and approximately 600 feet from station in azimuth $230^{\circ}31'43''$. Azimuth from station to center of top of water tank of Tidewater Power Co., Beaufort, is $1^{\circ}05'50''$.

White (Carteret County, H. Odessey, 1933).—Station is 9 miles east of Newport, on west side of entrance to Harlowe Creek, and outside corner of cultivated field owned by Alexander Graham. To reach from the Newport railroad station, go east 0.1 mile on road running at right angles to United States route 70, turn to the right, follow this mail route 6.5 miles, and take right fork 0.3 mile to the Graham place and another fork in road. Take left fork and proceed 1.5 miles, then turn right across field for 0.15 mile to station site. Station is on hard ground, 17.5 meters (57 feet) inside tree line along edge of marsh, and 18.5 meters (61 feet) southwest of 16-inch cedar tree with triangular blaze 3 feet above ground. Surface mark is a standard disk station mark in tile and concrete, note 6a. Underground mark is standard disk station mark in concrete, note 7a. Reference marks nos. 1 and 2 are standard reference disks in tile and concrete, note 13a. No. 1 is at edge of underbrush, 80 feet south of south edge of cultivated field, and 43.73 feet from station in azimuth $84^{\circ}30'$. No. 2 is on east edge of clearing south of cultivated field, on west edge of underbrush, 2 meters (7 feet) south of 16-inch cedar tree with triangular blaze, and 53.82 feet from station in azimuth $218^{\circ}07'$. Reference mark no. 3 is standard reference disk in concrete, note 11a, 15 feet south of center line of east-and-west road, 30 feet east of northwest corner of cultivated field, 75 feet east of board culvert across road, and approximately 0.25 mile from station in azimuth $117^{\circ}03'35''$.

Supplementary point

Near (Carteret County, P. C. Whitney, 1913; 1933).—Station is about $5\frac{1}{2}$ miles east of Beaufort, at north end of main shore of the "Straights", and opposite west end of Harkers Island. In 1933, surface mark was no longer in place, due to shore erosion; and underground mark, concrete monument, while still in place, was under water at high tide. Station *Gaskill* (see description thereof) is 53.34 meters (175.0 feet) from station in azimuth $117^{\circ}54'$.

EASTERN OBLIQUE ARC TO SANFORD

Principal points

Ogburn (Guilford County, C. L. Garner, 1918; 1933).—About 3 miles north of Summerfield, 4 miles east of Stokesdale, in southwest angle of junction of North Carolina route 704 and northern branch of North Carolina route 65, about 600 yards southwest of Mrs. Ogburn's house, 200 yards east of tobacco barn, about 200

yards south of route 65, 250 yards west of route 704, on south edge of patch of woods, on north edge of cultivated field, 29 feet south of 24-inch white-oak tree, and 27 feet north of center of farm road along north edge of field. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is bottle buried in upright position, note 10a. Reference mark no. 1 is standard reference disk in concrete, note 11c, in edge of oak grove, and 32.540 meters (106.76 feet) from station in azimuth $210^{\circ}18'$. Reference mark no. 2, established in 1933, is standard reference disk in concrete note 11a, on south edge of south branch of route 65, about 0.2 mile west of junction with route 704, and approximately 300 yards from station in azimuth $20^{\circ}43'37''$.

Kernersville (Forsyth County, C. L. Garner, 1918; 1933).—About 275 yards northwest of Southern Railway station at Kernersville, 200 yards east of United States route 421, and 1.23 meters (4.0 feet) west of center pipe of water tank of Kernersville Furniture Co. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is bottle buried three feet below surface in upright position, note 10a. Reference mark no. 1 is standard reference disk in concrete, note 11a, 5 yards north of northeast corner of power house of furniture company, and 36.495 meters (119.73 feet) from station in magnetic azimuth $344^{\circ}30'$. Reference mark no. 2, established in 1933, is standard reference disk in dressed-stone block which is buried in ground, near south edge of large field, about 100 yards west of filling station, 30 feet north of center line of route 421, and approximately 300 yards from station in azimuth $24^{\circ}30'17''$.

Guilford (Guilford County, C. L. Garner, 1918; 1934).—About one-half mile north of Guilford College railway station, three-fourths mile south of Guilford College, about 2,000 feet east of Guilford Consolidated School, about 1,000 feet east of paved road running from railway station to college, near northwest corner of cultivated field owned by James Staples (colored), 43 yards southeast of center of dirt road, 33 yards south of center of another dirt road, 123 feet south of 18-inch oak tree, and 96 feet northeast of 10-inch persimmon tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is bottle buried in upright position, note 10a. Reference mark, established in 1918, is standard reference disk in concrete, note 11c, 34.11 meters (111.9 feet) from station in azimuth $178^{\circ}34'$. It was found dug up in 1933, and same mark was reset on south edge of dirt road, 32.670 meters (107.18 feet) from station in azimuth $193^{\circ}53'$. Reference mark no. 2, established in 1933, was standard reference disk, note 11c, near northwest corner of concrete base of drinking fountain on north side of Guilford Consolidated School building, and approximately 600 yards from station in azimuth $85^{\circ}36'35''$. In 1934, reference mark no. 2 was destroyed by extension to school, and a new reference mark no. 2 (probably standard reference disk) was established in concrete, using nail keg as form. This mark is on property of R. M. Scales, just north of James Staples' dwelling, 32 feet southeast of center of dirt road, 55 feet east of 24-inch oak, 84 feet northeast of 18-inch oak, 34 feet northwest of 15-inch pine, and 770.47 feet from station in azimuth $42^{\circ}54'16''$.

High Point (Guilford County, C. L. Garner, 1918; 1933).—At High Point, on east side of Main Street, about 50 yards north of grade crossing of Southern Railway, and about 6 feet east of center of east side of elevator-shaft house on roof of building occupied by branch of Wachovia Bank & Trust Co. Distances and azimuths to various pipes on roof are as follows: pipe no. 1, near northwest corner of east wing, 9.96 meters (32.7 feet), $185^{\circ}32'$; pipe no. 2, near north edge of east wing and near center, 12.52 meters (41.1 feet), $190^{\circ}27'$; pipe no. 3, near south edge of east wing, 9.91 meters (32.5 feet), $253^{\circ}26'$; and pipe no. 4, near south edge of center portion of building and near east wing, 1.34 meters (4.4 feet), $298^{\circ}55'$. Following distances are to inside corners of roof of building: northwest corner of east wing, 10.88 meters (35.7 feet); northeast corner of east wing, 16.20 meters (53.1 feet); southeast corner of east wing, 14.61 meters (47.9 feet); southwest corner of east wing, 6.83 meters (22.4 feet); southeast corner of elevator-shaft house, 2.18 meters (7.2 feet); and northeast corner of elevator-shaft house, 3.56 meters (11.7 feet). Station was marked in 1933 with 2-inch block of bakelite fastened to roof with screws, head of center screw being station mark. Three reference marks were established in 1933. No. 1 is standard reference disk in top of north parapet of roof, 20 feet west of southwest corner of east wing, and 7.634 meters (25.05 feet) from station in azimuth $150^{\circ}07'$. No. 2 is standard reference disk in top of south parapet of roof, 6 feet west of northwest corner of east wing, and 4.330 meters (14.21 feet) from station in azimuth $255^{\circ}59'$. No. 3 is standard reference disk in concrete, note 11a, on right-of-way of Southern Railway, in southwest corner of grade

crossing of Hamilton Street, 10 feet west of west edge of street, 7 feet south of south rail of south track of railway, and approximately 280 meters (919 feet) from station in azimuth $266^{\circ}56'47''$. Azimuth from station to tall water tank is $251^{\circ}00'37''$; to cupola of High Point College is $216^{\circ}49'37''$; and to low water tank is $312^{\circ}24'24''$.

Greensboro (Guilford County, C. L. Garner, 1918).—On highest point of roof covering water tank of O. Henry Hotel at corner of North Elm Street and Bellemeade Avenue, in Greensboro. Station not recovered in 1933, as roof had been rebuilt, destroying all reference points.

Climax (Guilford County, C. L. Garner, 1918; 1933).—About 1 mile east of Climax, on property of J. T. Ledbetter. To reach from north side of railroad station in Climax, go east about 300 yards to junction with North Carolina route 61, turn right (northeast) onto highway, continue 1.2 miles to dirt road, turn right (south), and continue 0.55 mile to station site. Station is about 5 yards east of road leading to Ledbetter's house, about 200 yards north of house, in edge of pine woods on opposite side of road from cultivated field, 100 yards north of blacksmith shop, 75 feet north of rock pile, and 21 feet east of center of road. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is bottle in concrete, note 7d. Reference mark, established in 1918, was standard reference disk in concrete, note 11a, about 1 yard east of road, and 29.22 meters (95.9 feet) from station in azimuth $23^{\circ}39'$. It was found dug up in 1933, and three new marks were established. No. 1 is standard reference disk in concrete, note 11c, 35 feet east of center of road, and 20.748 meters (68.07 feet) from station in azimuth $354^{\circ}22'$. No. 2 is standard reference disk in concrete, note 11a, 160 yards west of road, on north edge of farm road through cultivated field, and 350 yards from station in azimuth $19^{\circ}49'27''$. No. 3 is standard reference disk in concrete, note 11c, 16.022 meters (52.57 feet) from station in azimuth $280^{\circ}41'$.

Asheboro (Randolph County, C. L. Garner, 1918; 1933).—About 3 miles northwest of Asheboro, on summit of Back Creek Mountain. To reach from Asheboro, go west 2.6 miles on North Carolina route 90, turn right (east) onto dirt road at Mineral Springs, continue 0.8 mile (passing rifle range) to large spring on right, and take rocky trail to left (west) 0.3 mile to summit of mountain. Station is 40 yards east of highest point of summit, about equidistant from two 30-inch oak trees which are 7 feet apart, and 1 yard east of line joining these trees. Station and reference disks, established in 1918, had been battered out of drill holes when station was recovered in 1933. Station was re-marked with standard disk station mark in same drill hole in boulder, note 4. Three reference marks were established in 1933. No. 1 is standard reference disk in same drill hole in rock outcrop as original reference mark, note 12a, 6.385 meters (20.95 feet) from station in azimuth $22^{\circ}37'$. No. 2 is standard reference disk in rock outcrop, note 12a, and 8.870 meters (29.10 feet) from station in azimuth $108^{\circ}24'$. No. 3 is standard reference disk in drill hole of flat rock which is set in irregular mass of concrete buried two feet in ground, in southern third of large level field (property of J. T. Britten) which is used as emergency landing field, about 400 yards from grade crossing of county road at Norfolk Southern Railroad, 300 yards south of county road, 200 yards east-northeast of railroad track, and approximately 2.5 miles from station in azimuth $250^{\circ}01'37''$.

Liberty (Randolph County, C. L. Garner, 1918; 1933).—About 4 miles southwest of Liberty. To reach from railroad crossing at Liberty, go south 3.2 miles on county road to Staley, turn sharp right (northwest) onto another county road at V-junction, continue 2.3 miles, turn left (northwest) onto dim woods road, and continue 0.5 mile to station site. Station is 100 feet south-southwest of road; 25 feet east of center of farm road along east edge of open field, about 15 yards east of fork in roads, and 18 feet north of 10-inch hickory tree. Station mark, established in 1918, was standard disk station mark in top of large white rock outcrop, note 2. Information from local residents was that this disk had been battered out of drill hole, and had been replaced, presumably by field party of United States Coast and Geodetic Survey, by brass bolt in concrete. This bolt was recovered in 1933, and station was re-marked with standard disk station mark, note 2. Reference mark, established in 1918, also had been battered out of drill hole. Drill hole was recovered and re-marked with standard reference disk, note 12a, 19.410 meters (63.68 feet) from station in azimuth $331^{\circ}26'$. Two additional reference marks were established in 1933. No. 2 is standard reference disk in rock outcrop, note 12a, in southwest corner of open field, 20 feet north of road along south edge of field, and distance from station uncertain (records

give about 300 yards, and also 1,000 meters (3,281 feet) in azimuth $33^{\circ}26'49''$. No. 3 is standard reference disk in rock outcrop, note 12a, and 24.065 meters (78.95 feet) from station in azimuth $210^{\circ}06'$. Eccentric point used to cut in new reference marks is standard disk station mark in concrete, note 1c, on east edge of farm road, and 7.510 meters (24.64 feet) from station mark in azimuth $117^{\circ}58'$. Mark is stamped "Liberty Ecc 1933".

Ramsure (Randolph County, C. L. Garner, 1918; 1933).—About 9.5 miles east of Asheboro, $4\frac{1}{2}$ miles south of Ramsure, and on summit of Pilot Mountain (sometimes called Pine Mountain). To reach from junction of routes 90 and 902, go southeast 8.9 miles on route 902, turn left (northwest) onto rough farm road, continue 0.9 mile, turn right around base of hill, continue 0.9 mile to dim crossroads, turn right across north side of hill, continue 1.4 miles to tree with triangular blaze on right and end of truck travel, take dim trail to west, and follow 0.3 mile to station site on summit. Station is about 40 yards west-northwest of highest part of summit, and 45 feet north of 8-inch oak tree with triangular blaze. Station and reference disks had been battered out of place when station was recovered in 1933. Station re-marked with standard disk station mark, note 2b, in original drill hole. Original reference mark also re-marked by standard reference disk, note 12b, 14.038 meters (46.06 feet) from station in azimuth $337^{\circ}37'$. Two additional reference marks were established in 1933. No. 2 is standard reference disk in concrete, note 11a, on property of A. C. Williams 300 yards west of his house, about midway of north edge of hay field, 200 feet west of farm road through center of field, and approximately 1 mile from station in approximate azimuth $189^{\circ}11'$. No. 3 is standard reference disk in rock outcrop, note 12a, and 17.135 meters (56.22 feet) from station in azimuth $271^{\circ}09'$. Eccentric point used to cut in new reference marks is cross surrounded by triangle, chiseled on rock outcrop 10 feet west of 8-inch hickory tree with triangular blaze, and 12.792 meters (41.97 feet) from station.

Siler (Chatham County, C. L. Garner, 1918; 1933).—About 2 miles west of Siler City, on property of R. H. Dixon. To reach from post office at Siler City, go west 1.2 miles on county road, turn right (north), continue 1.6 miles, turn left (west) onto farm road, continue 0.2 mile to farmhouse, keep to right around house, and continue 0.65 mile to station site. Station is in northeast corner of large wheat field, in southwest corner of junction of dim road from west, 81 feet south of junction, about 4 yards east of property line running northeast and southwest which separates lands of R. H. Dixon and J. J. D. Heckman, 4.70 meters (15.4 feet) southwest of corner stone, 24 feet south-southeast of 20-inch pine tree, and 16.5 feet west of center of farm road. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is bottle in concrete, note 7d. Reference mark, established in 1918, was standard reference disk in concrete, note 11a, 40 yards from fork of roads, 1 yard east of left-hand road, and 27.72 meters (90.9 feet) from station in azimuth $355^{\circ}12'$. Mark was found to have been destroyed and two new marks were established in 1933. No. 1 is standard reference disk in concrete, note 11c, 35 feet east of east edge of road, and 19.957 meters (65.48 feet) from station in azimuth $261^{\circ}31'$. No. 2 is standard reference disk in boulder, note 12c, about midway of southwest edge of wheat field, at east edge of woods, and about 300 yards from station in azimuth $65^{\circ}01'19''$.

Ore Hill (Chatham County, M. Steinberg, 1918; 1933).—On highest point of large hill known locally as Ore Hill, about 6 miles southeast of Siler City, about 0.25 mile west of railway station Mount Vernon Springs on Southern Railway, about 100 yards south of track, 40 feet southwest of southeast end of large ore pit, and 15 feet south of large pine tree with triangular blaze. Station mark, established in 1918, had been removed from drill hole, and station was re-marked in 1933 with standard disk station mark in same point, note 2a. Reference mark established in 1918, was found to be somewhat battered but still in place. Mark is standard reference disk in rock outcrop, note 12a, 23.360 meters (76.64 feet) from station in azimuth $266^{\circ}38'$. Two additional reference marks were established in 1933. No. 2 is standard reference disk in concrete, note 11a, 1 mile west along county road from Bonlee railway station, about 150 yards north along farm road from county road, 20 feet west of farm road, on south edge of cultivated field and north edge of pine thicket, and approximately 1.5 miles from station in approximate azimuth $358^{\circ}00'$. No. 3 is standard reference disk in rock outcrop, note 12a, and 5.205 meters (17.08 feet) from station in azimuth $129^{\circ}13'$.

Paul Beck (Chatham County, M. Steinberg, 1918).—On highest point of Paul Beck Mountain, about 6 miles south of Bonlee, and 1 mile west of stop known as

Beck Springs on Bonlee & Western Railway. To reach from United States route 421 at Bonlee, go west 2.2 miles on county road to crossroads with abandoned filling station in southeast corner, turn left (southeast), continue 2.6 miles, cross railroad (track now being taken up), turn right (southwest) along railroad track, continue about 2 miles to Beck Springs, turn west around large unpainted frame building, and continue about 1 mile to station site. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, and 40.56 meters (133.1 feet) from station in azimuth $17^{\circ}32'$. In 1933, station was found to have been destroyed. Concrete posts of station and reference mark had been battered to pieces and scattered over considerable area. Underground mark was found on ground about 20 feet from approximate location of station.

Jonesboro (Lee County, C. L. Garner, 1918; 1933).—About 2 miles east of Sanford, on roof of pump house, near Jonesboro town water tank, and on west side of North Main Street. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Both marks were destroyed in construction of pump house. Station was relocated from reference mark, and is now marked by nail in concrete on roof of pump house, directly over original mark. Distances from station to various points are: Southeast corner of coping, 3.615 meters (11.86 feet); southwest corner of coping, 3.540 meters (11.61 feet); northeast corner of roof, 2.850 meters (9.35 feet); and northwest corner of roof, 2.742 meters (9.00 feet). Reference mark, established in 1918, is standard reference disk in concrete, note 11c, in northeast corner of front yard of Elto Avant, about 2 yards west of west edge of North Main Street, and 42.92 meters (140.8 feet) (slope) from station in azimuth $352^{\circ}16'$. Two additional reference marks were established in 1933. No. 2 is standard reference disk in concrete, note 11a, on south side of county road and north edge of cultivated field, about 0.3 mile north of Atlantic Coast Line Railroad, 200 yards south-southeast of large frame farmhouse, and approximately 0.4 mile from station in azimuth $174^{\circ}50'42''$. No. 3 is standard reference disk in drill hole in southwest foundation of water tank, and 9.137 meters (29.98 feet) (slope) from station in azimuth $117^{\circ}20'$. Azimuth from station to tall steel water tank in Sanford is $132^{\circ}47'55''$; and to red steel standpipe in Sanford is $153^{\circ}44'18''$.

Carthage (Moore County, M. Steinberg, 1918; 1933).—On top of flat highland, 2.3 miles east-southeast of Carthage, 86 yards north of center of United States route 15, about 200 yards south-southwest of water tank at State prison camp, 100 yards east of railway, almost directly beneath telephone line to prison camp, and midway between second and third poles from highway. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark, established in 1918, is standard reference disk in concrete, note 11a, and 237.51 feet from station in azimuth $13^{\circ}34'$. Reference mark no. 2, established in 1933, is standard reference disk in boulder, note 12d, 20 feet south of center of highway, at point where highway makes sharp curve to south, and approximately 0.3 mile from station in azimuth $266^{\circ}48'31''$.

Lemon (Lee County, C. L. Garner, 1918; 1933).—About 1 mile south of Lemon Springs, on summit of long flat-topped hill, 75 yards east of county road from Sanford to Southern Pines, 3.4 miles south of this road's junction with United States routes 1 and 15 (this road is left hand or east road of three at this junction), 50 yards south of dirt road which intersects county road at T-junction, and about one-fourth mile west of Seaboard Air Line Railway. Station mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark, established in 1918, was standard reference disk in concrete, note 11c, 2 yards west of oak tree, and 22.21 meters (72.9 feet) from station in azimuth $296^{\circ}26'$. Mark had been dug up, and, in 1933, was reset in original condition but in different location, 22.202 meters (72.84 feet) from station in azimuth $296^{\circ}59'$. Reference mark no. 2, established in 1933, is standard reference disk in boulder, note 12c, about 100 yards east of Seaboard Air Line Railway, about 200 feet north of sand road, about midway of south side of cultivated field, at north edge of patch of woods, and approximately 1,200 meters (3,937 feet) from station in azimuth $280^{\circ}52'22''$. Azimuth from station to water tank at Jonesboro is $211^{\circ}11'29''$.

Foch (Moore County, C. L. Garner, 1918).—About one-eighth mile east of railway station at Southern Pines, in southeast corner of intersection of New Hampshire Avenue and Ridge Street, in northwest corner of grounds of Mr. J. C. Wicker's residence, 60 feet west-northwest of house, and 25 feet east of

rock garden. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, between sidewalk and street on south side of Ridge Street, and 22.102 meters (72.51 feet) from station in azimuth $127^{\circ}34'$. Azimuth mark could not be established in 1933, as station mark is surrounded by valuable shrubbery which obscures vision. Azimuth from station to water tank at Southern Pines is $255^{\circ}18'16''$; and to steeple of Congregational Church is $140^{\circ}16'23''$.

Sanford (Lee County, C. L. Garner, 1918; 1933).—About 2 miles south of Sanford, 1.25 miles northeast of Lee County courthouse along unpaved county road which joins United States route 421 north of courthouse, 0.3 mile south of road, on flat ridge in cultivated field, about 270 feet southwest of southeast corner of log and rough-board farmhouse, and about 100 yards north of two lone persimmon trees. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Disk of reference mark established in 1918 had been removed when station was recovered in 1933; it was re-marked with standard reference disk in same hole in concrete, note 11c, about 1 yard west of southwest corner of cabin, about 1 yard from southeast corner of farmhouse, and 272.72 feet from station in azimuth $278^{\circ}37'$. Reference mark no. 2, established in 1933, is standard reference disk in boulder, note 12c, on north side of county road, in south edge of cultivated field, about 100 yards east of large white house on south side of road, and approximately 0.25 mile from station in azimuth $248^{\circ}58'34''$. Azimuth from station to tall steel water tank in Sanford is $173^{\circ}58'43''$; and to red steel standpipe, about 2 miles north of Sanford, is $197^{\circ}49'34''$.

Allenby (Lee County, C. L. Garner, 1918).—About 4 miles north of Sanford, on county road to Colon, about one-half mile south of railway station at Colon, about 300 yards east of the Seaboard Air Line Railway, at first curve south of Colon, 0.15 mile south of grade crossing of county road at railway, about 200 yards east of road, beneath east end of kitchen, and near south side of house of J. F. Wicker. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, about 20 feet southeast of umbrella china-berry tree, 1 yard northeast of northeast corner of house proper, and 11.335 meters (37.19 feet) from station in azimuth $149^{\circ}22'$. As station mark has been covered by construction of kitchen, reference mark may be occupied as eccentric station, using station *Colon*, which is visible from reference mark, as azimuth mark. Azimuth from station to red standpipe at Sanford is $0^{\circ}59'50''$.

Swan (Lee County, C. L. Garner, 1918).—About 5.8 miles south-southeast of Jonesboro, about 0.5 mile west-southwest of Atlantic Coast Line Railroad station at Swann, 0.2 mile north of county road to Lemon Springs, in cultivated field owned by C. W. Wicker, and about 100 yards east of his house. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Marks were not recovered in 1933, and station *Swan eccentric* (see description thereof) was established in approximately same location. Reference mark is standard reference disk in concrete, note 11c, and 36.02 meters (118.2 feet) from station in azimuth $255^{\circ}14'$. It was recovered in 1933, and tied in to station *Swan eccentric*.

Swan eccentric (Lee County, M. A. Hecht, 1933).—About 5.8 miles south-southeast of Jonesboro, about 0.5 mile west-southwest of Swann station on Atlantic Coast Line Railroad, 0.2 mile north of county road to Lemon Springs, 123 feet west of center of county road to Jonesboro, in cultivated field owned by C. W. Wicker, about 100 yards south of his house, 20 yards west of road which intersects main highway about 80 yards east of Wicker's house, 50 yards northwest of persimmon tree, and in approximate location of station *Swan* (see description thereof) which was found to have been plowed up. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark is stamped "Swan Ecc"; and underground mark, through error, is stamped "Swan". Reference mark of station *Swan* was recovered; and is standard reference disk in concrete, note 11c, at intersection of roads, about 80 yards east of Wicker's house, 4 yards south of road to Jonesboro, and 118.19 feet from station in azimuth $251^{\circ}01'$. Reference mark no. 2, established in 1933, is standard reference disk in rock outcrop, note 12b, west of track, on right-of-way of Atlantic Coast Line Railroad, and approximately 0.3 mile from station in azimuth $283^{\circ}28'28''$.

WESTERN NORTH CAROLINA

Principal points

Bowman (Carroll County, Va., L. G. Simmons, 1933).—Station is $14\frac{1}{2}$ miles southeast of Hillsville, $10\frac{1}{2}$ miles north-northeast of Mount Airy, on what is known locally as Ground Hog Hill, on property of J. A. Bowman. To reach from Fancy Gap which is on highway between Mount Airy and Hillsville at divide in Blue Ridge, go east 5.25 miles on graded stone road, turn right (south) onto dirt crossroads, and proceed straight ahead 6.75 miles on road which parallels Blue Ridge, passing through Orchard Gap, Volunteer Gap, and Willis Gap, to point where main road turns left and dim road continues straight ahead. Station is about 85 yards along this dim road, 8 feet north of center line of road, and in line of fence posts. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 (azimuth) is in fence line, about 40 feet east of center line of north-and-south road, 25 feet east of large hickory tree, and approximately one-fourth mile from station in azimuth $171^{\circ}26'22''$. No. 2 is 50 yards south of east-and-west road, 3 feet northeast of rail fence, and 91.64 meters (300.7 feet) from station in azimuth $36^{\circ}11'$. No. 3 is 25 feet north of center line of east-and-west road, 30 feet east of north-and-south road, 2 feet east of rail fence, and 74.70 meters (245.1 feet) from station in azimuth $81^{\circ}30'$.

Turner (Surry County, L. G. Simmons, 1933).—About 6 miles south-southwest of Mount Airy, 4 miles east-northeast of Dobson, and about one-fourth mile northwest of highest point of Turner Mountain. To reach from Dobson, go south $6\frac{1}{4}$ miles on route 80 (Dobson Highway) or 1.65 miles beyond consolidated school at White Plains, turn left onto dirt road at arrow "County Road $3\frac{1}{2}$ mi.", proceed about 50 yards, take right fork proceed 0.3 mile, take right fork across small bridge, and proceed about 200 yards to J. W. Key's house. Road behind house leads to top of mountain, but trucks can not be taken up in wet weather. Station is in plowed field near northwest end of ridge. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks and azimuth mark are standard reference disks in concrete, note 11a. No. 1 is about 40 yards down south slope of hill, near line of timber and edge of cultivated field, and 34.625 meters (113.60 feet) from station in azimuth $62^{\circ}44'$. No. 2 is also near timber line, and 39.520 meters (129.66 feet) from station in azimuth $143^{\circ}36'$. Azimuth mark is near northwest side of high ground which forms summit of mountain, and approximately 1,000 feet from station in azimuth $8^{\circ}46'58''$.

Saddle (Alleghany-Surry Counties, L. G. Simmons, 1933).—Station is $10\frac{1}{4}$ miles east of Sparta, $4\frac{1}{2}$ miles south of Virginia-North Carolina State line, at Alleghany-Surry County line, and on north peak of Saddle Mountain. To reach from Mount Airy, go west about 25 miles on route 89 to junction with route 18, proceed west 1.25 miles on route 18, turn left onto T-road at arrow "Saddle 5 mi.", continue 2.85 miles, take left fork at J. Brannock's and S. H. Hawk's mail boxes, continue 1.5 miles, turn sharp left at bottom of grade and keep creek on right, proceed 0.2 mile, ford creek, and continue 0.4 mile to Cleve Bottomley's house. To make climb to station, continue 200 yards on same road to divide, and follow right-hand ridge to summit of mountain. Station is in center of small level space at top of peak, 10 feet west of east edge, and 12.4 feet south of north brow of peak. Surface mark is standard disk station mark in rock outcrop, note 2a. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is on north peak of mountain, 27 feet west of east edge of level space at summit, and 5.161 meters (16.93 feet) from station in azimuth $130^{\circ}31'$. No. 2 is at north edge of level space, and 3.787 meters (12.42 feet) from station in azimuth $197^{\circ}19'$. Azimuth mark is standard reference disk in concrete, note 11a, at west foot of ridge on north side of mountain, about 10 feet north of center line of farm road, 200 yards east of Bottomley's house, $2\frac{1}{2}$ feet south of corner of rail fence, and in azimuth $217^{\circ}01'53''$ from station.

Felt (Carroll County, Va., L. G. Simmons, 1933).—About $14\frac{1}{2}$ miles northwest of Mount Airy, 11 miles south-southwest of Hillsville, and 4 miles north of Virginia-North Carolina State line, on summit of what is known locally as Felts Knob, property owned by Charles Felts. To reach from Fancy Gap which is on highway between Mount Airy and Hillsville at divide in Blue Ridge, go west 7.2 miles on stone road to Piper Gap, and continue 3.75 miles to home of Charles Felts. Station is on summit of hill, one-fourth mile north of and 150 feet higher in eleva-

For notes in regard to marking of stations see p. 135.

tion than Felts' house, 92 feet north of south fence line, 91.5 feet west of east fence line, 125 feet west of east brow of knob, 115.5 feet northwest of southeast corner of field, and 8 feet northwest of dead stump. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks and azimuth mark are standard reference disks in boulders, note 12c. No. 1 is on east brow of knob, 91 feet north of southeast corner of field, 30 yards west of row of trees, 102 feet south of dead tree in east fence line of field, and 34.985 meters (114.78 feet) from station in azimuth 227°26'. No. 2 is in southeast corner of field, 30 yards west of row of trees on east brow of knob, 26 feet southwest of rock pile on east side of fence, and 27.697 meters (90.87 feet) from station in azimuth 298°10'. Azimuth mark is in fence line on summit of first rise west of station, 115 feet north of east-and-west fence, 180 yards southwest of large rock pile, and in azimuth 52°35'32" from station.

Bryant (Alleghany County, L. G. Simmons, 1933).—Station is 12 miles northwest of Elkin, 14½ miles west of Dobson, 1 mile west of Roaring Gap post office, and 0.9 mile west along woods road from United States route 2, on Bryants Knob. To reach from Roaring Gap post office which is on highway between Elkin and Sparta, go south 0.3 mile on route 21, turn left onto dirt road and follow arrow to Bryants Knob, proceed 0.45 mile on main road, and take dim right fork leading to cleared high ground. Station is near center of cleared area, 90 feet southwest of center line of woods road, and at site of old gun club. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in triangle formed by junction of 2 woods roads, 33 feet west of center of junction, 50 yards north of sharp curve in road leading from route 21 into woods, 51 feet north of short stubby beech tree, 65 feet north-northwest of 30-inch white-oak tree, and approximately 158 yards from station in azimuth 225°08'48". No. 2 is 15 feet east-northeast of center line of road and 55.885 meters (183.35 feet) from station in azimuth 223°45'. No. 3 is 14.5 feet southwest of center line of road, 11.5 feet north of small pine tree, and 24.268 meters (79.62 feet) from station in azimuth 312°00'.

Star (Yadkin County, L. G. Simmons, 1933).—About 5¼ miles west-southwest of Boonesboro, 3¼ miles south of Shady Grove Church Road, and 4½ miles southeast of Elkin, on summit of what is known locally as Star Peak, formerly known as Fox Knob, on property of John Bray. To reach from Elkin, follow route 21 across river to junction on east side of Jonesville, proceed south 1.45 miles on route 21, turn left onto graded road at arrow "Shady Grove Ch. 3¼ mi.", continue 3.15 miles, turn right at crossroads, continue 0.5 mile, and turn sharp right onto dim road at top of ridge. Station is in approximate center of level area at top of peak, about 9 feet southwest of old well, 10½ feet east-northeast of double poplar tree, and about 15 feet north of south slope of knob. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at Star Peak school, and about three-fourths mile from station in azimuth 207°09'44". No. 2 is in about longitudinal center of east slope of knob, 13 feet west of 11-inch poplar tree, and 21.195 meters (69.54 feet) from station in azimuth 247°00'. No. 3 is 18 feet south of approximate center of woods road to top of peak, 12 feet northwest of 14-inch poplar tree, and 15.987 meters (52.45 feet) from station in azimuth 180°20'.

Owen (Wilkes County, L. G. Simmons, 1933).—Station is about 5½ miles northeast of Boomer, and 3¼ miles west-southwest of Wilkesboro, on summit of what is known locally as Owens Knob, on property of W. M. Alexander. To reach from courthouse at Wilkesboro, go west 0.55 mile on route 16, continue straight ahead 3.15 miles on route 268, turn south onto dirt road, continue 1.18 miles, turn left onto dim road at tree with triangular blaze, proceed to top of grade and turn left at small blazed tree. Station is near west end of ridge, near approximate longitudinal center of ridge, in center of small cleared area, about 20 feet north of south slope, 72 feet southeast of large live chestnut snag, 22½ feet northeast of tall 18-inch blackgum tree, and 8½ feet east of center of trail along ridge. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at south end of ridge, 20 feet southeast of tall 18-inch blackgum tree, 5.2 feet north-northeast of dead stump, and 10.436 meters (34.24 feet) from station in azimuth 111°26'. No. 2 is 35 feet east of chestnut snag, 5½ feet east of trail along ridge, and 13.657 meters (44.81 feet) from station in azimuth 265°28'.

Azimuth from station to spire of white Methodist Church at Moravian Falls is $332^{\circ}20'21''$.

Mulberry (Wilkes-Alleghany Counties, L. G. Simmons, 1933).—Station is $15\frac{1}{4}$ miles north-northwest of North Wilkesboro, $3\frac{1}{2}$ miles southeast of Laurel Springs, and 0.9 mile east of Mulberry Gap, on Little Grandfather Mountain. To reach from North Wilkesboro, go north about 20 miles on route 18 to Mulberry Gap, continue to first house on right owned by F. Johnson, follow draw from rear of Johnson's house to top of ridge, and follow right up ridge to station site. Station is on east brow of peak, 35 feet south of south fence line of pasture on north slope of mountain, 15 feet northeast of large bluegum tree, and 10 feet east of magnolia thicket on east slope. Mark is standard disk station mark in rock outcrop, note 2a. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is 100 yards west of ridge, near east side of pasture, 90 yards north of south fence line, and about 150 yards from station in azimuth $214^{\circ}28'48''$. No. 2 is on east brow of mountain, 20.6 feet south of south fence of pasture, 20 feet east of large birch tree, and 4.375 meters (14.35 feet) from station in azimuth $246^{\circ}10'$. No. 3 is 25 feet west of east brow of mountain, 7.5 feet west of large bluegum tree, and 6.080 meters (19.95 feet) from station in azimuth $101^{\circ}14'$.

Thomkins (Watauga-Wilkes-Ashe Counties, L. G. Simmons, 1933; 1934).—About $11\frac{1}{2}$ miles east-northeast of Boone, $19\frac{1}{2}$ miles west-northwest of North Wilkesboro, on broad summit of Thomkins Knob, on land owned by Frank Hartley, 60 feet southwest of southwest edge of oak grove, and 80 feet northeast of large dead snag. To reach from North Wilkesboro, go west about 25 miles on route 421 to Deep Gap, proceed west 0.65 mile, turn right at arrow "Obids 10 mi. Glendale Springs 15 mi.", proceed 1.05 miles, turn right at T-road, continue 0.6 mile to H. E. Green's house, follow road along creek 1.5 miles, and follow ridge to left about one-fourth mile to station site. Mark is standard disk station mark in rock outcrop, note 2a. Reference mark no. 1 is standard reference disk in top of boulder, note 12c, near 18-inch stump, and about 300 yards from station in azimuth $126^{\circ}14'44''$. Reference marks nos. 2 and 3 are standard reference disks in rock outcrops, note 12a. No. 2 is 6.257 meters (20.53 feet) from station in azimuth $219^{\circ}40'$. No. 3 is 13.254 meters (43.48 feet) from station in azimuth $304^{\circ}58''$.

Hickory (Wilkes-Caldwell-Alexander Counties, L. G. Simmons, 1933).—Station is 16.9 miles southwest of Wilkesboro, and about 7 miles southwest of Boomer post office, on summit of Hickory Knob. To reach from Wilkesboro, go southwest about 16 miles on route 18, turn left onto dirt road, proceed 0.1 mile, turn left, proceed 0.3 mile, turn right, and proceed 0.5 mile to end of road at L. L. Carlton's house. Proceed southwest about 3.5 miles along old lumber road to summit of knob and station site. Station is in approximate center of level partly cleared area, 24 feet southeast of 8-inch hickory tree and 21 feet north-northwest of 6-inch pine sapling. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk in top of rock ledge, note 12a, on southwest slope of knob, 12 feet northeast of clump of hickory saplings, and 13.577 meters (44.54 feet) from station in azimuth $86^{\circ}17'$. Reference mark no. 2 is standard reference disk, note 12c, in top of buried boulder, 9 feet north-northeast of 6-inch hickory tree, 5 feet south of large hickory stump, and 8.300 meters (27.23 feet) from station in azimuth $214^{\circ}23'$. Azimuth from station to spire of Methodist Church at Taylorsville is $300^{\circ}26'05''$.

Hibriten (Caldwell County, L. G. Simmons, 1933; 1934).—About $3\frac{1}{2}$ miles east-southeast of Lenoir, 16 miles northeast of Morganton, on summit of Hibriten Mountain, near west end of ridge forming summit, 18 feet west of northwest leg of fire tower, and 20 feet northwest of southwest leg. To reach from monument circle in center of Lenoir, go east 1.3 miles on route 18, follow right-hand gravel fork 2.1 miles, turn left onto T-road, proceed 0.2 mile, turn left, take right fork, continue 0.5 mile, take left fork, continue 2.65 miles, turn sharp right at forks, and proceed 0.45 mile to fire tower at summit. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11c. No. 1 is in concrete base of northwest leg of fire tower, and 5.515 meters (18.09 feet) from station in azimuth $256^{\circ}23'$. No. 2 is in concrete base of southwest leg of fire tower, and 5.880 meters (19.29 feet) from station in azimuth $294^{\circ}52'$. Azimuth from station to spire of First Baptist Church at Lenoir is $102^{\circ}31'58''$.

Grandfather (Avery County, L. G. Simmons, 1933; 1934).—About $8\frac{1}{4}$ miles west-southwest of Blowing Rock, on Grandfather Mountain, on property of J. R.

MacRae, and near center of south edge of bare rock which forms what is known locally as "Third Peak". To reach from Blowing Rock, go west 17.6 miles on route 28 to J. A. MacRae's store, and continue 2 miles northeast to slope of first peak. Station mark is standard disk station mark in rock outcrop, note 2a. Reference mark no. 1 is standard reference disk in boulder, note 12c, and 5.928 meters (19.45 feet) from station in azimuth $133^{\circ}46'$. Reference mark no. 2 is standard reference disk in rock outcrop, note 12a, and 3.540 meters (11.61 feet) from station in azimuth $12^{\circ}28'$. Azimuth from station to cupola on Mayview Manor at Blowing Rock is $255^{\circ}28'42''$.

Jonas (Burke County, L. G. Simmons, 1933).—About $7\frac{1}{4}$ miles southwest of Linville, $5\frac{1}{4}$ miles south of Pineola, and $2\frac{1}{4}$ miles east of Linville Falls, on property of J. A. Barrier. To reach from Morganton, go northwest 27 miles on route 181 to Jonas Ridge Post Office, continue 1.1 miles south on route 181, turn right onto road leading west, follow through gate, proceed 0.5 mile past J. Johnson's house, continue over top of grade, turn right and continue to top of grade and station site. To reach from Jonas Ridge Post Office, go south about 1 mile to home of L. C. Shell, turn right onto mountain road, and proceed about $1\frac{1}{2}$ miles to station site at top of ridge. Station is on summit of Jonas Ridge, on peak south of bald ground, about 100 feet west of road, 15 feet south of 30-inch water-oak tree, 30 feet east of 24-inch white-oak tree, and 100 feet east of rail fence bordering field. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in rock outcrops, note 12a. No. 1 is just beyond top of ridge, and 20.548 meters (67.41 feet) from station in azimuth $193^{\circ}57'$. No. 2 is just beyond ridge, and 7.670 meters (25.16 feet) from station in azimuth $282^{\circ}52'$. Reference mark no. 3 is standard reference disk in buried boulder, note 12c, about 20 yards along rail fence around cornfield from center line of road which leads to station, and about 175 yards from station in azimuth $4^{\circ}22'14''$.

High Peak (Burke County, L. G. Simmons, 1933).—On summit of High Peak 4 miles south-southeast of Morganton, on property of Joseph Williams. To reach from Morganton, go southeast 2.2 miles on route 18, turn left onto dirt road, proceed 2 miles, and turn right onto woods road through yard of Clyde Orders. Station is near north edge of level space at top of peak, 20 feet south of north edge of declivity, 54 feet west of woods trail along east side of peak, 45 feet east of 8-inch hickory stump, and 60 feet east of large dead chestnut snag. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is along east side of trail on east edge of peak, and 16.606 meters (54.48 feet) from station in azimuth $237^{\circ}50'$. No. 2 is on east side of trail, about 50 feet south of north edge of peak, and 21.208 meters (69.58 feet) from station in azimuth $281^{\circ}51'$. Azimuth from station to dome of North Carolina State Hospital in Morganton is $98^{\circ}03'24''$.

Pogue (Rutherford County, L. G. Simmons, 1933).—On Pogue Mountain, about $1\frac{1}{4}$ miles northeast of Glenwood, on property of E. G. Goforth. To reach from Marion, go southeast 5 miles on route 19 to Glenwood, proceed east to Methodist Church at end of street, take trail east across railroad tracks, and follow old stage road east to top of ridge. Station is on highest part of ridge at north end, 7.8 feet north of 6-inch pine tree, and 22.9 feet southwest of 8-inch locust stub. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in grove of small trees, 8.453 meters (27.73 feet) from station in azimuth $300^{\circ}52'$. No. 2 is at end of trail to summit, 15.342 meters (50.33 feet) from station in azimuth $21^{\circ}43'$. Azimuth from station to observation tower on Mount Mitchell is $118^{\circ}53'36''$.

Mitchell (Yancey County, L. G. Simmons, 1933).—Station is on top of stone and concrete tower on highest point of Mount Mitchell. To reach from Black Mountain, go east 2 miles on routes 20 and 70, turn left onto toll road, and proceed $18\frac{1}{2}$ miles to hotel. Road from hotel goes to within one-fourth mile of summit. Station is cross cut in top of cast-iron pipe which supports spiral stairway to roof of tower, 3.196 meters (10.49 feet) from north corner of tower, 3.190 meters (10.47 feet) from west corner, 3.202 meters (10.51 feet) from south corner, and 3.200 meters (10.50 feet) from east corner. Reference mark no. 1 is standard reference disk in concrete, note 11a, 13.787 meters (45.23 feet) from north outside corner of tower, 12.284 meters (40.30 feet) from west corner, and in azimuth $132^{\circ}52'$ from station. Reference mark no. 2 is standard reference disk in rock outcrop, note 12a, 17.406 meters (57.11 feet) from north outside corner of tower,

21.269 meters (69.78 feet) from west corner, and in azimuth $169^{\circ}27'$ from station. Azimuth mark is standard reference disk in rock outcrop, note 12a, 200 yards southeast of Forester's cabin, on northwest slope of what is known as Mount Mitchell foreground, on north side of trail, and approximately 350 yards from station in azimuth $305^{\circ}03'07''$.

Pinnacle (Rutherford County, L. G. Simmons, 1933).—On summit of Pinnacle Mountain, 15.3 miles southwest of Marion, and 3.8 miles east of Montford (now known as Haines). To reach from Marion, follow West Henderson Street to first street west of railroad station, turn left, go south across tracks, proceed 1.4 miles to sign "5 miles to Glenwood", follow right-hand road to Haines, continue 1.9 miles on main dirt road, turn south onto dirt road, proceed 1.7 miles to home of L. N. Stott, and follow old logging road east from point just north of Stott's house to trail leading to summit of mountain. Station is 37.8 feet southeast of northwest edge of summit, 27.4 feet west of center of wooden fire tower, and 6.1 feet north of 12-inch oak tree. Mark is standard disk station mark in rock outcrop, note 2. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is 4.687 meters (15.38 feet) from station in azimuth $24^{\circ}46'$. No. 2 is 2.5 feet southeast of northwest edge of rock shelf, and 11.510 meters (37.76 feet) from station in azimuth $130^{\circ}10'$. Azimuth from station to standpoint at Spindale is $332^{\circ}22'21''$.

Bearwallow (Henderson County, L. G. Simmons, 1933).—Station is on top of Bearwallow Mountain, about 20 miles from Asheville. To reach from Asheville, go about 18 miles on routes 74 and 19 to Gerton post office, turn right onto road marked "Bearwallow", proceed southwest and south about 1½ miles to top of ridge at gap, and take trail east leading up hill. Station is in approximate center of round knob, on highest peak near west edge of summit, 61 feet northwest of triple dead chestnut trees, 60.5 feet west of 12-inch white-oak tree, and 88 feet northeast of 20-inch white-oak tree. Station mark is standard disk station mark in rock outcrop, note 2. Reference marks and azimuth mark are standard reference disks in rock outcrops, note 12a. No. 1 is 6.922 meters (22.71 feet) from station in azimuth $261^{\circ}35'$. No. 2 is 15 feet east of 20-inch white-oak tree and 25.670 meters (84.22 feet) from station in azimuth $42^{\circ}44'$. Azimuth mark is near north end of what is known as West Ridge of Bearwallow, just south of grove of pine trees, and approximately 400 yards from station in azimuth $92^{\circ}50'42''$.

Gerton (Henderson-Buncombe-McDowell Counties, L. G. Simmons 1933).—Station is on east summit of east peak known as Little Pisgah Mountain. To reach from Asheville, go about 18 miles on routes 74 and 19 to point 0.2 mile beyond county-line mark on highway, take road southeast and then east on southwest side of mountain, follow rough road 2½ miles to point where cleared slope of mountain shows, and take steep trail across pasture to top of peak. Station is 15 feet southwest of 12-inch water-oak tree, 14.5 feet northwest of dead 15-inch oak tree, and 25 feet northeast of twin dead chestnut trees. Station mark is standard disk station mark in rock outcrop, note 2. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is on flat top of peak, and 17.845 meters (58.55 feet) from station in azimuth $107^{\circ}31'$. No. 2 is on north brow of peak, and 12.910 meters (42.36 feet) from station in azimuth $208^{\circ}04'$. Azimuth from station to fire tower on top of peak which is above and southwest of Chimney Rock is $330^{\circ}48'49''$.

Britten (Buncombe County, L. G. Simmons, 1933).—On summit of Chestnut Knob, above Britten Cove, about 9 miles north-northeast of Asheville, and 3½ miles northeast of Weaverville, on property of Jim Cole. To reach from main cross streets in Weaverville, go north 0.95 mile on routes 19 and 23, turn right onto gravel road at arrow "Dula Springs 1.5 mi.", proceed 1.5 miles, continue on main road 0.4 mile, keep straight ahead at left fork and again at second left fork, and continue to end of road. Follow sled road and trail about 1¼ miles to C. C. Arrington's cabin, and follow trail to right up side of mountain to summit. Station is in center of knob, 33.5 feet north-northeast of 30-inch white-oak tree scarred by lightning, 40.6 feet southwest of triple apple trees, and 6.8 feet south of 6-inch walnut tree. Station mark is standard disk station mark in boulder, note 4. Reference mark no. 1 is standard reference disk in boulder, note 12c, 6 feet south of small clump of chestnut trees, and 23.124 meters (75.87 feet) from station in azimuth $276^{\circ}30'$. Reference mark no. 2 is standard reference disk in rock outcrop, note 12a, 3 feet west of rotten-rock outcrop, 10 feet west of 7-inch walnut tree, and 5.268 meters (17.28 feet) from station in azimuth $158^{\circ}57'$.

For notes in regard to marking of stations see p. 135.

Pisgah (Haywood County, L. G. Simmons, 1933).—On summit of Big Pisgah Mountain, about 25 miles from Asheville. To reach from Asheville, go west about 11 miles on routes 10 and 19, turn left at sign "Candler 1 mile", proceed to Candler, follow hard-surfaced road to foot of Mount Only, and continue to indicated parking place. Follow well-marked trail about three-fourths mile to summit of mountain, a sharp peak with low brushy growth and many outcropping rocks and boulders. Station is at north apex of triangular summit, 21 feet north-west of flat rock, and 29 feet north of inclined rock outcrop. Mark is standard disk station mark in rock outcrop, note 2. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is on top of summit, and 9.176 meters (30.10 feet) from station in azimuth $340^{\circ}05'$. No. 2 is down southwest slope of mountain, and 15.225 meters (49.95 feet) from station in azimuth $23^{\circ}59'$. Azimuth from station to fire tower at Spivey is $206^{\circ}02'48''$.

Sandymush (Haywood-Buncombe Counties, M. A. Hecht, 1933).—On summit of Sandymush Bald in the Newfound Mountains, about 6 miles northeast of Crabtree post office, and $10\frac{1}{2}$ miles north-northwest of Canton. To reach from Canton, go west about 7 to 8 miles on routes 19 and 23 to junction with route 209 just east of Lake Junaluska, proceed north 6.4 miles on route 209 to Crabtree post office, continue north on route 209 to junction with route 289, keep right on route 209, continue 3.8 miles to top of grade at divide in mountain, and go down grade 0.45 mile to end of truck travel at logging road which leads up slope to right (east). Large tree with triangular blaze is about 20 yards east of road at this point. Follow logging road about 200 yards to point where road crosses stream and stream appears to be coming down road, turn left up trail at triangle-blazed tree on right, and follow steep muddy trail about three-fourths mile up creek to cleared land. Peak is visible from this point, bearing slightly to right, about one fourth mile distant, and 350 feet in elevation. Station is on north end of summit, 73.3 feet east of twin dead chestnut trees, and 15.6 feet west of wire fence. Mark is standard disk station mark in boulder, note 4. Reference marks nos. 1 and 2 are standard reference disks in embedded flat rocks. No. 1 is on west brow of slope, 10 feet east of twin dead chestnut trees, and 19.278 meters (63.25 feet) from station in azimuth $112^{\circ}00'$. No. 2 is along south crest of ridge, in line of wire fence, and 13.890 meters (45.57 feet) from station in azimuth $20^{\circ}07'$. Reference mark no. 3 is a standard reference disk in boulder, on high wooded knoll, on east side of knob, and about 200 yards from station in azimuth $29^{\circ}11'11''$.

Water Rock (U.S.G.S.) (Haywood-Jackson Counties, M. A. Hecht, 1933).—On summit of Water Rock Knob (the most southerly of four high peaks in Plott Balsam mountains), about 8 miles northeast of Sylva, 8 miles west of Waynesville, and 4 miles northwest of Balsam. To reach from post office at Sylva, go east 5.35 miles on routes 19 and 23, or 0.75 mile beyond side road to north with arrows "Addie and Bluff Creek Road", turn left (north) onto road leading up east side of north fork of Scott Creek (water flume in creek at this point), follow rough steep road 1.8 miles up creek to white house of Jim Cogdill, and continue 0.3 mile beyond last house to end of truck travel. From sawmill, take left fork of logging road, follow to fork in canyon at trestle in tram road, follow trail up right canyon along flume a short distance to point where it bears left up ridge, follow this wide trail to 3 or 4 old cabins known as Spruce Camp (there is piped spring at this point and station site can be seen at head of canyon), and take trail to left up ridge to gap just below peak. Station site is on peak to right of gap about one fourth mile distant with 300-foot climb. Best route is up ridge along divide. Horses can be taken part way up ridge. Station mark is standard United States Geological Survey disk in buried stone, and 6 feet south of 15-inch balsam stump. Disk not stamped. Reference marks are standard reference disks in rock outcrops note 12a. No. 1 is along northwest slope of ridge, and 8.845 meters (29.02 feet) from station in azimuth $1^{\circ}52'$. No. 2 is on south slope of ridge, and 3.151 meters (10.34 feet) from station in azimuth $160^{\circ}11'$.

Sentell (Haywood County, M. A. Hecht, 1933).—About $3\frac{1}{2}$ miles east of Waynesville and $3\frac{1}{2}$ miles a little west of south of Clyde, on highest point of range of hills. To reach from Waynesville, go east about 3.4 miles on route 284 to top of gap at Pigeon Gap, follow badly washed-out wagon road which leads east parallel to highway and then turns left up mountain, continue about three fourths mile to abandoned house and barn, and keep straight ahead over broad trail to station site about three-fourths mile distant. Station is 25.5 feet west of twin 30-inch chestnut trees, 13 feet northeast of 15-inch hickory tree, and about 9 feet north of barbed-wire fence. Surface mark is standard station disk in buried boulder, note 4. Underground mark is standard station disk in boulder, note 9a.

Reference marks are standard reference disks in buried boulders, note 12c. No. 1 is on downward slope in line with Clyde, and 16.750 meters (54.95 feet) from station in azimuth $172^{\circ}51'$. No. 2 is in saddle of ridge, 3 feet north of wire fence corner, and 400 feet from station in azimuth $226^{\circ}24'39''$. No. 3 is on downward slope of ridge, 3 feet west of large chestnut tree, 5 feet north of wire fence, and 26.666 meters (87.49 feet) from station in azimuth $280^{\circ}02'$.

Guyot (U.S.G.S.) (Cocke-Sevier Counties, Tenn.; Haywood County, N.C., M. A. Hecht, 1933).—Station is 18 miles west of south of Newport, on summit of Mount Guyot, a peak of the Great Smoky Mountains on divide between North Carolina and Tennessee. To reach from Newport, go south about 17 miles on route 75 to Crosby post office, continue south 0.15 mile, cross bridge, turn right onto gravel road, proceed 2.6 miles to W. L. Valentine's home and nursery, continue 0.3 mile, cross bridge, turn left onto dim road, follow main-traveled road 1.7 miles to top of grade, take right fork, proceed 0.8 mile down hill, and to end of road at old house and barns which have been partially torn down. Take trail which leads south along west side of corn patch from between barn on left and chicken yard on right, take trail to right (west) leading to Indian Camp Creek at pole gate at small hut, cross creek, proceed about 200 yards, take left fork of trail, follow to top of Balsam Knob ("USGS BM 6355.9" painted on tree at this point), and take left trail along ridge to station site about three-fourths mile distant. Near summit of Mount Guyot, Appalachian Trail continues on over ridge to left. Bear right on up to peak which is about 100 yards distant. Station mark is standard United States Geological Survey disk in drill hole in buried sandstone boulder, stamped "TT No. 14D 1929". Reference marks are standard reference disks in buried boulders, note 12c. No. 1 is 9.60 meters (31.5 feet) from station in azimuth $145^{\circ}07'$. No. 2 is 17.02 meters (55.8 feet) from station in azimuth $237^{\circ}23'$.

Max Patch (Madison County, M. A. Hecht, 1933).—On summit of Max Patch Mountain, about $13\frac{1}{2}$ miles airline and 20 miles by road, north of Crabtree post office, $17\frac{1}{4}$ miles southeast of Newport, Tenn., and about one-fourth mile southeast of North Carolina-Tennessee State line. To reach from Canton, go west about 7 or 8 miles on routes 19 and 23 to junction with route 209 just east of Lake Junaluska, proceed north 6.4 miles on route 209 to Crabtree post office, continue north 5.8 miles to junction with route 289 at stone store, turn left onto route 289, continue 0.7 mile to junction with route 292 at creek crossing, turn right onto route 292, follow 11.75 miles to Max Patch Lodge, take upper left-hand road 0.2 mile, follow toll road to right at sign "Toll Road to Airport", and continue 0.65 mile to summit and station site. Station is in approximate center of cleared space used as landing field. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11c. No. 1 is near flagpole, and about 125 yards from station in azimuth $12^{\circ}14'13''$. No. 2 is 25.730 meters (84.42 feet) from station in azimuth $58^{\circ}00'$. No. 3 is 25.372 meters (83.24 feet) from station in azimuth $159^{\circ}11'$.

English (Cocke County, Tenn., A. H. Buchanan, 1891; 1934).—On western boundary of Cocke County, about $3\frac{1}{2}$ miles southwest of Carson Springs, on highest point of English Mountains. To reach from Carson Springs, go southwest about 500 feet from Tom's grocery store, turn right onto second road, and follow a short distance across two bridges to end of road. Take extreme right-hand trail to top of ridge, and follow trail to left along ridge to station site. Original station mark was north-and-south and east-and-west grooves with hole $1\frac{1}{2}$ inches deep at their intersection in top of rock, and with letters "USCS" in angles. Reference points were holes $1\frac{1}{2}$ inches deep with arrows pointing toward station, in tops of rocks at highest point of hill. Distances and bearings from station are: First, 22 feet $1\frac{1}{2}$ inches, N. 14° E.; second, 15 feet 5 inches, S. 72° E.; and third, 13 feet 11 inches, S. 32° E. In 1930, station was marked with standard disk station mark, note 2; and two standard reference disks were established in drill holes of old reference marks. No. 1 is 6.666 meters (21.87 feet) from station in azimuth $196^{\circ}54'$. No. 2 is 4.701 meters (15.42 feet) from station in azimuth $291^{\circ}18'$. In 1934, azimuth mark, consisting of standard reference disk in flat rock outcrop, note 12a, was established at base of 6-inch oak tree, 18 feet north of trail to summit, and 140 yards from station in azimuth $55^{\circ}30'08''$.

Black Mountain (Jackson-Haywood Counties, M. A. Hecht, 1933).—On summit of Black Mountain, about 17 miles airline and 34 miles by road east-southeast of Sylva. To reach from Sylva, go east 14.2 miles on North Carolina route 106 to bridge crossing Tuskasegee River, turn left onto dirt North Carolina route 281,

proceed 10.6 miles, pass cemetery on right, continue 0.2 mile, turn left onto dirt road just beyond bridge crossing, proceed 5.3 miles, take left-hand road on hillside, and continue 0.9 mile to end of truck travel at logging camp of Blackwood Lumber Co. Follow railroad right-of-way and well-beaten trail approximately 3 miles to scene of logging operations, and take any one of several trails which branch out from this point to summit of peak about $1\frac{1}{2}$ miles distant. Station is on northern edge of burnt-over peak, and 13 feet northeast of large outcropping rock which is higher than the one on which station is located. Station mark is standard station disk in rock outcrop, note 3. Reference marks are standard reference disks in rock outcrops, note 12b. No. 1 is on downward slope, and 13.538 meters (44.42 feet) from station in azimuth $40^{\circ}43'$. No. 2 is in outcrop higher than station, and 3.890 meters (12.76 feet) from station in azimuth $276^{\circ}53'$.

Hogback Mountain (Jackson County, M. A. Hecht, 1933).—On summit of Hogback Mountain, near Jackson-Macon County line, and approximately 10 miles airline and 15 miles by road east of Franklin. To reach from Franklin, go east toward Highlands 7.8 miles on United States route 64 (North Carolina route 28), turn left onto dirt and gravel road, proceed 5.5 miles along rough main-traveled road to Deep Gap, continue on foot along well-marked trail to right (old wagon road), and follow to summit. (This trail goes around mountain to an old field. Turn left here and follow old sled road to another field on top. Turn right here and follow along ridge to summit.) Total climb is about $1\frac{1}{2}$ miles. Station is 10 feet south of slightly higher rock outcrop, and 10 feet southeast of 8-inch water-oak stump. Station mark is standard station disk in rock outcrop, note 3. Reference marks are standard reference disks in rock outcrop, note 12b. No. 1 is on eastern downward slope of ridge, and 18.723 meters (61.43 feet) (slope) from station in azimuth $285^{\circ}38'$. No. 2 is along ridge in rock outcrop slightly higher than station, and 5.820 meters (19.09 feet) from station in azimuth $39^{\circ}51'$. Azimuth from station to fire tower on Rabun Bald is $18^{\circ}02'16''$.

Rattlesnake Cliff (Swain County, M. A. Hecht, 1933).—On northeasterly and highest of two peaks of range known as "Rattlesnake Cliff", about 3 miles airline and 7 miles by road southeast of Bryson City. To reach from courthouse at Bryson City, go east 1.6 miles on routes 10 and 23 to sign "Kirkland Creek Road", turn right, follow rough dirt road 0.25 mile to fork, take right fork, continue 0.75 mile, take left fork, continue 1.3 miles to home of Mr. Kirkland, and continue 0.25 mile to end of truck travel. Follow wagon road from point to left of home of R. C. Smith to fork with sign "Indian Land" tacked to tree, continue to open field, and continue through field to top from which point station site is visible. Bear left and follow blazed trail to station site. Total climb is about $2\frac{1}{2}$ miles. Station is in middle of flat heavily timbered summit, 35 feet east of 30-inch white-oak tree with triangular blaze, 17 feet west of scarred twin 12-inch water-oak trees, and 13 feet north of 15-inch water-oak tree. Surface mark is standard station disk in buried boulder, note 4. Underground mark is standard station disk in concrete, note 7a. Reference marks are standard reference disks in buried boulders, note 12c. No. 1 is on west edge of summit, 4 feet northeast of triangle-blazed 30-inch water-oak tree, and 9.868 meters (32.38 feet) from station in azimuth $137^{\circ}26'$. No. 2 is 8 feet west of 12-inch white-oak stump, 11 feet west of 12-inch water-oak tree, and 7.629 meters (25.03 feet) from station in azimuth $221^{\circ}57'$. Azimuth from station to fire tower on Wayah Bald is $32^{\circ}02'16''$.

Cheoah (U.S.G.S.) (Cherokee-Graham Counties, M. A. Hecht, 1933).—On main peak, known as Cheoah Bald, of range of mountains on northwest side of Nantahala River, $7\frac{1}{4}$ miles east of Robbinsville, 2 miles northwest of Hewitt Station on Murphy Branch of Southern Railway, and 5.5 miles north of Topton. To reach from junction of routes 10 and 108 at Topton, follow route 108 across overhead bridge towards Robbinsville 2.7 miles to sign "Buck Campbell Road", turn right onto this road, proceed 0.9 mile, cross railroad tracks, and continue to house of George Huscusson, who will direct party as to route to station site which requires at least $3\frac{1}{2}$ miles steep uphill climbing. Station mark is standard United States Geological Survey disk in buried boulder and stamped "U.S.C. & G.S. 1933." Reference mark no. 1 is standard reference disk in buried boulder, note 12c, along trail on top of ridge, and 22.803 meters (74.81 feet) from station in azimuth $53^{\circ}46'$. Reference mark no. 2 is standard reference disk in rock outcrop, note 12a, on west edge of slope, and 29.550 meters (96.95 feet) from station in azimuth $126^{\circ}21'$. Azimuth from station to fire tower on Wayah Bald is $325^{\circ}49'20''$.

Standing Indian (Macon-Clay Counties, M. A. Hecht, 1933).—On summit of Standing Indian Mountain in Yellow Mountain Range, about 16 miles airline and 25 miles by road east of Hayesville, $13\frac{1}{2}$ miles southwest of Franklin, and 3 miles north of North Carolina-Georgia State line. To reach from Franklin, go west about 15 miles on route 28 to Wallace Gap, continue 6 miles or about 1 mile beyond Black Gap, turn left onto side road, proceed 5.5 miles to Deep Gap and end of truck travel. Follow trail up ridge to left about 2 miles (900 feet elevation) to top. Arrow near top points to spring. Station is on north side of summit, 10 feet north of United States Forestry Service fire lookout tower, and about opposite middle of tower wall. Mark is standard station disk in rock outcrop, note 3. Reference marks nos. 1 and 2 are standard reference disks in rock outcrops, note 12b. No. 1 is on backbone of ridge, 60 feet northwest of fire tower, and 15.561 meters (51.05 feet) from station in azimuth $155^{\circ}59'$. No 2 is in front of entrance to and 5 feet east of fire tower, and 4.763 meters (15.63 feet) from station in azimuth $316^{\circ}15'$. Reference mark no. 3 is standard reference disk in rock outcrop, note 12a, 2.8 miles from United States route 64 along road leading to station, 32 feet north of 12-inch chestnut tree with triangular blaze, 40.9 feet north of center line of road, 20.2 feet west of 14-inch chestnut-oak tree, 16.3 feet southwest of 6-inch hickory tree, and 6 inches from 6-inch maple tree with triangular blaze, and 2 miles from station in azimuth $143^{\circ}14'20''$. Azimuth from station to fire tower on Wayah Bald is $172^{\circ}39'46''$.

Rabun 2 (Rabun County, Ga., M. A. Hecht, 1933).—On second highest peak in Georgia known locally as Kelly Bald Mountain, about 16 miles south of Franklin, N.C., and 4 miles south-southeast of Scaly, N.C., post office. Station is reached through famous Rabun Gap, whence the name. To reach from Franklin, go south about 14 miles on route 23 to State line, continue south 0.65 mile, turn left (east) onto gravel T-road at sign "17 mi. to Highlands, N.C.," follow main road 7.35 miles, pass small gas station and Scaly, N.C., post office, continue 1.3 miles, take T-road to right at arrow "Flats and Rabun Bald", proceed 1.3 miles, take left fork at arrow "Rabun Bald", continue 0.85 mile to arrow "Rabun Bald 2 mi." proceed 0.2 mile, and take left fork of road 1.1 miles to end of truck travel. Follow wide government trail about 1 mile to summit. Station is on north side of summit, and 45 feet north of United States Forest Service fire tower. Drill hole in rock, surrounded by chiseled square, in approximate location of station *Rabun* (1875) was recovered in 1933 and marked with standard station disk, note 3; and 3 standard reference disks in rock outcrops, note 12a, were established. No. 1 is 3 feet east of northeast corner of fire tower, and 14.103 meters (46.27 feet) from station in azimuth $344^{\circ}56'$. No. 2 is 10 feet west of southwest corner of fire tower, and 19.197 meters (62.98 feet) from station in azimuth $9^{\circ}45'$. No. 3 is on downward slope of peak, and 125 feet from station in azimuth $33^{\circ}24'$. Azimuth from station to fire tower on Standing Indian Mountain is $109^{\circ}40'03''$.

Tatham (U.S.G.S.) (Graham-Cherokee Counties, M. A. Hecht, 1933).—On summit of highest peak of Snowbird Mountains known locally as "Tatham Bald Mountain" and shown on United States Geological Survey Map as Teyahalee Bald, 4 miles north-northeast of Andrews, 13 miles northeast of Murphy, $3\frac{1}{4}$ miles south of Robbinsville, and 1 mile east of Tatham Gap. To reach from post office at Andrews, go east about 0.5 mile on route 10, turn left around Shell gas station onto dirt road, keep straight ahead across railroad tracks and concrete bridge with pipe rails for total distance from highway of 0.85 mile, keep straight ahead at crossroads, continue 0.15 mile, pass new white house on right, continue 0.1 mile to last house, proceed 4.7 miles to top of grade at gap, and continue down hill 0.2 mile to end of truck travel. Take logging road to right, and follow $1\frac{1}{2}$ miles (keeping right) to summit. Station is on east end of summit, 9 feet south of 10-inch triangle-blazed oak tree which was used by United States Geological Survey as a signal. Station mark is standard United States Geological Survey disk in concrete at center of top of stovepipe which is embedded in ground. Reference marks are standard reference disks in buried boulder, note 12c. No. 1 is on west downward slope, 10 feet southwest of 10-inch white-oak stump with triangular blaze, and 7.690 meters (25.23 feet) from station in azimuth $58^{\circ}15'$. No. 2 is on northwest top of ridge, midway between 6-inch twin white-oak stump and 10-inch water-oak stump, and 17.049 meters (55.93 feet) from station in azimuth $137^{\circ}25'$. Azimuth from station to spire of high school at Andrews is $23^{\circ}18'33''$.

Lance (Union County, Ga., M. A. Hecht, 1933).—On summit of what is known locally as Rocky Top, property of R. L. Lance, about $7\frac{1}{2}$ miles south-southeast of

Murphy, and 0.3 mile south of North Carolina-Georgia State line. To reach from Murphy, go south about 10 miles on route 19 to State line, continue south 2.0 miles or 1.2 miles beyond crossing Moccasin Creek, turn left onto dirt road through cut at top of grade, proceed 0.4 mile, take left fork at mail box on left with name "Conley", continue 1.1 miles, take left fork at bottom of grade, continue 0.6 mile, take dim right fork, continue 0.45 mile, take left-hand fork uphill after fording small stream, and continue about 0.5 mile to W. E. Kirkland's home on Conley Creek at end of truck travel. Proceed on foot along right side of creek (road narrows into path and crosses small creek), continue uphill to old abandoned cabin now used as barn, take trail to right which soon broadens into wagon road, follow to top of gap to point marked by tree with triangular blaze, follow trail uphill to left (very steep), and bear right along ridge to station site. Summit is heavily timbered. Station is on backbone of ridge, 50 feet west of summit, 13 feet southwest of 20-inch water-oak tree, and 46 feet west of twin 12-inch chestnut trees. Station mark is standard disk station mark in buried boulder, note 4. Underground mark is standard disk station mark in concrete, note 7a, 2 feet under ground. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is along backbone of ridge, 12 feet southwest of 14-inch chestnut-oak tree, and 17.105 meters (56.12 feet) from station in azimuth $117^{\circ}11'$. No. 2 is along north side of ridge, 10 feet east of 12-inch sourwood tree, and 12.345 meters (40.50 feet) from station in azimuth $174^{\circ}28'$.

Laurel (Cherokee County, M. A. Hecht, 1933).—On summit of Laurel Top Mountain, in Great Smoky Mountains, on property of United States Forest Service, about 16 miles east-southeast of Tellico Plains, Tenn. To reach from center of Tellico Plains, go south 0.5 mile to entrance to Cherokee National Forest, follow main forest road 20.8 miles to public camp grounds, take left fork, which becomes very steep, and continue about 6 miles to home of R. L. Fain and end of truck travel. Cross field to north and bear to right. Station is on third peak, first being Grassytop, second Lebo, and third Laurel Top. Total climb is about $1\frac{1}{2}$ miles. Station is along backbone of ridge, 150 feet south-southwest of summit, 15 feet southwest of peaked rock outcrop, and 60 feet north-northeast of large rock outcrop. Mark is standard station disk in rock outcrop, note 3. Reference mark no. 1 is standard reference disk in rock outcrop, note 12a, along south side of ridge, and 7.031 meters (23.07 feet) from station in azimuth $294^{\circ}30'$. Reference mark no. 2 is standard reference disk in large boulder, note 12c, along backbone of ridge, and 16.986 meters (55.73 feet) from station in azimuth $32^{\circ}51'$.

Pack Mountain (U.S.G.S.) (Cherokee County, M. A. Hecht, 1933).—On summit of highest of three peaks of highest mountain in Pack Mountain Range, about 23 miles by road west-southwest of Murphy, and 7 miles northeast of Copperhill, Tenn. To reach from Louisville & Nashville Railroad station in Murphy, go west 0.5 mile on route 10 to junction with route 28, turn right onto route 28, proceed 8.7 miles to junction with route 294, proceed 9.6 miles on route 294 to Postell post office on right-hand side of road, continue 0.75 mile on route 294 to church and school on left-hand side of road, turn left onto dirt road marked "Wehutty Road", proceed 1.0 mile, turn right, proceed 0.75 mile, turn left, proceed 1.25 miles, turn right, continue one-fourth mile to schoolhouse, turn left onto rough wagon road, and follow about one-half mile to home of Mr. Hughs and end of truck travel. Proceed on foot southwest along steep wagon road, pass last house, continue about 0.15 mile, turn right onto path which leads south to spring and continue on up slope about one-half mile to summit over very rough trail. Total climb about $1\frac{1}{2}$ miles. Station is on east end of peak, 16.8 feet northeast of 12-inch water-oak tree, and 32 feet west of 15-inch water-oak tree. Mark is standard United States Geological Survey disk in drill hole in rock outcrop. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is on eastern edge of summit, 2 feet northeast of 12-inch water-oak tree, and 11.339 meters (37.20 feet) from station in azimuth $5^{\circ}29'$. No. 2 is on western edge of summit, 15 feet west of 12-inch water-oak tree, and 8.301 meters (27.23 feet) from station in azimuth $98^{\circ}15'$. Fire tower on Sassafras Mountain is about 6 miles from station in azimuth $111^{\circ}51'16''$.

Supplementary points

Johnstown (Stokes County, L. G. Simmons, 1933).—Station is 12 miles east of Mount Airy, 4 miles south of Virginia-North Carolina State line, 19 miles north-west along route 89 from Danbury, and at junction of North Carolina routes 89 and 661. To reach from Mount Airy, go east about 14 miles on route 89 direct

to station site. Station is on southwest side of triangle formed by highway intersection, at R. G. Smith service station, 32 feet northeast of center line of route 661, and about 50 yards southeast of center line of highway junction. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks and azimuth mark are standard reference disks in concrete, note 11a. No. 1 is at northwest corner of triangle, and 23.845 meters (78.23 feet) from station in azimuth $125^{\circ}59'$. No. 2 is on north side of triangle, and 26.754 meters (87.78 feet) from station in azimuth $225^{\circ}30'$. Azimuth mark is at southeast corner of T. C. Frans' yard, and about 150 yards from station in azimuth $96^{\circ}35'45''$.

Brim (Surry County, N. C.; Patrick County, Va., L. G. Simmons, 1933).—Station is 9 miles east-northeast of Mount Airy, 1.2 miles west of Stokes-Surry County line, and approximately on Virginia-North Carolina State line. To reach from Mount Airy, go northeast 10 miles on route 80 (Stuart Road) or 1.0 mile beyond State line, turn right (east) onto dirt crossroads, proceed 0.45 mile, turn right (south) on graded T-road and continue 0.45 mile to State line and station site. Station is 20.5 feet west of center line of farm road, and 45 yards south of log tobacco barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks and azimuth mark are standard reference disks in concrete, note 11a. No. 1 is 200 yards south of Joe Anderson's house, at southwest corner of log tobacco barn, 20 feet west of center line of road, and 40.190 meters (131.86 feet) from station in azimuth $177^{\circ}34'$. No. 2 is 225 yards southwest of Joe Anderson's house, 50 yards southwest of log tobacco barn, 96.2 feet west of center line of farm road, and 23.098 meters (75.78 feet) from station in azimuth $277^{\circ}22'$. Azimuth mark is at southeast corner of Joe Anderson's stock barn, and about 300 yards from station in azimuth $164^{\circ}59'38''$.

Alberta (Surry County, L. G. Simmons, 1933).—About 6 miles south of Dobson, 13 miles northeast of Elkin, about 80 yards west of junction of routes 80 and 268, 25 feet north of center line of route 268, and 21 feet west of center line of lane leading to Mrs. Alberty's house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark and azimuth mark are standard reference disks in concrete, note 11a. No. 1 is 62 feet southeast of southeast corner of Mrs. Alberty's house, 8 feet north of southeast corner of hedge on east side of yard, and 55.416 meters (181.81 feet) from station in azimuth $172^{\circ}32'$. No. 2 (azimuth) is in Fairview Church yard, 62 feet west of northwest corner of church building, 52 feet south of center line of paved highway, and approximately 300 yards from station in azimuth $271^{\circ}45'48''$. *B.M. Fairview* (see description thereof) is 143.42 meters (470.5 feet) from station in azimuth $243^{\circ}25'10''$.

State Road (Wilkes-Surry Counties, L. G. Simmons, 1933).—About $9\frac{1}{2}$ miles west-southwest of Dobson, $5\frac{1}{4}$ miles north-northwest of Elkin, in pasture of J. E. Mosteller, 15.7 feet south of fence line, 33 feet south of center line of route 21, and about 80 yards west of Mosteller's house. To reach from Elkin, go about 6 miles northwest on route 21 to Wilkes-Surry County line. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 (azimuth) is across road from Hane's store, 28 feet west of center line of highway, 48 feet northeast of 26-inch white-oak tree, and approximately 0.4 mile from station in azimuth $128^{\circ}09'49''$. No. 2 is 15 feet north of center line of highway, directly opposite station, and 14.652 meters (48.07 feet) from station in azimuth $218^{\circ}43'$. No. 3 is in northeast fence corner of small pasture, 17 feet south of center line of highway, and 36.277 meters (119.02 feet) from station in azimuth $303^{\circ}42'$.

Mount Airy (Surry County, L. G. Simmons, 1933).—Station is in Mount Airy. To reach from junction of routes 80 and 121 at east end of new post office, go south 0.4 mile on route 80 to tabernacle on west side of highway at top of grade and at point where large stones line sides of highway. Station is in grassy plot of ground, about 11 yards north of north face of tabernacle, and 14 yards east of west side extended. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk in concrete, note 11a, about 5 yards south of southwest corner of Warren house on Rockford Street, and 45.281 meters (148.56 feet) from station in azimuth $197^{\circ}04'$. Reference mark no. 2 is standard reference disk in rock outcrop at top of bank, note 12a, and 41.209 meters (135.20 feet) from station in azimuth $274^{\circ}31'$. Azimuth mark is standard reference disk in concrete, note

11a, just inside fence line on east side of South Street, and approximately 250 yards from station in azimuth $70^{\circ}48'40''$.

B. M. Fairview (Surry County, L. G. Simmons, 1933).—About 6 miles south of Dobson, 13 miles northeast of Elkin, 65.8 feet north of northeast corner of Standard Oil gas station, and 49 feet east of center line of Dobson highway. Marked by standard Coast and Geodetic Survey bench mark disk. Station *Alberta* (see description thereof) is 143.42 meters (470.5 feet) from station in azimuth $63^{\circ}25'13''$.

Wilkes (Wilkes County, L. G. Simmons, 1933).—About three-fourths of a mile north of center of North Wilkesboro, on property of Judge Finley Estate. To reach from North Wilkesboro, go east 0.25 mile and north 0.85 mile on route 18 to dirt road just beyond paved street junction, turn left and proceed about 200 feet to station site. Station is in high pasture land, 18 feet east of center line of road at point where it turns sharply to west, and 94 feet northwest of 8-inch oak tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 12 feet east of center line of dirt road, 9 feet west of 8-inch oak tree, and 27.267 meters (89.46 feet) from station in azimuth $337^{\circ}05'$. No. 2 is 12 feet south of dirt road and 30.100 meters (98.75 feet) from station in azimuth $67^{\circ}39'$. Azimuth mark is fire tower on Pores Knob (tower is centered over station *Poore*), approximately $8\frac{1}{2}$ miles from station in azimuth $2^{\circ}04'03''$.

Taylor (Alexander County, L. G. Simmons, 1933).—About 1 mile west of Taylorsville, on summit of Gravelly Hill, on property of Dr. Edwards. To reach from courthouse at Taylorsville, follow route 90 west to junction of routes 90 and 16, turn north onto route 16, proceed 0.1 mile, and take left dirt fork leading to summit of Gravelly Hill. Station is 360 feet west of highway, and about 11 feet southeast of dim road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 17.917 meters (58.78 feet) from station in azimuth $249^{\circ}51'$. No. 2 is 9.105 meters (29.78 feet) from station in azimuth $165^{\circ}03'$. Azimuth from station to spire of Methodist Church in Taylorsville is $277^{\circ}39'56''$.

Blowing Rock (Watauga County, L. G. Simmons, 1933).—Station is 1.35 miles southeast of junction of routes 321 and 24 in town of Blowing Rock, on right-of-way of United States route 321, 0.55 mile northwest of dirt road leading to rock itself, 65 yards west along highway from two stone gate portals on north side of road, on outside of curve in highway concave to south, and 17 feet south of center line of highway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk in boulder, note 12c, 35 feet south of center line of highway, and 8.714 meters (28.59 feet) from station in azimuth $47^{\circ}35'$. Reference mark no. 2 is standard reference disk in concrete, note 11a, 15 feet south of center line of highway, and 17.170 meters (56.33 feet) from station in azimuth $247^{\circ}05'$. Azimuth mark is standard reference disk, note 12a, in top of Blowing Rock, and about one-half mile from station in azimuth $316^{\circ}59'26''$.

Hartland (Burke-Caldwell Counties, L. G. Simmons, 1933).—About 8 miles southwest of Lenoir and 9 miles north-northeast of Morganton, 23.25 feet west of center line of route 18 at point where highway crosses Burke-Caldwell county line, and 7.2 feet west of fence line. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on north side of dirt road leading from highway to R. M. Courtney's house, at southwest corner of lot owned by Ernest Setzer, about 150 yards from route 18, about opposite sawmill, and approximately one-fourth mile from station in azimuth $184^{\circ}16'02''$. No. 2 is 17 feet east of center line of route 18, and 13.087 meters (42.94 feet) from station in azimuth $250^{\circ}25'$. No. 3 is 17 feet west of center line of route 18, 1.5 feet east of fence, 38 feet south of county-line monument, and 18.111 meters (59.42 feet) from station in azimuth $356^{\circ}54'$. *Burke-Caldwell county-line stone* (see description thereof) is 6.68 meters (21.9 feet) from station in azimuth $343^{\circ}48'$.

Lenoir (Caldwell County, L. G. Simmons, 1933).—Station is on roof of Union National Bank in Lenoir, 4.55 feet from outer edge of east parapet, and 4.26 feet from outer edge of north parapet. Mark is standard disk station mark in concrete, note 1c. Reference marks are standard reference disks in parapet of roof. No. 1 is in east parapet, and 6.422 meters (21.07 feet) from station in azimuth $322^{\circ}04'$. No. 2 is in north parapet, and 6.340 meters (20.80 feet) from station

in azimuth $73^{\circ}35'$. Azimuth from station of water tank of Lenoir Furniture Corp. is $46^{\circ}59'48''$. Station *Circle* (see description thereof) is 32.715 meters (107.33 feet) from station in azimuth $220^{\circ}42'$.

Circle (Caldwell County, L. G. Simmons, 1933).—Station is in Lenoir, on west side of Monument Circle, about half-way between monument and curb around circle, and at intersection of main streets. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Azimuth from station to spire at weather vane of First Baptist Church is $162^{\circ}19'18''$. Station *Lenoir* (see description thereof) is 32.715 meters (107.33 feet) from station in azimuth $40^{\circ}42'$.

Bridgewater (Burke-McDowell Counties, L. G. Simmons, 1933).—About $8\frac{1}{4}$ miles east-northeast of Marion, $10\frac{1}{2}$ miles southwest of Morganton, and one-half mile southwest of Bridgewater. To reach from courthouse in Morganton, go west 11.8 miles on route 70 direct to station site at Burke-McDowell county line. Station is on line with county-line signs, 13 feet south of top of south cut, and 39 feet from center line of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on bank on north side of road, in edge of pines, and about 450 yards from station in azimuth $263^{\circ}38'36''$. No. 2 is 32.5 feet south of center line of road, and 19.447 meters (63.80 feet) from station in azimuth $99^{\circ}40'$. No. 3 is on county line, 53 feet north of center line of road, and 27.850 meters (91.37 feet) from station in azimuth $179^{\circ}48'$.

Burke-Caldwell county-line stone (Burke-Caldwell Counties, L. G. Simmons, 1933).—About 8 miles southwest of Lenoir, 9 miles north-northeast of Morganton, and at Burke-Caldwell county line near point where route 18 crosses line. (Type of mark not described.) Station *Harland* (see description thereof) is 6.68 meters (21.9 feet) from station in azimuth $163^{\circ}48'$.

Grant (McDowell County, L. G. Simmons, 1933).—On summit of Grant Mountain, about 2 miles south-southeast of center of Marion, and on property of J. L. Morgan. To reach from courthouse in Marion, go south 2 miles on route 19, take right-hand dirt fork, follow parallel to main highway 0.3 mile, and turn right onto rough wagon road leading up mountain. Trucks can proceed as far as next fork. Take right fork and follow to ridge of summit. Station is about one-third of length of summit from west end. Station mark is standard disk station mark in boulder, note 4. In 1934, dirt had been dug from around boulder with station mark and it had been moved from its original position. Both reference marks were found to have been destroyed. No. 1 was 10.880 meters (35.70 feet) from station in azimuth $278^{\circ}11'$. No. 2 was 6.479 meters (21.26 feet) from station in azimuth $20^{\circ}18'$. Azimuth from station to dome of First National Bank in Marion was $153^{\circ}43'59''$.

Marion (McDowell County, L. G. Simmons, 1933).—Station is in Marion, on northwest corner of roof of McDowell County Courthouse, in center of inverted catch basin over drainpipe. Station mark is probably standard disk station mark. Reference marks are probably standard reference disks in concrete curbing of parapet wall. No. 1 is 5.838 meters (19.15 feet) from station in azimuth $238^{\circ}35'$. No. 2 is 4.751 meters (15.59 feet) from station in azimuth $345^{\circ}29'$. Azimuth from station to black standpipe on west side of Marion is $54^{\circ}05'20''$. Station *Lawn* (see description thereof) is 46.353 meters (152.08 feet) from station in azimuth $21^{\circ}10'$.

Lawn (McDowell County, L. G. Simmons, 1933).—Station is in Marion, on southwest corner of McDowell County Courthouse lawn, in midst of clump of shrubbery, 9.76 feet from center of concrete post in corner of driveway, and 4.5 feet east of back side of sidewalk curb. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Azimuth from station to First Baptist Church spire is $147^{\circ}22'32''$. Station *Marion* (see description thereof) is 46.353 meters (152.08 feet) from station in azimuth $201^{\circ}10'$.

Spivey (Buncombe County, L. G. Simmons, 1933).—On summit of Spivey Mountain, about $5\frac{1}{2}$ miles west of center of Asheville. To reach from West Asheville, follow car line to junction of routes 19, 23, and 191, proceed west 0.9 mile on routes 19 and 23, turn right onto Johnson Boulevard, continue straight ahead to sign "Spivey Mt. Tower", and follow main road to fire tower at summit. Station is in center of roadway circle. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk in concrete foundation of southwest leg of tower, and 17.420 meters (57.15 feet) from station in azimuth $128^{\circ}30'$. Reference mark no. 2 is standard reference disk in concrete, note 11a, and 28.984 meters (95.09 feet)

from station in azimuth $220^{\circ}15'$. Azimuth from station to chimney of Enka Rayon Plant is $0^{\circ}54'00''$.

Asheville (Buncombe County, L. G. Simmons, 1933).—Station is in Asheville, in center of 4-inch ventilating pipe in northwest corner of roof of Flat Iron Building, 7.9 feet from inside northwest corner of parapet. Station mark is standard disk station mark. Reference marks are standard reference disks. No. 1 is in northwest concrete pier of northeast radio tower, and 26.90 meters (88.25 feet) from station in azimuth $251^{\circ}57'$. No. 2 is in northwest pier of southwest radio tower, and 18.32 meters (60.10 feet) from station in azimuth $348^{\circ}14'$. Azimuth from station to black water tank in West Asheville is $61^{\circ}23'15''$. Station *Alley* (see description thereof) is 67.800 meters (222.44 feet) from station in azimuth $183^{\circ}58'$.

Alley (Buncombe County, L. G. Simmons, 1933).—Station is in Asheville, on southwest corner at intersection of alleys behind Sears Roebuck and Bon Marche stores, directly north across street from Flat Iron Building, and at northeast corner of parking lot. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Azimuth from station of most southernly ornamental cross on east face of highest part of Arcade Building is $78^{\circ}21'19''$. Station *Asheville* (see description thereof) is 67.800 meters (222.44 feet) from station in azimuth $3^{\circ}58'$.

Waynesville (Haywood County, L. G. Simmons, 1933).—In Green Hill Cemetery, Waynesville. To reach from courthouse in Waynesville, go southwest 0.6 mile on routes 19 and 23, and take left asphalt fork leading upgrade to cemetery. Station is in northwest corner of cemetery, 20.55 feet west of curb around roadway, 7.05 feet west of double pine tree on west side of road, and 32.3 feet from center of "W" in Wells on large monument. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is west of roadway which encircles cemetery, and 25.757 meters (84.50 feet) from station in azimuth $20^{\circ}29'$. No. 2 is on slope towards main asphalt road leading to cemetery, and 10.687 meters (35.06 feet) from station in azimuth $157^{\circ}45'$. No. 3 is 14 feet west of routes 19 and 23, about 20 yards north of asphalt road leading to cemetery, 3 feet west of first telephone and power-line pole south of white house on west side of highway, and approximately 200 yards from station in azimuth $184^{\circ}19'58''$.

Carver (Jackson County, M. A. Hecht, 1933).—On summit of Carver Mountain, about $3\frac{1}{4}$ miles east of Sylva, $1\frac{1}{4}$ miles south of Addie, and $1\frac{1}{2}$ miles southeast of Beta. To reach from post office at Sylva, go east 2.6 miles on route 10 or 1.55 miles beyond point where pavement changes from asphalt to concrete, turn right at Beta railroad siding, cross tracks, bear left along main road, pass schoolhouse, keep left-hand road through gap at point where right-hand road leads upgrade, proceed about one-fourth mile, and take right fork at large house. Start climb from point about one-half mile beyond last fork, opposite cemetery. Carver Mountain is easily identified from Beta railroad siding as nearest high peak bearing southeast about 2 miles distant. Station is 8 feet north of 12-inch blazed pine tree, 25 feet southeast of 30-inch water-oak tree, and 15 feet northwest of corner of wire fence. Surface and underground marks are standard station disks in buried boulders, notes 4 and 9a. Reference mark no. 1 is standard reference disk in rock outcrop, note 12b, on downward slope, 10 feet west of 12-inch blazed yellow-pine tree, and 4.480 meters (14.70 feet) from station in azimuth $56^{\circ}21'$. No. 2 is in corner of wire fence, 12 feet east of 12-inch blazed yellow-pine tree, and 4.090 meters (13.42 feet) from station in azimuth $329^{\circ}29'$.

Dillsboro (Jackson County, M. A. Hecht, 1933).—About $1\frac{1}{2}$ miles southwest of Dillsboro, on summit of highest peak in vicinity (about 3,000 feet elevation) known locally as "High Point." To reach from Dillsboro, go south about 100 yards on United States route 23 to first road to right at sign "Macktown Road", follow this main-traveled road 0.6 mile, cross creek, keep to right, continue 0.5 mile to forks, take left fork, cross creek, and follow main-traveled road (bearing to left) 1.3 miles to home of Tom McMahon at end of truck travel. Follow trail which starts in Mr. McMahon's cornfield directly in front of bushy-top white oak, up hill to fence crossing, follow path leading diagonally across field to forks at bottom of hill, take left trail up hill to timber line, continue to top of ridge, and bear left along ridge to station site. Surface and underground marks are standard disk station marks in buried boulders, notes 4 and 9a. Reference marks are standard reference disks in boulders, note 12c. No. 1 is on downward

slope of summit, and 8.10 meters (26.6 feet) from station in azimuth $59^{\circ}53'$. No. 2 is along west edge of ridge, and 19.42 meters (63.7 feet) from station in azimuth $149^{\circ}07'$.

Sylva (Jackson County, M. A. Hecht, 1933).—About 1 mile west of Sylva and one-half mile east of Dillsboro, along highway. To reach from Sylva, go west 1 mile on United States routes 19 and 23 to sign "Dillsboro City Limit" which is about 100 yards east of concrete overhead bridge. Station is on grassy knoll about 50 yards southeast of bridge, and 50 yards south-southwest of Shell gasoline station just east of bridge. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is just south of fence line around hill, and 26.735 meters (87.71 feet) (slope) from station in azimuth $223^{\circ}29'$. No. 2 is in range with walnut tree, 15 feet higher than station, and 22.92 meters (75.2 feet) (slope) from station in azimuth $331^{\circ}02'$. No. 3 is in top of southeast corner of concrete bridge abutment on route 19, about 36 feet west of railroad, and approximately 300 feet from station in azimuth $67^{\circ}27'38''$.

Bryson (Swain County, M. A. Hecht, 1933).—On grassy knoll on east side of Galbreth Br. Road, about 3.2 miles east-northeast of Bryson City. To reach from square in Bryson City, go east about 2.0 miles on United States route 19 (North Carolina route 10) to bridge across Tuckasegee River, continue 0.6 mile on route 19 to dairy on right and sign "Galbreth Br. Road", turn left, and follow dirt road 0.9 mile to station site. Station is about 50 yards east of road, and 19.5 feet southeast of plain stone tombstone which is encircled by rectangular pole fence. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 15 feet east of center line of road, about 50 yards south along road from cottage on west side of road, and about 150 yards from station in azimuth $33^{\circ}53'35''$. No. 2 is on south edge of grassy knoll, and 14.982 meters (49.15 feet) from station in azimuth $41^{\circ}03'$. No. 3 is toward nearest part of road, and 20.350 meters (66.76 feet) from station in azimuth $144^{\circ}39'$.

Wayah (Macon County, M. A. Hecht, 1933).—On summit of Wayah Bald, in Nantahala Mountains, about 10 miles airline and 22 miles by road due west of Franklin. To reach from junction of routes 28 and 23 at Franklin, go west 4.5 miles on route 28 to sign "Wayah Bald 12 miles", turn right, follow national forest road 9.1 miles to gap, turn right at sign "Wayah Bald 3 miles", and follow this road to summit and station site. Station is 12 feet north of northeast leg of United States Forest Service lookout tower. Mark is standard station disk in rock outcrop, note 3. Reference mark no. 1 is standard reference disk in rock outcrop, note 12b, in line with ranger's cabin, 15 feet from southeast leg of tower, and 12.365 meters (40.57 feet) from station in azimuth $41^{\circ}57'$. Reference mark no. 2 is standard reference disk in concrete footing of northwest leg of tower, and 5.254 meters (17.24 feet) from station in azimuth $103^{\circ}01'$. Reference mark no. 3 is standard reference disk in rock outcrop, note 12a, along top of ridge, about 40 feet southeast of road leading to station, and 150 feet from station in azimuth $36^{\circ}06'$. Azimuth from station to fire tower on Standing Indian is $352^{\circ}40'15''$.

Franklin (Macon County, M. A. Hecht, 1933).—About one-half mile west of main street of Franklin, on grounds of Trimont Hotel, 12 feet south of southwest corner of tennis court, 30 feet east of center line of dirt road leading south around hotel grounds from Harrison Avenue, almost in line with south side of hotel building, and 126.8 feet west of extreme southwest corner of building. Station *Standing Indian* (see description thereof) is visible between old barn-woodshed and tall oak tree in azimuth $39^{\circ}33'05''$. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is across road from old barn-woodshed, 6.5 feet east of 18-inch stump on east side of road, and 16.485 meters (54.08 feet) from station in azimuth $17^{\circ}04'$. No. 2 is on property of Mr. Anderson, $2\frac{1}{2}$ feet north of fence line on south side of field, about 36 feet east of 8-inch walnut tree 1 foot south of fence line, about 100 feet a little east of north of northeast corner of large white house, about 20 feet north of northeast corner of yard, and approximately one-fourth mile from station in azimuth $79^{\circ}57'15''$. No. 3 is on east edge of Dr. Lyle's lawn, 14 feet west of center line of dirt road, directly across road from old tunnel, 9 paces east of east edge of house, 3 feet southeast of apple tree, and 18.81 meters (61.71 feet) (slope) from station in azimuth $143^{\circ}39'$.

Welch (Macon County, M. A. Hecht, 1933).—About in center of long sloping ridge, about $3\frac{1}{4}$ miles northeast of Topton, and $1\frac{1}{2}$ miles southeast of Nantahala, on property of Mr. Mason. To reach from Topton, go east 3.7 miles on United

States route 19 and North Carolina route 10 to sign "Wayah Bald Motor Road, 26 miles", turn right onto this road, and proceed 3.5 miles or 0.25 mile beyond white house and store on right-hand side of road and end of truck travel. Cross branch on foot log at end of cornfield, follow path along edge of corn field to broad trail leading up hill through woods along old creek bed, continue to cleared field, bear right, cross small branch, and follow through cornfield to top of ridge. Station is on center of ridge between two cornfields, 24.3 feet south of 24-inch stump, 19.5 feet south of lone hickory tree, and about 100 yards down ridge from 4 power-line poles. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11a. No. 1 is along saddle of ridge, about 8 feet south of tree line, and 27.45 meters (90.1 feet) from station in azimuth 181°08'. No. 2 is along Wayah Bald gravel road, 12 feet south of center line of road, 13 feet north-northwest of north side of log corner, about 15 yards south of W. R. McMahan's house, and approximately one-half mile from station in azimuth 208°36'27". Reference mark no. 3 is standard reference disk in buried boulder, note 12c, along center of ridge, in line with station and lone locust tree which is 5 feet south of mark, and 18.10 meters (59.4 feet) from station in azimuth 352°35'.

Topton (Graham County, M. A. Hecht, 1933).—About 1¼ miles north-northeast of Topton and 7¼ miles east-southeast of Robbinsville. To reach from junction of routes 10 and 108 at Topton, go north 2.5 miles on route 108 (crossing overhead bridge) or about 250 feet beyond observation platform overlooking Nantahala Gorge to gap in mountain side road with arrow "Buck Cambell Road." Station is on low level knoll to right (north) of cleared gap, 41.4 feet north of center line of road, about 100 yards west along road from observation platform, 21.0 feet north of edge of 10-foot rock bluff (road cut), 38.0 feet west of telephone pole, and 25 yards east of "Buck Cambell Road". Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in sandstone outcrops, note 12a. No. 1 is 20 feet northwest of center line of road, 30 feet west-southwest of telephone pole, and approximately one-fourth mile from station in azimuth 71°14'01". No. 2 is on edge of rising slope, and 9.24 meters (30.3 feet) from station in azimuth 153°04'. No. 3 is on edge of rising slope, and 8.535 meters (28.00 feet) from station in azimuth 207°13'.

Hayesville (Clay County, M. A. Hecht, 1933).—About one-half mile south of courthouse at Hayesville, on land of John Swanson. To reach from courthouse, go south from southwest corner of square on road marked "Young Harris Road", continue about 75 yards, keep main road down hill, continue 0.3 mile to forks, take left fork up hill, pass school on left, and continue 0.3 mile to top of grade at junction with dirt road on left. Station is on highest part of low wooded knoll about 25 yards west of main road at this point, about 20 feet east of west edge of slope, 39.4 feet east of fence line, and 19.2 feet south of 6-inch oak tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 inches west of fence line, and 24.885 meters (81.64 feet) from station in azimuth 145°07'. No. 2 is between two dirt roads, 12 feet north of center line of road leading to station, 15 feet southwest of center line of other road which leads to farmhouse, 3 feet west of small oak tree, 25 yards west of center of west side of frame farmhouse, directly across road from chicken house, and about 175 yards from station in azimuth 290°29'14". No. 3 is 6 inches east of fence line, 1 foot west of line between station and 12-inch oak tree, and 22.60 meters (74.1 feet) from station in azimuth 26°35'.

Fain (U.S.G.S.) (Cherokee County, M. A. Hecht, 1933).—On bald knob about 2½ miles north of Murphy, and ½ mile southwest of and about 150 feet lower than Fains Knob. To reach from Murphy, follow main street northwest from center of town (passing Dickey Hotel and post office) to bridge crossing Valley River, continue 0.2 mile, take right fork of asphalt road to dirt road turning left directly opposite small brick mill building, turn left, continue 1.25 miles to top of grade where main road continues straight ahead, take right fork (very rough) up ridge, follow about 0.5 mile to point where main road turns left into draw and old wagon road leads up ridge to right, take right fork (very steep) up ridge about 0.35 mile to point where road bears right around mountain to top of ridge, turn sharp left and continue 0.4 mile to top of ridge, and follow along ridge about 0.25 mile to station site. Station is in apple orchard in center of long level ridge, about 50 yards from south end, and 6 feet east of dim road leading to

it. Surface mark is standard United States Geological Survey bench mark, stamped "U.S.C. & G.S. 1933", in drill hole on top of 4- by 6-inch cut-stone post. Underground mark is standard disk station mark in concrete, note 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at edge of easterly slope of ridge, nearly in line with station *Lance*, about 8 feet northwest of large apple tree, and 14.914 meters (48.93 feet) from station in azimuth 353°56'. No. 2 is along center of ridge, 6 feet east of center line of dim road leading to station, 3 feet west of cultivated area, and about 150 yards from station in azimuth 212°58'14". No. 3 is along center of ridge, about 9 feet east of dim dirt road leading to station, 7 feet south of apple tree, and 20.586 meters (67.54 feet) from station in azimuth 218°30'.

Murphy (Cherokee County, M. A. Hecht, 1933).—On property of First Methodist Episcopal Church in Murphy, on leveled part of grassy meadow between level of churchyard and street and of small branch, 25.595 meters (83.97 feet) east of center line of route 10, 28.81 meters (94.5 feet) south of most westerly of two extreme southern corners of church, and 29.09 meters (95.4 feet) southwest of most easterly of two extreme southern corners of church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk in concrete, note 11a, in grassy meadow, and 18.546 meters (60.85 feet) from station in azimuth 179°27'. Reference mark no. 2 is standard reference disk in concrete, note 11c, in north end of fifth step from bottom of steps on front (west) side of north wing of Murphy High School building, and about 250 yards from station in azimuth 234°52'06". Reference mark no. 3 is standard reference disk in concrete, note 11a and 12.965 meters (42.54 feet) from station in azimuth 349°30'.

GOLDSBORO TO LITTLE RIVER, S.C. AND MARIETTA TO LINCOLNTON

Principal points

Mount Olive (Wayne County, R. D. Horne, 1933).—Station is at Mount Olive, in yard at rear of Mount Olive High School building, on line with northwest side, and 36.7 feet northwest of north corner of building. To reach from main part of city, go northwest about 0.5 mile on James Street to end of street and high school. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is about 4 inches below surface of ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 45 feet southeast of center line of United States route 117 (North Carolina route 40), 60 feet northeast of northeast gasoline pump of Shell service station on southeast side of highway, and approximately 0.45 mile from station in azimuth 252°05'50". No. 2 is 15 feet southwest of street along northeast side of school grounds, on line with row of trees along northeast edge of school grounds, 113.5 feet northeast of east corner of building, and 179.18 feet from station in azimuth 267°43'. No. 3 is 10 feet southeast of ditch along northwest side of school grounds, on line with row of trees along northeast edge of school grounds, 147 feet north of north corner of building, and 124.00 feet from station in azimuth 188°12'.

Alphin (Duplin County, R. D. Horne, 1933).—About 10¼ miles north of Kenansville, 10½ miles northeast of Warsaw, and 7¼ miles southeast of Mount Olive, on land owned by Leonard Alphin and occupied by Melvin Outlaw. To reach from intersection of Center and James Streets in Mount Olive, go east 1.6 miles on East James Street and road into which it leads or 0.35 mile beyond crossing of small bridge, and take right fork at point with large signboard on left. Proceed 1.95 miles and keep straight ahead at crossroads following arrow "Kenansville 18 Miles". Continue 5.7 miles on main road or 0.65 mile beyond dim crossroads, and turn sharp left onto sandy road opposite a white one-story house on right. Follow this road 1.6 miles to old Will Sloan house on east side of road and station site. Station is 32 feet east of southeast corner of barn and 143 feet east of southeast corner of house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 168 feet east of the center line of dirt road, 2 feet south of drainage ditch running east from road, and 195.60 feet from station in azimuth 16°18'. No. 2 is 4 meters (13 feet) west of center line of road leading to station, 12 meters (39 feet) southeast of southeast corner of tobacco barn, 25 meters (82 feet) northeast of northeast corner of tobacco barn opposite entrance to barnyard, and approximately 0.25 mile from station in

azimuth $10^{\circ}04'10''$. No. 3 is 47.3 feet west of southeast corner of negro house, 37 feet east of center line of dirt road, 3 feet east of an 8-inch tree, and 187.00 feet from station in azimuth $92^{\circ}36'$. Azimuth from station to aluminum water tank with black top in Mount Olive is $130^{\circ}43'10''$.

Ireland (Sampson-Duplin Counties, R. D. Horne, 1933).—Station is 11.5 miles northeast of Clinton and 2 miles west of Faison, on property owned by Mrs. M. P. Fearington and managed by Mrs. S. R. Ireland. To reach from junction of routes 40 and temporary route 403, 1 block south of railroad station at Faison, go west 2.05 miles on route 403 to station site. Station is in small cleared area in thick pine woods, 67 feet south of center line of route 403, 30.2 feet south-southwest of 18-inch triangle-blazed pine, and on Sampson-Duplin County line. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 37.5 feet south of center line of road, 8.5 feet west of Duplin-Sampson county-line sign, and 97.46 feet from station in azimuth $275^{\circ}20'$. No. 2 is 40 feet north of center line of route 403, 75 feet southwest of southwest corner of Ross Clum's house, and approximately 0.4 mile from station in azimuth $278^{\circ}47'35''$. No. 3 is 43 feet north of center line of route 403, 65 feet south of 8-inch, double-trunk, blazed pine tree, and 158.73 feet from station in azimuth $135^{\circ}31'$.

Everton (Duplin County, R. D. Horne, 1933).—Station is 4 miles northeast of Warsaw, at Williams crossroads, on property of Mr. G. L. Everton. To reach from intersection of routes 24 and 40 in Warsaw, go north on route 40, turn right onto dirt road just after passing railroad station, and continue 4.1 miles to Williams crossroads and station site. Station is 53 feet southeast of center line of road to Warsaw, 78 feet southwest of center line of road to Kenansville, and 106 feet north of north corner of Mr. Everton's large white house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 17 feet northwest of center line of road to Faison, 7 feet south of south corner of red barn, and 141.75 feet from station in azimuth $189^{\circ}01'$. No. 2 is along Kenansville Road, 355 yards southeast of signboard at road intersection, at north corner of large field southeast of Mr. Everton's house, 1.5 feet west of corner fence post, 15 feet southwest of center line of road, 12 feet northwest of deep drainage ditch, and approximately 355 paces from station in azimuth $287^{\circ}28'56''$. No. 3 is 8 feet north of north corner fence post of fenced lot, 17 feet southeast of center line of road to Warsaw, and 158.3 feet from station in azimuth $53^{\circ}27'$.

Warsaw (Duplin County, R. D. Horne, 1933).—In the city of Warsaw, 69 feet north of center line of College Avenue (North Carolina route 24), about 150 feet west of Atlantic Coast Line Railroad track, on line with north (rear) side of Texaco service station, and 84 feet west of northwest corner thereof. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects about 8 inches. Reference mark no. 1 is standard reference disk, in north curb of College Avenue, in front of Texaco service station, 24 feet west of west curb of Railroad Avenue, and 107.92 feet from station in azimuth $234^{\circ}00'$. Reference mark no. 2 is a standard reference disk in concrete, note 11a, 1 foot west of northwest corner of woven-wire fence around National Oil Co.'s bulk station, 36 feet east of east rail of Atlantic Coast Line Railroad track, and approximately 0.2 mile from station in azimuth $327^{\circ}36'17''$. Reference mark no. 3 is standard reference disk in south curb of College Avenue, in front of small yellow building which is office of Texas Co., 170 feet west of west curb of Railroad Avenue, and 106.80 feet from station in azimuth $23^{\circ}06'$.

Robinson (Sampson County, R. D. Horne, 1933).—About $5\frac{1}{4}$ miles north-northeast of Clinton and $11\frac{1}{4}$ miles northeast of Ingold, on land owned by W. T. Robinson of Moultonville, N.C. To reach from Clinton, go east 4.6 miles on route 24 to Robinson's store at Moultonville railroad station, turn left (north) onto dirt road, and proceed 1.3 miles to T-road intersection with large oak tree in center of road. Station is in field just north of this intersection, about 5 feet west of prolongation of center line of north-and-south road, 42 feet north of center line of east-and-west road, 18.4 feet northeast of southwest corner of tobacco barn, and 17.7 feet southeast of northeast corner of tobacco barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is 2 inches below surface of ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 12 feet north of center line of road, 175 feet east of road intersection, and 179.84 feet from station in azimuth $280^{\circ}07'$. No. 2 is 15 feet east of center line of road, 45 feet south of

drainage ditch, and approximately 0.5 mile from station in azimuth $6^{\circ}11'09''$. This mark is not visible from ground without clearing some small trees just east of road about midway between station and mark. No. 3 is 10 feet east of center line of road, 225 feet south of center line of the east-and-west road, and 298.75 feet from station in azimuth $17^{\circ}20'$.

More (Duplin County, R. D. Horne, 1933).—About 16 miles airline southeast of Clinton and 4.55 miles south-southeast of Warsaw, on property owned by negro community association managed by Isaih More. To reach from Clinton, follow route 24 to Warsaw and turn right (south) onto dirt county road just after crossing railroad track. Proceed 4.55 miles on this road, which leads to Magnolia, to station site. Station is 50 feet south of southeast corner of wooden building (probably school), 52 feet east of center line of dirt road, 18 feet east of 6-inch blazed oak tree, and 18.8 feet east of blazed pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on narrow strip of land between road and railroad, 35 feet east of east rail of railroad, 44 feet west of center line of road, on line of telephone poles, and approximately 0.30 mile from station in azimuth $346^{\circ}19'14''$. No. 2 is 20 feet west of center line of road, 56.6 feet east of the east rail of railroad, and 129.70 feet from station in azimuth $15^{\circ}47'$. No. 3 is 43 feet west of center line of road, 34.4 feet east of east rail of railroad, and 139.60 feet from station in azimuth $120^{\circ}57'$.

Canady (Sampson County, R. D. Horne, 1933).—About $6\frac{1}{2}$ miles south-southeast of Clinton, and $5\frac{1}{2}$ miles north-northeast of Ingold, on land owned by J. R. Canady. To reach from Clinton, go southeast 2.7 miles on route 23 to junction with route 60, continue south 3.1 miles on route 23 to Epworth Methodist Episcopal Church on west side of highway, continue south 0.3 mile on route 23 to dirt crossroad, turn left (southeast), and proceed 1.95 miles to summit of grade and station site. Station is in cultivated field in front of Canady's house, 32 feet west-southwest of center line of main road, 52 feet south of an east-and-west road, and 12 feet east of 10-inch walnut tree (the most easterly of row of trees along southeast side of lane leading to Canady's house). Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 14 feet west-southwest of center line of road, 78 feet south-southeast along road from line of walnut trees on southeast side of lane, and 115.38 feet from station in azimuth $307^{\circ}43'$. No. 2 is about opposite center of first curve in road northwest of station, 22 feet west of center line of road, 150 feet south of barn, 1 foot east of fence, and approximately 0.4 mile from station in azimuth $139^{\circ}27'42''$. No. 3 is 15 feet east-northeast of center line of road, and 143.32 feet from station in azimuth $159^{\circ}45'$.

Camp (Sampson County, R. D. Horne, 1933).—About 10.5 miles northeast of Ingold, 4.2 miles north-northeast of Delway, 9.6 miles south of Turkey, and 1 mile east of Waycross post office and store, on property of Camp Lumber Co. of Franklin, Va. To reach from junction of routes 41 and 60, go northeast 9.15 miles to Taylors bridge and sign on left painted blue and marked "Smith Ware House, Wilson, N.C." Turn right onto dirt road, cross creek just after making turn, and continue 4 miles to Waycross post office and store. Continue east 1 mile to county line and station site, station is 38.5 feet southwest of county-line sign, 41 feet south of center line of dirt road, and 57 feet south of blazed pine tree on north side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 56.5 feet north of county-line sign, 41 feet north of center line of road, 42.5 feet northeast of blazed pine tree on north side of road, and 76.95 feet from station in azimuth $195^{\circ}57'$. No. 2 is 20 feet north of center line of road, and approximately 0.15 mile from station in azimuth $262^{\circ}35'05''$. No. 3 is 34.5 feet north of northwest corner of negro shack, at northeast corner of fenced yard on west side of shack, and 103.59 feet from station in azimuth $327^{\circ}30'$.

Ingold (Sampson County, R. D. Horne, 1933).—On south edge of village of Ingold, on triangular plot of ground between route 23 and gravel road to Harrell's store, 48.5 feet east-southeast of center line of route 23, and 91 feet south-southwest of southwest corner of small brick house belonging to T. R. Burton who has a service station and store at this road intersection. Land at station belongs to Mr. Burton. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is across highway from Burton's service station, 31 feet west of center line of route 23, 48 feet north of west end of culvert under

highway, and 171.25 feet from station in azimuth $165^{\circ}54'$. No. 2 is about 100 yards south of the intersection of route 23 and road to Harrell's store, 10 feet east of center line of gravel road to Harrell's store, 1 foot south of telephone pole, and 165.50 feet from station in azimuth $271^{\circ}10'$. No. 3 is 170 feet south of center line of route 23, 5 feet west of center line of lane, and approximately 0.5 mile from station in azimuth $60^{\circ}37'17''$. To reach reference mark no. 3 from station, go southwest and west 0.5 mile to lane leading south just beyond small cemetery on right side of highway, turn left, and proceed 170 feet to mark.

Hall (Duplin County, R. D. Horne, 1933).—Station is just east of the corner of Sampson and Duplin Counties, on land owned by B. H. Hall. To reach from Harrell's store which is 8 miles northeast of Kerr and at junction of routes 60 and 41, go northeast 1.1 miles on route 60 to first road intersection on right, turn right and go 0.15 mile to pine grove with cemetery on south edge. Station is 108 feet south of center line of dirt road running east from highway, 94 feet northeast of southeast corner of cemetery, 52 feet east of timber line at east edge of cultivated field, and 22 feet east of blazed pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 13.5 feet south of center line of road, on fence line, and 115.09 feet from station in azimuth $199^{\circ}44'$. No. 2 is on east side of cultivated field, 6 meters (20 feet) west of center line of route 60, about 200 yards north of dirt road that leads to station, and approximately 0.25 mile from station in azimuth $106^{\circ}28'39''$. No. 3 is at northeast corner of cultivated field on east side of highway, 13 feet south of center line of dirt road, and 140.92 feet from station in azimuth $117^{\circ}01'$.

Garland (Sampson County, M. Steinberg, 1918; 1933).—At Garland, on Atlantic Coast Line Railroad, directly across track from depot, 13 yards north of south end of depot platform, 9 yards west of road, and 4.414 meters (14.48 feet) from east rail. Surface mark is a standard disk station mark in concrete, note 1a. Top of mark is flush with ground. Station mark is also bench mark and disk is stamped "L 22". Underground mark is iron nail with point projecting above the concrete, note 7c. Reference mark no. 1 is standard reference disk in south face of Bank of Garland building, 2 feet from west end, 2 feet above ground, and 41.36 meters (135.7 feet) from station in azimuth $169^{\circ}17'$. Reference mark no. 2 is standard reference disk in sidewalk, about 6 feet in front of building owned by Mr. Carter, opposite railroad station, and 23.808 meters (78.11 feet) from station in azimuth $280^{\circ}06'$. Mark is stamped "Garland-South River Base R.M. #2 1918-1933." Reference mark no. 3 is standard reference disk, located along right-of-way of Atlantic Coast Line Railroad, 518 meters (1,699 feet) north of milepost W-46, about 310 meters (1,017 feet) south of depot, 10.48 meters (34.4 feet) west of east rail, and 309 meters (1,014 feet) from station in azimuth $325^{\circ}34'59''$. Mark is stamped "Garland-South River Base R.M. #3 1918-1933."

Kerr (Sampson County, M. Steinberg 1918; 1933).—About $\frac{3}{4}$ mile north of Kerr depot, on Atlantic Coast Line Railroad, on first curve north of depot, on left tangent toward depot, 753 meters (2,470 feet) south of milepost W-37, 150 yards north of station whistle post, 100 yards south of road crossing, 5.71 meters (18.7 feet) east of east rail, 6.2 meters (20 feet) west of center line of dirt road paralleling railroad, and 4.4 meters (14 feet) north of telegraph pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is iron nail with point projecting above concrete, note 7c. Reference mark no. 1 is standard reference disk in concrete, note 11a, at foot of large pine tree, 23.19 meters (76.1 feet) east of east rail, 11.1 meters (36 feet) east of center line of road paralleling railroad, and 24.23 meters (79.5 feet) from station in azimuth $196^{\circ}08'$. Mark is stamped "R.M. #1." Reference mark no. 2 is standard reference disk in concrete, note 11a, about 0.75 mile north of depot in Kerr, near north end of curve, 9.49 meters (31.1 feet) east of east rail, 3.6 meters (12 feet) west of center line of dirt road, and 25.79 meters (84.6 feet) from station in azimuth $158^{\circ}08'$. Mark is stamped "Kerr-South River Base R.M. #2, 1918-1933." Reference mark no. 3 is standard reference disk in concrete, note 11a, about 130 yards north of depot in Kerr, 8.4 meters (28 feet) west of center line of main track, 11.0 meters (36 feet) east of fence line, 32.0 meters (105 feet) south of intersection of dirt road and railroad, and approximately 0.75 mile from station in azimuth $339^{\circ}08'13''$.

Beard (Bladen County, R. D. Horne, 1933).—About 12 miles northeast of Elizabethtown and 9.6 miles northeast of Lagoon, on property of the W. G. Whitehead Estate, adjacent to property of Beards Chapel. To reach from White Lake, go northeast 5.75 miles on route 23 to station site. Station is 61.5 feet east

of center line of highway, 200 feet northeast of church, and 27.8 feet southeast of 10-inch triangle-blazed pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 9 paces east of center line of route 23, about 35 yards north of point of curvature of curve in road, one pace southeast of lone pine tree, and approximately 0.35 mile from station in azimuth $214^{\circ}37'03''$. No. 2 is in grassy area, 21 feet west of center line of route 23, 2 yards east of line of telephone poles to northward, 20 paces south-southeast of guyed pole no. 636, and 128.55 feet from station in azimuth $88^{\circ}37'$. No. 3 is in same grassy area, 20 feet west of center line of route 23, 5 feet east of two lone 10-inch tree stumps, and 105.40 feet from station in azimuth $176^{\circ}10'$.

Tussock (Bladen County, R. D. Horne, 1933).—Station is 12.8 miles airline east of Elizabethtown and 2.5 miles west of South River Road, on property of Mr. Flowers. To reach from White Lake on route 23, go east 3.15 miles on North Carolina temporary route 41 and turn right onto dim dirt road at point just before highway makes sharp left turn. Follow this main woods road 5.7 miles, passing new shanty on left at 4.4 miles, to station site. Station is in pine timber, in southwest corner of crossroads, 46 feet south of White Hall Road running west from Black River, 29.7 feet south of 16-inch pine tree, and 34.4 feet west of 14-inch pine tree. Both trees have triangles blazed on north sides. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in northwest corner of crossroads, 12 feet east-southeast of tree stump $2\frac{1}{2}$ feet in diameter and 6 feet high, and 86.32 feet from station in azimuth $257^{\circ}07'$. No. 2 is $3\frac{1}{2}$ yards south of White Hall Road, and approximately 0.1 mile from station in azimuth $134^{\circ}02'48''$. No. 3 is in southwest corner of crossroads, about midway between roads, and 81.60 feet from station in azimuth $117^{\circ}31'$.

White Lake (Bladen County, R. D. Horne, 1933).—About $6\frac{1}{2}$ miles northeast of Elizabethtown and one-half mile north of White Lake, on property of White Lake Baptist Church. To reach from Elizabethtown, go northeast 7 miles on North Carolina route 23 (United States route 701) to junction with North Carolina temporary route 41 at White Lake. Turn east onto route 41 and proceed 0.25 mile to churchyard and station site. Station is at northwest corner of churchyard, 180 feet north of center line of road, and 128 feet north-northwest of northwest corner of church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 5 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 1 foot north of north side of church, 3 feet east of northwest corner, and 129.36 feet from station in azimuth $335^{\circ}54'$. No. 2 is 15 feet north of center line of road, 115 feet west of southwest corner of church, and 204.98 feet from station in azimuth $23^{\circ}23'$. No. 3 is on right-of-way of North Carolina route 23, on inside of curve in highway where it turns north at intersection with route 41, 15 feet northwest of center line of route 23, about 15 feet south of center line of route 41 extended, and approximately 0.25 mile from station in azimuth $78^{\circ}54'41''$. To reach this mark from station, go south to road, turn left, and proceed 0.25 mile to road intersection. Continue straight west across pavement of route 23 to mark.

Monroe (Bladen County, R. D. Horne, 1933).—About 10.4 miles airline north-east of Clarkton and 7.2 miles airline southeast of Elizabethtown. To reach from courthouse in Elizabethtown, go south 8.5 miles on route 21 to crossroads and station site. Station is in small pine grove, 88 feet southeast of gate to road leading into grove, 106 feet east of center line of highway, and 18 feet east of blazed pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 12 feet north of center line of dim dirt road east of gate, 117 feet east of gate, and 89.59 feet from station in azimuth $200^{\circ}59'$. No. 2 is at north corner of small wood lot about 125 feet north-northeast of negro house, at south edge of cultivated field, and approximately 0.30 mile from station in azimuth $67^{\circ}11'36''$. No. 3 is at top of bank on west side of highway, 29 feet west of center line of highway, 50 feet south of dirt T-road intersection, 109 feet southwest of route 21 highway marker, and 143.75 feet from station in azimuth $79^{\circ}57'$.

Elizabethtown (Bladen County, R. D. Horne, 1933).—In Elizabethtown, about 200 feet east of north-and-south street (route 23), 300 feet south of east-and-west

For notes in regard to marking of stations see p. 135.

street (route 21), 112 feet southeast of southeast corner of jail, 175 feet south-southeast of southeast corner of courthouse, and 28 feet north of fence along south side of courthouse yard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 4 inches. Reference mark no. 1 is granite post, 6 inches square and 3 feet high, projecting 6 inches above ground, 4 feet west of west side of courthouse, 30 feet south of northeast corner of courthouse, and 244.75 feet from station in azimuth $180^{\circ}17'$. Letters "NCGS USGS 1898" are cut in flat top of stone, with cross in center. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11a. No. 2 is at second street intersection east of station, 1 block south of route 21, 2 blocks east of route 23, 18 feet east of center line of north-and-south street, 14 feet south of center line extended of east-and-west street, and approximately 0.2 mile from station in azimuth $301^{\circ}56'27''$. No. 3 is 2 feet southeast of south-west corner of jail, and 138.05 feet from station in azimuth $128^{\circ}12'$. *Magnetic station (N.C.G.S. and U.S.G.S. (1898))* (see description thereof) is 0.366 meter (1.20 feet) from station in azimuth 258° .

Rogers (Bladen County, R. D. Horne, 1933).—About 5.6 miles airline east of Abbottsburg and 7.2 miles airlines south-southwest of Elizabethtown, on land owned by Mr. S. H. Rogers. To reach from courthouse in Elizabethtown, go south 8.2 miles on route 23 direct to station site. Station is 1.9 miles north-northeast of railroad tracks at Clarkton, on west side of highway, and on north edge of grove of large oak trees. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 meters (20 feet) west of center line of highway, 1 meter (3 feet) east of narrow drainage ditch on east edge of cultivated field, about 12 meters (39 feet) northwest of northwest corner of woods and southwest corner of cultivated field on east side of road, and approximately 0.25 mile from station in azimuth $187^{\circ}23'48''$. No. 2 is 21 feet west of center line of highway, 5 feet south of telephone pole on west side of highway at east edge of plowed field, and 189.40 feet from station in azimuth $193^{\circ}41'$. No. 3 is 32 feet northwest of northeast corner of house, 39.5 feet northeast of center of well in back of northwest corner of house, 6 feet southeast of southeast corner of fenced cultivated plot, and 145.25 feet from station in azimuth $94^{\circ}19'$.

Dublin (Bladen County, R. D. Horne, 1933).—Just west of Dublin on route 21 at point where highway makes large curve to right (north), on property of Mr. T. D. Hersey. To reach from Elizabethtown, go west-northwest 7.5 miles on route 21, and pass through Dublin to station site. Station is about 7 feet northeast of point of intersection of tangents of center line of route 21, 43 feet southwest of center line of highway, and 85 feet northwest of telegraph pole which is on west side of dirt road running south by west from route 21. This pole acts as corner pole for wires turning curve with highway and for those going down dirt road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 19 feet north by east of the center line of route 21 at point where highway starts to curve to right (north), 52 feet east by south of projection of center line of dirt road, and 157.85 feet from station in azimuth $300^{\circ}48'$. No. 2 is 33 feet west of center line of highway at point just after it completes curve, and 106.50 feet from station in azimuth $159^{\circ}57'$. No. 3 is 30 feet east of center line of highway at a point where it makes a curve to left (west), 150 yards north of small house on east side of highway, and approximately 0.3 mile from station in azimuth $171^{\circ}21'06''$.

Griffin (Bladen County, R. D. Horne, 1933).—Station is 0.2 mile northwest on route 211 from Abbottsburg, on property of Mr. R. T. B. Griffin, in pine grove, in churchyard of the Zion A. M. E. Church (colored), 42 yards northwest of northwest corner of church, 35 yards northeast of center line of route 211, 15 yards south of south edge of cultivated field, and 32 feet south of $2\frac{1}{2}$ -foot short-needle pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 35 feet south of center line of route 211, 35 yards southeast of graded dirt road running north and south across route 211, and 150.99 feet from station in azimuth $30^{\circ}58'$. No. 2 is 10 yards northeast of center line of highway, 3 feet east of telephone pole no. 388, on bank of drainage ditch, about 3 feet west of ditch perpendicular to road, and approximately one-half mile from station in azimuth $134^{\circ}00'38''$. No. 3 is at northwest corner of churchyard, 11 yards east of center line of graded dirt road running north and south, and 131.95 feet from station in azimuth $165^{\circ}29'$.

Mason (Bladen County, R. D. Horne, 1933).—About 12 miles west-northwest of Elizabethtown, 8 miles northeast of Bladenboro, and 100 yards east of Robeson-Bladen County line, on property owned by Lawrence Mason. To reach from junction of routes 22, 201, and 211 in Lumberton, go east 11.9 miles on route 201 to grove of pine trees on north side of highway and station site. To reach from Elizabethtown, go west 8.4 miles on route 21 to junction with route 201, and turn left onto route 201. From this point proceed 5.55 miles to grove of pine trees and station site. Station is on south edge of grove, 325 feet east of county line, 44 feet north of center line of highway, and 90 feet west of west side of Mason's house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 5 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 28 feet south of center line of highway, about 110 feet west of a north-south line through large chimney of house on the north side of highway, and approximately 0.25 mile from station in azimuth $280^{\circ}36'41''$. No. 2 is 30 feet south of center line of highway, 16 feet east of center line of dirt side road, and 111.31 feet from station in azimuth $321^{\circ}40'$. No. 3 is 30 feet south of center line of highway, 125 feet west of center line of dirt side road, and 101.83 feet (slope) from station in azimuth $54^{\circ}34'$.

Freeman (Bladen County, R. D. Horne, 1933).—Station is southwest of Bladenboro, near Galeed Baptist Church, and on property of W. C. Freeman. To reach from Bladenboro, go southwest on street crossing railroad just south of railroad station, and keep straight ahead on main-traveled road 1.8 miles from stop light in town. Pass school where pavement ends, and continue on dirt road to church and station site. Station is 104.60 feet west of northwest corner of church, 116.3 feet west of southwest corner of church, 153 feet north of center line of highway, and 30 feet west of dirt road leading north on west side of church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on south edge of woods, 6 meters (20 feet) north of center line of road, about 100 feet west-northwest of small farmhouse on south side of road, and approximately 0.20 mile from station in azimuth $243^{\circ}17'12''$. No. 2 is 133 feet southwest of southwest corner of Galeed Church, 21 feet west of center line of highway, 40.2 feet north of tree on south side of highway which has five mail boxes on its north side, and 125.65 feet from station in azimuth $307^{\circ}06'$. No. 3 is at east edge of cultivated field, on west side of dirt road running north along west side of church, 11.60 feet northwest of northwest corner of church, and 122.90 feet from station in azimuth $149^{\circ}03'$. Following azimuths are from station: Bladenboro Cotton Mills, aluminum water tank, $194^{\circ}23'41''$; Bladenboro Cotton Mills, stack, $201^{\circ}45'18''$; and Bladenboro aluminum water tank, $239^{\circ}43'44''$.

Allenton (Robeson County, R. D. Horne, 1933).—About one-fourth mile southeast of Allenton, on property of Allenton Consolidated School. To reach from Lumberton, follow route 211 east 3.6 miles beyond junction with route 74 direct to station site. Station is 139.7 feet west-southwest of southwest corner of school (long brick building), 45 feet north of center line of route 211, and 46.3 feet northwest of center line of wooden culvert across westerly driveway into school grounds. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is a standard reference disk in top of first step of front main entrance to school building, about 4 inches from west edge, and 190.025 feet from station in azimuth $236^{\circ}36'$. Reference mark no. 2 is standard reference disk in concrete, note 11a, in line with main entrance to school, about 100 feet south of steps, about 35 feet north of center line of route 211, and 140.47 feet from station in azimuth $285^{\circ}18'$. Reference mark no. 3 is standard reference disk in center of top of concrete culvert on south side of highway, 17 feet south of center line of highway, 60 paces east of point where dirt road branches off to northeast, and approximately 0.4 mile from station in azimuth $283^{\circ}27'20''$.

Long Branch (Robeson County, R. D. Horne, 1933).—About 7 miles southeast of Lumberton and 9 miles northeast of Fairmont, in yard of Long Branch Baptist Church. To reach from courthouse in Lumberton, go southeast 6.55 miles on North Carolina route 20 (United States route 74) direct to station site. Station is in northwest corner of churchyard, just northwest of small cemetery, 74.5 feet north-northwest of Zora Wilson's tombstone, 68 feet south-southwest of center line of highway, 128 feet north of northwest corner of church, and 6 feet east of prolongation of west side of church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6

inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 31.5 feet north-northeast of center line of highway, 5 feet southeast of southeast corner of small white building across highway from cemetery, and 147.00 feet (slope) from station in azimuth $264^{\circ}14'$. No. 2 is 28 feet east of center line of highway, 50 feet southeast of tobacco barn, about 110 feet northwest of northwest end of curve in highway, and approximately 0.25 mile from station in azimuth $137^{\circ}25'17''$. No. 3 is in northwest corner of churchyard, 35 feet south-southwest of center line of highway, and 124.69 feet (slope) from station in azimuth $142^{\circ}19'$.

Fields (Columbus County, R. D. Horne, 1933).—Near crossroads 3 miles north of Evergreen, 3 miles east of Boardman, and 9 miles west of Bladenboro. To reach from Evergreen, turn right onto dirt road marked "To Bladenboro", on curve in road on east side of town, and opposite Standard service station. Follow this road 1.6 miles to fork in road, then right-hand fork 1.5 miles to station site. Station is 65 feet west of center line of road intersection. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 39 feet east of center line of road intersection, 13 feet north of center line of road running to Bladenboro, on fence line of north side of road, and 101.71 feet from station in azimuth $242^{\circ}22'$. No. 2 is 4 meters (13 feet) south of center line of road to Bladenboro, and 0.20 mile from station in azimuth $271^{\circ}29'12''$. No. 3 is 14 feet north of center line of road to Boardman, 122.70 feet east of southeast corner of Dodge schoolhouse, and 127.92 feet from station in azimuth $107^{\circ}02'$.

Byrd (Robeson County, R. D. Horne, 1933).—About 4 miles east of Fairmont, 11 miles southwest of Lumberton, 0.8 mile south of Proctorville, on land owned by R. I. Byrd. To reach from Fairmont, go east 5.0 miles on route 71 to railroad crossing 0.8 mile south of Proctorville and station site. To reach from a point on route 20, 0.8 mile west of bridge over Lumber River, go west about 2 miles on route 71 to Orrum, and continue west 1.8 miles on route 71 to summit of grade just west of railroad crossing. Station is on top of bank, 35 feet north of center line of highway, 240 feet west of railroad crossing, and 12 feet west of the southwest corner of garage which is between highway and Byrd's house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 4 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 0.15 mile north of route 71, 15 feet east of center line of road, 25 feet south of an east-and-west line through center of large chimney on south end of house on east side of road, and approximately 0.3 mile from station in azimuth $218^{\circ}39'56''$. No. 2 is on top of 4-foot bank, 22 feet south of center line of highway, 150 feet west of railroad crossing, opposite drive into Byrd's yard, and 110.42 feet from station in azimuth $306^{\circ}21'$. No. 3 is on top of 4-foot bank, 22 feet north of center line of road, and 126.52 feet from station in azimuth $84^{\circ}52'$. Spire of white church with red roof in Proctorville is approximately 0.8 mile from station in azimuth $184^{\circ}22'23''$.

Williamson (Columbus County, R. D. Horne, 1933).—Station is at Williamson crossroads, 3.2 miles west of Evergreen and 8.08 miles north of Chadbourn, on property of S. M. Martin. To reach from Evergreen, go west from route 20 at east end of town, cross railroad track just east of railroad station, and follow road marked "To Flat Bluff" 3.9 miles to crossroads and Williamson Baptist Church in southwest angle of crossroads. Station is 67 feet southwest of center line of intersection of roads, and 164.5 feet east of northeast corner of church. Road intersection is marked with following signs: To north "Evergreen 4 miles"; to south "Fair Bluff 10 miles"; to west "Boardman 6 miles"; and to east "Chadbourne 6 miles". Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 83 feet north of crossroads, 16 feet east of center line of road to Evergreen, at edge of cornfield, and 142.70 feet from station in azimuth $203^{\circ}04'$. No. 2 is 4 meters (13 feet) south of center line of road, 2 feet north of fence line, 11 meters (36 feet) west of north-and-south fence that intersects an east-and-west fence at northwest corner of small meadow, and approximately 0.20 mile from station, in azimuth $288^{\circ}42'24''$. No. 3 is 120 feet south of crossroads, 16 feet east of center line of road to Fair Bluff, and 95.80 feet from station in azimuth $319^{\circ}57'$. Azimuth from station to aluminum water tank at Chadbourne is $294^{\circ}21'05''$.

Claybank (Robeson County, R. D. Horne, 1933).—About 4 miles south of Fairmont and 8 miles northeast of Fair Bluff, on grounds of Claybank School

(colored). To reach from Fairmont, go south 4.1 miles on North Carolina route 70 direct to station site. Station is in northwest corner of pine grove, 103 feet east-southeast of center line of pavement, 15 feet west of prolongation of center line of pavement north of curve at school, and 115 feet south-southwest of southwest corner of school building. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 4 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 38 feet east-southeast of center line of pavement, 96 feet northwest of northwest corner of school building, and 208.40 feet from station in azimuth $180^{\circ}25'$. No. 2 is on property of Mrs. Harry Weinstein, 23 feet east of center line of pavement, 150 feet north of north side of barn, and approximately 0.35 mile from station in azimuth $181^{\circ}51'15''$. No. 3 is at top of 4-foot bank, at south end of curve in highway, 25 feet east-southeast of center line of pavement, and 136.10 feet from station in azimuth $55^{\circ}27'$.

Ford (Columbus County, R. D. Horne, 1933).—Station is 2.7 miles east of post office in Fair Bluff, on property of C. R. Ford. To reach from Fair Bluff, go east 2.7 miles on route 17 direct to station site. Station is in pine timber, 54 feet north of center line of highway, 93 feet northeast of center line of intersection of crossroad and highway, and 57 feet east of dirt road leading north from highway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 19 feet south of center line of highway, just north of path leading to house, and 120.70 feet from station in azimuth $298^{\circ}05'$. No. 2 is 71 feet west of highway and crossroad intersection, 33 feet south of center line of highway, and 160.80 feet from station in azimuth $49^{\circ}25'$. No. 3 is 10 meters (33 feet) south of center line of highway, 2 meters (7 feet) west of road leading south along west edge of cultivated field and edge of woods to farmhouse, and approximately 0.25 mile from station in azimuth $77^{\circ}51'30''$. Azimuth from station to aluminum water tank in Chadbourn is $270^{\circ}47'43''$.

King eccentric (Gaston County, R. D. Horne, 1933).—About 3 miles southeast of Kings Mountain railway station on Southern Railway, about 26 miles west-southwest of Charlotte, at highest point of Kings Mountain, and at elevation of about 1,700 feet. Summit is ridge of broken rocks about 200 yards long, with average width of 15 feet. Height of cliff at station is 97 feet. Station mark is standard disk station mark, note 1a, in northwest corner of 5-foot square concrete block which has flagpole in center. Flagpole is directly over station *King* (see description thereof), 0.805 meter (2.64 feet) distant from station in azimuth $359^{\circ}27'$. Reference marks are standard reference disks in drill holes in bedrock, note 12a. No. 1 is 15 feet below station in elevation, and 95.20 feet from station in azimuth $233^{\circ}11'$. No. 2 is 35 feet north-northeast of center line of road at point where dim woods roads fork to right and left of main road, and approximately 0.5 mile from station in azimuth $81^{\circ}06'36''$. No. 3 is 30 feet below station in elevation, and 73.70 feet from station in azimuth $90^{\circ}15'$.

Baker (Catawba County, R. D. Horne, 1933; 1934).—Station is 10.5 miles west of Newton and 6.0 miles south-southwest of Hickory, on highest point of Bakers Mountain, on property owned by Avery Hilderbrand. To reach from intersection of routes 10 and 17 in Hickory, go south on route 17, pass through Brockford, cross Henry River on concrete bridge 3.0 miles from Hickory, and take right fork at 3.6 miles. Proceed 2.4 miles, take right fork at point opposite Mount View service station, follow arrows 0.65 mile to Mount Grove Church on right, continue 0.3 mile, turn left onto road through woods, and go 0.4 mile to home of Thomas Hilderbrand. Main farmhouse has burned leaving only chimneys standing. Leave truck and proceed southeast on old logging road to spring and old sawmill site. Follow trail from this point around southeast side and then up south side to top of mountain. Station is in bedrock, 6 feet east of dead burnt oak tree 18 inches in diameter. Station mark is a standard disk station mark, note 2. Reference marks are standard reference disks in bedrock, note 12a. No. 1 is 39.83 feet from station in azimuth $355^{\circ}10'$. No. 2 is 2 feet north of oak tree, in trail leading east to station, and 101.28 feet from station in azimuth $92^{\circ}04'$. Azimuth from station to standpipe in West Hickory is $204^{\circ}48'15''$. In 1934, station mark had been cut out of rock, leaving only center of disk which was very loose in its rock base; and reference mark no. 2 was found to have been destroyed.

Pasour (Gaston County, R. D. Horne, 1933).—Station is $7\frac{1}{4}$ miles a little south of east of Cherryville and about $5\frac{1}{4}$ miles northwest of Dallas, at north-east end of long ridge and highest point of Pasour Mountain, on land of J. W.

Baldwin. To reach from Cherryville, go northeast $1\frac{1}{2}$ miles on North Carolina route 150, and take dirt road on right (temporary route 277) leading to Dallas. Continue 7.2 miles to dim, dirt, rough road about 200 feet west of small church with green trimmings on north side of route 277 and in gap between north and south ends of Pasour Mountain. Follow this mountain road north 0.85 mile up backbone of mountain to station site on highest point of ridge. Station is 11 feet west of road, and 36.05 feet north of 10-inch pine tree with triangle blaze on west side. Station mark is standard station disk, note 2, in top of triangular granite outcrop about 18 inches on each side and projecting about 3 inches above ground. Trees are sparse on east side of station. Spencer Mountain is plainly visible, and Kings Mountain can be seen by looking back (south) down the road. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is 5 feet in elevation down mountain side from station, and 35.34 feet from station in azimuth $280^{\circ}02'$. No. 2 is in long, narrow, outcrop paralleling road, 21 feet east of road, and 123.14 feet from station in azimuth $10^{\circ}25'$. Azimuth from station to Cherryville municipal water tank is $97^{\circ}00'51''$.

Anderson 2 (Catawba County, R. D. Horne, 1933).—About 8 miles east of Maiden, on the north-northeast and south-southwest ridge which forms highest part of Anderson Mountain. To reach from Baptist Church in Maiden, go east 1.1 miles on North Carolina Route 16 to point where route 16 turns sharply to south. Continue east 6.2 miles on dirt road to Denver until home of Martin Wilkerson is reached on north side of road just beyond road going north to Drum Crossroads. Mountain can be climbed on foot from this point, or mules and wagon can be obtained to take gear to top. Station is in partially cleared spot, 21 feet east by north of 5 small chestnut oaks, 21 feet east by south of 4 small chestnut oaks, and $31\frac{1}{2}$ feet east by south of 3 chestnut oaks. All of these oaks are marked with 6-inch triangular blazes, and in each group they grow from a common base. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is in rock outcrop, 16 by 28 inches by about 4 inches high, with small chestnut-oak sapling in its northeast corner, on east slope of ridge, on west edge of fox-hunter's path, 50 feet east-northeast of 20-inch chestnut oak, and approximately 300 feet from station in azimuth $231^{\circ}53'17''$. No. 2 is in rock outcrop, 15 inches by 3 feet by 4 inches high, surrounded by ledge of rock, about 4 or 5 feet in elevation below station, 9 feet north of three 6-inch chestnut oaks growing from common base, 9 feet west of dead pine, and 86.1 feet from station in azimuth $260^{\circ}00'$. No. 3 is in rock outcrop, 1 by 2 feet, 3 feet in elevation below station, and 82.3 feet from station in azimuth $18^{\circ}51'$.

Spencer (Gaston County, R. D. Horne, 1933).—Station is $4\frac{1}{2}$ miles northeast of Gastonia, $3\frac{1}{4}$ miles east-southeast of Dallas, and 6 miles west of Mount Holly, on summit of Spencer Mountain. To reach from railroad station in Gastonia, go east 2.4 miles on route 7 (Airline Avenue), keep straight ahead at crossing of route 277, continue 0.8 mile, and turn left onto T-asphalt road at Ranlo at arrow "Spencer Mountain 3 Miles". Proceed 1.65 miles or 0.2 mile beyond electric railway crossing, and turn right up dirt road. In dry weather, truck can be taken to quarry on east side of and about 100 feet from the summit. Continue on foot bearing right around top to westerly side of summit and station site. Station is in rock which projects 8 feet above surrounding rock. Marked by standard station disk in rock, note 2. Reference marks are standard reference disks in bedrock, note 12a. No. 1 is 8 feet in elevation below station, and 15.15 feet from station in azimuth $277^{\circ}10'$. No. 2 is 6 feet in elevation below station, and 39.59 feet from station in azimuth $47^{\circ}38'$.

Huntersville (Mecklenburg County, R. D. Horne, 1933).—At Huntersville, near city water tank, about 80 yards east of railroad station, in grassy area on east edge of cultivated field, in line with northwest corner of small red shed and center of pipe of water tank, and 56.65 feet southwest of center of pipe which is 2.46 feet in diameter. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk, note 11c, in center of west edge of concrete footing of westerly leg of water tank, and 57.06 feet from station in azimuth $203^{\circ}54'$. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11a. No. 2 is on west edge of cultivated field across road from railroad station, 15 feet north of north side extended of railroad station, 9 feet northeast of telephone pole, and 139.62 feet from station in azimuth $83^{\circ}01'$. No. 3 is 5 yards west of center line of Cottongin Street, about 8 feet south-southeast of northeast corner of yard around the Holbrook residence, 6 inches east of edge of sidewalk, and approximately 150 yards

from station in azimuth $84^{\circ}56'26''$. Azimuth from station to top of Huntersville municipal water tank is $224^{\circ}09'$. *B.M. 41 (1932)* (see description thereof) is 17.221 meters (56.50 feet) from station in azimuth $203^{\circ}44'$.

Charlotte (Mecklenburg County, R. D. Horne, 1933).—Station is in north corner of main roof of the First National Bank Building at Charlotte. The United States Weather Bureau has established a weather station at opposite end of roof. Station mark is standard disk station mark, note 1a, in a concrete block. Reference marks are standard reference disks, note 11c. No. 1 is on north face of wall of Weather Bureau penthouse, 3 feet above roof, and 75.30 feet from station in azimuth $319^{\circ}22'$. No. 2 is in wall of penthouse of bank building, 3 feet above roof, and 43.55 feet from station in azimuth $6^{\circ}16'$. No. 3 is in north curb of sidewalk of Sixth Street, 75 feet east of corner of Sixth and North Poplar Streets, and approximately 0.3 mile from station in azimuth $197^{\circ}55'58''$. Station *City* (see description thereof) is 295.2 meters (969 feet) distant in azimuth $149^{\circ}38'22''$. Station *Mayor* (see description thereof) is 377.7 meters (1,239 feet) distant in azimuth $96^{\circ}46'14''$.

Concord (Cabarrus County, R. D. Horne, 1933).—In woodland about $2\frac{1}{2}$ miles south-southwest of Concord. To reach from Concord, go southwest about 1 mile on route 29, cross Buffalo Creek, continue southwest 1.45 miles or about 100 yards beyond crossroads at Minute Service Station, and follow graded dirt road where main road turns left at arrow "Roberta Mill $2\frac{1}{2}''$ ". Proceed 0.4 mile to left fork at top of grade and station site. Station is in clearing, opposite left fork, and 31 feet west of center line of main road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at point where Roberta Mill Road joins route 29, 13 yards west of center line of route 29, 7 feet southwest of telephone pole, and approximately 0.4 mile from station in azimuth $221^{\circ}42'22''$. No. 2 is 24 feet east of center line of main road, 8 feet south of 3-foot pine tree which is slashed for turpentine cup, and 131.85 feet from station in azimuth $238^{\circ}27'$. No. 3 is between left fork and main road, 20 feet east of center line of main road, 18 feet west of left fork, $4\frac{1}{2}$ feet northwest of 6-inch hickory tree, and 138.75 feet from station in azimuth $9^{\circ}13'$.

Jackson (Cabarrus County, R. D. Horne, 1933).—About $3\frac{1}{2}$ miles south of Concord, on property of Jackson Training School for Boys, in large rock 45 feet in diameter, on east side of grounds on slope toward highway, 25 feet east of $3\frac{1}{2}$ -foot oak tree, 35 feet east of center line of gravel road on school grounds, and 129 feet west of center line of route 29. To reach from Concord, go south $3\frac{1}{2}$ miles on route 29 direct to station site. Station mark is standard station disk, note 2. Reference marks are standard reference disks in rock outcrops, note 12a. No. 1 is 36 feet east of center line of gravel road, in bedrock 40 feet in diameter, and 103.60 feet from station in azimuth $180^{\circ}17'$. No. 2 is in top of large boulder in alfalfa field, 60 feet south of north edge of field, 100 feet east of west edge of field, 130 feet east of center line of highway, 300 feet northwest of small frame house on south edge of field, and approximately 0.35 mile from station in azimuth $181^{\circ}30'22''$. No. 3 is at north side of stone pavilion at ladies' entrance, and 208.55 feet from station in azimuth $36^{\circ}57'$.

Mint Hill (Mecklenburg County, R. D. Horne, 1933; 1934).—About $11\frac{1}{2}$ miles south of east of Charlotte, three-fourth mile north of settlement of Mint Hill, 25 yards east of edge of gravel pit on high and prominent hill, 34.7 feet east of south corner of wooden structure, and 36.6 feet southeast of east corner of same. To reach from Charlotte, go east 10 miles on route 27 or 4.1 miles beyond crossing of McAlpin Creek and 0.95 mile beyond T-road on left with arrow "Harrisburg 9", turn right onto gravel T-road at Wildgrove service station, and follow arrow "Mint Hill $2\frac{1}{2}''$ ". Keep straight road 1.95 miles or 0.65 mile beyond T-road on left, turn left onto road leading to gravel-pit hill (visible about one-half mile distant), and proceed 0.45 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk, note 12b, in outcropping bedrock 56.02 feet from station in azimuth $221^{\circ}14'$. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11a. No. 2 is on southeast edge of road leading to top of hill from south, and 60.7 feet from station in azimuth $25^{\circ}00'$. No. 3 is about 5 paces northeast of center line of northwest-and-southeast gravel road, about 150 yards northwest of T-road leading to top of hill, 150 feet northwest of road leading southwest to farmhouse on north edge of cultivated field, and approximately 0.35 mile from station in azimuth $60^{\circ}09'28''$.

Locust (Stanly County, R. D. Horne, 1933).—About 14 miles southeast of Concord, 6 miles west-northwest of Oakboro, at Locust, and on grounds of Locust Baptist Church. To reach from route 27 in Locust, go north 0.15 mile on macadam crossroad direct to station site. Station is in yard behind church, 2 feet north of north side extended of church, and 28.4 feet west of northwest corner of church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 100.4 feet north-northwest of northwest corner of church, 9 feet west of west side extended of church, $31\frac{1}{2}$ feet east of most northerly of two white-oak trees, and 98.79 feet from station in azimuth $184^{\circ}15'$. No. 2 is in Mr. Hartzell's yard, in line with power line to his house, 55 feet west of center line of macadam road, 12 feet north of center of dirt T-road running west, and 240.48 feet from station in azimuth $325^{\circ}09'$. No. 3 is 0.5 mile southwest of crossroads in Locust, 69 paces northeast of center of driveway to P. Cooper's house, $28\frac{1}{2}$ feet southeast of center line of route 27, 3 feet east of telephone pole, and approximately 0.4 mile from station in azimuth $43^{\circ}55'02''$. No. 4 is 10 feet north of dirt T-road leading west off macadam road, 100 feet east of group of trees at point where this road turns to northwest, and approximately 0.15 mile from station in azimuth $175^{\circ}09'59''$. To reach from station, go north 0.15 mile on macadam road, turn left (west), and follow dirt road 0.05 mile to reference mark.

Advance (Union County, R. D. Horne, 1933; 1934).—About 10 miles north-northeast of Monroe, 11 miles north-northwest of Marshville, $3\frac{1}{4}$ miles north-northeast of Unionville, and on the Pursler Estate. To reach from Monroe, go west 0.6 mile on route 74, turn north onto route 151, proceed 7.0 miles to crossroads with arrows "Unionville 1" and "Indian Trail 8", proceed east 0.9 mile following Unionville arrow and keep straight ahead at jogged crossroads, continue 0.45 mile, turn right at T-road junction at school and church in Unionville, proceed 100 feet and follow main road to left, continue 250 feet and keep straight ahead at slanting crossroads, proceed 0.55 mile, turn left (northeast) at jogged crossroads, continue 0.65 mile, keep straight ahead on first road to right of house which is in north angle of crossroads, and continue 1.8 miles or 0.35 mile beyond T-road at Gulf gas station to station site at top of grade. Station is 24 feet southeast of center line of road at point where left fork leads to Advance Church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk in concrete, note 11a, 5 meters (16 feet) northwest of center line of road leading to station, 80 feet southwest of T-road leading west, at top of first rise in grade in road northeast of station, and 0.20 mile from station in azimuth $226^{\circ}43'33''$. Reference marks nos. 2 and 3 are standard reference disks in boulders, note 12c. No. 2 is in boulder, 3 by $2\frac{1}{2}$ feet high, 41 feet northwest of center line of road, and 189.05 feet from station in azimuth $54^{\circ}31'$. No. 3 is in boulder $2\frac{1}{2}$ by 2 by 1 foot high 37 feet north of center line of road at fork leading to church, and 60.73 feet from station in azimuth $142^{\circ}07'$. Azimuth from station to Monroe silver-colored municipal water tank is $19^{\circ}14'43''$.

Aquadale (Stanly County, R. D. Horne, 1933).—About $6\frac{1}{2}$ miles east of Oakboro and $5\frac{1}{4}$ miles north-northwest of Norwood, on land owned by W. B. Poplin. To reach from Oakboro, turn half-left just before crossing railroad track onto Aquadale road, proceed 2.0 miles to road intersection at church, keep straight 4.4 miles on center road or 2.15 miles beyond crossing large creek, turn left onto T-road to Aquadale, and cross railroad track at 0.2 mile. Turn right along north side of tracks, continue 0.6 mile, take left fork through woods leading to Poplin's house, and follow 0.1 mile to station site. Station is in uncultivated area, 23.5 feet west of center line of road, and 36.8 feet south of and 3 feet west of east side extended of corner. A number of loose boulders are near station. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is a standard reference disk, note 11b, in top of 3- by 4-foot rock outcrop about 6 inches above surface of ground, 64 feet east of road leading to Poplin's house, and 114.20 feet from station in azimuth $247^{\circ}42'$. Reference mark no. 2 is a standard reference disk in concrete, note 11a, on land owned by Mr. Carpenter, opposite boundary corner between land owned by John Poplin and Walter Poplin, at top of grade 15 feet north of center line of Aquadale road, and approximately 0.4 mile from station in azimuth $255^{\circ}03'55''$. Reference mark no. 3 is standard reference disk, note 11b, in top of $1\frac{1}{4}$ - by 3-foot rock outcrop about 4 inches above surface of ground, in cultivated

field, 23 feet west of road leading to Poplin's house, and 116.27 feet from station in azimuth $20^{\circ}12'$.

Fountain (Anson County, R. D. Horne, 1933).—About 8 miles northeast of Marshville, near settlement of Fountain Hill, on summit of low hill known as "Rebel Hill" and on land of Tom Griffin. To reach from Marshville, go east 1 block from traffic light on route 20, turn left, proceed about 100 yards, and turn right around small Pure Oil gas station. Proceed 0.15 mile, turn half-left onto paved fork just beyond brick church on left, continue 0.45 mile to end of pavement, and keep straight ahead 4.55 miles on main road or 0.35 mile beyond small dirty yellow house with white trimmings, on left side of road. Take right fork 2.65 miles, keep straight ahead at crossroads, and follow arrow "Diamond Hill 5 Mi." Continue 0.4 mile to crossroads with New Hope Church in southwest angle, turn left, and proceed about 120 yards to Tom Griffin's house which is first house on east side of road. Station is 0.75 mile from church, 32 feet east of blazed twin oak, and 30 feet west of woods road leading to station from east side of hill. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference mark no. 1 is standard reference disk, note 12c, in boulder $2\frac{1}{2}$ feet in diameter by 1 foot high, and 65.94 feet from station in azimuth $45^{\circ}31'$. Reference mark no. 2 is standard reference disk in concrete, note 11a, in northeast corner of churchyard, 18 paces northeast of main entrance to church, and approximately 0.75 mile from station in azimuth $312^{\circ}47'53''$. Reference mark no. 3 is standard reference disk, note 12c, in boulder 3 by $2\frac{1}{2}$ feet by 18 inches high, at point of slope northeast of station, and 70.75 feet from station in azimuth $175^{\circ}28'$.

McKay (Montgomery County, R. D. Horne, 1933).—Station is $7\frac{1}{4}$ miles southeast of Norwood and $4\frac{1}{2}$ miles south-southwest of Mount Gilead, on property of the four McKay sisters. To reach from junction of North Carolina routes 51 and 515 at Mount Gilead post office, go west and south 3.5 miles on route 515, turn right (west) onto T-road at sign "Tedder's Farm $1\frac{1}{2}$ Miles", proceed 1.05 miles, turn left at another T-road junction, proceed 0.75 mile, turn right into lane at mail box no. 19, and follow lane northwest 200 yards to McKay's house. Station is in yard about 100 feet northwest of house, 12 feet west of center of gate in fence around garden, 26 feet northwest of 30-inch honey-locust tree, and about 300 feet northeast of small cemetery. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 8 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 15 feet east of lane, about 100 feet north of road, 90 feet east of northeast corner of tenant house on McKay property, 22 feet north of 16-inch pine tree, and approximately 0.1 mile from station in azimuth $352^{\circ}06'17''$. No. 2 is 10 feet east-southeast of southeast corner of small barn, 62 feet northwest of 30-inch black-walnut tree, and 45.30 feet from station in azimuth $67^{\circ}52'$. No. 3 is 3 feet northeast of northeast corner of barn, and 94.77 feet from station in azimuth $135^{\circ}39'$. Azimuth from station to black municipal water tank (higher of two) at Mount Gilead is $201^{\circ}55'16''$.

Wadesboro (Anson County, R. D. Horne, 1933).—About one-half mile north of center of Wadesboro, on property of C. S. Wheeler, in yard back of house and barns, and 88.2 feet north of center line of chimney on north side of northwest wing of house. To reach from courthouse in Wadesboro, go north 2 blocks on route 515, turn left onto route 74, proceed 0.2 mile, take right fork (Sykes Avenue) between red brick church on left and Lilly Cafe on right, proceed 0.2 mile or just beyond C. W. Wright's store, and turn right into lane between 2 hedges leading to C. S. Wheeler's house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 8 meters (26 feet) west of center line of north-and-south macadam road, 250 feet south of Pentecostal Holiness Church on west side of road, 250 feet north of bottom of grade on highway, and 0.3 mile from station in azimuth $259^{\circ}33'44''$. No. 2 is 5 feet north of northeast corner of barn in back yard of Wheeler's house, at top of east slope of hill, and 59.28 feet from station in azimuth $257^{\circ}52'$. No. 3 is 2 feet south of fence line along north boundary of C. S. Wheeler's land, and 101.96 feet from station in azimuth $146^{\circ}29'$. Azimuth from station to Wadesboro municipal water tank is $349^{\circ}56'42''$.

Ingram (Anson County, R. D. Horne, 1933).—About $4\frac{1}{2}$ miles northeast of Lilesville and $8\frac{1}{2}$ miles east-northeast of Wadesboro, on property of Mrs. Nannie Forlow. To reach from main corner in Lilesville, go west 0.45 mile on United States route 74, take right dirt fork (north), and follow arrow "Ingram Mt. 5".

Proceed 0.7 mile, take right fork and follow arrow "Ingram Mt. $4\frac{1}{2}$ ". Keep main straight road 3.75 miles or 0.7 mile beyond T-road on left and arrow "Ingram Mt. $1\frac{1}{2}$ ", to Mrs. Forlow's house. Station is in yard in front of house, 60 feet east of center line of road, 12 feet south of prolongation of south face of house, 47 feet southeast of nearest side of 3-foot oak tree, and 51 feet west-southwest of 18-inch chinaberry tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 2 feet south of path leading from yard to negro cabin, on line from station to chimney on center of cabin, and 96.78 feet from station in azimuth $5^{\circ}05'$. No. 2 is 26 feet south of center line of road, a little west of point where road curves to north, and approximately 150 yards from station in azimuth $69^{\circ}24'49''$. From this mark, station mark is in line with chinaberry tree in Mrs. Forlow's yard. No. 3 is 40 feet west of center line of road, 84 feet southwest of the 3-foot oak tree, and 100.70 feet from station in azimuth $107^{\circ}42'$.

Lenzton (Richmond County, R. D. Horne, 1933).—Station is about 9 miles north-northwest of Rockingham and 5 miles, a little south of west, of Ellerbe, on high ground overlooking the Pee Dee River. To reach from the bank and main corner in Ellerbe, go west 2.15 miles from point where arrow sign reads "Mt. Pleasant Church 2 Mi.", keep straight ahead at slanting crossroads, continue 1.75 miles or 0.25 mile beyond crossroad at bottom of grade, and take right fork at point with house on right. Proceed 1.05 miles to old road coming in from rear and small oak tree with triangular blaze, follow this road 200 feet, turn left onto woods road, follow up hill to edge of cotton field, and bear to right around field until top of hill is reached. (A light truck can be taken to top of hill if ground is not wet.) Station is in northwest corner of cotton field, 100 feet south of northeast edge and 120 feet east of northwest edge. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on northeast edge of cotton field, and 108.42 feet from station in azimuth $226^{\circ}39'$. No. 2 is at edge of cotton field, 50 feet southwest of timber line on northwest side of hill, and 204.55 feet from station in azimuth $304^{\circ}40'$. No. 3 is 60 feet north of southeast corner of cotton field at the point where road leading to station enters field, and approximately 500 feet from station in azimuth $342^{\circ}54'18''$.

Hinson (Anson County, R. D. Horne, 1933).—About 9 miles east-southeast of Wadesboro, $4\frac{1}{2}$ miles southeast of Lilesville, and $8\frac{1}{2}$ miles west of Rockingham, on property of H. R. Hinson. To reach from junction of routes 15 and 74 in Rockingham, go west 5.1 miles on route 74 or 0.7 mile beyond center of bridge over Pee Dee River, turn left onto gravel route 802, proceed 0.9 mile to railroad crossing at town of Pee Dee, continue 0.7 mile, take right fork, follow 0.5 mile, take another right fork, and follow 1.1 mile to top of grade at H. R. Hinson's house. Station is 82 feet northeast of 2-foot oak tree in front of Hinson's house, and 28 feet south of center line of road. A deserted house is on north side of road opposite station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 18 feet north of center line of road, and 81.76 feet from station in azimuth $271^{\circ}48'$. No. 2 is 17 feet north-northeast of center line of dirt road, 200 feet southeast of deserted house on north side of road, and approximately 0.4 mile from station in azimuth $127^{\circ}23'00''$. No. 3 is 16 feet north of center line of road, directly north of Mr. Hinson's house, and 68.27 feet from station in azimuth $165^{\circ}08'$.

Sandy (Richmond County, J. P. Lushene, 1933).—About $4\frac{1}{2}$ miles south-southwest of Ellerbe, and 5 miles a little west of north of Rockingham, in back yard of Sandy Grove Church, 16.5 meters (54 feet) south of south side of church, 11 meters (36 feet) west of dirt road, and 12 meters (39 feet) east of 8-inch pine tree. To reach from Rockingham, go north about 1.7 miles on routes 15 and 75 to their junction, turn right and proceed 3.5 miles on route 15, take left dirt fork and follow arrow "Mt. Pleasant Church 2 Miles". Proceed 0.4 mile, take upper left fork, continue to slanting crossroads, turn sharp left, and continue 0.7 mile to Sandy Grove Church on south side of road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 projects 5 inches, is 59 meters (194 feet) east of church, 2 feet south of house, 1 foot south of fireplace chimney, $2\frac{1}{2}$ meters (8 feet) east of southwest corner of house, 2 meters (7 feet) west of rear entrance to house, and 58.72 meters (192.7 feet) from station in azimuth $247^{\circ}59'$. No. 2 projects 2 inches, is 45 meters

(148 feet) northwest of church, near edge of road bank, 7 meters (23 feet) north of east-and-west road passing in front of church, 64 meters (210 feet) southwest of abandoned house, and 62.42 meters (204.8 feet) from station in azimuth $136^{\circ}17'$. No. 3 projects 4 inches, is south of first turn of long S-curve, 9 meters (30 feet) south of center line of road, $4\frac{1}{2}$ meters (15 feet) east of 18-inch lone pine tree, and approximately three-eighths mile from station in azimuth $72^{\circ}39'52''$. Azimuth from station to Ellerbe municipal water tank is $200^{\circ}25'56''$; and to Rockingham municipal water tank is $349^{\circ}12'12''$. Astronomical station is 28.700 meters (94.16 feet) from station in azimuth $204^{\circ}51'$.

Martin (Richmond County, R. D. Horne, 1933).—About $5\frac{1}{2}$ miles west-southwest of Hamlet and $5\frac{1}{4}$ miles south of Rockingham, on property of W. N. Martin. To reach from the Rockingham Hotel in Rockingham, go south 0.75 mile on route 1, turn left onto slanting crossroads, and follow arrow "Route 204—5 Miles". Keep straight ahead 3.7 miles or 1.5 miles beyond a T-road on right with arrow "Cordova 4 Miles", take right fork, continue 1.0 mile, and turn right onto slanting T-road at arrows "Rockingham 5, Hamlet 3". Proceed 0.7 mile, take right fork with gas station in V, continue 0.95 mile and again take right fork, and proceed 0.55 mile or 0.2 mile beyond W. M. Martin's house on south side of road to station site at top of grade. Station is 42 feet south of center line of road in the cornfield. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 15 feet south of center line of road, on edge of plowed field, and 104.55 feet from station in azimuth $247^{\circ}10'$. No. 2 is 16 feet north of center line of road leading to station, in fork formed by this road and road leading northeast through woods, 250 feet north-northeast of W. M. Martin's house, and approximately 0.25 mile from station in azimuth $257^{\circ}24'42''$. No. 3 is 15 feet north of center line of road, on edge of plowed field, and 91.97 feet from station in azimuth $116^{\circ}47'$.

Fruitland (Richmond County, R. D. Horne, 1933). About 3.5 miles northeast of Hamlet and $6\frac{1}{4}$ miles east of Rockingham, on property owned by Fruitland Co. To reach from railroad crossing in Hamlet, go northwest 0.65 mile on United States route 74, turn right onto North Carolina route 204 just northwest of high school, and proceed northeast 3.5 miles to summit of grade with peach orchard on each side of road. Station is in peach orchard between highway and tracks of Seaboard Air Line Railway, on line with row of trees nearest railroad, 76 feet southeast of center line of highway, 48 feet northwest of center line of railroad at point 135 feet southwest of switch point, and 300 feet northeast of signal no. 2495. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is about 12 inches below ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 20 feet southeast of center line of highway and 70.84 feet from station in azimuth $194^{\circ}37'$. No. 2 is 16 feet northwest of center line of highway, 2.5 feet northwest of telephone pole, 18 feet northeast of Mrs. W. T. Brooks' garden, and approximately 0.2 mile from station in azimuth $66^{\circ}32'17''$. No. 3 is 24 feet southeast of center line of highway, 75 feet northeast of center line of lane leading northwest from highway, and 148.85 feet from station in azimuth $80^{\circ}53'$.

Fairview (Scotland County, R. D. Horne, 1933).—About 7 miles southeast of Hamlet and 9 miles northwest of Laurinburg. To reach from railroad crossing in Hamlet, go southeast 7.2 miles on route 74 to station site. Station is on highest ground in vicinity, at north end of highway bridge over Seaboard Air Line Railway tracks, in southwest corner of cultivated field, 15 feet north of edge of railroad cut, about 60 feet north of center line of track, and 46 feet east of center line of highway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 3 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 150 feet northwest of Shell service station, about 300 feet northwest of crossroad, 30 feet northwest of culvert, 19 feet south of center line of highway, and approximately 0.2 mile from station in azimuth $355^{\circ}44'46''$. No. 2 is 20 feet south of south end of highway bridge over railroad, 15 feet east of center line of highway, and 129.90 feet from station in azimuth $38^{\circ}40'$. No. 3 is 75 feet north of center line of railroad, 61 feet west of center line of highway, 12 feet east of 8-inch water-oak tree, and 110.80 feet from station in azimuth $131^{\circ}22'$. Following azimuths are from station: Laurinburg municipal water tank, about 9 miles distant, $296^{\circ}55'22''$; Laurinburg Dixie Guano Co. water tank, $297^{\circ}37'34''$; Hamlet municipal water tank, about 7 miles distant, $120^{\circ}30'07''$.

McInnis (Marlboro County, S. C., R. D. Horne, 1933).—About 11 miles south-southeast of Hamlet, on property of Mr. S. J. McInnis. To reach from Hamlet, go south 0.4 mile from railroad crossing on route 74 or 0.15 mile from the Mark River Bridge, and turn right onto dirt road marked "To Bennettsville". Proceed 0.25 mile, go through railroad underpass, turn right 50 feet, then left and continue 9.8 miles to station site. Station is on sand hill about 0.1 mile south of road, in peach orchard with lone dead walnut tree in its southeast corner, 36 feet north of walnut tree, and between second and third rows of peach trees on south side of orchard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in northeast corner of orchard, 100 yards east of State gravel road, and 81.00 feet from station in azimuth $186^{\circ}51'$. No. 2 is 6 meters (20 feet) west of center line of gravel road, 14 meters (46 feet) north of small filling station, 125 feet north of house in southeast corner of cultivated field, and 0.30 mile from station in azimuth $38^{\circ}35'23''$. No. 3 is on south edge of orchard, 80 feet west of dead walnut tree, and 88.60 feet from station in azimuth $77^{\circ}06'$.

Zion (Scotland County, R. D. Horne, 1933).—About 3 miles southwest of Laurinburg, in yard of the Zion Church (colored). To reach from intersection of United States routes 74 and 401 (North Carolina route 24) in Laurinburg, go southeast 3.05 miles on route 401 to dirt road leading south opposite brick school building on right, turn left, and proceed 0.2 mile to station site. Station is 142 feet west of center line of road, and 61.5 feet north-northeast of northeast corner of church. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 8 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 0.1 mile northeast of dirt north-and-south road leading to station, 20 feet northwest of center line of route 401, 25 feet southwest of land on southeast side of highway, and approximately 0.3 mile from station in azimuth $184^{\circ}33'22''$. No. 2 is 25 feet east of center line of road, at southwest corner of cultivated field, and 176.20 feet from station in azimuth $239^{\circ}06'$. No. 3 is 2 feet southeast of southeast corner of church, and 112.42 feet from station in azimuth $1^{\circ}19'$.

Lynch (Marlboro County, S. C., R. D. Horne, 1933).—Station is about 2 miles southeast of Tatum, on property owned by Mr. Norman W. Lynch. To reach from Tatum, go east 0.75 mile on route 401, turn right, and proceed 0.65 mile to old vacant house in cotton patch on north side of road. Station is 44 feet north of center line of road and 27 feet west of southwest corner of vacant house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at edge of cotton field, 15 feet north of center line of road, and 92.10 feet from station in azimuth $324^{\circ}14'$. No. 2 is at edge of cotton field on south side of road, 13 feet south of center line of road, and 107.00 feet from station in azimuth $94^{\circ}58'$. No. 3 is at southeast corner of vacant house, 5 meters (16 feet) northwest of center line of northeast-and-southwest farm road, 0.15 mile southwest of road leading to station, and approximately 0.3 mile from station in azimuth $100^{\circ}38'12''$.

Oak Grove (Robeson County, R. D. Horne, 1933).—About 10 miles northwest of Rowland and $7\frac{1}{4}$ miles southwest of Maxton, in yard of Oak Grove Methodist Church. To reach from Rowland, go northwest 7.6 miles on North Carolina route 71 and United States route 311 to Raymond, take left fork (United States route 311) 3.9 miles to crossroads, turn left, proceed west 1.8 miles to Old Fork Crossroad, turn right and proceed 0.25 mile to station site. To reach from Maxton, go south about 5 miles on North Carolina route 71 to its junction with United States route 311 at Raymond, turn right onto United States route 311 and continue as above. Station is in north corner of churchyard, 56 feet south-southwest of center line of road, about 200 feet north of church, and 23 feet northeast of 15-inch oak tree with triangular blaze on its northwest side. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 5 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 16 feet south-southeast of center line of road and 120.95 feet from station in azimuth $302^{\circ}28'$. No. 2 is on line with east side of church, 72.5 feet north of northeast corner, and 122.64 feet from station in azimuth $7^{\circ}51'$. No. 3 is 12 feet north of center line of road, about 0.1 mile west of lane leading to residence on south side of road, and approximately 0.3 mile from station in azimuth $118^{\circ}17'07''$.

Judson (Dillon County, S.C., R. D. Horne, 1933).—At crossroads near Judson Baptist Church, 63.5 feet southwest of southwest corner of church, and 176.5 feet from center line of intersection of crossroads. To reach from junction of dirt crossroad and route 9 in Little Rock, go east 0.8 mile on dirt road, take left fork, and proceed 7.2 miles to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 7 meters (23 feet) west of center line of road at northeast corner of barn, about 150 feet northwest of northwest corner of house on east side of road, and approximately 0.5 mile from station in azimuth $302^{\circ}28'34''$. No. 2 is 70 feet southeast of center line of intersection of crossroads, at northwest corner of sheet-iron barn, and 135.56 feet from station in azimuth $7^{\circ}43'$. No. 3 is 38.5 feet northwest of northwest corner of church, and 148.35 feet from station in azimuth $141^{\circ}51'$.

Salem (Robeson County, R. D. Horne, 1933).—About 5 miles northwest of Rowland and 10 miles southwest of Pembroke, in yard of Salem colored school. To reach from railroad station in Rowland, go northwest 5.3 miles on North Carolina route 71 direct to station site. Station is about 120 yards east-northeast of highway, 110.5 feet northwest of northwest side of school, and 20 feet southeast of drainage ditch along northwest side of school yard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 75.5 feet southeast of south corner of school, 22 feet west-southwest of 30-inch white-oak tree, and 185.45 feet from station in azimuth $350^{\circ}18'$. No. 2 is about 60 yards east-northeast of highway, 12 feet southeast of center line of drive into school yard, 22 feet north-northeast of 24-inch white-oak tree, and 172.17 feet from station in azimuth $50^{\circ}25'$. No. 3 is 20 feet southwest of center line of highway, 118 feet northwest of center line of lane with names C. Barnes, W. D. McCullom, and S. McCullom, 380 feet northwest of residence of W. M. Walker, and approximately 0.15 mile from station in azimuth $132^{\circ}49'26''$.

Barlow (Dillon County, S.C., R. D. Horne, 1933).—At fork of Little Rock-McLaurens Mill road, about 1.5 miles north of Little Rock, and on property owned by Mr. G. D. Barlow. To reach from Little Rock, go east on dirt road past church and cemetery, take left fork at 0.8 mile, and follow main road 1.1 miles to station site. Station is in cultivated field, in front of small negro tenant house which is between two mulberry trees, 85 feet east of mulberry tree in front of house, 51 feet west of center line of main road, and 31 feet south of driveway leading to house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on east edge of cultivated field, 17 feet west of center line of main road, 39 paces south of driveway, and 91.27 feet from station in azimuth $313^{\circ}39'$. No. 2 is at northwest corner of woods, 19 feet west of center line of main road, and approximately 0.3 mile from station in azimuth $334^{\circ}10'37''$. No. 3 is on east edge of cultivated field, 19 feet west of center line of main road, 54 feet north of driveway into tenant house, and 89.20 feet from station in azimuth $176^{\circ}17'$.

Dillon north base (Robeson County, C. I. Aslaxson, 1933).—In Rowland, near Atlantic Coast Line Railroad depot, 15.84 meters (52.0 feet) west of east rail of north-bound track, and 10.8 meters (35 feet) south of south end of depot. Surface mark is standard disk station mark in concrete, note 1a, stamped "Dillon North Base (1933)". Underground mark is standard reference disk, instead of standard station disk, in concrete. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11a. No. 1 is just across tracks from station 15.8 meters (52 feet) east of center line of north-bound track, 2.5 meters (8 feet) southeast of telephone pole line, and 31.5476 meters (103.502 feet) from station in azimuth $287^{\circ}02'$. Disk is stamped "Dillon North Base R. M. #1 (1933)". No. 2 is just across tracks from Atlantic Coast Line Railroad cotton platform, 10.40 meters (34.1 feet) south of center line of dirt street, 10.0 meters (33 feet) east of center line of north-bound track, 4.5 meters (15 feet) west of telegraph pole, and 45.1518 meters (148.136 feet) from station in azimuth $354^{\circ}38'$. Disk is stamped "Dillon North Base R. M. #2 (1933)". Reference mark no. 3 is a standard reference disk in south face (southwest corner) of brick building occupied by Wilson Motor Sales Co. (Lincoln-Ford Sales), 100 meters (328 feet) northeast of depot, 16.25 meters (53.3 feet) east of center line of north-bound track, 1.12 meters (3.7 feet) east of southwest corner of building, 1.18 meters (3.9 feet) above ground, and approximately 140 meters (459 feet) from station in azimuth $221^{\circ}49'55''$. Disk is stamped "Dillon North Base R. M. #3 (1933)". Spire of

Rowland Methodist Church is approximately 0.5 mile from station in azimuth $344^{\circ}45'07''$.

Hamer (Dillon County, S.C., R. D. Horne, 1933).—About 7 miles northeast of Dillon, on high ground 200 feet southwest of North Carolina-South Carolina State line, 35 feet northwest of center line of United States route 301, and opposite a South Carolina speed-limit sign. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is 1 foot below ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 27 feet northwest of center line of route 301, opposite Gulf filling station, and 202.67 feet (slope) from station in azimuth $228^{\circ}00'$. No. 2 is 24 feet southwest of center line of route 301, and 168.77 feet (slope) from station in azimuth $20^{\circ}53'$. No. 3 is 24 feet southeast of center line of route 301, 15 yards north of north corner post of tobacco barn on property of J. N. Hamilton, and approximately 0.5 mile from station in azimuth $41^{\circ}51'12''$.

Dillon south base (Dillon County, S.C., C. I. Aslakson, 1933).—About $1\frac{1}{2}$ miles north of Dillon, at first curve north of city on Atlantic Coast Line Railroad, about 425 feet north of automatic semaphores nos. 2614 and 2615, 9.5 meters (31 feet) east of center line of north-bound track, 4.70 meters (15.4 feet) west of telegraph pole, 12.95 meters (42.5 feet) southwest of another pole, and 189.38 meters (621.3 feet) south along extension of tangent of north point of tangency of east rail of north-bound track. To reach from Dillon, go north 1.5 miles on United States route 301 direct to station site. Surface mark is standard disk station mark in concrete, note 1a. Underground station mark is standard reference disk in concrete. Reference mark no. 1 is a standard reference disk, note 11c, in top of south concrete abutment of trestle, 150.22 meters (492.8 feet) south of automatic semaphores nos. 2604 and 2605, 260.50 meters (854.7 feet) north of milepost C-121, 2.0 meters (7 feet) east of east rail of north-bound track, and 1,395.55 meters (4,578.6 feet) from station in azimuth $208^{\circ}15'10''$. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11a. No. 2 is 9.8 meters (32 feet) east of center line of north-bound track, 4.5 meters (15 feet) west of telegraph pole line, 8.25 meters (27.1 feet) southwest of pole, and 40.4981 meters (132.868 feet) from station in azimuth $31^{\circ}47'$. No. 3 is directly across tracks from station, 21.9 meters (72 feet) west of center line of north-bound track, and 31.2701 meters (102.592 feet) from station in azimuth $123^{\circ}58'$.

Hammond (Robeson County, R. D. Horne, 1933).—About 3 miles airline east southeast of Rowland, on the property of Mr. J. Hammond. To reach from intersection of United States route 301 and North Carolina route 71 in Rowland, go east 3.35 miles on route 71 direct to station site. Station is on highest ground in near vicinity, about 35 yards southeast of Hammond's house, 86 feet north of center line of route 71, and 31.5 feet northwest of northwest corner of ornamental fence around small family graveyard. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 12 yards southwest of center line of route 71, 100 feet west of small bridge crossing road, at north edge of woods, and approximately one-half mile from station in azimuth $335^{\circ}50'42''$. No. 2 is at the southeast corner of Hammond's yard, 43 feet northeast of center line of route 71, 34.7 feet southeast of southwest corner of fence around graveyard, and 85.14 feet from station in azimuth $350^{\circ}57'$. No. 3 is 2 feet east of northeast corner of Hammond's garage, 43 feet east of center line of route 71, in area between road along northwest side of yard and route 71, and 112.52 feet from station in azimuth $117^{\circ}29'$.

Pittman (Robeson County, R. D. Horne, 1933).—About 2.5 miles southwest of Fairmont and 8.5 miles southeast of Rowland, on property line of Mrs. R. L. Pittman and Mrs. R. A. Pittman. To reach from Fairmont, go southwest 3 miles on North Carolina route 71 direct to station site; and to reach from Rowland, go southeast 10.4 miles on North Carolina route 71 direct to station site. Station is at highest point of cultivated field across highway from residence of Leo T. Bullock, 67 feet northwest of center line of highway, and 40 feet southwest of center line of side road just southwest of Mr. Bullock's service station. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 5 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on Mr. Bullock's property, 30 feet southeast of center line of highway, 10 feet northeast of drive into Bullock's yard, and 127.22 feet (slope) from station in azimuth $271^{\circ}47'$. No. 2 is about 100 feet southwest of the southwest side of Bullock's house, 155 feet along lane south of

center line of highway, 5 feet east of center line of lane, 1 foot west of fence, and 179.26 feet from station in azimuth $341^{\circ}34'$. No. 3 is on land owned by Mrs. R. A. Pittman, about 75 yards west of W. H. Nye's residence, 45 yards southwest of tobacco barn, 40 feet southeast of center line of highway, 14 feet south of center line of side road, and approximately 0.15 mile from station in azimuth $43^{\circ}15'23''$.

Oliver (Dillon County, S.C., R. D. Horne, 1933).—About 6.5 miles southeast of Dillon, 6 miles northwest of Lakeview, on property owned by Mr. R. M. Dillon. To reach, follow route 9 southeast from Dillon for 6.4 miles or northwest from Lakeview for 6.6 miles, direct to station site. Station is in hog pasture, on south side of route 9, 76 feet southwest of center of intersection of route 9 and north-and-south dirt road, 36 feet southwest of northeast corner of fence around pasture, and in line with center of intersection and fence corner. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in cultivated field, 18 feet west of center line of north-and-south road, in north-and-south line of telephone poles, 14 inches south of second pole north of main road, and 218.59 feet from station in azimuth $201^{\circ}57'$. No. 2 is 13 yards northwest of small Negro cabin, 19 feet east of center line of north-and-south road, and 172.19 feet from station in azimuth $1^{\circ}03'$. No. 3 is about 10 yards north of center line of route 9, 5 yards northwest of north end of 30-inch concrete culvert across road, 4 yards west of center line of drainage ditch entering culvert, and approximately one-third mile from station in azimuth $109^{\circ}56'58''$.

Kemper (Dillon County, S.C., J. P. Lushene, 1933).—In town of Kemper, which is about 2 miles southwest of Lakeview. Follow route 9 to Lakeview and then go southwest about 2 miles to Kemper. Station is in southeast corner of school grounds, on property line between county school and Baptist Church, 15 meters (49 feet) south of small grove of pine trees, and 55 meters (180 feet) south of center line of county road passing in front of school. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is at northeast corner of county school, 90 feet south of center line of road, 60 feet southwest of school pump, 110 feet west of grove of pine trees, and 39.498 meters (129.59 feet) from station in azimuth $186^{\circ}57'$. No. 2 is 75 feet east of grove of pine trees, 120 feet south of road, 2 feet west of southwest corner of Baptist Church, and 32.85 meters (107.8 feet) from station in azimuth $290^{\circ}22'$. No. 3 is near depot at Kemper, 125 feet west of county road, 150 feet south of south face of depot, 12 feet east of railroad tracks, 2 feet north of cotton and tobacco storage house, and approximately one-fourth mile from station in azimuth $142^{\circ}07'56''$. A temporary azimuth mark "Lite" is approximately 1 mile from station in azimuth $123^{\circ}18'18''$.

Nichols (Dillon County, S.C., R. D. Horne, 1933).—About 3 miles north of Nichols, 5 miles southeast of Kemper, on property owned by Mrs. Fronie Nichols and managed by Mr. Gerry Nichols. To reach from railroad station in Nichols, go north 3.2 miles on route 9 direct to station site. Station is in cultivated field, 54 feet east of route 9 at point where highway curves to northeast, 30.2 feet east-southeast of telephone pole no. 197 which has triangle cut on it, about 150 yards southeast of dwelling occupied by Mr. E. Horn, and 6 yards west of west side extended of long wooden barn. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Surface mark is about 8 inches below ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 0.3 mile north of the Marion-Dillon County line, 9 paces west of center line of route 9, 112 paces south of lane leading to farm buildings on west side of highway, directly across road from telephone pole no. 188, and approximately 0.4 mile from station in azimuth $354^{\circ}44'40''$. No. 2 is on west edge of same cultivated field as station, 38 feet east of center line of road, 33.5 feet north of telephone pole no. 196, and 157.19 feet from station in azimuth $359^{\circ}07'$. No. 3 is 32 feet west of center line of route 9, on east edge of cultivated field, 2 feet south of pole guying pole no. 197, and 87.16 feet from station in azimuth $95^{\circ}19'$.

Floyds (Horry County, S.C., R. D. Horne, 1933).—About 6 miles northwest of Green Sea, 6 miles southeast of Nichols, on grounds of Floyds Township high school. To reach from Nichols, go southeast 0.75 mile on United States route 17 to junction with South Carolina route 9, and follow left fork (route 9) 4.25 miles to station site. Station is at east corner of athletic field, 114 feet north-northwest of north corner of school building, and 52 feet south-southwest of

center line of highway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects about 2 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 33 feet north-northeast of center line of highway, 150 feet west of small white house on north side of road owned by A. M. Small, and 0.2 mile from station in azimuth $295^{\circ}51'57''$. No. 2 is 115 feet south-southwest of center line of highway, 30 feet east of east corner of school building, and 240.30 feet from station in azimuth $314^{\circ}46'$. No. 3 is 32 feet north-northeast of center line of highway, 2 feet west of southwest corner of old wooden building, and 166.87 feet from station in azimuth $153^{\circ}00'$.

Wilson (Columbus County, R. D. Horne, 1933).—About 7 miles southwest of Chadbourn, on property of Mr. W. H. Wilson. To reach from Tabor, follow Tabor-Fair Bluff Road 10 miles to filling station in forks of road just south of Cherry Grove Church, and turn right onto Cerro Gordo Road. Proceed 3.2 miles on this road to station site. To reach from Clarendon, go east to village of Wards, then southwest on Fair Bluff Road to junction with Cerro Gordo Road at Wards crossroads. Turn left at this point and proceed 1.4 miles to station site. To reach from Chadbourn, go west on route 17 to concrete highway bridge over Porters Swamp. Continue west 0.3 mile and turn left (south) onto dirt road. Follow this road 0.4 mile to railroad, turn right before crossing tracks, continue 0.1 mile to railroad station at Cerro Gordo, and turn left across tracks at point east of railroad station. Continue 2.35 miles to station site, bearing right at forks in road at 1.3 and 1.8 miles south of railroad station. Station is 56 feet west of center line of dirt road, and 42.5 feet south of southwest corner of tobacco barn at south edge of cultivated field south of Mr. Wilson's farmhouse. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 13 meters (43 feet) north-northeast of center line of intersection of road running northeast-southwest past the station and T-road to north, 5 meters (16 feet) east of center line of T-road, 9 meters (30 feet) north of center line of the northeast-southwest road, and approximately 0.30 mile from station in azimuth $226^{\circ}49'22''$. No. 2 is 18 feet north of center line of road, on line of fruit trees on north side of road, 118 feet south of center line of chimney on south side of Mr. Wilson's house, and 234.10 feet from station in azimuth $231^{\circ}15'$. No. 3 is 8 feet southwest of center line of dirt road, 110 feet southeast of center line of dirt side road with $2\frac{1}{2}$ -foot drainage ditch running parallel to it on north side, and 209.55 feet from station in azimuth $356^{\circ}52'$. Azimuth from station to aluminum water tank in Chadbourn is $242^{\circ}54'22''$.

Green Sea (Horry County, S. C., R. D. Horne, 1933).—In town of Green Sea, in southwest corner of yard of Green Sea grade school, in southwest corner of intersection of South Carolina route 9 and United States route 701. To reach from Tabor, go southwest 0.7 mile on United States route 701 to State line, and continue southwest on same route 6.1 miles to station site. Station is about 100 yards south of route 9, 150 yards west of route 701, in line of a row of trees along south side of school yard, 152 feet south-southwest of southwest corner of school, 28 feet east of fence along west side of school yard, and 40 feet north of north side of E. L. Buffkin's house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in southeast corner of school yard, 36 feet north of center line of road which is the extension of route 9, 90 feet southeast of southeast corner of south wing of high-school building, 90 feet south-southeast of southeast corner of east wing of high-school building, and approximately 0.2 mile from station in azimuth $254^{\circ}12'47''$. No. 2 is in yard in front of Buffkin's house, 9 feet south of center line of drive to house, 1 foot north of fence, 20 feet east of prolongation of east side of school building, and 127.85 feet from station in azimuth $293^{\circ}40'$. No. 3 is 1 foot east of fence along west side of school yard, 88 feet southwest of southwest corner of school building, and 99.78 feet from station in azimuth $173^{\circ}48'$.

Clarendon (Columbus County, R. D. Horne, 1933).—Station is on high-school grounds, 0.25 mile from the town of Clarendon, 31 feet west of fence line on east side of school grounds, 103 feet south of southeast corner of building, and 187 feet northeast of center line of dirt road. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 24 feet northeast of center line of road, 71 feet northwest of fence line on east side of school grounds, 3 feet northwest of T-pole on north side of road, and 162.80 feet from station in

azimuth $33^{\circ}54'$. No. 2 is in southwest angle of crossroads in town, 15 meters (49 feet) south of grade crossing, 3 meters (10 feet) east of east rail of railroad track, 16 meters (52 feet) southwest of center line of intersection of crossroads, and approximately 0.25 mile from station in azimuth $112^{\circ}30'03''$. No. 3 is in concrete walk at entrance to school, 8 feet east of entrance, 18 inches west of east edge of walk, 5 feet northeast of east pillar at entrance, and 118.50 feet from station in azimuth $161^{\circ}41'$. Azimuth from station to aluminum water tank in Tabor is $27^{\circ}26'27''$.

Iron Hill (Columbus County, R. D. Horne, 1933).—Station is 6 miles southeast of Tabor, and 5.6 miles southeast of Clarendon, at Iron Hill crossroads, on property of Mr. W. A. Inman. To reach from Tabor, go southeast 6 miles on second street south of railroad station, cross railroad, go east 0.3 mile to end of cement road, turn right onto dirt road, and follow arrows to Iron Hill. Station is southwest of grove of small pines, 19 feet west of fence line on east side of pasture, and 111 feet south of center line of road running east and west. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 44 feet south of center line of east-and-west road, in the northeast corner of pasture, at fence corner, and 123.37 feet from station in azimuth $229^{\circ}03'$. No. 2 is 6 meters (20 feet) south of center line of east-and-west road, 1 foot west of north-and-south fence line, 1 meter (3 feet) south of fence corner formed by north-and-south and east-and-west fence lines, 200 feet west of farm on south side of road, opposite house on north side of road, and approximately 0.30 mile from station in azimuth $260^{\circ}49'48''$. No. 3 is 22 feet south of fence line on north side of pasture, and 146.98 feet from station in azimuth $120^{\circ}23'$.

Loris (Horry County, S.C., R. D. Horne, 1933).—In town of Loris, in yard of Loris public school. To reach from main street intersection in town, go east 1 block, turn right, proceed south 1 block, turn left onto street along north side of school grounds, and proceed east 0.1 mile to station site. Station is 90 feet south of center line of street along north side of school grounds, 15 feet west of east edge of woods along east side of school grounds, and 154 feet east-northeast of northeast corner of north wing of grade-school building (old high-school building). Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 5 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 18 feet north of center line of street, across street from edge of woods on east side of school grounds, and 104.75 feet from station in azimuth $214^{\circ}38'$. No. 2 is 40 feet east of center line of street parallel to railroad, 65 feet east of center line of main track of Atlantic Coast Line Railroad, 75 feet south-southeast of southwest corner of old Presbyterian Church which is now being used by Junior Order of United American Mechanics, and approximately 0.25 mile from station in azimuth $127^{\circ}18'54''$. No. 3 is 28 feet south of center line of street, 6 feet west of prolongation of east side of east wing of grade-school building, and 124.60 feet from station in azimuth $149^{\circ}38'$.

Guide (Columbus County, R. D. Horne, 1933).—Station is 13 miles southeast of Tabor, and 3.5 miles north of Pireway, on property of Columbus County School Board and part of the Guideway Consolidated School. To reach from main street in Tabor, go east about 0.3 mile from point 1 block south of post office to end of cement road, turn right onto dirt road and follow arrows to Pireway. Continue 8.5 miles, turn left (going northeast from Tabor) as marked by arrows, pass Zion Church on right 2.8 miles from turn, and continue 1.4 miles to station site. Station is 20 feet east of west edge of school grounds, 50 yards north of southwest corner of school yard, and 100 yards southwest of school. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 120 yards south of road, 90 yards west of school, 15 yards southwest of southwest corner of outdoor basketball court, 10 feet east of west edge of school grounds, and 126.30 feet from station in azimuth $205^{\circ}07'$. No. 2 is 5 meters (16 feet) south-southeast of center line of southwest-and-northeast road that crosses road leading past school, 0.15 mile southwest of this intersection, on southeast edge of timber and cultivated field on opposite side of road, and approximately 0.25 mile from station in azimuth $305^{\circ}14'37''$. Heavy clearing is necessary to make this mark visible from ground. No. 3 is on edge of school grounds, 50 yards east of southwest corner of school yard, 120 yards south of school building, and 192.00 feet from station in azimuth $329^{\circ}56'$.

For notes in regard to marking of stations see p. 135.

Simpson (Horry County, S.C., R. D. Horne, 1933).—About $5\frac{1}{2}$ miles south-east of Loris, 16 miles northeast of Conway, 2 miles east of village of Daisy, and on land owned by Simpson Creek County School. To reach from main street intersection in Loris, go east 0.3 mile, turn right, proceed southeast 4.3 miles to T-intersection, turn right, proceed 0.15 mile to crossroads at Daisy, turn left, proceed east 1.15 miles and south 0.2 mile on main road to T-road east. Turn left, proceed 0.75 mile to Simpson Creek school and church, and continue straight ahead 250 feet to station site. Station is about 300 feet southeast of Simpson Creek Church, 300 feet northeast of Simpson Creek School, 280 feet west of artesian well at north edge of road southwest of church, 32 feet south of center line of road, and 20 feet north-northeast of 10-inch pine tree with triangular blaze on north side. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 8 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 18 feet south of center line of road, 80 feet west of center line of lane, and 132.22 feet from station in azimuth $272^{\circ}41'$. No. 2 is 18 feet north of center line of road, 30 feet east of east edge of cultivated field, about 335 feet east of small bridge, and approximately 0.1 mile from station in azimuth $273^{\circ}35'20''$. No. 3 is 30 feet north of center line of road, 132 feet east-southeast of southeast corner of church, 190 feet east of artesian well, and 117.00 feet from station in azimuth $133^{\circ}21'$.

Supplementary points

Magnetic station (N.C.G.S. and U.S.G.S. (1898)) (Bladen County, R. D. Horne, 1933).—In Elizabethtown, about 200 feet east of north-and-south street (route 23), 300 feet south of east-and-west street (route 21), 112 feet southeast of southeast corner of jail, 175 feet south-southeast of southeast corner of courthouse, and about 28 feet north of fence along south side of courthouse yard. Marked by 6 by 6-inch square granite post about 3 feet high, and projecting 6 inches above ground. Top of stone is flat with cross cut in center, and lettered "NCGS USGS 1898." Station *Elizabethtown* (see description thereof) is 0.366 meter (1.20 feet) from station in azimuth 78° .

Turner (Columbus County, N.C.; Dillon County, S.C., R. D. Horne, 1933).—About 2 miles southwest of Fair Bluff and 7 miles northeast of Nichols, on North Carolina-South Carolina State line. To reach from Fair Bluff, go southwest 0.5 mile on United States route 17, and turn right onto dirt road leading off curve in highway just north of railroad crossing, proceed southwest 1.25 miles to railroad, turn right onto dirt road along track, and follow 0.4 mile to point where road bears right away from track and with tobacco barn straight ahead. Station is 55 feet southwest of southwest side of barn, and 93 feet northwest of center line of railroad track. Surface mark is standard disk station mark in top of 8-inch square granite post which projects 4 feet above ground. Post is North Carolina-South Carolina State-line boundary monument, and is marked "NC" on northeast side and "SC" on southwest side. Reference marks nos. 1 and 3 are standard reference disks in concrete, note 11a. No. 1 is about 200 yards north of curve in road where it leaves railroad tracks, 15 feet west of center line of road, 35 feet south of tobacco barn, and approximately 0.4 mile from station in azimuth $222^{\circ}57'26''$. No. 3 is 6 feet north of center line of road, 1 foot south of fence, 25 feet west-southwest of southwest corner of tobacco barn, and 92.71 feet from station in azimuth $150^{\circ}43'$. Station *B.M. State Line* (see description thereof) is 35.372 meters (116.05 feet) from station in azimuth $246^{\circ}08'$.

B.M. State Line (Columbus County, N.C.; Dillon County, S.C., R. D. Horne, 1933).—About 2 miles southwest of Fair Bluff, 7 miles northeast of Nichols, on North Carolina-South Carolina State line, 52 feet northwest of center line of railroad track, and 18 feet southwest of most southerly of two large maple trees between road and railroad. Marked by standard bench-mark disk in top of concrete post. Station *Turner* (see description thereof) is 35.372 meters (116.05 feet) from station in azimuth $66^{\circ}08'$.

Replacement (Columbus County, N.C.; Horry County, S.C., R. D. Horne, 1933).—About 7 miles west of Tabor, on North Carolina-South Carolina State line, at corner of property lines of Mr. Fred Lancaster and Mr. Sam Herring. To reach from railroad station in Tabor, go west 0.15 mile on route 40, turn right onto dirt road, and continue 0.25 mile to forks. Follow left fork 0.35 mile to another fork and turn right onto main road. Proceed 6.1 miles to crossroad and home of Sam Herring on left. Turn left onto this crossroad, go about 200 yards to woods road, turn right and follow to station site. Station is 175 feet

north of center line of road. Marked by standard disk station mark in top of granite post about $3\frac{1}{2}$ feet high. Post is carved on east face, "Pine blazed in 1735 Standing alive in 1928"; on north face, "N.C."; and on south face, "S.C." Post was set over center of where blazed pine stood, and stump is still alongside station. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 6 meters (20 feet) north-northeast of center line of east-and-west road that crosses road leading to station, 2 meters (7 feet) north of center line of 3-foot drainage ditch, about 160 feet west of tobacco barn, and approximately 0.25 mile from station in azimuth $300^{\circ}55'37''$. This mark is not visible from ground at station. No. 2 is 17 feet north of center line of road, and 157.68 feet from station in azimuth $319^{\circ}57'$. No. 3 is in underbrush 90.65 feet from station in azimuth $50^{\circ}01'$. Another stone monument of North Carolina-South Carolina boundary, said to be exactly 37 miles west of the coast, is 500 feet from station in azimuth $315^{\circ}20'43''$. Azimuth from station to aluminum water tank at Tabor is $308^{\circ}11'36''$.

Tabor (Columbus County, N.C.; Horry County, S.C., R. D. Horne, 1933).—Station is three-fourths mile southwest of Tabor, on North Carolina-South Carolina State line, on west side of United States route 701, in Fred Powell's yard, about 25 yards north of the "State Line Filling Station" (Gulf gasoline), and 47 feet west of center line of highway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk, note 11c, 1 foot from south end of $\frac{3}{4}$ by 6-foot concrete culvert on east side of route 701, and approximately 0.25 mile from station in azimuth $220^{\circ}22'32''$. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11a. No. 2 is 32 feet west of center line of highway, in line of north-and-south power-line poles, 2 feet south of first pole north of station, and 89.18 feet from station in azimuth $227^{\circ}05'$. No. 3 is at southeast corner of Fred Powell's house, and 80.74 feet from station in azimuth $101^{\circ}15'$. *State-line monument* (see description thereof) is 3.908 meters (12.82 feet) from station in azimuth $317^{\circ}38'$. Another State line monument of the same type, except that it has "28" cut on its east face signifying that it is 28 miles from the coast, is approximately one-half mile from station in azimuth $135^{\circ}22'05''$. It is visible from ground with slight amount of clearing.

State-line monument (Columbus County, N.C.; Horry County, S.C., R. D. Horne, 1933).—On North Carolina-South Carolina State line, three-fourths mile southwest of Tabor, and 10 yards west of center line of United States route 701. Marked by 6-inch square by $4\frac{1}{2}$ -foot-high granite monument which has "NC" cut on north face and "SC" on south face. Station *Tabor* (see description thereof) is 3.908 meters (12.82 feet) from station in azimuth $137^{\circ}38'$.

Dothan (Columbus County, N.C.; Horry County, S.C., R. D. Horne, 1933).—About $1\frac{1}{2}$ miles southeast of Tabor, in a boundary monument on North Carolina-South Carolina State line, and in cultivated field owned by Mr. A. J. Suggs. To reach from Tabor, go southeast 8.0 miles on State dirt highway running from Tabor to Pireway, and turn right at Standard Oil filling station. Proceed about 3 miles and take left fork. Follow this fork three-fourths mile and turn right at three mail boxes just north of the Camp Swan Methodist Church. Continue one-half mile to State line and station site. Station is 25 yards west of house owned by H. W. Marlowe and occupied by W. C. Jones, and 26 feet west of road. Surface mark is standard disk station mark in center of top of granite boundary monument. Monument is 6-inch square post, $4\frac{1}{2}$ feet high, and marked "NC" on northeast face and "SC" on southwest face. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 18 feet east of center line of road, 27 feet west of northwest corner of log tobacco barn, and 101.95 feet from station in azimuth $207^{\circ}36'$. No. 2 is 22 yards from center line of road, on north edge of driveway to Jones' house, 31 feet north of large 2-foot deciduous tree, and 108.12 feet from station in azimuth $332^{\circ}20'$. No. 3 is in southeast corner of cultivated field, 18 feet west of center line of road, 6 feet west of drainage ditch on west side of road, 6 feet north of drainage ditch perpendicular to road, and approximately 0.2 mile from station in azimuth $1^{\circ}32'49''$.

McRae (Robeson-Scotland Counties, N.C.; Dillon-Marlboro Counties, S.C., R. D. Horne, 1933).—About 7 miles northeast of Clio, on North Carolina-South Carolina boundary line. To reach from Clio, go northeast 0.7 mile on South Carolina route 381, take left fork, continue 1.7 miles, and keep straight ahead at point where route 381 turns left. Proceed 1.1 miles to Red Bluff, and continue 3.6 miles on same road to station site. Station is 30 feet northwest of center line of Clio-Maxton Road, 20 feet northeast of dim road through field, and 8.5 feet

northwest of State-line monument (5- by 5-inch granite post lettered "1905"). Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 41 yards north of junction of Clio-Maxton and Laurinburg Roads, 125 yards north of Mr. McLean's residence, 100 yards south of two-room tenant house, 5 yards east of center line of Laurinburg road, and approximately 0.3 mile from station in azimuth $264^{\circ}34'30''$. No. 2 is 27 feet northwest of center line of Clio-Maxton Road, 67.3 feet east by south of east corner of Mr. Steve Lockely's house, at north corner of his yard, and 140.65 feet from station in azimuth $56^{\circ}59'$. No. 3 is on northeast side of dim road through field, 5 feet southeast of drainage ditch, and 263.46 feet from station in azimuth $131^{\circ}20'$. *State-line monument (1905)* (see description thereof) is 2.59 meters (8.5 feet) from station in azimuth $327^{\circ}01'$.

State-line monument (1905) (Robeson-Scotland Counties, N.C.; Dillon-Marlboro Counties, S.C., R. D. Horne, 1933).—On North Carolina-South Carolina State line, about 7 miles northeast of Clio. Marked by 5- by 5-inch granite post lettered "1905." Station *McRae* (see description thereof) is 2.59 meters (8.5 feet) from station in azimuth $147^{\circ}01'$.

Gibson (Scotland County, N.C.; Marlboro County, S.C., R. D. Horne, 1933).—Station is 0.4 mile southwest of Gibson, on the North Carolina-South Carolina State line, on property of Mr. J. C. Hunsucker, in cultivated area at south edge of young orchard, 38.5 feet west of center line of North Carolina route 203, at end of pavement, and 22.33 feet from center of 4-inch square concrete boundary monument lettered "1905" on its top. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are probably standard reference disks in concrete, note 11a. No. 1 is 16.5 feet southeast of highway, in line of telephone poles, directly across road from Mr. Hunsucker's two-story house, and 190.58 feet from station in azimuth $251^{\circ}59'$. No. 2 is 24 paces southeast of highway, about 9 inches east of third telephone pole from station, 45 paces south of southeast corner of white bungalow with hedge enclosure, and approximately 0.1 mile from station in azimuth $51^{\circ}31'02''$. No. 3 is 8 feet west of intersection of east-and-west and north-and-south ditches which marked old State line, 8 feet south of dirt farm road leading northwest from route 203, and 181.82 feet from station in azimuth $104^{\circ}30'$. *State-line monument* (see description thereof) is 6.806 meters (22.33 feet) from station in azimuth $317^{\circ}30'$.

State-line monument (Scotland County, N.C.; Marlboro County, S.C., R. D. Horne, 1933).—On North Carolina-South Carolina State line, 0.4 mile southwest of Gibson. Marked by 4-inch square concrete post lettered "1905." Station *Gibson* (see description thereof) is 6.806 meters (22.33 feet) from station in azimuth $137^{\circ}30'$.

Perhealth (Richmond County, N.C.; Marlboro County, S.C., R. D. Horne, 1933).—About 7 miles airline southwest of Hamlet, on the North Carolina-South Carolina State line. To reach from Hamlet, go southwest 7.9 miles on North Carolina route 204 to end of pavement at State line. Station is in grassy area, 38 feet southeast of center line of route 204, 40 yards south of and in line with three brick footings on west side of old filling station, and 13 feet south of most easterly post of large "State Line" sign. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 18 feet southeast of center line of route 204, 30 paces southwest of old filling station, 2 yards west of line of brick footings, and 80.00 feet from station in azimuth $214^{\circ}37'$. No. 2 is directly across highway from Mr. Eddie Longley's house, 62 paces northwest of center line of highway, at about center of west edge of long field, at point of woodland extending out into field, and approximately 0.2 mile from station in azimuth $61^{\circ}16'22''$. No. 3 is directly across highway from south edge of cultivated field, on north slope of wooded ravine, 18 feet northwest of center line of route 204, and 100.65 feet from station in azimuth $83^{\circ}59'$.

Hamlet traverse tie (Richmond County, R. D. Horne, 1933).—On property of Hamlet Water Co., about 0.6 mile west-northwest along Main Street from railroad junction in downtown Hamlet, in northwest corner of triangle formed by intersection of Main and Entwistle Streets and Hyland Avenue, 9.418 meters (30.90 feet) east of northwest point of outer edge of low brick wall enclosing triangle, and 0.41 meter (1.3 feet) south of line between center of pipe of water tank which is also in triangle, and this northwest point on wall. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference

marks are standard reference disks cemented in curbing of nearby streets, note 11c. No. 1 is at southwest corner of intersection of Hyland Avenue and Entwistle Street, and 34.266 meters (112.42 feet) from station in azimuth $212^{\circ}38'$. No. 2 is 15 feet south of center line of Main Street (North Carolina route 204), 36 feet southwest of intersection of unpaved street, and approximately 0.15 mile from station in azimuth $294^{\circ}46'47''$. No. 3 is 15.2 feet south of center line of Main Street, 2 feet east of guy pole in telephone line, and 25.847 meters (84.80 feet) from station in azimuth $329^{\circ}18'$. Center of pipe of water tank is 10.134 meters (33.25 feet) from station in azimuth $261^{\circ}55'$. This pipe was also reference point of traverse station *Hamlet* (see description thereof) which if now in existence is under pavement of Main Street.

Rockingham (Richmond County, C. L. Garner, 1918; 1933).—About 2 miles north of Hamlet, on property owned by Mr. D. F. Mudd. To reach from junction of routes 74 and 204 in Hamlet, go northeast 1.6 miles on route 204 direct to station site. Station is between highway and railway, in grove of small oaks, 156 feet southeast of center line of highway, about 200 yards southwest of white filling station, at first curve in Seaboard Airline Railway south of milepost 251, at intersection of tangents to east rail of south-bound main track, 88.8 feet northwest of northwest rail, and 23.5 feet west by south of 8-inch oak tree with 6-inch triangular blaze 5 feet above ground on side toward station. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. In 1933, the original reference mark was found to have been disturbed, and three new standard reference disks in concrete, note 11a, were placed. No. 1 is 18.7 feet east of most easterly rail of most easterly of several side tracks, 112 feet south-southwest of switch for this track, 16 feet west of center line of lane leading to mark, and approximately 0.4 mile from station in azimuth $243^{\circ}20'28''$. No. 2 is 33.9 feet northwest of northwest rail and 83.15 feet from station in azimuth $266^{\circ}13'$. No. 3 is 34.4 feet west of west rail, 5.4 feet north of short pole used to back up telegraph pole, and 100.66 feet from station in azimuth $10^{\circ}04'$. Azimuth from station to Hamlet municipal water tank is $44^{\circ}30'40''$; and to Seaboard Air Line Railway tank at Hamlet, $24^{\circ}45'40''$.

Cordova (Richmond County, R. D. Horne, 1933).—Station is 3.65 miles south of Rockingham Hotel, Rockingham, N.C., 0.5 mile beyond dirt crossroads with arrows "Cordova", etc., and small green-roofed filling station in east angle, at top of most southerly of series of rises, and 25.7 feet southeast of center line of United States route 1. Looking northeast from station, the center of long white school with two chimneys (on the horizon) is in range with large dead tree. A large lone pine stands just to the northwest of line to this school. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 24 feet northwest of center line of route 1, 3 to 4 feet higher than grade of road, and 123.91 feet from station in azimuth $196^{\circ}11'$. No. 2 is at beginning of first curve in road southwest of station, 71 feet southwest of "Road Curves" sign, 29.7 feet northwest of center line of highway, and approximately 0.35 mile from station in azimuth $41^{\circ}35'10''$. No. 3 is 22 feet northwest of center line of route 1, and 64.10 feet from station in azimuth $87^{\circ}44'$.

Pee Dee (Richmond County, R. D. Horne, 1933).—About $4\frac{1}{4}$ miles west-northwest of Rockingham, on right-of-way of United States route 74 (North Carolina route 20). To reach from Rockingham Hotel in Rockingham, go west 1.7 miles on route 74, keep left on same route at junction with United States route 15, and continue 4.05 miles, or 0.95 mile beyond transmission line crossing and 0.35 mile beyond small gas station on left, to top of grade and station site. Station is in cultivated field, 29.5 feet west of center line of highway, and 6 feet west of west edge of road cut. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 29.5 feet east of center line of route 74, 80.5 feet south of south brick foundation for portico of gas station, and approximately 0.4 mile from station in azimuth $234^{\circ}59'29''$. No. 2 is in same field as station, 25.5 feet west of center line of highway, 3 feet west of west edge of road cut, and 50.53 feet from station in azimuth $237^{\circ}16'$. No. 3 is in cultivated field across road from station, 28 feet east of center line of highway, 3 feet east of east edge of road cut, and 58.30 feet from station in azimuth $332^{\circ}28'$.

Entwistle (Richmond County, R. D. Horne, 1933).—About 5 miles east-northeast of Rockingham, and 5 miles north of Hamlet. To reach from junction

of United States routes 1 and 74 in Rockingham, go northeast 5.2 miles on route 1 or 0.7 mile beyond Morgan's tourist camp, to dirt T-road on left with arrow "Morrison Trng. School 8 Mi." Station is about 16 yards east of center line of this dirt road extended, 36.5 feet south of center line of route 1, and 22.9 feet west of center of 3-inch square unlabeled concrete mark which is about $1\frac{1}{2}$ feet southwest of 18-inch pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 28 feet south of center line of route 1, about 100 yards south of and in line with ridge of Mr. Love's barn, 5.8 feet west of 2-foot stump, and 98.40 feet from station in azimuth $251^{\circ}03'$. No. 2 is on property of Mr. E. B. Morse, about 25 yards west of and in line with his filling station, across route 1 from west gatepost of entrance to Rockingham Country Club, 1 foot southeast of corner pole of north-and-south and east-and-west power-line poles, approximately 0.35 mile from station in azimuth $253^{\circ}50'28''$. No. 3 is on north edge of cultivated field, 18 feet west of dirt road leading past Mr. Love's house to training school, 6 yards southwest of intersection of this road and a cut-off from route 1, and 165.57 feet from station in azimuth $155^{\circ}33'$.

Ellerbe (Richmond County, R. D. Horne, 1933).—At north edge of town of Ellerbe, on city property about one-fourth mile east of route 15, on line with two easterly legs and 26.5 feet south of southeast leg of municipal water tank, on line with west side of and 66 feet north of northwest corner of pump house, and 44 feet north of center line of street. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk, note 11c, in top of west curb of main street of town, directly in front of brick building owned by Walter J. Hogan, 12 feet northeast of southeast corner, 20 feet southeast of northeast corner of building, and approximately 0.2 mile from station in azimuth $39^{\circ}47'56''$. Reference mark no. 2 is standard reference disk in concrete, note 11a, 26.5 feet east of center line of railroad track, 105 feet southwest of center of southwest leg of water tank, and 116.95 feet from station in azimuth $87^{\circ}41'$. Reference mark no. 3 is standard reference disk, note 11c, in top of south corner of concrete foundation of northwest leg of water tank, and 66.33 feet from station in azimuth $172^{\circ}11'$. Center of municipal water tank is 46.3 feet from station in azimuth $180^{\circ}46'$; and water tank of Marston Training School is approximately 9 miles from station in azimuth $292^{\circ}36'09''$.

Ansonville (Richmond County, R. D. Horne, 1933).—Station is one-half mile north of Ansonville, on property of Mr. Dula, in line with back or east side of his house, in line with power-line pole on east side of highway and telephone pole on west side of highway, 110 feet east of power-line pole, and $7\frac{1}{2}$ feet north of 3-foot oak tree. To reach from post office in Ansonville, go north 0.5 mile on route 80 direct to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Upper mark is 6 inches below ground. Reference marks are standard reference disks in concrete, note 11a. No. 1 is on top of hill, 18 feet north of center line of dirt road, and approximately 0.3 mile from station in azimuth $213^{\circ}56'12''$. To reach from station, go north 0.2 mile, turn right (east) onto dirt road, and follow 0.1 mile to top of hill. No. 2 is on top of bank 25 feet east of center line of route 80, 3 feet south by west of power-line pole mentioned above, and 110.2 feet from station in azimuth $88^{\circ}21'$. No. 3 is on bank 25 feet east of center line of highway, and 187.35 feet from station in azimuth $157^{\circ}03'$.

Marshville (Union County, R. D. Horne, 1933).—About 1 mile northeast of Marshville, on top of hill known locally as "Richardson Hill", and on right-of-way of dirt road which lies between properties of W. M. Stewart and of Hasty Bros. To reach from Marshville, turn north from traffic light on route 74, cross railroad tracks, and go right (east) 0.3 mile to Olive Branch Road with arrow sign "Olive Branch 9 Mi." Follow this road one-half mile to point where it curves to left and narrow dirt road goes straight ahead, and continue on narrow dirt road 0.3 mile to top of hill and station site. Station is 10 feet west of center line of road, and 94.3 feet southwest of southwest corner of Hasty Bros.' house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 18 feet west of center line of road, 24 feet south of first telephone pole north of station, $3\frac{1}{2}$ feet south of line of south face of Hasty Bros.' house, and 77.95 feet from station in azimuth $208^{\circ}31'$. No. 2 is on opposite side of road from station, 10 feet east of center line of lane, 2 feet northeast of first tall telephone pole south of

station, and 107.9 feet from station in azimuth $24^{\circ}31'$. No. 3 is 15 feet east of center line of Olive Branch Road, 45 feet northeast of road leading to Mr. Traywick's house, 3 feet north of his mail box, and approximately 0.4 mile from station in azimuth $204^{\circ}33'48''$. The road leading past station intersects the Olive Branch Road about 100 feet west of station. Azimuth from station to Wadesboro water tank is $278^{\circ}14'07''$.

Sloop (Mecklenburg-Cabarrus Counties, R. D. Horne, 1933).—Station is 12 miles northeast of center of Charlotte, $9\frac{1}{2}$ miles east-southeast of Huntersville, and about $7\frac{1}{4}$ miles southwest of Concord, on land owned by E. S. Sloop. To reach from Concord, go southwest about 9 miles on route 29 or 0.25 mile beyond Harrisburg service station to dirt T-road leading northwest from cemetery and marked with arrows "Morehead Farm 3" and "Croft 14". To reach this point from Charlotte, go northeast about 13 miles on route 29 or 1.4 miles beyond Mecklenburg-Cabarrus County line. Proceed northwest 2.65 miles on dirt road, turn left at dirt crossroads around small abandoned store, proceed southwest 0.3 mile following arrow "Charlotte 13 Miles" to county line which is about 80 yards beyond Sloop's house on right. Station is near bottom of grade, 51 feet southeast of second pole southwest along road from Sloop's house, 26 feet east-southeast of center line of road, 68 feet west of twin apple tree, about 200 feet northwest of pile of large rocks, in northwest corner of oats field, at southwest corner of apple orchard. Station mark is standard station disk in 8 by 8-inch by 3-foot high granite post, carved "M" on southwest side, "C" on northeast side, and "July 28th, 1905" on northwest side. Reference mark no. 1 is standard reference disk in concrete, note 11a, in wire fence line east-northeast of Sloop's house, 26 feet northeast of his driveway, 20 feet northwest of center line of road, 48 feet northwest of 4-foot oak, and 318.45 feet (slope) from station in azimuth $213^{\circ}26'26''$. Reference mark no. 2 is standard reference disk, note 12c, in rounded rock 66 feet west-southwest of 15-inch tree growing among group of large rocks in oats field, and 192.00 feet from station in azimuth $322^{\circ}18'$. Reference mark no. 3 is standard reference disk in concrete, note 11a, 23 feet east of center line of road, 17 feet south of fourth telephone pole (No. 3) south of station, and about 200 yards from station in azimuth $47^{\circ}15'52''$.

Allen (Mecklenburg County, R. D. Horne, 1933).—At Allen, on route 27, 13 miles east of Charlotte, 7 miles west of junction of routes 27 and 151, 1 mile west of Mecklenburg-Cabarrus County line, on north side of highway, across from railway station, 8 meters (26 feet) northwest of Allen service station, 5 meters (16 feet) south-southeast of corner of old barn, and 12.3 meters (40 feet) west of nearest of four large oaks. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in small peach orchard in back of white house, 4.85 meters (15.9 feet) northwest of edge of porch, 8.91 meters (29.2 feet) west of pump, 13.3 meters (44 feet) north of most northerly of four oaks, and 33.17 meters (108.8 feet) from station in azimuth $219^{\circ}15'$. No. 2 is 5.63 meters (18.5 feet) northwest of center line of route 27, 15.60 meters (51.2 feet) east-southeast of northeast corner of Allen service station, 12.9 meters (42 feet) south-southeast of most easterly of four oaks, and 29.08 meters (95.4 feet) from station in azimuth $313^{\circ}06'$. No. 3 is in southeast corner of small cemetery in back of brick church, 5 paces northeast of center line of gravel road, 7 paces southeast of 10-inch cedar, 2 paces north of twin oak tree, and approximately 0.15 mile from station in azimuth $319^{\circ}39'21''$.

Locke (Cabarrus County, R. D. Horne, 1933).—At Concord, in grassy area at northeast corner of property of the Locke cotton mills, 40 yards southwest of intersection of Church Street (United States route 29) and Peachtree Street, 96.4 feet northwest of northeast corner of east wing of mill building (wooden structure with brick foundation), and 139.8 feet southeast of northeast corner of part of building which extends furthest back toward fence on south side of Peachtree Street. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is about 10 yards southwest of intersection of Church and Peachtree Streets, 3 feet inside of east high fence, 7 feet south of center of gateway into mill grounds, and 106.82 feet from station in azimuth $198^{\circ}58'$. No. 2 is at northeast corner of intersection of Cook and Cannon Streets, 18 feet southeast of center line of Cannon Street, 15 feet northeast of corner of Cook Street, $1\frac{1}{2}$ feet northeast of light pole, and approximately 0.5 mile from station in azimuth $93^{\circ}44'15''$. No. 3 is 5.6 feet south of northeast corner of main building, 1 foot east of this building, and 136.29 feet from station in azimuth $75^{\circ}20'$. Azimuth from station to mill water tank is $19^{\circ}09'54''$.

Bench Mark 41 (1932) (Mecklenburg County, R. D. Horne, 1933).—At Huntersville, in top of southwest corner of concrete footing of westerly leg of municipal water tank. (Type of mark not described.) Station *Huntersville* (see description thereof) is 17,221 meters (56.50 feet) from station in azimuth $23^{\circ}44'$.

City (Mecklenburg County, R. D. Horne, 1933).—In Charlotte, in sidewalk of driveway of Atlantic gasoline filling station, 42.8 feet southeast of curb on southeast side of Pine Street, 14 feet from curb on northeast side of Trade Street, and 12.12 feet north of northwest corner of the Builders Building. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Station *Charlotte* (see description thereof) is 295.2 meters (969 feet) distant in azimuth $329^{\circ}38'18''$. Station *Mayor* (see description thereof) is 308.551 meters (1,012.30 feet) distant in azimuth $47^{\circ}03'42''$.

Mayor (Mecklenburg County, R. D. Horne, 1933).—In Charlotte, in northwest corner of Atlantic gasoline filling station at south corner of intersection of Mint and West Third Streets, across Mint Street from railroad freight station, 13.65 meters (44.8 feet) southeast of center of north rail of north street car track on Mint Street, 7.618 meters (24.99 feet) from northwest corner of old jail, and 28.60 meters (93.8 feet) southwest of center line of West Third Street. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Station *Charlotte* (see description thereof) is 377.7 meters (1,239 feet) distant in azimuth $276^{\circ}46'06''$. Station *City* (see description thereof) is 308.551 meters (1,012.30 feet) distant in azimuth $227^{\circ}03'37''$.

Alexis (Lincoln County, R. D. Horne, 1933).—About 10 miles southeast of Lincolnton, 4 miles northwest of Stanley, at first rise in grade 0.2 mile north of Gaston-Lincoln county-line sign on North Carolina route 27, about 40 feet south of deepest part of highway cut, about 40 yards southwest of D. E. Rhyne's house, 27 feet west of center line of highway, and 39.4 feet (slope) east of east rail of single-track railroad. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is across highway from station, on west edge of cultivated field, 3 feet east of east edge of road cut, and 55.04 feet from station in azimuth $234^{\circ}12'$. No. 2 is 7 yards east of center line of highway, 24 yards west of northwest corner of white farmhouse, and approximately 0.3 mile from station in azimuth $335^{\circ}39'02''$. No. 3 is between highway and railroad, 35.4 feet (slope) east of east rail, 32 feet west of center line of highway, and 78.09 feet from station in azimuth $340^{\circ}10'$.

Stanly (Gaston County, R. D. Horne, 1933).—In Stanley, in west corner of fenced garden in yard of S. M. Finger, and 150 feet southwest of southwest corner of his house. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk, note 11c, in west balustrade of steps to Bruington Baptist Church, and approximately 200 yards from station in azimuth $203^{\circ}48'21''$. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11a. No. 2 is in northeast corner of yard, 30 feet north of chicken house on west side of yard, and 80.72 feet from station in azimuth $221^{\circ}21'$. No. 3 is in southwest corner of yard, 10 feet north of northeast corner of barn, and 70.80 feet from station in azimuth $120^{\circ}30'$. *Primary traverse station no. 10* (U.S.G.S.) (see description thereof) is 66.888 meters (219.45 feet) from station in azimuth $257^{\circ}53'$.

Gastonia (Gaston County, R. D. Horne, 1933).—In Gastonia, in northeast corner of roof of First National Bank Building, 4.2 feet from east coping, 4.75 feet from north coping, and 25.2 feet from west coping. Mark is standard station disk in concrete, note 1a. Reference marks are standard reference disks. No. 1 is in vertical brick wall near sewer ventilator, 4.6 feet from east coping, 11.2 feet southwest of southwest corner of chimney, and 31.12 feet from station in azimuth $359^{\circ}47'$. No. 2 is in side of second brick pillar of coping from northwest corner of west side of building, 9 feet from north coping, 1.6 feet above roof, and 25.31 feet from station in azimuth $81^{\circ}16'$. Azimuth from station to Loray Mills silver water tank is $74^{\circ}32'05''$; and to red light on Kings Mountain, $62^{\circ}02'40''$.

Gastonia base reference mark no. 1 (Gaston County, R. D. Horne, 1933).—In Gastonia, in long narrow grassy strip on north side of railroad station, about 2 feet north of hedge, about 50 yards west of east end of iron fence, 2 yards east of line extending through wooden columns on east end of depot, 65 feet east of telephone pole, 20.77 feet north of north rail, 11.15 feet south of outside of street curb, and 10.75 feet south of iron fence. Marked by standard reference disk in concrete, note 11a. Station *Gastonia base* (see description thereof) is 99.960 meters (327.95 feet) from station in azimuth $82^{\circ}27'07''$.

Gastonia base (Gaston County, R. D. Horne, 1933).—Station, base line, and reference mark are in long narrow grassy strip on north side of railroad station grounds in Gastonia, across street from and in front of Armington Hotel. Station is in northwest corner of grounds, about 1 yard north of small hedge, 21.6 feet north of north rail, 5.95 feet east of west end of iron fence, and 11.2 feet south of fence. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Station *Gastonia base reference mark no. 1* (see description thereof) is 99.960 meters (327.95 feet) from station in azimuth $262^{\circ}27'05''$.

Cherryville (Gaston County, R. D. Horne, 1933).—On city property near center of town of Cherryville, 10 feet west of small pump house which is south of main building of waterworks, 17 feet east of center line of South Mulberry Avenue, and 95 feet north of center line of intersection of South Mulberry Avenue and West Academy Street. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk, note 11c, in curb, 16 feet south of center line of West Academy Street, 100 feet west of South Mulberry Avenue, and 145.57 feet from station in azimuth $301^{\circ}07'$. Reference mark no. 2 is standard reference disk in concrete, note 11a, 15 feet west of center line of South Mulberry Avenue, 200 feet south of white house on west side of street, in middle of east edge of cornfield, and 0.2 mile from station in azimuth $345^{\circ}04'04''$. Reference mark no. 3 is standard reference disk, note 11c, in curb, 16 feet south of center line of West Academy Street, and 187.90 feet from station in azimuth $38^{\circ}43'$.

Denver (Lincoln County, R. D. Horne, 1933).—At Denver, on property of R. E. Procter, of Charlotte. To reach from main crossroads at post office in Denver, go east about 200 yards on route 271, turn south at arrows "St. James Church 3 Mi." and "Liberty Hill School 5 Mi.", and proceed about 0.15 mile to top of grade and station site. Station is about 13 paces beyond south of top of grade and 21 feet east of center line of road. Station *Anderson 2*, on Anderson Mountain (see description thereof), is visible just to right of north end of old shed in azimuth $126^{\circ}36'04''$. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 22 feet east of center line of road and 34.72 feet from station in azimuth $191^{\circ}42'$. No. 2 is at northwest corner of intersection of road leading to station and route 271, 30 feet north of center line of route 271, 24 feet west of center line of dirt road to station, and approximately 0.2 mile from station in azimuth $191^{\circ}41'38''$. No. 3 is 18.5 feet west of center line of dirt road and 39.78 feet from station, in azimuth $110^{\circ}13'$.

Statesville (Iredell County, R. D. Horne, 1933).—In Statesville, between Mitchell College for Women and city standpipe, 78 feet southwest of west side of college building, 11 feet east of east side of standpipe, 39 feet north of fire plug, 24 feet west-northwest of northwest corner of unpainted shed, 18 feet northwest of center line of cinder drive, and 15.3 feet southwest of 6-inch apple tree. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is near gate in wood fence, 7 feet west of center line of drive, 12.4 feet east of corner of fence, 17.3 feet north-northeast of northeast corner of yellow garage, and 182.15 feet from station in azimuth $344^{\circ}54'$. No. 2 is in concrete sidewalk at southwest corner of Oak and Cherry Streets, 1 foot from end of sidewalk, 1.5 feet south of inside edge of sidewalk, 3 paces north of water meter, and approximately 300 yards from station in azimuth $68^{\circ}16'15''$. No. 3 is 92.35 feet west-southwest of west side of standpipe, 30 feet east of 12-inch cedar tree, 6 feet south of fence corner, 6 feet southwest of drive, 1 foot east of wood fence, and 115.66 feet from station in azimuth $75^{\circ}07'$.

Newton (Catawba County, R. D. Horne, 1933).—In Newton, in courthouse yard, directly across street from Imperial Theater, 52 feet north of center line of walk leading to east entrance of courthouse, and 25 feet west of west edge of walk on east side of courthouse. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks, note 11c. No. 1 is in top step of east entrance to courthouse, 6 feet north of southeast corner, and 79.52 feet from station in azimuth $49^{\circ}11'$. No. 2 is in sidewalk at northeast corner of Main and East First Streets, at southwest corner of Shufford National Bank Building, and 227.50 feet from station in azimuth $139^{\circ}00'$. No. 3 is in sidewalk, 25 feet east of northeast corner of East Second Street and College Avenue, and approximately 0.25 mile from station in azimuth $210^{\circ}41'16''$.

Penelope (Catawba County, R. D. Horne, 1933).—Station is 3 miles west of Hickory, 200 feet northwest of Sinclair service station, 22 feet north of center

line of route 10, and 45 feet south of south rail of main line of Southern Railway. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is a standard reference disk, note 11c, in concrete drive at northwest corner of Sinclair service station, 50 feet southwest of center line of route 10, and 144.15 feet from station in azimuth $283^{\circ}26'$. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11a. No. 2 is 220 feet west of Sinclair service station, 29 feet south of center line of route 10, and 65.78 feet from station in azimuth $22^{\circ}40'$. No. 3 is between railway tracks and dirt road on north side of tracks, 100 feet west of tracks, 25 feet east of dirt road, 100 feet south of grade crossing, and approximately 0.30 mile from station in azimuth $67^{\circ}40'03''$.

Catlin (Lincoln-Catawba Counties, R. D. Horne, 1933).—Station is 17 miles southeast of Morganton, $14\frac{1}{4}$ miles southwest of Hickory, 14 miles west-northwest of Lincolnton, and near Lincoln-Catawba County line, 3 miles east of Burke-Lincoln-Catawba County corner, on property of Mrs. John Young. To reach from Morganton, go south about 17 miles on route 18, cross Lincoln County line, continue 2.1 miles, turn left onto gravel route 113, and proceed 2.05 miles to Lincoln-Catawba County line and station site. To reach from junction of routes 17 and 113 which is about 10 miles south of Hickory and 11 miles southwest of Newton, go southwest $8\frac{1}{4}$ miles on route 113 to station site. To reach from Lincolnton, go west 12 miles on route 27, turn right onto gravel road at brown Gulf filling station, proceed 2.1 miles to route 113, turn right (northeast), and continue 0.9 mile to station site. Station is in cultivated field, at top of small grade, 37 feet southeast of center line of road, and 21.3 feet east-southeast of Catawba County sign. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in cultivated field, 14 feet southeast of center line of road, and 68.98 feet from station in azimuth $197^{\circ}26'$. No. 2 is in cultivated field in front of unpainted house, 12 feet west-northwest of center line of road, 9 feet southwest of path leading to house, about 50 yards east-southeast of house, and approximately one-half mile from station in azimuth $40^{\circ}24'56''$. No. 3 is 17.5 feet northwest of center line of road, 4.3 feet north of Lincoln County sign, and 54.88 feet from station in azimuth $126^{\circ}33'$.

Lincolnton (Lincoln County, R. D. Horne, 1933; 1934).—At Lincolnton, 1 foot east of line of east face of courthouse, 18.5 feet east of east edge of cement sidewalk from south side of courthouse to Water Street, and 61.5 feet (slope) south of southeast corner of courthouse. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11c. No. 1 is in east curb of South Aspen Street, 12.65 feet southwest of southwest corner of County National Bank Building, 11.67 feet west of northwest corner of two-story brick building south of bank, and 106.45 feet from station in azimuth $251^{\circ}03'$. No. 2 is in cement sidewalk on west side of South Aspen Street (route 16), 18 feet west of center line of street, 75 feet north of northwest corner of wooden bridge over railroad tracks, 36 feet south-southeast of large concrete steps, and approximately 650 feet from station in azimuth $341^{\circ}53'14''$. In 1934, reference mark no. 2 was destroyed in relocating sidewalk. A new standard reference disk was established by engineers of the State Highway Commission exactly over position of old mark, but about 0.7 foot higher. Distances and azimuth from station remain as given above. No. 3 is in curb of southwest corner of Water and South Aspen Streets, 23.25 feet west by south of center of manhole plate in center line of South Aspen Street, 6 feet north of south curb of Water Street, and 149.45 feet from station in azimuth $357^{\circ}09'$.

Primary traverse station no. 10 (U.S.G.S.) (Gaston County, R. D. Horne, 1933).—In Stanley, in S. M. Finger's yard, 150 yards north along railroad from railroad station, and on west side of railroad opposite Dr. Weather's drug store. Marked by cap riveted to 3-inch iron pipe which projects 18 inches above ground, and stamped "Prim. Trav. Sta. No. 10 Elev. 852 feet 1912". Pipe was found to be loose in ground. Station *Stanly* (see description thereof) is 66.888 meters (219.45 feet) from station in azimuth $77^{\circ}53'$.

CHARLOTTE TO SOUTH CAROLINA BOUNDARY

Principal points

Monroe (Union County, R. D. Horne, 1934).—In east end of Monroe (known as Five Points), 216.85 feet southeast of water tank, 32 feet south of center line of dirt street, opposite gas tanks of Standard Oil Co., and 66 feet northeast of

black-walnut tree. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Reference marks nos. 1 and 2 are standard reference disks in concrete, note 11b. No. 1 is 7 paces northwest of Friendship Baptist Church (colored) in North Monroe, and 0.25 mile from station in azimuth $198^{\circ}54'28''$. No. 2 is at southeast corner of wire fence of Standard Oil Co.'s property, 22 feet north of center line of dirt road, and 106.50 feet from station in azimuth $239^{\circ}45'$. Reference mark no. 3 is standard reference disk in concrete, note 11c, in east corner of southwest footing of water tank, 24.8 feet west of center of tank, 29 feet north of center line of road leading to station, and 229.85 feet from station in azimuth $105^{\circ}59'$. Center of tank is 216.85 feet from station in azimuth $111^{\circ}57'$. Azimuth from station to weather vane on courthouse is $93^{\circ}40'53''$, and to black water tank is $134^{\circ}55'13''$.

Pleasant (Union County, R. D. Horne, 1934).—About 15 miles southeast of Charlotte, about 5 miles southeast of Mathews, about 75 yards east of and on property of Pleasant Plain Baptist Church, 56 feet south of south edge of United States route 74 (paved), directly across highway from Gulf gasoline station and store with stable to east, 16 feet west of 30-inch oak tree, 15 feet northwest of 12-inch oak tree, 33 feet north of north edge of cemetery, and 49.9 feet south of center of Union-Mecklenburg county-line marker. To reach from Monroe, go west about 12 miles on route 74 direct to station site. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Reference marks are standard reference disks in concrete, note 11b. No. 1 is 9 feet north of north edge of highway, 16 feet south of southeast corner of stable, 4 feet east of telegraph pole, and 105.90 feet from station in azimuth $219^{\circ}14'$. No. 2 is 90 feet south of south edge of highway, 6 feet east of 20-inch oak tree, 2 feet north of cemetery fence line, and 73.59 feet from station in azimuth $65^{\circ}29'$. No. 3 is 7 paces southwest of center line of route 74, 15 paces southeast of center line of route 44 (Providence School Road), 29 paces northwest of northwest corner of large white house, and approximately 0.3 mile from station in azimuth $107^{\circ}02'11''$.

Mineral (Union County, R. D. Horne, 1934).—On property of Davis Griffin, 8.9 miles southwest of Monroe, about 1.4 miles southwest of Mineral Springs, in west edge of woods, 41.5 feet north of center line of route 25, 50 feet east of center line of road running north from route 25, 17.8 feet east of 16-inch pine with two triangular blazes, and 31.35 feet northeast of signpost marked "County Road 2 M". To reach from Monroe, go southwest 8.9 miles on route 25 direct to station site. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Surface mark projects 8 inches. Reference marks are standard reference disks in concrete, note 11b. No. 1 projects 6 inches, and is 8 paces south of center line of route 25, 2 feet north of wire fence in edge of woods, 5 paces east of 14-inch pine tree, and 83.85 feet (slope) from station in azimuth $306^{\circ}04'$. No. 2 projects 6 inches, and is in edge of field, 8 paces south of center line of route 25 at point 23 paces west of junction of route 25 and north-and-south dirt road, and 140.35 feet from station in azimuth $38^{\circ}31'$. No. 3 projects 8 inches, and is 110 feet south of route 25, 10 feet east of east edge of small grove of gum and oak trees, 2 feet south of southeast corner of small shed with tin roof, and approximately 0.1 mile from station in azimuth $55^{\circ}17'50''$.

Providence (Mecklenburg County, R. D. Horne, 1934).—About 12 miles south-southeast of Charlotte, 6 miles east-southeast of Pineville, $4\frac{1}{2}$ miles east-northeast of North Carolina-South Carolina State line, 68 yards south-southwest of Providence School building, on north side of Y-road just south of center line extended of road leading southwest, 13 yards east of road leading northwest, 28 yards northwest of road leading east, and 10 yards north-northeast of twin trees. To reach from Mathews, go west 6.5 miles on route 276 (Pineville Road) to T-road on left with sign "Providence School $2\frac{1}{2}$ miles", and follow this road 2.4 miles to Y-intersection with brick school building on north side. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Surface mark projects 3 inches. Reference marks are standard reference disks in concrete, note 11b. No. 1 is 42 yards south of southwest corner of school, 25 yards north of road leading east, 3 yards north of center line of drive leading into school, and 117.27 feet from station in azimuth $239^{\circ}17'$. No. 2 is 25 yards south of drive to school, 6 yards east of road leading northwest, in range with north end of school, and 94.6 feet from station in azimuth $138^{\circ}39'$. No. 3 is at top of grade, on outside of curve, 7 yards east of main road, 4 yards south of center line of farm road leading east, 18 yards southwest of 12-inch oak tree, and 0.55 mile from station in azimuth $153^{\circ}05'06''$. Northwest corner of school building

at point just below eaves is 75 yards from station in azimuth $171^{\circ}10'$, and southwest corner of school building at point just below eaves is 75 yards from station in azimuth $204^{\circ}36'$.

Heath (Union County, R. D. Horne, 1934).—Near Heath Methodist Episcopal Church South, 103 feet west of southwest corner of church, and 81.8 feet north of center line of dirt road. To reach from Waxhaw, go south on North Carolina route 25 to State line, continue south 1.7 miles on South Carolina route 12 (same road) to junction with United States route 521 at Osceola, turn left and proceed south 1.6 miles to Gulf filling station, turn left onto dirt road, proceed 0.4 mile to cotton gin, continue 0.1 mile to road fork, and follow left fork 0.4 mile to above-mentioned church. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Reference marks are standard reference disks in concrete, note 11b. No. 1 is at southwest corner of church wing on west side of church, and 93.51 feet from station in azimuth $233^{\circ}54'$. No. 2 is 118 feet west of southwest corner of church, 6 feet southwest of small tree on south side of road, and 100.85 feet from station in azimuth $320^{\circ}07'$. No. 3 is 24 feet north of center line of road, and 0.25 mile from station in azimuth $54^{\circ}55'06''$. Station *Richardson* (see description thereof) is visible from ground in azimuth $9^{\circ}24'44''$.

State (Mecklenburg County, R. D. Horne, 1934).—Near North Carolina-South Carolina boundary line, about 5.2 miles southeast of Pineville, 32 feet west of center line of paved United States route 521, 68 feet west of highway right-of-way marker pipe on east side of highway, 16.7 feet north of similar pipe on west side of highway, and in barbed-wire fence line. Highway right-of-way markers are $2\frac{1}{2}$ -inch iron pipes, and are distant 66.26 feet center to center from each other. To reach from Pineville, go south 5.2 miles on United States route 521 direct to station site at State line. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Reference marks are standard reference disks in concrete, note 11b. No. 1 is 22 feet west of center line of highway, and 115.47 feet from station in azimuth $201^{\circ}46'$. No. 2 is 33 feet east of center line of highway, 56 feet south of pipe on east side of highway, and 97.47 feet from station in azimuth $334^{\circ}02'$. No. 3 is about 10 paces east of center line of highway, about half-way up hill which slopes to south, and approximately 0.35 mile from station in azimuth $14^{\circ}13'27''$. Mark is not visible from ground without clearing branches from nearby pine trees.

Roddy (York County, S.C., R. D. Horne, 1934).—About 7 miles east of Rock Hill, about 1 mile east of Leslie, about 200 yards north of South Carolina route 5, about 200 yards west of Roddy public school, in front yard of Mr. W. E. Walker, 113 feet west of brick chimney on west side of Walker's house, 25 feet south of south corner of small wooden shed, and 39 feet north of center line of dirt road. To reach from Rock Hill, go south about 7 miles on South Carolina route 5 to Leslie, continue about 1 mile to dirt road to left at top of hill, and follow this road about 200 yards to Walker's house and station site. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Reference marks are standard reference disks in concrete, note 11b. No. 1 is 53 feet south of center line of road leading to Walker's house, 105 feet south of chimney on west side of house, 44 feet east of 12-inch cedar tree, and 99.6 feet from station in azimuth $330^{\circ}09'$. No. 2 is about 100 yards north of fork at junction of dirt road and route 5, about 30 yards east of center line of route 5, 6 paces east of center line of dirt road, and approximately 0.7 mile from station in azimuth $346^{\circ}23'47''$. No. 3 is 16 feet east of center line of dirt road, 40 yards west of house, and 106.59 feet from station in azimuth $99^{\circ}45'$.

Fort Mill (York County, S.C., R. D. Horne, 1934).—On top of highest hill in Fort Mill, in northwest part of town, on property owned by Lancaster Cotton Mill Co., $38\frac{1}{2}$ feet west-southwest of center pipe of large tank, 13.6 feet west of northwest corner of footing of southwest leg of tank, 34 feet southwest of west corner of footing of northwest leg of tank, and 50 feet south of center line of dirt street. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Surface mark projects 8 inches. Reference marks are standard reference disks in concrete, note 11b. No. 1 is on west side of garden fence, 5 yards east of range with the two east legs of tank, 23 yards south of southeast leg, and 101.1 feet (slope) from station in azimuth $284^{\circ}38'$. No. 2 is on north side of yard wire fence, 8 yards east of telephone pole, 2 yards west of range with east side of house across street, and 121.25 feet (slope) from station in azimuth $359^{\circ}56'$. No. 3 is 0.15 mile north of paved route 21, 50 yards west of small yellow house, 20 yards north of telephone pole in T-road intersection, 5

paces east of center line of road, and 0.3 mile from station in azimuth $88^{\circ}37'00''$. Ball on standpipe is one-half mile from station in azimuth $306^{\circ}41'40''$.

Winthrop (York County, S. C., R. D. Horne, 1934).—In Rook Hill, on south side of campus of Winthrop Industrial Training School which is across United States route 21 from Winthrop Normal College, 90.7 feet southeast of southeast corner of training school building, 29 yards east of walk leading to south door of building, 17 yards north of center line of street, 8 yards north of wire fence, 6 yards west-northwest of 10-inch oak tree, 12 yards east of 16-inch oak tree, and 10 yards south of 24-inch pine tree. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Surface mark is in 14-inch concrete cylinder, flush with surface of ground. Reference mark no. 1 is standard reference disk in concrete, note 11b, 12 yards south of center line of grass parkway in center of street, 21 yards east-southeast of beginning of parkway, 32 yards west-southwest of culvert, and 0.25 mile from station in azimuth $247^{\circ}38'34''$. Reference mark no. 2 is standard reference disk in concrete, note 11c, flush with surface of concrete sidewalk on west side of north-and-south street which leads towards south door of training school, 6 inches west of east edge, 6 yards south of south side of house on same side of street, and 194.3 feet from station in azimuth $357^{\circ}55'$. Reference mark no. 3 is standard reference disk in concrete, note 11b, 21 yards west of walk leading to south door of building, 2 yards southeast of large oak tree, 1 yard north of north edge of paved sidewalk on north side of street, and 157.75 feet from station in azimuth $57^{\circ}14'$. Azimuths from station are: tank Winthrop College farm, $240^{\circ}21'58''$; spire Oakland Avenue Church, $358^{\circ}06'39''$; and spire Winthrop College main building $31^{\circ}16'52''$.

Red Hill (Union County, R. D. Horne, 1934).—About 8 miles west-northwest of Monroe, about 0.2 mile northeast of Seaboard Air Line Railway tracks, on highest point of hill known locally as Red Hill and High Hill, and about 30 meters (98 feet) east of edge of woods. To reach from courthouse in Monroe, go 8.2 miles on United States route 74, turn right (northeast), proceed 0.8 mile to railway, and continue 0.25 mile to top of hill and station site. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Surface mark projects about 6 inches. Reference marks are standard reference disks in concrete, note 11b, projecting about 1 foot. No. 1 is about 200 feet southwest of railway, 5 feet northeast of center line of road, 170 feet southwest of second pole east of road and railway crossing, and approximately 0.25 mile from station in azimuth $44^{\circ}57'55''$. No. 2 is in edge of woods on west side of hill, and 126.79 feet from station in azimuth $99^{\circ}01'$. No. 3 is in edge of woods on northwest side of hill, and 134.14 feet from station in azimuth $166^{\circ}55'$. Azimuth from station to silver-colored municipal water tank at Monroe is $313^{\circ}58'28''$.

Meckun (Mecklenburg County, R. D. Horne, 1933; 1934).—About 13 miles east-southeast of Charlotte, $5\frac{1}{2}$ miles east-northeast of Mathews, and $2\frac{1}{2}$ miles south-southeast of Mint Hill, on land owned by J. F. Phillips. To reach from Mint Hill, go south 1.4 miles on gravel road from road junction at entrance to Philadelphia Church, keep straight ahead where road comes in from right, continue 0.65 mile to creek bridge, and continue 0.35 mile to triangular grass plot with post of mail boxes at T-road intersection. Station is on strip of land between road and orchard fence, 27 paces west-southwest of mail boxes, 23 feet southwest of center line of road, 9 feet northeast of orchard wire fence, and 5 paces northwest of fence corner. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is in southwest corner of cultivated field, 28 feet east-southeast of mail boxes, 26 feet northeast of road, and 121.08 feet from station in azimuth $276^{\circ}15'$. No. 2 is about 100 yards west-northwest of intersection of gravel roads, 11 paces north of center line of road, 3 paces north of north edge of drainage ditch, and approximately one-fourth mile from station in azimuth $302^{\circ}16'12''$. No. 3 is on strip of land between road and orchard fence, 21 feet southwest of center line of road, 17 feet southeast of 14-inch red-oak tree, and 72.54 feet from station in azimuth $119^{\circ}03'$.

Richardson (Union County, R. D. Horne, 1934).—On bare-topped hill. To reach from Waxhaw, go south to junction of routes 521 and 12 at Osceola, turn left onto route 521, cross Waxhaw Creek, continue 0.4 mile to slanting T-road on left, and follow south 0.8 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Reference marks are standard reference disks in concrete, note 11b. No. 1 is 24 feet south of center line of dirt road, 24 paces west-southwest of west corner of J. H. Thompson's house, and 0.25 mile from station in azimuth $10^{\circ}58'48''$. No. 2 is in top of *State-*

line monument (1813), on north side of pointed top, 18 feet east of center line of road, and 342.74 feet from station in azimuth $14^{\circ}15'41''$. No. 3 is at west side of cotton field, 8 feet west of 14-inch forked hickory tree, and 99.13 feet from station in azimuth $138^{\circ}39'$. North corner of *State-line monument (1813)* (see description thereof) is 104.27 meters (342.1 feet) from station in azimuth $14^{\circ}18'50''$. Station *Heath* (see description thereof) is visible from ground in azimuth $189^{\circ}24'16''$.

Lancaster (Lancaster County, S.C., R. D. Horne, 1934).—In yard of Lancaster Grammar School at corner of West Dunlap and South French Streets in Lancaster, 57.60 feet north of northeast corner of school building, 34.9 feet northwest of 24-inch oak tree, 35.5 feet south of board fence on north side of school playground, and 42.8 feet northeast of 30-inch oak tree. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Reference mark no. 1 is standard reference disk in concrete, note 11c, flush with east end of stone doorstep of back door at east end of school building, and 74.91 feet from station in azimuth $324^{\circ}51'$. Reference marks nos. 2 and 3 are standard reference disks in concrete, note 11b, projecting 6 inches. No. 2 is at northwest corner of school playground, 3 feet east of fence on west side of playground, 28 feet south of north edge, approximately 16 feet east of small barn, and approximately 240.50 feet from station in azimuth $65^{\circ}54'$. Mark is not visible from ground at station, as line of sight is obstructed by large oak tree. No. 3 is in fence corner in northeast part of West Side Cemetery on North York and West Barr Streets, 4 feet south of 4-inch chinaberry tree, and 0.15 mile from station in azimuth $139^{\circ}37'52''$. Azimuth from station to ball on top of Lancaster water supply tank is $252^{\circ}36'12''$.

Rodgers (Union County, R. D. Horne, 1934).—About 2 miles southwest of Waxhaw, on top of low hill approximately 0.2 mile north of route 25, in center of rectangular field surrounded by woods, on property of W. D. Rodgers, 79 paces east-northeast of large frame tenant house, opposite small, red-and-white frame building on north side of route 25, 54.70 feet north-northwest of 6-inch pear tree, and 44.70 feet north of 10-inch pear tree. To reach from Waxhaw, go southwest 1.7 miles on route 25, turn right onto narrow dirt road just beyond above-mentioned red-and-white frame building, cross railroad, continue 0.2 mile, turn right beyond above-mentioned frame tenant house, and continue east-northeast to station site. Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Surface mark projects 6 inches. Reference marks are standard reference disks in concrete, note 11b. No. 1 projects 8 inches, and is 9 paces east of center of route 25, 26 paces west of southwest corner of 2-story frame tenant house, 9 paces south of 16-inch oak tree, 7 paces north of center of driveway, 8 inches southwest of 24-inch oak tree, and 0.3 mile from station in azimuth $304^{\circ}15'10''$. No. 2 projects 8 inches, and is 53.1 feet west of 4-inch pine tree in field, 15.8 feet east of 8-inch black-oak tree on northwest edge of field, 22.2 feet southeast of 6-inch hickory tree on northwest edge of field, and 123.75 feet from station in azimuth $52^{\circ}19'$. No. 3 is 5 feet south of edge of woods on northeast side of field, 7.8 feet west-southwest of 6-inch pine tree on edge of woods, 24.0 feet southeast of 8-inch oak tree in woods, and 106.33 feet from station in azimuth $149^{\circ}46'$.

Supplementary points

State-line monument (1813) (Union County, N.C.; Lancaster County, S.C.; R. D. Horne, 1934).—On bare-topped hill, 18 feet east of center line of road. Marked by 16-inch square limestone post projecting $3\frac{1}{2}$ feet; marked "N.C." on north side, "S.C." on south side, and "1813" on west side. Top of stone comes to slanting point or gable. Station *Richardson* (see description thereof) is 104.27 meters (342.1 feet) from station in azimuth $194^{\circ}18'50''$. Reference mark no. 2 of station *Richardson* is set on north side of top of monument.

NORTHWEST CORNER OF NORTH CAROLINA

Principal points

Clinch (Washington County, Va., A. H. Buchanan, 1894; 1934).—About 8 miles north of Abingdon, about 5 miles south of Lebanon, about 5 miles southeast of Hansonville, at head of Little Moccasin Creek, on property of Holston River Lumber Co., and near southwest extremity of bare flat-topped ridge on what is known locally as Clinch Mountain. To reach from Abingdon at junction of United States routes 11 and 19, go west 11.2 miles or 0.25 mile beyond Old Fort

filling station on route 19, turn right onto rock road and go 0.1 mile, take left fork and go 0.15 mile, take left fork across stream and follow 0.9 mile to home of John Reynolds and end of truck travel, follow wagon road to left up valley about 1 mile to gap, turn right onto old tram road, and follow along ridge about $\frac{3}{4}$ mile to station site. Original surface mark was intersection of north-and-south and east-and-west lines, surrounded by letters "U.S.C.S.", in top of large flat-surfaced rock. In 1933, rock was found broken and station was re-marked with standard station disk in drill hole in large boulder placed over underground mark. Underground mark is 1-inch drill hole in center of stone 6 by 4 by 4 inches, buried about 1 foot below surface of ground. Reference marks are drill holes in rock "in situ". No. 1 was 75 feet north of station; no. 2 was 80 feet 3 inches southeast of station; and no. 3 was 62 feet 9 inches southwest of station. In 1932, station and two reference marks were recovered; surface mark and one reference mark had been broken. In 1933, two reference marks were recovered and re-marked with standard reference disks, and additional standard reference disk was established. No. 1 (old no. 2) is 80.32 feet from station in azimuth $302^{\circ}02'$. No. 2 (1933) is about 10 yards west of top of ridge, and 225 yards from station in azimuth $154^{\circ}23'17''$. In 1934, disk had been removed and was replaced with another standard reference disk in same drill hole. No. 3 (old no. 1) is 22.886 meters (75.09 feet) from station in azimuth $180^{\circ}52'$.

Holston 2 (Carter-Sullivan Counties, Tenn., M. A. Hecht, 1933; 1934).—About 8 miles northeast of Elizabethton, on western one of two peaks of Holston Mountain, 115 feet southeast of old cabin, in center of group of rocks, on highest part of summit, 45 feet south-southeast of 12-inch oak, and in drill hole of reference mark no. 2 of station "Holston" which was destroyed by dynamite and from which it was distant 8 feet 9 inches in bearing $N. 38^{\circ}20' E.$ To reach from Elizabethton, go east 8.65 miles or 0.1 mile past Unaka School on State route 91, turn left onto farm road and go 0.35 mile, take right fork and go 0.2 mile to open glade, continue on foot along steep trail up ridge to west 300 yards to top, follow rough wagon road along ridge $3\frac{1}{2}$ miles to summit of mountain between two peaks at Low Gap, turn left and continue west one-half mile to summit and station site. Surface mark is standard disk station mark in boulder, note 4. Reference marks nos. 1 and 2 are standard reference disks in bedrock, note 12a. No. 1 is on east edge of summit, 7 feet northeast of 4-inch white oak, and 7.93 meters (26.0 feet) from station in azimuth $282^{\circ}08'$. No. 2 is on southwest edge of summit, in drill hole marking reference mark no. 3 of station "Holston" (from which it was distant 25 feet 11 inches in bearing $S. 13^{\circ}05' W.$), and 10.318 meters (33.85 feet) from station in azimuth $18^{\circ}57'$. Reference mark no. 3 (azimuth mark) is standard reference disk in boulder, note 12c, 13 feet northwest of 30-inch dead chestnut tree, and 120 feet from station in azimuth $104^{\circ}14'$.

Supplementary points

Bristol 2 (Washington County, Va.; Sullivan County, Tenn.; M. A. Hecht, 1933).—About one-half mile east of Bristol, near western end of East Hill Cemetery, 8 feet west of center line of most westerly circular drive in cemetery, 38.2 feet north-northeast of letter "S" in name "Smith" on north face of tallest monument, 20.4 feet south-southeast of letter "P" in "Palmer" on east face of large marble monument, and on Virginia-Tennessee boundary line. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks. No. 1 is in top of northwest corner of concrete wall around burial plot of Gallaham family, about 6 feet southeast of center line of circular drive, 7 feet west of twin 6-inch cedar in north edge of plot, and 28.620 meters (93.90 feet) from station in azimuth $229^{\circ}52'$. No. 2 is in top of large concrete vault of Bondurant family, 1.2 feet east of west edge, 1.3 feet east of north edge, and 6.771 meters (22.21 feet) from station in azimuth $319^{\circ}37'$. No. 3 (azimuth mark) is in top of curbing on west side of Pennsylvania Avenue, about 13 paces north of center line of McDowell Street extended (Pennsylvania Avenue is United States route 421 going east from Bristol), and about 0.4 mile from station in azimuth $71^{\circ}18'14''$. Following azimuths are from station: V. I. College, spire, $166^{\circ}35'02''$; Columbia Paper Co. stack, $185^{\circ}29'48''$; and tannery stack, $254^{\circ}18'17''$.

Dunn (Washington County, Va.; Sullivan County, Tenn.; A. H. Buchanan, 1895; 1933).—On Virginia-Tennessee State line where it crosses ridge about 5 miles west of Bristol, on summit of ridge, and short distance southwest of higher point on same ridge. To reach from Bristol, go west from city limits 0.4 mile on

United States route 11, turn right at intersection onto new United States route 58 and follow 1.2 miles to dirt road, turn left across creek and continue to left 0.4 mile to large house with rock wall along road, turn right across creek and go 0.8 mile, turn left and continue 1.5 miles to lane on left on property of James Burdine and end of truck travel, and follow lane up hill about 500 yards to station site. Originally marked by drill hole at intersection of north-and-south and east-and-west lines on surface of large rock, and surrounded by letters "U.S.C.S." Re-marked in 1933 by standard station disk in same drill hole. Two standard reference disks in rock outcrops were established in 1933. No. 1 is 8.452 meters (27.73 feet) from station in bearing N. 54° E. No. 2 is 15.893 meters (52.14 feet) from station in bearing S. 25° E.

Smathers (Washington County, Tenn., M. A. Hecht, 1933; 1934).—Near south city limits of Johnson City, on low part of lawn of Dr. C. R. Smathers' property on Buffalo Street, about 110 feet northeast of his residence, and 15.7 feet south of Mr. Preas' driveway. To reach from main street, turn south at Southern Railway tracks onto Buffalo Street, and follow 0.4 mile to station. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference marks are standard reference disks in concrete, note 11a. No. 1 is 15 feet east of Buffalo Street, 21.5 feet north of Mr. Preas' driveway, and 40.200 meters (131.89 feet) from station in azimuth 119°19'. No. 2 is in southwest corner of cornice on top of the John Sevier Hotel, and 0.5 mile from station in azimuth 158°25'05". No. 3 is 1 foot northwest of northwest corner of Dr. Smathers' garage, 15.9 feet northeast of northeast side of residence, and 36.043 meters (118.25 feet) from station in azimuth 314°22'.

Damascus (Washington County, Va.; Johnson County, Tenn., A. H. Buchanan, 1895; 1934).—On or near Virginia-Tennessee State line, about 4¼ miles northwest of Laurel Bloomery, 3½ miles southeast of Alvarado, about 2½ miles west-southwest of Damascus, on summit of peak in Holston Mountain Range, on backbone of ridge, 6 feet west of 15-inch chestnut-oak tree, 5 feet south of chestnut-oak tree (gone in 1933), and 2 feet north of chestnut-oak tree (gone in 1933). To reach from post office in Damascus, go southwest 0.15 mile on gravel road to road end, follow narrow dirt road to right 2.8 miles through several gates to top of ridge where road narrows to path, proceed southwest on foot 1¼ miles to 4 triangle-blazed trees along path, and go up dim steep trail to right (northwest) 150 feet to station site. Originally marked by 5- by 12-inch stone post, 24 inches long, projecting 7 inches. Top of stone is marked with cross grooves and letters "U.S.C.S." Southeast side is marked "U.S.", and northwest side, "C.S." Stone was re-marked in 1933 with standard disk station mark. Three standard reference disks were established in 1933 in buried stones. No. 1 is on northeast side of ridge, about 3 feet south of 18-inch hickory tree, and 14.510 meters (47.60 feet) from station in azimuth 225°17'. No. 2 is on southeast side of ridge, 2 feet west of 15-inch water-oak tree, and 12.185 meters (39.98 feet) from station in azimuth 354°30'. No. 3 is in saddle slightly on east side of ridge, about 4 feet north of crooked 30-inch chestnut-oak tree, and approximately 75 yards from station in azimuth 34°24'.

White Top 2 (Grayson County, Va., M. A. Hecht, 1933).—About 20 miles by road southwest of Chilhowie, in open field on south slope of White Top Mountain, about one-half mile below summit, and 30 feet north of center line of road. To reach from Chilhowie, go south on Virginia route 79 from sign "White Top", cross Norfolk and Western Railway, proceed 3.9 miles to junction of routes, cross intersection, proceed 0.4 mile on United States route 58, turn left across iron bridge, and follow well-marked road 14.2 miles to station site. Surface and underground marks are standard disk station marks in boulders, notes 4 and 9a. Reference marks are standard reference disks in boulders, note 12c. No. 1 is on downward slope of ridge, and 28.093 meters (92.17 feet) from station in azimuth 62°36'. No. 2 is on upward slope of ridge, and 26.676 meters (87.52 feet) from station in azimuth 177°44'. No. 3 is about 150 feet to right of convention or dance hall, about 15 feet west of center line of road, and about 475 yards from station in azimuth 324°14'43".

N.C. corner (Ashe County, N.C.; Grayson County, Va.; Johnson County, Tenn., A. H. Buchanan, 1894; 1934).—On North Carolina-Virginia-Tennessee boundary corner, about 8.5 miles east-southeast of Damascus, Va., about 4 miles southwest of Whitetop, Va., on east face of Pond Mountain, about one-fourth mile from top, on sharp ridge which runs due north, about 35.5 feet west of 24-inch ash tree with dead top, and 2 feet south of fence corner. To reach from Chilhowie, Va., go south on Virginia route 79, cross Norfolk and Western Railway

and follow well-marked road 13.4 miles to Lutheran Training School for Girls, follow right fork through Konnarock, Va., 2.8 miles to concrete-block filling station, turn left, proceed 1.3 miles, turn right, proceed 3.1 miles to Green Cove Church, turn left and proceed 1.6 miles to T-road, turn right and proceed 1.5 miles to overhead bridge at Whitetop, Va., bear to right and follow rough farm road 2.7 miles to home of Roby W. Sullivan which is at end of truck travel. Follow dim wagon road up ridge about $1\frac{1}{2}$ miles to station site. Original corner boundary mark was cherry tree which had been blown down in 1894. Position was re-marked with heavy stone with north-and-south and east-and-west grooves in top and letters "U.S.C.S." Stone was recovered in 1933 and intersection of grooves marked with standard disk station mark. Three standard reference disks in boulders, note 12c, were established in 1933. No. 1 was on east slope of hill, 15 feet west of wire fence, and 25.675 meters (84.24 feet) from station in azimuth $259^{\circ}34'$. In 1934, this mark had been destroyed and standard reference disk in boulder, note 12d, was established on eastern downward slope, 16 feet west of wire fence, and 28.892 meters (94.79 feet) from station in azimuth $260^{\circ}15'$. No. 2 is on top of ascending ridge, 15 feet north of 20-inch dead chestnut tree, and 575.75 feet from station in azimuth $34^{\circ}34'01''$. No. 3 is on top of ascending ridge, about 3 feet from wire fence, and 16.927 meters (55.53 feet) from station in azimuth $37^{\circ}16'$.

CHOWAN RIVER (SECOND-ORDER)

Principal points

Meherrin (Hertford County, C. A. Egner, 1932).—About 200 meters (656 feet) north of Parker's Ferry which crosses Meherrin River about one-half mile north-west of junction of Meherrin and Chowan Rivers, at edge of cultivated field on slope to north toward ravine, 9 meters (30 feet) west of center line of highway which crosses ferry, and 66.80 meters (219.2 feet) north of corner of house occupied by Mr. Parker who is tenant on cultivated land between station and ferry. Surface mark is standard disk station mark in precast block of concrete, 9 by 9 inches at top, 11 by 11 inches at bottom and 24 inches high. Underground mark is standard disk station mark in block of concrete, 6 by 6 by 8 inches. Reference marks are standard reference disks in concrete cylinders, 12 inches in diameter and 30 inches deep, which project slightly above ground. No. 1 is 6 meters (20 feet) northeast of northeast corner of Parker's house, 1 meter (3 feet) from large stump, and 65.92 meters (216.3 feet) from station in magnetic azimuth 156° (true). No. 2 is at edge of cultivated field bordering ravine, and 50.50 meters (165.7 feet) from station in magnetic azimuth 295° (true). From station: Center line of road is in magnetic azimuth 76° (true), and northeast corner of Parker's house is in magnetic azimuth 160° (true).

Tunis (Hertford County, C. A. Egner, 1932).—Station is geometrical center of wooden water tank on steel framework with concrete piers on brow of hill overlooking mill of Tunis Heading & Stave Co., and on land owned by Mr. K. R. Israel. Mill is no longer in operation, property being in charge of Mr. J. H. Spivey or his son. Main road leading to Tunis railroad station, passing through town of Tunis, passes immediately north of tank. Concrete foundations and steel framework are symmetrical, but pipe leading downward from tank is not strictly vertical. Center of concrete monuments or center of tank, if still standing, should be taken as station mark. Wooden part of tank is now in poor condition. Reference mark is cylindrical concrete monument, 30 inches deep, within about 1 meter (3 feet) of telegraph pole southwest of station, on approximately highest ground of open lot, and 24.81 meters (81.4 feet) from station in azimuth $3^{\circ}56'$. Gable of Mr. R. W. Peele's house, on opposite side of street, is in azimuth $115^{\circ}57'$.

Piland (Hertford County, C. A. Egner, 1932).—At Pilands crossroads, in northwest corner of intersection near edge of pine grove owned by Forman Lumber Co., of Elizabeth City, 26.4 meters (87 feet) from center line of north-and-south road, 10.4 meters (34 feet) from center line of east-and-west road, and 25.1 meters (82 feet) from center-line intersection of roads. To reach from post office at Harrellsville, go northwest 0.6 mile on route 35 to church at fork in road, follow right fork 1.6 miles to iron bridge across Wicoon Creek, continue 0.3 mile to road intersection on right, follow this road 0.2 mile to small bridge, continue 1.7 miles, turn left, and proceed 0.8 mile to Pilands crossroads. Marked by standard disk station mark. Reference mark no. 1 (not described) is at edge of road, and 18.97 meters (62.2 feet) from station in azimuth $252^{\circ}21'$. Reference mark no. 2 (not described) is at fence line across road and 17.05 meters (55.9 feet) from station

For notes in regard to marking of stations see p. 135.

in azimuth $355^{\circ}13'$. Azimuth mark is precast concrete block, $9\frac{1}{2}$ by $9\frac{1}{2}$ inches on top and 30 inches long, at edge of cultivated field owned by Mr. Lassiter, 41.25 meters (135.3 feet) southeast of center line of road, 15.80 meters (51.8 feet) from small sweet-gum tree, and approximately 288 meters (945 feet) from station in azimuth $249^{\circ}40'27''$.

Mason (Hertford County, C. A. Egner, 1932).—About 2.0 miles east of center of Harrellsville, on property of Mr. Mason whose farm and house front on River Road, near heavily wooded area bordering Wicocon Creek, about 20 meters (66 feet) from gate in fence line, and 5 meters (16 feet) to left of wagon road. To reach, enter lane immediately east of farmhouse, proceed north 0.6 mile across open field and high ground to small ravine, bear right keeping ravine on left, proceed to heavily wooded area, pass through above-mentioned gate in fence line, and continue to station site. Surface mark is standard disk station mark in cylindrical concrete block. Underground mark is standard disk station mark in concrete, about 2 feet below surface of ground. Reference marks are concrete blocks. No. 1 is in east-and-west fence line, about 15 meters (49 feet) east of gate, and 22.41 meters (73.5 feet) from station in magnetic azimuth $313\frac{1}{2}^{\circ}$ (true). No. 2 is at base of 30-inch pine tree, about 60 meters (197 feet) north of gate, 20 meters (66 feet) east of ravine, about 3 meters (10 feet) west of wagon road, and 26.13 meters (85.7 feet) from station in magnetic azimuth $171\frac{1}{2}^{\circ}$ (true).

Cotton (Hertford County, C. A. Egner, 1932).—In Harrellsville, in backyard of third lot (owned by C. B. Cotton) from northwest corner of principal crossroad of town, 10 meters (33 feet) from back fence, 9 meters (30 feet) from west fence, in peach orchard, and alongside grape arbor. Surface and underground marks are standard disk station marks in concrete. Reference marks are standard reference disks in concrete. No. 1 is in northeast corner of lot, 2 feet from fence lines, and 15.702 meters (51.52 feet) from station in azimuth $242^{\circ}49'$. No. 2 is 5 meters (16 feet) north of well on property line, 2 feet from east fence line, and 33.775 meters (110.81 feet) from station in azimuth $349^{\circ}02'$. Azimuth marks are standard reference disks in concrete. No. 1 is in churchyard, 15.0 meters (49 feet) from fork in road, about equidistant from each road, and about 0.4 mile from station in azimuth $96^{\circ}58'49''$. No. 2 is on bluff, 36.00 meters (118.1 feet) west of center line of road between Harrellsville and Tar Ferry, 35.00 meters (114.8 feet) south of high-water line of Wicocon Creek, and approximately 1,150 meters (3,773 feet) from station in azimuth $182^{\circ}52'29''$. Azimuth from station to church steeple is $354^{\circ}50'14''$.

Newsome (Hertford County, C. A. Egner, 1932).—At Newsome Store crossroads, about 23 miles by road from west end of Edenhous Point bridge, 28.7 meters (94 feet) east of center line of main highway, 11.8 meters (39 feet) south of center line of crossroad, and 29.80 meters (97.8 feet) from lower southeast corner of chimney of Mr. Newsome's house. To reach from west end of bridge at Edenhous Point, go west 5.6 miles on United States route 17 (North Carolina route 342), turn right, and continue 17.6 miles to station site. Surface mark is standard disk station mark in concrete cylinder, 12 inches in diameter by 3 feet long, projecting 5 inches above ground. Underground mark is standard disk station mark in 6-inch length of 3-inch pipe filled with cement. Reference marks are standard reference disks in concrete cylinders, 12 inches in diameter by 3 feet long, projecting 5 inches above ground. No. 1 is in southwest corner of Mr. Newsome's front yard, at southwest corner of his store, and 27.55 meters (90.4 feet) from station in azimuth $113^{\circ}46'$. No. 2 is in southeast corner of Mr. Newsome's yard, 2 feet from corner of his barnyard, and 24.42 meters (80.1 feet) from station in azimuth $212^{\circ}02'$. United States Geological Survey bench mark, stamped "No. 5 1905", is 0.61 meter (2.0 feet) from reference mark no. 1, and 27.60 meters (90.6 feet) from station. Top of mark was rusted off when recovered in 1932. Southeast corner of chimney of Westley Lane's cabin is in azimuth $110^{\circ}50'12''$ from station.

Cannon (Chowan County, C. A. Egner, 1932).—At Cannon Ferry Landing bordering on Chowan River, 16.7 miles from municipal building at Edenton, at edge of cultivated field owned by E. N. Elliott, 49.0 meters (161 feet) east-southeast from edge of river, 16 meters (52 feet) southwest of center line of road, 3.0 meters (10 feet) west by north from walnut stump, and 3.5 meters (11 feet) from shack used as restaurant during fishing season. To reach from Edenton, go 15.6 miles on route 32 to sawmill, turn left onto hard-surface macadam road leading to ferry landing, and follow to station site. Surface mark is standard disk station mark in concrete block, 12 by 12 by 42 inches. Underground mark is standard disk station mark in block of concrete 4 feet below surface mark.

Reference marks are standard reference disks in concrete blocks, 12 by 12 by 30 inches, flush with surface of ground. No. 1 is in Cannon Graveyard at center of cultivated field, 9.0 meters (30 feet) west of tombstone marked "Jannie Burke", and 53.73 meters (176.3 feet) from station in azimuth $4^{\circ}32'$. No. 2 is 12.0 meters (39 feet) south-southwest of east-northeast corner of Mr. Elliott's fish house, 4.5 meters (15 feet) east-southeast of edge of river, 4.5 meters (15 feet) north-northeast of 3-foot cypress tree, and 54.31 meters (178.2 feet) from station in azimuth $77^{\circ}47'$. Azimuth from station to Woodley Pier beacon is $84^{\circ}21'20''$.

Saunders (Bertie County, C. A. Egner, 1932).—In pine wood bordering open cultivated field about 0.35 mile west of Colerain Landing, 20 meters (66 feet) inside fence line which borders field, and 150 meters (492 feet) from improved road from Colerain to Colerain Landing. This pine growth belongs to Mrs. Saunders who resides in eastern edge of town of Colerain on south side of this same highway. Surface mark is standard disk station mark in concrete block 9 by 12 by 30 inches. Underground mark is standard disk station mark in mass of concrete. Reference marks are standard reference disks in concrete blocks similar to surface mark. No. 1 is just inside fence, and 21.08 meters (69.2 feet) from station in magnetic azimuth 325° (true). No. 2 is just outside fence line, near hedge bordering fence, and 40.10 meters (131.6 feet) from station in magnetic azimuth 61° (true).

NEW RIVER (SECOND-ORDER)

Principal points

Amos (Onslow County, A. P. Ratti, 1932).—About 0.6 mile northeast of New River Inlet, in slight hollow off southerly group of dunes, about 150 yards southeast of 2 prominent dunes, about 35 yards south of murkle bushes on edge of marsh, and about 50 yards southwest of group of murkle bushes in low land between 2 groups of dunes. Marked by standard station disk in center of top of tile embedded in ground, note 6a. Reference marks are standard reference disks in center of top of tile embedded in ground, note 13a. No. 1 is in hollow northeast of 2 high dunes, and 35.50 meters (116.5 feet) from station in azimuth $99^{\circ}28'$. No. 2 is on slight hummock, and 21.47 meters (70.4 feet) from station in azimuth $223^{\circ}21'$.

Samworth (Onslow County, A. P. Ratti, 1932).—On east shore of New River, about 1 mile north of intercoastal waterway, on prominent bluff between Traps Bay and Marines, about 75 meters (246 feet) northeast of bank of river, and 35 meters (115 feet) southwest of main house of Mr. Samworth. Marked by standard station disk in center of top of tile embedded in ground.

Cedar Point (Onslow County, R. P. Strough, 1914; 1932).—On south side of Cedar Point at mouth of New River, at about high-water mark, and 1 meter (3 feet) from brush. Marked by standard station disk in center of top of 6-inch tile which is fastened by means of concrete to long wooden pile driven into marsh, note 6c. In 1932, mark was reinforced with 12-inch square cement collar. Reference mark is tile filled with and set in cement, 3 yards south of blazed tree, and 10.975 meters (36.01 feet) from station in azimuth $267^{\circ}36'$.

Hatch (U.S.E.) (Onslow County, A. P. Ratti, 1932).—On west bank of New River, on Hatch Point, and about 30 feet from low-water line. Marked by $1\frac{1}{4}$ -inch iron pipe projecting 2 feet above bottom.

Hall (U.S.E.) (Onslow County, A. P. Ratti, 1932).—On west bank of New River, about 3 miles north of New River Inlet, off Halls Point, 5 meters (16 feet) from low-water mark, and in 2 feet of water. Marked by $1\frac{1}{4}$ -inch pipe projecting 18 inches above bottom.

Court (Onslow County, A. P. Ratti, 1932).—On east bank of New River, on prominent low point between Court House Bay and Sneads Ferry known as "Jarrett's Point", about 80 yards north of point, and about midway between east and west banks of point. Marked by standard station disk in center of top of tile embedded in ground, note 6a. Reference mark is standard reference disk in center of top of tile embedded in ground, note 13a, and 93.68 meters (307.3 feet) from station in approximate azimuth 226° .

Poverty (Onslow County, A. P. Ratti, 1932).—On prominent bluff on west side of New River, about one-half mile north of Fulcher's Landing, and about 3 meters (10 feet) from edge of bluff. Marked by standard station disk in 6-inch cylindrical concrete monument projecting about 2 inches.

Ferry eccentric (Onslow County, A. P. Ratti, 1932).—On west bank of New River, about 50 yards south of Sneads Ferry landing, about 4 meters (13 feet)

from high-water mark, and at dead end of roadway extending south from ferry landing. Marked by standard station disk in center of top of tile embedded in ground, note 6a. Station *Ferry (U.S.E.)* (see description thereof) is 10.18 meters (33.4 feet) from station in azimuth $174^{\circ}46'$.

Covil (Onslow County, A. P. Ratti, 1932).—About one-fourth mile northwest of north approach to Sneads Ferry, about 125 yards west of first house on west side of road leading to Sneads Ferry, on highest point of open field, and about 200 yards east of bank of New River. Marked by standard station disk in center of top of tile embedded in concrete, note 6a.

Stone eccentric (Onslow County, A. P. Ratti, 1932).—On west bank of New River, about 1.2 miles west of Sneads Ferry, about one-third mile north of first creek west of Sneads Ferry, on highest point of high prominent bluff, about 4 yards from edge of bluff, and near large pine trees. Marked by standard station disk in center of top of tile embedded in ground, note 6a. Station *Stone (U.S.E.)* (see description thereof) is 102.17 meters (335.2 feet) from station in azimuth $306^{\circ}51'$.

Gin eccentric (Onslow County, A. P. Ratti, 1932).—On west bank of New River, about 2 miles northwest of Sneads Ferry, on bare bluff, about 600 yards south of lone house on edge of bluff, 8 meters (26 feet) from edge, and about 8 meters (26 feet) above river. Marked by standard station disk in center of top of tile embedded in ground, note 6a. Station *Gin (U.S.E.)* (see description thereof) is 24.64 meters (80.8 feet) from station in azimuth $293^{\circ}59'$.

Hines (Onslow County, A. P. Ratti, 1932).—On west bank of New River, about 2 miles north of Sneads Ferry, close to west edge of small wharf, about 25 meters (82 feet) from shore, and in $1\frac{1}{2}$ feet of water. Site of several houses on bluff north of station is known as Hines Camp. Marked by standard station disk in center of top of two 8-inch tile pipes, note 6a, each $2\frac{1}{2}$ feet long, projecting 1 foot above low-water level. Station is near site of station Wharf (U.S.E.), 1931 which has been destroyed. Reference marks are standard reference disks cemented in depressions in outcropping bedrock, note 12b. No. 1 is 51.50 meters (169.0 feet) from station in azimuth $153^{\circ}35'$. No. 2 is 53.29 meters (174.8 feet) from station in azimuth $172^{\circ}53'$.

Gillette (U.S.E.) (Onslow County, A. P. Ratti, 1932).—On west bank of New River, about $1\frac{1}{2}$ miles north of Sneads Ferry, about 4 meters (13 feet) from point of land, and in 8 inches of water. Point is low and sandy, and wooded about to edge of water. Marked by $1\frac{1}{4}$ -inch iron pipe. Reference marks are standard reference disks in center of tops of tiles embedded in ground, note 13a. No. 1 is 10.10 meters (33.1 feet) from station in azimuth $346^{\circ}34'$. No. 2 is 28.77 meters (94.4 feet) from station in azimuth $22^{\circ}53'$.

Fish (U.S.E.) (Onslow County, A. P. Ratti, 1932).—On east bank of New River, about $3\frac{1}{4}$ miles northeast of Sneads Ferry. United States Engineer's mark (not described) was replaced with standard station disk in top of 6-inch tile embedded in ground, note 6a. Top of tile is flush with surface and reinforced by square cement collar. Reference marks are standard reference disks in center of tops of tiles embedded in ground, note 13a. No. 1 is 32.52 meters (106.7 feet) from station in azimuth $244^{\circ}28'$. No. 2 is 13.63 meters (44.7 feet) from station in azimuth $321^{\circ}06'$.

Grey (U.S.E.) (Onslow County, A. P. Ratti, 1932).—On west bank of New River, about 3 miles northeast of Sneads Ferry, and on low sandy point of land known as Gray's Point. Marked by 1-inch hole in top of 6-inch cylindrical concrete monument which is inscribed "U.S.E.D."

Rhodes (U.S.E.) (Onslow County, T. R. Cobb, 1931).—On west side of New River, near extremity of sandy point known as Rhodes Point, opposite mouth of Frenches Creek, and about 20 feet from high-water mark. Marked by concrete monument stamped "U.S.E.D. 1931".

French (U.S.E.) (Onslow County, T. R. Cobb, 1931).—On east side of New River, on point of land north of Duck Creek. Duck Creek is small creek entering New River about one-fourth mile south of Frenches Creek. Marked by concrete monument stamped "U.S.E.D. 1931".

Bluff (U.S.E.) (Onslow County, T. R. Cobb, 1931).—On east side of New River, on high bluff about midway between Frenches Creek and Hadnots Point, about 20 feet back from top of bluff, and in edge of cultivated field. Marked by concrete monument stamped "U.S.E.D. 1931".

Spring (U.S.E.) (Onslow County, T. R. Cobb, 1931).—On west side of New River, on wooded point known as Spring Point which is first point on west side of river south of Town Point. Marked by concrete monument.

Hadnot (U.S.E.) (Onslow County, T. R. Cobb, 1931).—On east side of New River, about 30 feet back from extremity of Hadnot Point. Marked by concrete monument stamped "U.S.E.D. 1931".

Little Ragged (U.S.E.) (Onslow County, A. P. Ratti, 1932).—On west bank of New River, on Little Ragged Point, and about 5 meters (16 feet) from edge of river. Marked by 1-inch hole in center of 6-inch cylindrical concrete monument inscribed "U.S.E.D."

High (Onslow County, A. P. Ratti, 1932).—On east bank of New River, about 2 miles southeast of Jacksonville, about midway between Wallace and Northeast Creeks, about $1\frac{1}{4}$ miles south of Paradise Point, 65 meters (213 feet) from top of bank of river on edge of field, and about 15 meters (49 feet) north of woods line at south edge of field. Marked by standard station disk in center of top of tile embedded in ground, note 6a. Reference marks are standard reference disks in center of tops of tiles embedded in ground, note 13a. No. 1 is in field, and 29.79 meters (97.7 feet) from station in azimuth $153^{\circ}03'$. No. 2 is at edge of woods, and 19.85 meters (65.1 feet) from station in azimuth $302^{\circ}58'$.

North base (U.S.E.) (Onslow County, A. P. Ratti, 1932).—About $1\frac{1}{2}$ miles northwest of New River Inlet, about 350 meters (1,148 feet) from interwaterway, on northwest shore of narrow straight cut which leads southeast from interwaterway to inlet, and 11.5 feet from high-water mark of cut. Marked by 6-inch square concrete monument projecting 0.3 foot, and inscribed with letters "U.S.E. 1913" and equilateral triangle.

South base (U.S.E.) (Onslow County, A. P. Ratti, 1932).—About 1 mile north of New River Inlet, at southeast end of 1-mile cut which leads from waterway to inlet. Marked by 6-inch square concrete monument projecting about 4 inches, and inscribed with letters "U.S.E." and equilateral triangle.

View (Onslow County, A. P. Ratti, 1932).—On ocean shore, about $1\frac{1}{4}$ miles southwest of New River Inlet, about 125 yards from beach, 25 yards from edge of marsh bushes, and in hollow of first high dune south of path leading east from marsh. Marines Landing is visible midway between beacons nos. 2 and 4. Marked by standard station disk in center of top of tile embedded in ground, note 6a. Reference marks are standard reference disks in center of tops of tiles embedded in ground, note 13a. No. 1 is in hollow in direction of inlet, and 33.52 meters (110.0 feet) from station in azimuth $252^{\circ}08'$. No. 2 is on slight rise at foot of above-mentioned dune, and 33.36 meters (109.4 feet) from station in azimuth $10^{\circ}05'$.

Fish (Onslow County, A. P. Ratti, 1932).—About 2 miles west of New River Inlet, about 125 yards from ocean beach, near beacon no. 1, about 150 yards southwest of old fish shack, and on edge of murkle bushes and marsh. Marked by standard station disk in center of top of tile embedded in ground, note 6a. Reference marks are standard reference disks in center of tops of tiles embedded in ground, note 13a. No. 1 is in hollow between 2 dunes, and 19.99 meters (65.6 feet) from station in azimuth $139^{\circ}57'$. No. 2 is at edge of murkle bushes, and 22.49 meters (73.8 feet) from station in azimuth $228^{\circ}46'$.

Passet (Onslow County, A. P. Ratti, 1932).—About 1.7 miles northeast of New River Inlet, east of beacon no. 31, at sharp bend in intercoastal waterway, and in hollow east of high sand dune which is 50 meters (164 feet) inshore from main ridge of dunes. Marked by standard station disk in center of top of tile embedded in ground, note 6a. Reference marks are standard reference disks in center of tops of tiles embedded in ground, note 13a. No. 1 is 35.52 meters (116.5 feet) from station in azimuth $90^{\circ}51'$. No. 2 is 25.04 meters (82.2 feet) from station in azimuth $178^{\circ}58'$.

Crag (Onslow County, R. P. Strough, 1914; 1932).—About 2 miles northeast of New River Inlet, about 400 meters (1,312 feet) northwest of Craig Point, and about 65 meters (213 feet) from trees on west border of Smith's field. Marked by standard station disk in center of top of tile surrounded by mass of concrete, note 6b, projecting about 6 inches. Reference mark was tile filled with and surrounded with cement, at about high-water mark on west edge of field, 2 meters (7 feet) from blazed tree, and 61.4 meters (201 feet) from station. Reference mark was not recovered in 1932.

Vim (Onslow County, A. P. Ratti, 1932).—About 2.3 miles northeast of New River Inlet, about 0.3 mile southeast of intercoastal waterway, opposite small bay, about 75 yards inshore from main ridge of sand dunes, and on summit of westerly of two prominent dunes. Marked by standard station disk in center

of top of 8-inch tile embedded in ground, note 6a. Top of tile is reinforced with 12-inch square cement collar which projects 6 inches.

Bay (Onslow County, R. P. Strough, 1914; 1932).—About 2 miles north-east of New River Inlet, in marsh on west side of small bay which leads from interwaterway up into Williams' field, about 100 meters (328 feet) from edge of woods on west and north sides of bay, and about 10 meters (33 feet) west of edge of water. Originally marked by standard station disk in center of top of tile which was fastened by means of cement to upper end of long wooden pile driven into marsh, note 6c. Re-marked in 1932 by standard station disk in center of top of 8-inch tile filled with concrete, embedded in ground, and reinforced with square concrete collar, note 6a. Original reference mark was 3 yards from water and 19.8 meters (65 feet) from station. In 1932, mark was found to have been destroyed, and two standard reference disks in center of tops of tiles embedded in ground, note 13a, were established. No. 1 is 109.21 meters (358.3 feet) from station in azimuth $71^{\circ}06'$. No. 2 is 81.85 meters (268.5 feet) from station in azimuth $111^{\circ}15'$.

Sea (Onslow County, R. P. Strough, 1914; 1933).—About 3 miles northeast of New River Inlet, on east end of ridge which is north of ridge along south edge of beach. In 1927, mark was 45 meters (148 feet) from high-water line. Marked by standard station disk in center of top of tile which is fastened by means of concrete to upper end of long wooden pile driven into marsh, note 6c.

Williams (Onslow County, R. P. Strough, 1914; 1933).—About 3 miles north-east of New River Inlet, at southeast corner of field owned by John Williams, about 25 meters (82 feet) northwest of clump of oak trees, and just above high-water mark. Marked by standard station disk in center of top of tile which is fastened by means of concrete to upper end of long wooden pile driven into marsh, note 6c. Reference mark is tile filled with and set in concrete, 1 meter (3 feet) north of oak tree blazed with three nails which is at edge of marsh, and 22.82 meters (74.9 feet) from station in azimuth $268^{\circ}18'$.

Ragged (U.S.E.) (Onslow County, A. P. Ratti, 1933).—On west bank of New River, on Ragged Point, and 3 meters (10 feet) from edge of bank. Marked by 1-inch hole in center of top of 6-inch cylindrical concrete monument.

Montford (U.S.E.) (Onslow County, A. P. Ratti, 1932).—On west bank of Northeast Creek, on prominent low wooded point known as Montford Point, and about 5 meters (16 feet) from edge of point. Marked by 1-inch hole in center of top of 6-inch cylindrical concrete monument which is inscribed with letters "U.S.E.D."

Southwest (U.S.E.) (Onslow County, A. P. Ratti, 1933).—On west bank of New River, about 1 mile southwest of Montford Point, and 3 meters (10 feet) from edge of bank. Marked by 1-inch hole in center of top of cylindrical concrete monument. Bank of river has undergone considerable erosion.

Jarman (Onslow County, A. P. Ratti, 1933).—About three-fourths mile west of Ragged Point, on northeast shore of Southwest Creek, and 8 meters (26 feet) from bank. Marked by standard station disk in center of top of tile embedded in ground, note 6a.

Stump (Onslow County, A. P. Ratti, 1933).—On south bank of Southwest Creek, about 1 mile south of Ragged Point, about 100 meters (328 feet) east of bottleneck in creek southeast of Jarman's Landing, and about 5 meters (16 feet) from bank. Marked by standard station disk in center of top of tile embedded in ground, note 6a.

Swamp (Onslow County, A. P. Ratti, 1933).—About 1 mile northeast of Montford Point, on edge of swamp at northernmost tip of Paradise Point, and 3 meters (10 feet) from edge of beach. Marked by standard station disk in center of top of tile embedded in ground, note 6a.

Northeast (Onslow County, A. P. Ratti, 1933).—On northwest shore of Northeast Creek, about 1 mile northeast of Montford Point, about 900 meters (2,953 feet) northeast of Burton's wharf, and 5 meters (16 feet) from bank on east side of small creek which flows into Northeast Creek. Marked by standard station disk in center of top of tile embedded in ground, note 6a.

Moss (U.S.E.) (Onslow County, A. P. Ratti, 1933).—On west shore of New River, about three-fourths mile northwest of Montford Point, about $1\frac{1}{2}$ miles south of Jacksonville, and in water about 20 meters (66 feet) from shore. Marked by $1\frac{1}{2}$ -inch iron pipe.

Brier (U.S.E.) (Onslow County, A. P. Ratti, 1933).—On New River, 2 meters (7 feet) from shore. Marked by 2-inch iron pipe.

Pine (U.S.E.) (Onslow County, A. P. Ratti, 1933).—On west bank of New River, on prominent point about $1\frac{1}{4}$ miles northwest of Montford Point, and about 1 mile south of Jacksonville. Marked by $\frac{3}{4}$ -inch iron pipe.

Wilson (U.S.E.) (Onslow County, A. P. Ratti, 1933).—On east shore of New River, about three-fourths mile south of Jacksonville, and in water 4 meters (13 feet) from shore. Marked by $\frac{3}{4}$ -inch iron pipe.

Marsh (U.S.E.) (Onslow County, A. P. Ratti, 1933).—On west shore of New River, near northern end, about one-half mile south of Jacksonville, and on land about 1 meter (3 feet) from low-water mark. Marked by $\frac{3}{4}$ -inch round iron rod projecting 1 foot.

Mill (U.S.E.) (Onslow County, A. P. Ratti, 1933).—On northeast shore of New River, about one-half mile south of Jacksonville, and on land about 1 meter (3 feet) from edge of water. Marked by $1\frac{1}{4}$ -inch iron pipe.

Supplementary points

Stone (U.S.E.) (Onslow County, A. P. Ratti, 1932).—On west bank of New River, about 1.2 miles west of Sneads Ferry, about one-third mile north of first creek west of Sneads Ferry, and on high prominent bluff which is eroding rapidly. Marked by 1-inch hole in top of 6-inch cylindrical concrete monument which is inscribed with letters "U.S.E.D." Station *Stone eccentric* (see description thereof) is 102.17 meters (335.2 feet) from station in azimuth $126^{\circ}51'$.

Ferry (U.S.E.) (Onslow County, A. P. Ratti, 1932).—On west bank of New River, about 50 yards south of Sneads Ferry landing, and near dead end of roadway extending south from ferry landing. Marked by $1\frac{1}{4}$ -inch iron pipe projecting 30 inches above bottom. Pipe was found in bent and battered condition. Station *Ferry eccentric* (see description thereof) is 10.18 meters (33.4 feet) from station in azimuth $354^{\circ}46'$.

Gin (U.S.E.) (Onslow County, A. P. Ratti, 1932).—On west bank of New River, about 2 miles northwest of Sneads Ferry, on bare bluff, about 600 yards south of lone house near edge of bluff, and about 1 meter (3 feet) from edge of bluff which is undermined. Marked by 6-inch cylindrical concrete monument which is inscribed with letters "U.S.E.D."

BOONE NORTHWARD (SECOND-ORDER)

Principal points

Feathercamp (Washington County, Va., M. A. Hecht, 1934).—In Unaka National Forest, $5\frac{1}{2}$ miles north-northwest of Virginia-Tennessee-North Carolina corner, on summit of Feathercamp Peak of Grosses Mountain, $88\frac{1}{2}$ feet north of center of Feathercamp Mountain fire tower, in longitudinal center of summit, and 30 feet northwest of small log cabin. To reach from railroad crossing on route 58 in Damascus, go east 6.8 miles on dirt road on north side of railroad tracks to top of grade, turn left onto dirt road, and continue 1.5 miles to summit and station site. Marked by standard disk station mark in boulder, note 4. Reference mark no. 1 is standard reference disk in rock, note 12a, down east slope, and 43.26 feet from station in azimuth $345^{\circ}54'$. Reference mark no. 2 is probably standard reference disk in top of concrete footing of northwest leg of fire tower, 78.83 feet from station in azimuth $74^{\circ}53'$. Azimuth mark is standard reference disk in top of boulder on southwest edge of road leading to station, about one-fourth mile west of group of rough frame buildings, and between 0.6 and 0.7 mile from station in azimuth $279^{\circ}02'40''$.

Grant (U.S.G.S.) (Washington County, Va., M. A. Hecht, 1934).—On sharp wooded peak of River Knobs owned by W. F. and L. M. Grant, about 7 miles northeast of Damascus, about $4\frac{1}{2}$ miles east-southeast of Abingdon, 25.3 feet east-southeast of 7-inch oak with triangular blaze, and 29 feet west of 24-inch oak with top cut out. To reach from junction of routes 78 and 58 in Damascus, go northwest 8.45 miles on route 58 or 0.2 mile beyond Middle Fork of Holston River, turn right onto gravel road and go 0.1 mile to fork, follow right fork 0.3 mile to lane leading to home of Mr. Sneed, walk up lane to house, and proceed to station site which is 0.5 mile back of house. Marked by United States Geological Survey disk 6 inches below surface. Reference and azimuth marks are standard reference disks in boulders, note 12c. No. 1 is 13 feet south of 15-inch oak, and 82.92 feet from station in azimuth $347^{\circ}58'$. No. 2 is on down slope of

hill, and 34.39 feet from station in azimuth $78^{\circ}52'$. Azimuth mark is on property of Gus Smith, 48 yards north of fence corner at road fork, and 0.25 mile from station in azimuth $190^{\circ}44'18''$. Azimuth from station to McQueen fire tower, distant 8 miles, is $12^{\circ}50'30''$.

Glenn (Ashe County, M. A. Hecht, 1934).—On highest knob at junction of Stone Mountain and Pond Mountain, 7 miles southeast of Damascus, Va., 6.8 feet southeast of obtuse-angled junction of fence lines, and about 40 feet north of stump of large tree. To reach from Whitetop, Va., cross overhead bridge and go to right over rough farm road 2.7 miles to home of Roby W. Sullivan at end of truck travel, follow dim wagon road up ridge 1.5 miles to station *N. C. corner*, proceed southwest along ridge 0.25 mile to gap, and continue southeast along ridge 0.25 mile to top of knob and station site. Marked by standard disk station mark in buried rock, note 4. Reference marks are standard reference disks in buried rocks, note 12a. No. 1 is on southern downward slope of knob, and 113.00 feet from station in azimuth $329^{\circ}57'$. No. 2 is on downward slope of knob, and 96.58 feet from station in azimuth $30^{\circ}03'$. Azimuth mark was established for station *N. C. corner*, and is standard reference disk in boulder, note 12c, on north side of trail leading to station, about 10 feet north-northeast of large tree, and 0.25 mile from station in azimuth $166^{\circ}35'23''$.

Haunted (Johnson-Sullivan Counties, Tenn., M. A. Hecht, 1934).—About $4\frac{1}{2}$ miles southwest of Damascus, Va., $2\frac{1}{2}$ miles west of Sutherland, on Holston Mountain in Unaka National Forest, on divide which forms boundary between Johnson and Sullivan Counties, just northeast of Haunted Hollow, in top of 6 by 12-inch outcrop on highest part of rock ledge running northeast and southwest, and 8 feet west-northwest of 16-inch chestnut tree with triangular blaze on northwest side. To reach from railroad crossing in Damascus, Va., follow United States route 58 northwest 0.7 mile, turn left onto slate road and follow 3.2 miles, turn left onto side road and follow 0.1 mile to old abandoned sawmill site, follow well-defined trail up ridge to right 2.0 miles to intersection with trail running along top of ridge at arrow on right " $2\frac{1}{2}$ miles to State highway", turn right and continue along top of ridge 1 mile to point where trail goes around high knob on left, and go up knob to left about 300 feet to station site. Marked by standard disk station mark in rock, note 3. Reference marks are standard reference disks in rock, note 12a. No. 1 is in top of 2-foot square rock outcrop which slopes to southeast, in same rock ledge as station, and 39.22 feet from station in azimuth $256^{\circ}45'$. No. 2 is in 1- by 2-foot rock outcrop on downhill slope, and 60.11 feet from station in azimuth $354^{\circ}42'$. Azimuth mark is standard reference disk, note 12c, in top of 8- by 24-inch boulder on top of ridge, buried 5 feet north-northeast of double 26-inch chestnut tree, and 150 feet from station in azimuth $75^{\circ}46'$.

Bald Knob (U.S.G.S.) (Johnson County, Tenn., M. A. Hecht, 1934).—On highest point of Bald Knob which is high cleared peak of Blue Ridge Mountains, about $5\frac{1}{2}$ miles east of Cold Spring, $4\frac{1}{2}$ miles southeast of Laurel Bloomery, $5\frac{1}{4}$ miles northeast of Mountain City, in center of bald knob, and 55 feet north-northeast of 20-inch dead chestnut. To reach from post office at Mountain City, go southeast 2 miles on United States route 421 to post office at Shouns, turn left onto gravel crossroad and follow 2.0 miles, take left fork just after crossing small wooden bridge and follow main road 6.6 miles or 0.5 mile beyond crossroads at top of grade, keep left around side of hill and continue 0.45 mile, turn left up creek and follow main road 2.2 miles or 1.35 miles beyond Hemlock, N.C., post office, turn left around side of hill and follow narrow road 2.35 miles to old frame house with four gables in Cut Laurel Gap and end of truck travel, continue left (west) up dim trail about one-fourth mile to top of ridge, turn left, and follow top of ridge about $2\frac{1}{2}$ miles to highest knob and station site. Marked by United States Geological Survey disk in irregular-shaped buried stone, and stamped "1934". Reference and azimuth marks are standard reference disks in boulders, note 12d. No. 1 is in square buried stone on eastern slope of ridge, and 17.490 meters (57.38 feet) from station in azimuth $3^{\circ}33'$. No. 2 is in buried stone on western slope of ridge, 8 feet west of 20-inch dead chestnut, and 18.150 meters (59.55 feet) from station in azimuth $84^{\circ}39'$. Azimuth mark is in small buried stone flush with ground, near middle and eastern edge of sloping ridge, and about 500 yards from station in azimuth $229^{\circ}28'13''$.

Shady (Johnson County, Tenn., M. A. Hecht, 1934).—On summit of Iron Mountain in Unaka National Forest, 4.75 miles west-northwest of Mountain City, about 0.3 mile northeast of United States route 421 at point where highway crosses summit, 200 feet north of south edge of summit, near east edge of

grassy spot, 61.5 feet west-southwest of 24-inch chestnut tree with triangular blaze, and 25 feet east of 30-inch maple tree. To reach from point where United States route 421 crosses summit of Iron Mountain, follow dim trail northeast along cross ridge 0.5 mile to summit, and proceed to right about 100 yards to station site. Marked by standard disk station mark in boulder, note 4. Reference and azimuth marks are standard reference disks in rock, note 12a. No. 1 is in rock outcrop flush with ground, 49.41 feet from station in azimuth $172^{\circ}04'$. No. 2 is in rock outcrop flush with ground, 57.48 feet from station in azimuth $50^{\circ}21'$. Azimuth mark is about 100 feet south of north edge of summit, 15 feet southwest of 30-inch oak tree with triangular blaze, and 350 feet from station in azimuth $206^{\circ}36'50''$.

Trout (Ashe County, M. A. Hecht, 1934).—On sharp rock point known as "The Peak" in Blue Ridge Mountains, about $6\frac{1}{4}$ miles northeast of Trade, Tenn., $7\frac{1}{4}$ miles northwest of Elks crossroads, 5 miles a little north of east of tricounty corner of Johnson County, Tenn., and Ashe and Watauga Counties, on highest point and northern extremity of ridge, on southwest end of large sloping boulder, 27 feet west of 10-inch white oak, 18 feet southwest of 4-inch triangle-blazed white oak, and about 25 feet southeast of edge of rock cliff. To reach from junction of United States route 421 and Tennessee route 67 (North Carolina route 16) at Trade, Tenn., go east 7.2 miles on route 16 or 1.1 miles past J. S. Stevens' store, turn right across bridge onto county road and follow 1.15 miles, keep main road to left and continue 0.4 mile, turn right onto farm road and continue 0.3 mile to home of Charlie Osborne at end of truck travel, follow farm road through orchard one-half mile to gap in fence, bear left on dim road up left branch of valley for one-fourth mile, turn left onto cross trail at blazed oak, proceed one-eighth mile to top of ridge, turn right onto trail along ridge and follow about 1 mile to triangle-blazed oak at top of ridge, turn right, and continue along backbone of ridge about $1\frac{1}{4}$ miles to station. Marked by standard disk station mark in boulder, note 5. Reference and azimuth marks are standard reference disks in boulders, note 12d. No. 1 is at southwest end of mass of jagged boulders, at edge of rock cliff, and 17.349 meters (56.92 feet) from station in azimuth $216^{\circ}32'$. No. 2 is in wide flat top of sloping boulder, on downward slope of ridge, and 6.880 meters (22.57 feet) from station in azimuth $320^{\circ}30'$. Azimuth mark is on high rocky spur, in north-west tip of pointed boulder, and about 300 yards from station in azimuth $13^{\circ}41'12''$.

Doe (Johnson County, Tenn., M. A. Hecht, 1934).—On highest part of Doe Mountain on what is known locally as "Snake Den Ridge", about $4\frac{1}{2}$ miles southwest of Mountain City, $1\frac{1}{4}$ miles south-southeast of Little Doe, $1\frac{1}{4}$ miles northwest of Vaughtsville, at south end of highest ridge of mountain, 15 feet east of center of Civilian Conservation Corps trail, 12 feet southwest of 10-inch tree with triangular blaze, and 21.6 feet east of 7-inch tree with triangular blaze. To reach from junction of routes 421 and 67 in Mountain City, go west 4.6 miles on route 67 to small unpainted church on left and three mail boxes on right, proceed left 0.7 mile to home of John Nelson at end of truck travel, follow wagon road from house 275 yards, follow trail on left through woods to creek bed, follow creek bed and blazed trail to top of ridge and above-mentioned trail, and follow to left about 0.3 mile to blazed trees and station site. Total walk is about 2.5 miles. Marked by standard disk station mark in boulder, note 4. Reference marks are standard reference disks in boulders, note 12c. No. 1 is 18 feet east of trail, and 48.70 feet from station in azimuth $174^{\circ}56'$. No. 2 is $1\frac{1}{2}$ feet northeast of 14-inch chestnut oak, and 35.54 feet from station in azimuth $316^{\circ}55'$. Azimuth from station to north red brick chimney of two-story house, distant 3 miles, is $269^{\circ}33'33''$.

Bald of Rich (U.S.G.S.) (Watauga County, M. A. Hecht, 1934).—About $2\frac{1}{2}$ miles southeast of Zionville, $2\frac{1}{4}$ miles south of Tennessee-North Carolina State line, on summit of mountain known as "Bald of Rich", on summit of cleared knob which is central one of three peaks of about same height, 25 feet east of highest point of summit and 4 feet north of its longitudinal center. To reach from junction of United States route 421 and Tennessee route 67 at Trade, Tenn., go south 1.0 mile on route 421, turn east onto Meat Camp road and follow 0.85 mile, keep up hill at fork and continue 2.5 miles to gap at top of grade at foot of mountain and end of truck travel, cross field to right one-fourth mile to edge of woods, follow path through woods along side of ridge 0.4 mile, turn right up ridge before reaching large clearing, and continue along ridge 0.7 mile to station site on second summit. Marked by standard United States Geological Survey disk

cemented in drill hole in bedrock. Reference and azimuth marks are standard reference disks in rock, note 12a. No. 1 is down north slope of summit, and 28.24 feet from station in azimuth $165^{\circ}00'$. No. 2 is on backbone of ridge, and 47.14 feet from station in azimuth $70^{\circ}53'$. Azimuth mark is on backbone of ridge, near southwest end of knob, in large rock which is middle one of three rocks, and between 330 and 350 yards from station in azimuth $58^{\circ}16'28''$.

Stone (Watauga County, N.C.; Johnson County, Tenn., M. A. Hecht, 1934).—On Tennessee-North Carolina State line, $1\frac{1}{2}$ miles southwest of Baker Gap, on drainage divide on high ridge of Stone Mountain, on summit of second knob northwest of southeast end of Stone Mountain Range, 30 feet northwest of highest part of summit, 18 feet northwest of large dead snag, and $13\frac{1}{2}$ feet west-northwest of white oak tree with triangular blaze. To reach from junction of United States route 421 and North Carolina route 194 at Sugar Grove post office, cross bridge on North Carolina route 194, follow George Gap road on right 4.6 miles, keep to left and continue 1.65 miles, turn right at brick church and continue 2.35 miles, turn sharp left up hill and continue 0.4 mile to home of Mr. Eggers and end of truck travel, follow old road 100 yards from house, follow dim path on right up mountain 0.4 mile to top of ridge, and proceed 0.5 mile to left along ridge to summit and station site. Surface and underground marks are standard disk station marks in boulders, notes 4 and 9. Reference marks are standard reference disks in rock, note 12a. No. 1 is in large rock outcrop down northwest slope, and 201.85 feet from station in azimuth $188^{\circ}54'$. No. 2 is in large rock outcrop on southwest slope, and 115.99 feet from station in azimuth $125^{\circ}47'$. Azimuth mark is standard reference disk in concrete, note 11b, at sharp curve on road leading to station, 0.4 mile north of small settlement, 40.8 feet south of fence corner, 14.5 feet east-southeast of center of road, and 1.75 miles from station in azimuth $266^{\circ}01'21''$.

Supplementary points

McQueen (Johnson-Sullivan Counties, Tenn., M. A. Hecht, 1934).—On top of high wooded rock ridge on Holston Mountain Range in Unaka National Forest, about $9\frac{1}{2}$ miles south-southeast of Abingdon, Va., $2\frac{1}{4}$ miles northwest of Crandull, near foot of 40-foot steel fire tower, 20.7 feet from east leg of tower 20.4 feet from north leg, 4.7 feet from short telephone pole, and 56.3 feet (slope) and 20 feet above 16-inch hardwood tree. To reach from Mountain City courthouse, go northwest 10.7 miles on route 421 to crossroads with white barn and silo on left, turn right onto stone road and go 3.35 miles or 0.15 mile beyond second of two bridges to green house across creek on left, turn left across bridge, turn sharp right and go 0.2 mile, turn left and follow telephone line up steep grade 2.55 miles to top of ridge and Appalachian Trail, turn sharp left up steep grade, and continue 0.35 mile to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference mark no. 1 is standard reference disk in concrete, note 11a, 67.2 feet from south leg of tower, 3.6 feet from 12-inch white oak used as telephone pole, 26.3 feet from 14-inch white oak, and 105.61 feet from station in azimuth $32^{\circ}05'$. Reference mark no. 2 is standard reference disk in concrete footing of west leg of tower, 34.8 feet from short telephone pole, and 38.16 feet from station in azimuth $58^{\circ}30'$. Azimuth mark is standard reference disk in concrete, note 11b, 7.0 feet from center line of Appalachian Trail, 10.8 feet from 6-inch white oak, 31.3 feet from north corner of cabin fireplace, and 300 feet from station in azimuth $255^{\circ}59'48''$. Azimuth from station to Bethel, high school, apex of bell tower of frame building, is $198^{\circ}35'24''$.

Iron (U.S.G.S.) (Johnson County, Tenn., M. A. Hecht, 1934).—About $4\frac{1}{2}$ miles northwest of Mountain City, about 3 miles south-southeast of Crandull, on highest point of top of Iron Mountain in Unaka National Forest, 33.8 feet southwest of wire pasture fence, and 7.8 feet north-northwest of 24-inch chestnut with top cut out. To reach from junction of routes 421 and 67 in Mountain City, go northwest 6.7 miles on route 421 to top of grade and Iron Mountain Walk, take trail up ridge to right and follow 1,600 feet to sign "Shady Valley 3", take right fork and follow triangle-blazed main-ridge trail $1\frac{1}{2}$ miles to sign "Damascus 12.5 Miles", take left fork and follow one-half mile to cleared field and station site. Marked by old United States Geological Survey mark in boulder flush with ground. Reference and azimuth marks are standard reference disks in boulders, note 12c. No. 1 is 35 feet west of wire fence, and 39.63 feet from station in azimuth $183^{\circ}46'$. No. 2 is at same elevation as station, and 31.66 feet from station in azimuth $93^{\circ}28'$. Azimuth mark is in small boulder flush with ground

48 feet north of wire fence, about 50 feet south of backbone of ridge, and 150 yards from station in azimuth $275^{\circ}36'27''$. Azimuths from station to following objects are: red-roofed white school, spire, distant 4 miles, $252^{\circ}06'14''$; Mountain City, red brick school, spire, $308^{\circ}29'17''$; and McQueen fire tower, $141^{\circ}52'48''$.

Luciuda (Johnson County, Tenn., M. A. Hecht, 1934).—About 3 miles northwest of Zionville, one-fourth mile northwest of North Carolina-Tennessee State line, $2\frac{1}{2}$ miles a little north of west of Trade, on west side of right-of-way of side road running from United States route 421 near Key Station, along Luciuda Creek on bank west of road adjoining property of Mr. Mays, 14.8 feet from center line of road, 85 feet from 12-inch white oak, 10 feet inside and northwest of fence corner, and 8 feet above road. To reach from junction of routes 421 and 67 in Trade, go northwest 1.85 miles on route 421 or just beyond white church on right to stone T-road to left, turn left (southwest), and go 2.55 miles to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference and azimuth marks are standard reference disks in concrete, note 11a. No. 1 is 24.6 feet from twin 10-inch chestnut tree, 16.4 feet (slope) from center line of road, 9 feet above road, and 67.90 feet from station in azimuth $175^{\circ}13'$. No. 2 is across road, 1 foot north of fence line, 11.6 feet from 8-inch maple tree on south side of fence, 14.9 feet from 12-inch maple on south side of fence, 70 feet (slope) from center line of road, and 107.80 feet (slope) from station in azimuth $318^{\circ}40'$. Azimuth mark is on edge of second-growth brush, 15.7 feet north of center line of road, 7 feet above road, 79.4 feet west of point where trail leaves road in northerly direction, 133.2 feet northeast from nearest of two 10-inch poplars 12 feet apart (trees are 25 feet north-northeast of spring), and 250 yards from station in azimuth $274^{\circ}09'16''$.

Green (Watauga County, M. A. Hecht, 1934).—About $4\frac{1}{2}$ miles northwest of Sugar Grove, $1\frac{1}{2}$ miles west of Sweetwater, in Beaver Dam township, on west side of road opposite vacant 2-story house, on land of Mr. D. F. Greene, 85 feet south of point where telephone line diverges from road and crosses field, 300 feet south from crossroads and mail box 45-B, 0.15 mile north from Edmiston Perry's store, 6.0 feet inside fence line, 22.6 feet from center line of road, and 12 feet above road. To reach from Sugar Grove post office at junction of United States route 421 and North Carolina route 603, go west 0.05 mile on route 603 across bridge, turn right off route 603 where highway turns to left, proceed 0.4 mile to T-road, keep straight ahead up hollow 4.65 miles and cross George Gap, follow left fork across bridge at old store for 0.2 mile, follow left fork at store with Essolene pump for 1.6 miles, follow left fork at Bethel Baptist Church on right for 0.15 mile, follow main right fork at white school on left for 0.65 mile to crossroads at small plank bridge and mail box 45-B, and continue about 300 feet on main gravel road to station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference and azimuth marks are standard reference disks in concrete, note 11a. No. 1 is 23.1 feet from center line of road, across from station, in cultivated field 8 feet below road, and 57.20 feet (slope) from station in azimuth $285^{\circ}08'$. No. 2 is 24.1 feet (slope) from center line of road, 4.2 feet inside fence line, 10 feet above road, and 95.95 feet from station in azimuth $354^{\circ}37'$. Azimuth mark is 1 foot inside fence line, in yard of Bethel Baptist Church, 58.7 feet from north corner of church, 74.9 feet from east corner, 22.2 feet from 3-inch shade tree on fence line, 82.6 feet from center of intersection of roads in front of church, and 0.75 mile from station in azimuth $229^{\circ}30'22''$. Azimuth from station to left edge of cornice on chimney of Bethel Baptist Church, distant 0.75 mile, is $228^{\circ}33'39''$.

Kong (Washington County, Va., M. A. Hecht, 1934).—About 6 miles north of Damascus, 6.25 miles a little south of west of Lodi, 6 miles east-southeast of Abingdon, 6 feet inside fence line of cultivated field, 36.9 feet from center line of United States route 58, and about 12 feet above road. To reach from junction of routes 58 and 78 in Damascus, go northwest 6.85 miles on route 58 or 0.2 mile beyond yellow house and pond on right to lane leading to right at W. F. Reed's mail box, and continue to station site which is 20.8 feet from second telephone pole. First pole is numbered "185". Surface and underground marks are standard disk station marks in concrete, notes 1b and 7a. Reference and azimuth marks are standard reference disks in concrete, note 11b. No. 1 is 62.0 feet from telephone pole 185, 10.5 feet from center line of farm lane, 3.8 feet inside fence line of cultivated field, 52.4 feet from center line of road, and 270.10 feet from station in azimuth $270^{\circ}25'$. No. 2 is 2 feet inside of fence line of cultivated field, about 12 feet above road, 45.1 feet from second telephone pole from pole 185, and 109.45 feet from station in azimuth $93^{\circ}27'$. Azimuth mark is 41.1 feet from north-

east corner of shed with concrete foundation, 1 foot outside fence line, 9 feet from center line of drive, 78.6 feet north of center line of highway, 19.5 feet from 5-inch maple tree, 21.6 feet from 8-inch pear tree, and about 0.2 mile from station in azimuth $277^{\circ}08'13''$.

Cress (Johnson County, Tenn., M. A. Hecht, 1934).—About $3\frac{1}{2}$ miles north-northwest of Mountain City, on east edge of right-of-way of United States route 421, at vertex of hairpin curve on southeast slope of Iron Mountain, 39.7 feet from center line of highway, 19.1 feet south of point where wood road enters highway, 84.5 feet from post at south end of guard rail on downhill side, 65.7 feet from post at east end of guard rail on uphill side, 18.4 feet north of 6-inch blazed chestnut, and 5 feet above center line of highway. To reach from Mountain City courthouse, go west 5.2 miles on route 421 or 0.9 mile beyond Unaka National Forest entrance sign to sharp curve on right, T-road on left, blazed 6-inch chestnut tree, and station site. Surface and underground marks are standard disk station marks in concrete, notes 1a and 7a. Reference and azimuth marks are standard reference disks in concrete, note 11b. No. 1 is 16.4 feet from 4-inch chestnut, in second growth of hardwood and brush, 5 feet in elevation below and 35.64 feet from station in azimuth $314^{\circ}31'$. No. 2 is 6 feet below highway, on edge of side-slope fill, 42.6 feet from center line of highway, 12.4 feet from 3-inch dogwood tree on edge of woods, 33.6 feet from post at east end of guard rail on uphill side, 8 feet in elevation below and 37.13 feet from station in azimuth $64^{\circ}29'$. Azimuth mark is in edge of woods on north side of route 421, 36.7 feet (slope) from center line of road, 25 feet above road, 19.5 feet southeast of 4-inch pine, 16.6 feet southwest of 4-inch pine, and 400 yards from station in azimuth $190^{\circ}42'57''$.

SANFORD TO VIRGINIA BOUNDARY (TRAVERSE)

Principal points

Osgood (Lee County, C. I. Garner, 1918).—About 1 mile north of railway station at Osgood, at first curve of Seaboard Air Line Railway north of Osgood, at intersection of tangents to west rail, about 50 meters (164 feet) east of track, and about 2 meters (7 feet) south of 12-inch oak tree. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 27.20 meters (89.2 feet) from station in azimuth $35^{\circ}39'$. Station was not recovered in 1933.

Davis (Lee County, C. L. Garner, 1918; 1933).—About 2 miles north of railway station at Osgood, on right-of-way of Seaboard Air Line Railway, on second curve north of Osgood and first curve north of milepost 192, at intersection of tangents to west rail from south and east rail from north, 62.8 feet west of west rail, about 2 yards south of old drainage ditch, and 7.5 feet west of blaze on 15-inch tulip tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, on side of hill, on opposite side of track from station, 10.0 meters (33 feet) east of rail, and 35.0 meters (115 feet) from station in azimuth $287^{\circ}55'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on top of cut about 15 feet above rail, about 15 feet north of line through two block signals, about 40 feet east of signal no. 191.4, about 100 yards south of road crossing, 20 feet east of east edge of bank of cut, 25 feet northwest of telephone pole, and in azimuth $208^{\circ}45'42''$ from station.

Gibbons (Lee County, C. L. Garner, 1918).—About 3 miles north of Osgood, about 125 meters (410 feet) south of milepost 191 of Seaboard Air Line Railway, at intersection of tangents to east rail from south and west rail from north, between crossties of main track, and 0.40 meter (1.3 feet) west of west rail. Marked by nail in 2- by 4-inch stake in concrete.

Esprey (Lee County, C. L. Garner, 1918).—About one-fourth mile north of Olives, at first curve of Seaboard Air Line Railway north of Olives and first curve south of milepost 190, on prolongation of tangent to east rail from north, 125 meters (410 feet) north of point of tangency, about 4 meters (13 feet) offset from tangent to west rail from south, and about 5 meters (16 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, about 15 meters (49 feet) east of east rail, about 3 meters (10 feet) south of telephone pole, and 29.50 meters (96.8 feet) from station in azimuth $214^{\circ}10'$. Station was not recovered in 1933.

Farley (Lee County, C. L. Garner, 1918).—About three-fourths mile north of Olives, at first curve north of milepost 190 of Seaboard Air Line Railway, at intersection of tangents to east rail, and 13.58 meters (44.6 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, on opposite side of track, about 5 meters (16 feet) east of edge of cut, and 27.54 meters (90.4 feet) from station in azimuth $288^{\circ}18'$. Station was not recovered in 1933.

Dro (Chatham County, M. Steinberg, 1918; 1933).—About one-fourth mile south of railway station at Moncure, on right-of-way of Seaboard Air Line Railway, on level ground at bottom of fill, on east edge of old road, at intersection of tangents to east rail from south and west rail from north on first curve south of Moncure, 100 meters (328 feet) north of bridge over Deep River, 75 meters (246 feet) south of section house, about 150 yards south of block signal no. 187.6, 89.6 feet west of telephone pole, 70.9 feet west of west rail, and 15.5 feet north of triangular blaze on 12-inch pine tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 20 yards west of track, and 23.09 meters (75.8 feet) from station in azimuth $254^{\circ}50'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 4 feet east of west edge of bank of borrow pit, opposite south end of switch, 94.9 feet northeast of block signal no. 187.6, 56.4 feet east of east rail of north-bound track, and approximately 200 yards from station in azimuth $260^{\circ}12'48''$. Green light on second block signal from station, on east side of track near railway water tank is approximately 0.3 mile from station in azimuth $254^{\circ}12'39''$.

Moncure (Chatham County, M. Steinberg, 1918; 1933).—About one-half mile north of railway station at Moncure, on prolongation of tangent to west rail from south, on first curve of Seaboard Air Line Railway north of Moncure, 86.7 feet west of west rail, about 50 meters (164 feet) south of negro house, 68.9 feet west of telephone pole, and in east edge of briar patch in grassy pasture about 10 feet below level of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, about 30 meters (98 feet) from track, and 29.23 meters (95.9 feet) from station in azimuth $298^{\circ}17'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 150 yards north of Atlantic filling station on east side of route 1, 61.5 feet south of center line of highway, 30 yards west of west rail, 98 feet south of telephone pole on west side of highway, on top of high cut about 25 feet above rail, 6 feet north of south edge of bank, and approximately 250 yards from station in azimuth $285^{\circ}48'11''$.

Dri (Chatham County, M. Steinberg, 1918).—About three-fourths mile north of railway station at Moncure, at first curve of Seaboard Air Line Railway north of Moncure, at foot of cut, 8 meters (26 feet) north of north rail, and 10 meters (33 feet) west of small barn on opposite side of track. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, 9 meters (30 feet) from track, and 31.92 meters (104.7 feet) from station in azimuth $303^{\circ}05'$. Station was not recovered in 1933.

Dre (Chatham County, M. Steinberg, 1918; 1933).—About 1 mile north of railway station at Moncure, on right-of-way of Seaboard Air Line Railway, on prolongation of tangent to east rail from north, on first curve south of Haw River, at foot of fill, about 300 yards southeast of wooden overgrade crossing, 7.6 feet northeast of wire fence, 41.8 feet east of tall 15-inch pine tree, 38.6 feet south of southwest rail, and 62.0 feet northwest of telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, in pine thicket, and 22.64 meters (74.3 feet) from station in azimuth $100^{\circ}13'$. Mark was not recovered in 1933. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 50 yards southeast of wooden overgrade crossing, on bank 7 feet southeast of well-worn foot trail, 19.8 feet west of telephone pole, 89.6 feet west of mail rack on northeast side of track, 50.9 feet southwest of southwest rail, about 133 feet south of block signal no. 186.3, and approximately 250 yards from station in azimuth $127^{\circ}20'54''$.

Dra (Chatham County, M. Steinberg, 1918; 1933).—About $\frac{2}{3}$ mile north of railway station at Moncure, opposite first curve of Seaboard Air Line Railway north of Haw River, at intersection of tangents to east rail, in uncultivated strip

between two fields, about 100 yards south of railway, 47.0 feet west of center line of dirt farm road leading through fields, 7.4 feet west of triangular blaze on 8-inch pine tree, and 17.5 feet north of triangular blaze on 10-inch pine tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 2 meters (7 feet) northeast of dirt farm road, and 20.49 meters (67.2 feet) from station in azimuth $224^{\circ}06'$. Mark was not recovered in 1933. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 50.3 feet north of north rail, 19 feet north of telephone pole guyed with steel cable to south, 17 feet south of 5-inch pine tree which stands alone in southwest corner of field, about 50 yards west of whistle post on north side of track, and approximately 125 yards from station in azimuth $168^{\circ}58'27''$.

Doz (Chatham County, M. Steinberg, 1918; 1933).—About $2\frac{1}{2}$ miles north of railway station at Moncure, on right-of-way of Seaboard Air Line Railway, on second curve north of Haw River, on prolongation of tangent to east rail from south, in grassy pasture, 240 meters (787 feet) south of milepost 184, 50 meters (164 feet) south of pipe culvert under track, 5 feet east of wire fence, 49.9 feet west of lone 12-inch pine tree, 53.8 feet northeast of telephone pole, 60.1 feet east of east rail, and about 10 feet below level of track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, at edge of woods, about 30 meters (98 feet) from track, and 14.6 meters (47.9 feet) from station in azimuth $253^{\circ}08'$. Concrete post was recovered in original position in 1933, but disk had been removed. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 27.0 feet east of east rail, 5.6 feet south of telephone pole no. E-24, 15 feet north of braced fence post, and approximately 150 yards from station in azimuth $209^{\circ}29'21''$.

Doy (Chatham County, M. Steinberg, 1918).—About 1.2 miles south of railway station at Merry Oaks, at about middle point of short tangent between first and second curves of Seaboard Air Line Railway south of Merry Oaks, 6 meters (20 feet) west of west rail, 75 meters (246 feet) south of negro house on opposite side of track, and 30 meters (98 feet) north of wagon road crossing. Marked by nail in 4- by 4-inch post which projects 1 foot above ground. Reference mark is railroad spike in east face of oak tree, and 6.10 meters (20.0 feet) from station in azimuth $172^{\circ}51'$.

Dox (Chatham County, M. Steinberg, 1918; 1933).—About three-fourths mile south of Merry Oaks railway station, on right-of-way of Seaboard Air Line Railway, on prolongation of tangent to east rail to north, on north end of first curve south of railway station, 30 meters (98 feet) north of whistle post, on east edge of 2-foot cut, 25.2 feet northwest of northwest rail, 105 feet southwest of concrete foundation of switch box on northwest side of track, and 77 feet northeast of telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 25 meters (82 feet) east of track, at edge of woods, and 25.10 meters (82.3 feet) from station in azimuth $213^{\circ}36'$. Azimuth mark is standard reference disk in concrete, note 11a, at first cut north of station, between highway and railway tracks, 125 feet north of block signal, about 100 feet south of telephone house on railway, 25 feet east of pine tree with triangular blaze, and approximately 0.3 mile from station in azimuth $235^{\circ}01'01''$.

Dow (Chatham County, M. Steinberg, 1918).—About 1.3 miles north of railway station at Merry Oaks, at top of highest rise north of Merry Oaks, about 8 meters (26 feet) west of west rail of Seaboard Air Line Railway, on top of 12-foot cut, 22 meters (72 feet) north of whistle post, and directly across track from "Railroad Crossing" sign. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on opposite side of track, 2 meters (7 feet) west of highway, and 40.74 meters (133.7 feet) from station in azimuth $326^{\circ}10'$. Station was not recovered in 1933.

Dov (Wake County, M. Steinberg, 1918).—About 1 mile north of railway station at Newhill, at about middle point of first curve of Seaboard Air Line Railway north of Newhill, on prolongation of tangent to left rail toward Newhill, at east side of highway, 50 meters (164 feet) north of road crossing, 70 meters (230 feet) south of Negro dwelling on same side of track, and about 15 meters (49 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, about 10 meters (33 feet)

west of track, and 20.0 meters (66 feet) from station in azimuth $247^{\circ}11'$. Station was not recovered in 1933.

Dot (Wake County, M. Steinberg, 1918).—About 3.5 miles south of railway station at Apex, near end of third curve of Seaboard Air Line Railway south of Apex, on prolongation of tangent to left rail from Apex, 12.8 meters (42 feet) east of east rail, in cotton field, 6 meters (20 feet) north of whistle post, and 50 meters (164 feet) south of Negro dwelling. Marked by nail in top of 4- by 4-inch post which projects 1 foot above ground. Reference mark (not described) is about 25 meters (82 feet) east of track, and 18.3 meters (60 feet) from station in azimuth $39^{\circ}18'$.

Dos (Wake County, M. Steinberg, 1918; 1933).—About 3.2 miles south of railway station at Apex, at beginning of third curve of Seaboard Air Line Railway south of Apex, on prolongation of tangent to right rail toward Apex, 4.74 meters (15.6 feet) east of east rail, 70 meters (230 feet) south of Negro house on opposite side of track, and 6 meters (20 feet) north of road crossing. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on opposite side of track, 1 meter (3 feet) south of telegraph pole, and 25.10 meters (82.3 feet) from station in azimuth $98^{\circ}08'$. Station *Dor* (see description and geographic position thereof) is visible from ground in azimuth $219^{\circ}44'03''$.

Dor (Wake County, M. Steinberg, 1918; 1933).—About 2.5 miles south of railway station at Apex, at south end of second curve of Seaboard Air Line Railway south of Apex, on prolongation of tangent to left rail from Apex, 115 meters (377 feet) north of road crossing, 100 meters (328 feet) north of small cabin, and 8.8 meters (29 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is spike in northwest face of large oak tree, and 23.17 meters (76.0 feet) from station in azimuth $332^{\circ}40'$. Station *Dos* (see description and geographic position thereof) is visible from ground in azimuth $39^{\circ}44'23''$.

Dop (Wake County, M. Steinberg, 1918).—About 1.6 miles south of railway station at Apex, on second curve of Seaboard Air Line Railway south of Apex, on prolongation of tangent to left rail toward Apex, in cultivated field, about 100 meters (328 feet) west of track, 130 meters (427 feet) north of road crossing, and 20 meters (66 feet) south of wagon road. Marked by nail in top of 4- by 4-inch post projecting 1 foot above ground. Reference mark is railroad spike in southeast face of large oak tree, and 139.5 meters (458 feet) from station in azimuth $264^{\circ}56'09'$.

Don (Wake County, M. Steinberg, 1918; 1933).—About 1 mile south of railway station at Apex, at south end of first curve of Seaboard Air Line Railway south of Apex, about 200 meters (656 feet) south of road crossing, 40 meters (131 feet) south of whistle post, and 8 meters (26 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, near whistle post, about 5 meters (16 feet) east of track, and 18.5 meters (61 feet) from station in azimuth $255^{\circ}59'$. Station *Baldwin* (see description and geographic position thereof) is visible from ground in azimuth $247^{\circ}37'07''$.

Baldwin (Wake County, M. Steinberg, 1918; 1933).—About one-half mile south of railway station at Apex, at north end of first curve of Seaboard Air Line Railway south of Apex, on prolongation of tangent to right rail toward Apex, in yard of Negro dwelling, 54 meters (177 feet) east of east rail, 50 meters (164 feet) north of road crossing, and 40 meters (131 feet) northwest of Negro dwelling. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, in front of house, and 34.5 meters (113 feet) from station in azimuth $54^{\circ}47'$. Station *Don* (see description and geographic position thereof) is visible from ground in azimuth $67^{\circ}37'18''$. Station *Apex* (see description and geographic position thereof) is visible from ground in azimuth $206^{\circ}24'19''$.

Apex (Wake County, M. Steinberg, 1918; 1933).—About 190 meters (623 feet) north of railway station at Apex, 45 meters (148 feet) south of Durham and Southern Railway crossing, and $1\frac{1}{2}$ meters (5 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in east face of northeast corner of railway station, and 195.0 meters (640 feet) from station in azimuth $29^{\circ}43'59''$. Station *Baldwin* (see description and geographic position thereof) is visible from ground in azimuth $26^{\circ}24'32''$.

Dom (Wake County, M. Steinberg, 1918).—About $1\frac{1}{2}$ miles north of railway station at Apex, at south end of first curve of Seaboard Air Line Railway north of Apex, on prolongation of tangent to left rail toward Apex, 130 meters (427 feet) north of road crossing, on top of cut about 20 meters (66 feet) above track, and 4 meters (13 feet) west of edge of cut. Station mark is nail in top of 4- by 4-inch post projecting 1 foot above ground. Reference mark is railroad spike in west face of largest pine tree on opposite side of track, and 63.54 meters (208.5 feet) from station in azimuth $329^{\circ}26'$.

Dol (Wake County, M. Steinberg, 1918; 1933).—About 2 miles north of railway station at Apex, at north end of first curve of Seaboard Air Line Railway north of Apex, on prolongation of tangent to right rail from Apex, on level ground midway between track and highway, 40 meters (131 feet) north of small dwelling on opposite side of road, and 17.64 meters (57.9 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 8 meters (26 feet) west of highway, and 17.28 meters (56.7 feet) from station in azimuth $88^{\circ}28'$. Station *Dok* (see description and geographic position thereof) is visible from ground in azimuth $249^{\circ}38'11''$.

Dok (Wake County, M. Steinberg, 1918; 1933).—About 3.5 miles north of railway station at Apex, at south end of second curve of Seaboard Air Line Railway north of Apex, on prolongation of tangent to left rail toward Apex, 100 meters (328 feet) from whistle post, 60 meters (197 feet) southward along track from Negro dwelling on same side of track, 8 meters (26 feet) east of east rail, and 2 meters (7 feet) from edge of cut. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, and 17.92 meters (58.8 feet) from station in azimuth $289^{\circ}03'$. Station *Dol* (see description and geographic position thereof) is visible from ground in azimuth $69^{\circ}38'50''$. Station *Doi* (see description and geographic position thereof) is visible from ground in azimuth $233^{\circ}28'07''$.

Doi (Wake County, M. Steinberg, 1918; 1933).—About 2 miles south of railway station at Cary, on second curve of Seaboard Air Line Railway south of Cary, on prolongation of tangent to left rail toward Cary, 31 meters (102 feet) east of track, in cotton field, and 3 meters (10 feet) east of wagon road running through field. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on opposite side of wagon road, about 10 meters (33 feet) west of track, and 21.87 meters (71.8 feet) from station in azimuth $85^{\circ}29'$. Station *Dok* (see description and geographic position thereof) is visible from ground in azimuth $53^{\circ}28'14''$.

Doh (Wake County, M. Steinberg, 1918; 1933).—About 1 mile south of railway station at Cary, at bottom of fill on right-of-way of Seaboard Air Line Railway, on south end of first curve south of Cary, 28 feet west of west rail, 50 meters (164 feet) north of road crossing, and about 10 meters (33 feet) northeast of large oak tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on other side of wagon road from station, and 56.40 meters (185.0 feet) from station in azimuth $35^{\circ}37'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on railway right-of-way, on bank of deep cut about 9 feet above rail, about 200 yards north of road crossing, 21.6 feet west of triangular blaze on 8-inch pine tree, 17 feet east of telephone pole, 57 feet east of east rail, and approximately 0.3 mile from station in azimuth $21^{\circ}07'46''$.

Dog (Wake County, M. Steinberg, 1918).—About three-fourths mile south of railway station at Cary, at north end of first curve of Seaboard Air Line Railway south of Cary, on prolongation of tangent to right rail toward Cary, 50 meters (164 feet) north of milepost 166, 11.10 meters (36.4 feet) north of north rail, and about 3 feet higher than track. Marked by nail in top of 4- by 4-inch post. Reference mark is railroad spike in south face of large oak tree, and 81.0 meters (266 feet) from station in azimuth $250^{\circ}39'$.

Dof (Wake County, M. Steinberg, 1918).—About 610 meters (2,001 feet) west of railway station at Cary, 55 meters (180 feet) east of semaphore of Seaboard Air Line Railway, about 5 meters (16 feet) south of south rail, and directly in front of large yellow house on same side of track. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, at

edge of cultivated field on same side of track, 10 meters (33 feet) south of semaphore, and 56.50 meters (185.4 feet) from station in azimuth $74^{\circ}55'$. Station was not recovered in 1933.

Cary (Wake County, M. Steinberg, 1918).—On top of Cary High School building at Cary, at about middle point of north bay of roof, $1\frac{1}{4}$ meters (4 feet) from north end, and $1\frac{1}{2}$ meters (5 feet) east of flagpole. Station mark (not described) was not recovered in 1933 as it evidently had been covered by new roof. *Cary reference mark* (see description thereof) is 10.600 meters (34.78 feet) from station in azimuth $328^{\circ}25'$. Station *Cary High* (see description thereof) was established in 1933 in enclosure behind main school building.

Raleigh (Wake County, M. Steinberg, 1918).—At Raleigh, on roof of North Carolina Bank and Trust Co. Building (formerly Citizens National Bank Building), near northwest corner of elevator house, and at following distances from corners: Northwest corner, 1.962 meters (6.44 feet); southwest corner, 4.472 meters (14.67 feet); southeast corner, 5.880 meters (19.29 feet); and from southwest corner of chimney in northeast corner, 3.293 meters (10.80 feet). Station mark (not described) was not recovered in 1933 due to new roof having been laid. *Raleigh reference mark* (see description thereof) is 20.600 meters (67.59 feet) from station in azimuth $295^{\circ}11'$. Station *Raleigh 2* (see description thereof) was established in 1933 in approximately same location.

Hilltop (Wake County, M. Steinberg, 1918; 1933).—About $1\frac{1}{2}$ miles north of railway station at Millbrook, one-third mile east of Seaboard Air Line Railway track, in field on top of highest hill in vicinity, 50 meters (164 feet) east of east end of W. P. Wiggins' house, about 150 yards south of route 1, 41 feet west of wine-sap apple tree which is most northerly in row of trees, and 12.6 feet southeast of southeast corner of chicken house. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in south face of chimney of Wiggins' house, and 68.2 meters (224 feet) from station in azimuth $93^{\circ}35'$. Line from station to reference mark has been obstructed by construction of addition to Wiggins' house. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on top of bank about 7 feet above route 1, 25.9 feet northwest of center line of highway, 92.6 feet southwest of south end of advertising signboard, 87.5 feet north of "Side Road" signpost on south side of highway, and approximately 175 yards from station in azimuth $201^{\circ}39'07''$.

Dob (Wake County, M. Steinberg, 1918; 1933).—About 2.8 miles south of railway station at Wake Forest, 12.05 meters (39.5 feet) east of east rail of Seaboard Air Line Railway, about 8 feet above track, at edge of cultivated field, and 3 meters (10 feet) west of small road leading to Negro house which is 60 meters (197 feet) south of station. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in depression in outcropping bedrock, note 12b, on opposite side of track, and 31.00 meters (101.7 feet) from station in azimuth $78^{\circ}59'$. Station *Diz* (see description and geographic position thereof) is visible from ground in azimuth $207^{\circ}57'44''$.

Diz (Wake County, M. Steinberg, 1918; 1933).—About 2.5 miles south of railway station at Wake Forest, 300 meters (984 feet) south of milepost 143 of Seaboard Air Line Railway, 7.98 meters (26.2 feet) east of east rail, on top of small cut, about 4 feet above track, 120 meters (394 feet) south of road crossing which leads to house on opposite side of track directly in front of station, and 50 meters (164 feet) south of large white house on same side of track and across cotton field from station. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is probably standard reference disk in concrete, note 11a, on same side of track, and 17.00 meters (55.8 feet) from station in azimuth $233^{\circ}19'$. Station *Dob* (see description and geographic position thereof) is visible from ground in azimuth $27^{\circ}57'48''$. Station *Diz* (see description and geographic position thereof) is visible from ground in azimuth $210^{\circ}27'29''$.

Dix (Wake County, M. Steinberg, 1918; 1933).—About 2 miles south of railway station at Wake Forest, 625 meters (2,051 feet) north of milepost 143 of Seaboard Air Line Railway, 7.29 meters (23.9 feet) east of east rail, on top of small cut, and 3 meters (10 feet) west of telegraph pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (not described) is 24.05 meters (78.9 feet) from station in azimuth $99^{\circ}32'$. Station *Diz* (see description and geographic position thereof) is visible from ground in azimuth $30^{\circ}27'40''$.

For notes in regard to marking of stations see p. 135.

Div (Wake County, M. Steinberg, 1918; 1933).—About $1\frac{1}{2}$ miles south of railway station at Wake Forest, on second curve of Seaboard Air Line Railway south of Wake Forest, on top of highest hill in vicinity, in center of small peach and apple orchard (formerly cotton field), about 50 yards south of milepost 192, about 150 yards south of block signal, 101 feet east of east rail, about 60 yards west of farmhouse on east side of orchard, 50 meters (164 feet) north of yellow house on opposite side of track, 77.3 feet south of north boundary fence of orchard, 56.8 feet east of west boundary fence line, and 75.4 feet west of telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in north face of stone chimney of yellow house, and 99.6 meters (327 feet) from station in azimuth $65^{\circ}37'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 150 yards north of block signal, about 150 yards south of road crossing, 43.6 feet south of telephone pole, 12.1 feet west of west rail, 2.5 feet northwest of whistle post on west side of track, opposite old house on east side of track, in bottom of drainage ditch, and approximately 300 yards from station in azimuth $184^{\circ}41'52''$.

Dit (Wake County, M. Steinberg, 1918).—About 0.8 mile south of railway station at Wake Forest, on second curve of Seaboard Air Line Railway south of Wake Forest, on prolongation of tangent to left rail toward Wake Forest, in pea field on west side of track, about 15 feet lower than track, and about 20 meters (66 feet) south of large yellow house on opposite side of highway. Marked by nail in top of 4- by 4-inch post. Reference mark is spike in southeast face of large tree in yard of small galvanized house on opposite side of track, and 140.0 meters (459 feet) from station in azimuth $232^{\circ}20'54''$.

Dis (Wake County, M. Steinberg, 1918; 1933).—About 680 meters (2,231 feet) south of railway station at Wake Forest, on first curve of Seaboard Air Line Railway south of Wake Forest, on prolongation of tangent to left rail toward Wake Forest, 20 meters (66 feet) east of east rail, and 10 meters (33 feet) north of small negro house. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in east corner of brick building of bottling works and 60.0 meters (197 feet) from station in azimuth $173^{\circ}08'$. Station *Forrest* (see description and geographic position thereof) is visible from ground in azimuth $196^{\circ}00'00''$.

Forrest (Wake County, M. Steinberg, 1918; 1933).—About 320 meters (1,050 feet) north of railway station at Wake Forest, on first curve of Seaboard Air Line Railway north of railway station, on prolongation of tangent to right rail toward railway station, in small ditch on west side of track, 4 feet below track, 100 meters (328 feet) east of red brick house, and 50 meters (164 feet) north of road crossing. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, at road crossing, 10 meters (33 feet) west of track, 3 meters (10 feet) north of road, and 45.31 meters (148.7 feet) from station in azimuth $25^{\circ}46'$. Station *Dis* (see description and geographic position thereof) is visible from ground in azimuth $16^{\circ}00'05''$. Station *Dir* (see description and geographic position thereof) is visible from ground in azimuth $213^{\circ}53'37''$.

Dir (Wake County, M. Steinberg, 1918; 1933).—About 800 meters (2,625 feet) north of railway station at Wake Forest, 10 meters (33 feet) north of milepost 140 of Seaboard Air Line Railway, on prolongation of tangent to left rail toward Youngsville, 15.66 meters (51.4 feet) west of west rail, and 1 meter (3 feet) east of fence of house. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in east face of southeast pier under house and 12.64 meters (41.5 feet) from station in azimuth $101^{\circ}34'$. Station *Forrest* (see description and geographic position thereof) is visible from ground in azimuth $33^{\circ}53'43''$.

Dip (Wake County, M. Steinberg, 1918).—About 1.2 miles north of railway station at Wake Forest, on second curve of Seaboard Air Line Railway north of Wake Forest, on prolongation of tangent to right rail toward Wake Forest, 20.38 meters (66.9 feet) east of east rail, 50 meters (164 feet) south of wagon road crossing and road fork, and 1 meter (3 feet) west of highway. Marked by nail in top of 4- by 4-inch post projecting 18 inches above ground. Reference mark is spike in east face of largest-oak tree on opposite side of track and 61.15 meters (200.6 feet) from station in azimuth $129^{\circ}07'$.

Dim (Wake County, M. Steinberg, 1918; 1933).—About 1.6 miles north of railway station at Wake Forest, 170 meters (558 feet) north of milepost 139 of Seaboard Air Line Railway, 7.66 meters (25.1 feet) west of west rail, on top of cut,

1 meter (3 feet) west of edge of cut, and 2 meters (7 feet) east of edge of cotton field. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on opposite side of track, and 33.43 meters (109.7 feet) from station in azimuth $256^{\circ}26'$. Station *Wake* (see description and geographic position thereof) is visible from ground in azimuth $224^{\circ}37'56''$.

Wake (Wake County, M. Steinberg, 1918; 1933).—About 1.6 miles south of railway station at Youngsville, on first curve of Seaboard Air Line Railway south of Youngsville, 880 meters (2,887 feet) south of milepost 137, 120 meters (394 feet) south of road crossing, 70 meters (230 feet) north of house on opposite side of track, and 11.73 meters (38.5 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on same side of track, 2 meters (7 feet) west of highway, and 36.70 meters (120.4 feet) from station in azimuth $217^{\circ}45'$. Station *Dim* (see description and geographic position thereof) is visible from ground in azimuth $44^{\circ}38'32''$. Station *Youngsville* (see description and geographic position thereof) is visible from ground in azimuth $196^{\circ}05'34''$.

Youngsville (Franklin County, M. Steinberg, 1918; 1933).—About 0.9 mile south of railway station at Youngsville, at beginning of first curve of Seaboard Air Line Railway south of railway station, on prolongation of tangent to left rail toward railway station, 480 meters (1,575 feet) south of milepost 137, 290 meters (951 feet) north of road crossing, 15 meters (49 feet) east of east rail, on top of cut, 22 meters (72 feet) south of whistle post, and 8 meters (26 feet) west of cornfield. Surface mark is standard disk station mark in concrete, note 1a. Underground mark, nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on opposite side of track, and 43.82 meters (143.8 feet) from station in azimuth $135^{\circ}59'$. Station *Wake* (see description and geographic position thereof) is visible from ground in azimuth $16^{\circ}05'37''$.

Dil (B.M. M 9) (Franklin County, M. Steinberg, 1918).—About 0.9 mile north of railway station at Youngsville, at south end of first curve of Seaboard Air Line Railway north of railway station, on prolongation of tangent to right rail toward railway station, 530 meters (1,739 feet) north of milepost 136, on top of small cut, 8 meters (26 feet) east of east rail, 7 meters (23 feet) south of switch target, and 5 meters (16 feet) west of wagon road. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on top of cut directly across track, and 25.0 meters (82 feet) from station in azimuth $61^{\circ}53'$. Station was destroyed by railway construction in 1929.

Dik (Franklin County, M. Steinberg, 1918).—About 1.1 miles north of railway station at Youngsville, at north end of first curve of Seaboard Air Line Railway north of railway station, on prolongation of tangent to left rail from Youngsville, 7.0 meters (23 feet) east of east rail, 2 meters (7 feet) from edge of cut, and 5 meters (16 feet) west of country wagon road which parallels track. Marked by nail in top of 4- by 4-inch post. Reference mark is spike in east face of large pine tree, and 12.00 meters (39.4 feet) from station in azimuth $221^{\circ}56'$.

Dig (Franklin County, M. Steinberg, 1918).—About $\frac{1}{4}$ miles north of railway station at Youngsville, at beginning of second curve of Seaboard Air Line Railway north of railway station, 400 meters (1,312 feet) south of milepost 135, on prolongation of tangent to right rail toward Youngsville, on top of fill, and 1.61 meters (5.3 feet) west of west rail. Marked by nail in top of 4- by 4-inch post. Reference mark is spike in west face of large pine tree, and 23.65 meters (77.6 feet) from station in azimuth $192^{\circ}05'$.

Tank (Franklin County, M. Steinberg, 1918; 1933).—About $\frac{1}{2}$ miles north of railway station at Youngsville, on second curve of Seaboard Air Line Railway north of Youngsville, on prolongation of tangent to right rail toward Youngsville, 36 meters (118 feet) north of milepost 135, 25 meters (82 feet) south of Brandy Creek water tank, and 1.80 meters (5.9 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in west face of stone pillar under water tank, and 22.85 meters (75.0 feet) from station in azimuth $185^{\circ}18'$. Station *Dif* (see description and geographic position thereof) is visible from ground in azimuth $168^{\circ}40'45''$.

Dif (Franklin County, M. Steinberg, 1918; 1933).—About 2.0 miles north of railway station at Youngsville, on first curve of Seaboard Air Line Railway north of water tank, on prolongation of tangent to left rail toward Youngsville, 400

meters (1,312 feet) south of milepost 134, 25 meters (82 feet) west of west rail, on level ground on top of high cut, 12 meters (39 feet) from edge of cut, and 10 meters (33 feet) north of whistle post. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 2 meters (7 feet) west of edge of cut, on same side of track as and 30.0 meters (98 feet) from station in azimuth $204^{\circ}13'$. Station *Tank* (see description and geographic position thereof) is visible from ground in azimuth $348^{\circ}40'40''$.

Did (Franklin County, M. Steinberg, 1918).—About 3.7 miles south of railway station at Franklinton, on fourth curve of Seaboard Air Line Railway south of Franklinton, 40 meters (131 feet) south of road crossing, 16 meters (52 feet) south of water tank sign, 8 meters (26 feet) north of milepost 134, on top of small rise, and 12.20 meters (40.0 feet) west of west rail. Marked by nail in top of 4- by 4-inch cedar post projecting 1 foot above ground. Reference mark is spike in west face of oak tree, near crossing on opposite side of track, and 55.36 meters (181.6 feet) from station in azimuth $242^{\circ}45'$.

Dic (Franklin County, M. Steinberg, 1918).—About $3\frac{1}{2}$ miles south of railway station at Franklinton, 270 meters (886 feet) north of milepost 134 of Seaboard Air Line Railway, on prolongation of tangent to left rail toward Franklinton, 2.0 meters (7 feet) south of whistle post, at foot of cut, and 1.73 meters (5.7 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 8 meters (26 feet) east of track, and 140.91 meters (462.3 feet) from station in azimuth $65^{\circ}41'42''$. Station was not recovered in 1933.

Dib (Franklin County, M. Steinberg, 1918).—About $2\frac{1}{2}$ miles south of railway station at Franklinton, at end of second curve of Seaboard Air Line Railway south of Franklinton, 370 meters (1,214 feet) north of milepost 133, on prolongation of tangent to right rail toward Youngsville, 3 meters (10 feet) east of east rail, at foot of steep cut, and about 1 foot below track. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on opposite side of track, and 30.0 meters (98 feet) from station in azimuth $57^{\circ}25'$. Station was not recovered in 1933.

Dez (Franklin County, M. Steinberg, 1918).—About $2\frac{1}{2}$ miles south of railway station at Franklinton, on second curve of Seaboard Air Line Railway south of railway station, 620 meters (2,034 feet) north of milepost 133, 13.8 meters (45 feet) east of east rail, and 5 meters (16 feet) north of small country road crossing. Marked by nail in top of 4- by 4-inch cedar post projecting 1 foot above ground. Reference mark is spike in east face of largest pine directly across track, and 28.03 meters (92.0 feet) from station in azimuth $131^{\circ}47'$.

Dey (Franklin County, M. Steinberg, 1918).—About $2\frac{1}{2}$ miles south of railway station at Franklinton, at beginning of second curve of Seaboard Air Line Railway south of railway station, 600 meters (1,968 feet) south of milepost 132, and 13.89 meters (45.6 feet) east of east rail. Marked by nail in top of 4- by 4-inch cedar post projecting 1 foot above ground. Reference mark is railroad spike in west face of largest sweetgum tree, 4 feet above ground, and 18.01 meters (59.1 feet) from station in azimuth $194^{\circ}19'$.

Dex (Franklin County, M. Steinberg, 1918).—About $1\frac{1}{2}$ miles south of railway station at Franklinton, at end of first curve of Seaboard Air Line Railway south of Franklinton, on prolongation of tangent to left rail toward Youngsville, 175 meters (574 feet) north of railway trestle, 75 meters (246 feet) north of milepost 132, at top of fill, and 1.65 meters (5.4 feet) west of west rail. Marked by nail in top of 4- by 4-inch cedar post projecting 1 foot above ground. Reference mark is standard reference disk in concrete, note 11a, in west side of trestle, and 178.97 meters (587.2 feet) from station in azimuth $354^{\circ}33'14''$.

Dew (Franklin County, M. Steinberg, 1918; 1933).—About $1\frac{1}{2}$ miles south of railway station at Franklinton, on right-of-way of Seaboard Air Line Railway, on prolongation of tangent of west rail from north, on first curve south of Franklinton, on top of high bank about 15 feet above track, 380 yards north of milepost 132, 33.5 feet west of west rail, about 15 yards south of southeast corner of cultivated field surrounding shack which is about 125 yards north of station, 81.8 feet north of telephone pole, and 17 feet east of blazed 6-inch pine in east edge of woods. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 15 yards west of track, at edge of field, and 16.84

meters (55.2 feet) from station in azimuth $184^{\circ}22'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on bank about 8 feet above rail, in little-used footpath just east of cotton field, 24.1 feet west of west rail, 85.1 feet south of telephone pole, 53.0 feet west of telephone pole on east side of track, 129 feet north of block signal no. 131.7, and approximately 225 yards from station in azimuth $202^{\circ}43'22''$.

Franklinton (Franklin County, M. Steinberg, 1918).—About 410 meters (1,345 feet) north of railway station at Franklinton, on first curve of Seaboard Air Line Railway north of railway station, 100 meters (328 feet) south of milepost 130, 50 meters (164 feet) west of small yellow house, in cultivated field at top of cut, 3 meters (10 feet) south of whistle post, and 15.10 meters (49.5 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, at edge of field, 7 meters (23 feet) east of track, and 22.12 meters (72.6 feet) from station in azimuth $28^{\circ}30'$. Station was not recovered in 1933.

Deter (Franklin County, M. Steinberg, 1918; 1933).—About $1\frac{1}{2}$ miles north of railway station at Franklinton, on second curve of Seaboard Air Line Railway north of railway station, at intersection of tangents to east rail, 475 meters (1,558 feet) south of milepost 129, 110 meters (361 feet) south of yard-limit sign, 23.4 feet west of west rail, 5.3 feet north of telephone pole, 29.0 feet east of blazed 12-inch pine tree, and about 30 yards east of route 1. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, about 8 meters (26 feet) west of rail, and 24.90 meters (81.7 feet) from station in azimuth $5^{\circ}20'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 75 yards southeast of house on bank between highway and railway, 27.9 feet west of west rail, 31.0 feet east of center line of route 1, 5.5 feet south of telephone pole, and approximately 200 yards from station in azimuth $189^{\circ}05'52''$.

Det (Franklin County, M. Steinberg, 1918).—About $2\frac{1}{4}$ miles north of railway station at Franklinton, on third curve of Seaboard Air Line Railway north of Franklinton, on prolongation of tangent of left rail toward Franklinton, about 370 meters (1,214 feet) south of milepost 128, 7.66 meters (25.1 feet) east of east rail, at bottom of fill 6 feet below track, 190 meters (623 feet) south of railway trestle no. 29.3, and 10 meters (33 feet) west of highway. Marked by 4- by 4-inch stake driven into ground. Mark was dug out in 1933 in effort to locate underground mark and was not replaced. Reference mark is standard reference disk in top of concrete culvert at trestle, 3 feet west of track, and 193.61 meters (635.2 feet) from station in azimuth $183^{\circ}46'54''$.

Des (Franklin County, M. Steinberg, 1918; 1933).—About $2\frac{3}{4}$ miles north of railway station at Franklinton, on right-of-way of Seaboard Air Line Railway, on prolongation of tangent to east rail from north, on first curve south of block signal no. 127.2 and third curve north of Franklinton, about 300 yards north of milepost 128, 40 feet east of east rail, 40 yards north of road crossing, 50 meters (164 feet) north of south end of tobacco field, in west edge of cultivated field about 5 feet below track, and about 125 yards west of shed where school children wait for bus. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on same side of track as station, and 36.90 meters (121.1 feet) from station in azimuth $8^{\circ}57'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on bank 4 feet above rail, 164 feet south of block signal no. 127.3, 200 feet north of large concrete culvert under track, 23.8 feet west of west rail, 5.5 feet east of telephone pole, and approximately 575 yards from station in azimuth $174^{\circ}27'45''$.

Der (Franklin County, M. Steinberg, 1918; 1933).—About $3\frac{1}{4}$ miles north of railway station at Franklinton, on fourth curve of Seaboard Air Line Railway north of railway station and second curve south of bridge over Tar River, on prolongation of tangent to east rail from south, at bottom of fill about 8 feet below track, between track and dirt road, 38.5 feet west of west rail, 7 meters (26 feet) north of milepost 127, 27.8 feet south of telephone pole, 48 feet east of another telephone pole on west side of road, 200 yards north of grade crossing, and about 30 yards north of dirt T-road intersection. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 11c. Reference mark was standard reference disk in concrete, note 11a, directly across highway, and 14.71 meters (48.3 feet) from station in azimuth

76°05'. Mark was not recovered in 1933. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 46.4 feet south of spliced telephone pole in V-shaped fork of dirt road, 75.5 feet north of telephone pole, in fill about 10 feet below track, 21.2 feet west of lone cherry tree, 8 feet east of center line of dirt road, 61.6 feet west of west rail, and about 200 yards from station in azimuth 191°45'02''.

Dep (Franklin County, M. Steinberg, 1918; 1933).—About 3½ miles north of railway station at Franklinton, on right-of-way of Seaboard Air Line Railway, 1 meter (3 feet) east of bank of cut, about 5 feet above track, on south end of first curve south of bridge over Tar River, 23.9 feet east of east rail, 1,100 meters (3,609 feet) south of milepost 126, 50 meters (164 feet) south of rock formation in cut, 5 meters (16 feet) south of north edge of cornfield on opposite side of track, 23.0 feet south of telephone pole, 11.2 feet west of wire fence, and 71 feet south of northeast corner of field. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in east face of rock outcrop at south end of cut, 2 feet above ground, and 64.03 meters (210.1 feet) from station in azimuth 199°08'. Azimuth mark, established in 1933, is standard reference disk in top face of slate outcrop, note 12a, about 100 yards north of grade crossing, 145 feet south of station *Deo*, 29.2 feet east of east rail, 12.6 feet north of telephone pole, and approximately 300 yards from station in azimuth 203°21'03''.

Deo (Franklin County, M. Steinberg, 1918; 1933).—About 3¾ miles north of railway station at Franklinton, 750 meters (2,461 feet) south of milepost 126 of Seaboard Air Line Railway, on first curve south of Tar River bridge, on prolongation of tangent to left rail toward bridge, 250 meters (820 feet) north of road crossing, on top of small cut about 5 feet above track, and 15.81 meters (51.9 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in small projecting rock, on opposite side of track, and 28.00 meters (91.9 feet) from station in azimuth 66°01'. Station *Den* (see description and geographic position thereof) is visible from ground in azimuth 182°58'22''.

Den (Franklin County, M. Steinberg, 1918; 1933).—About 5¼ miles north of railway station at Franklinton, 42 meters (138 feet) south of milepost 125 of Seaboard Air Line Railway, on first curve north of Tar River Bridge, on prolongation of tangent to right rail toward bridge, 3 meters (10 feet) east of edge of top of cut, and 9.35 meters (30.7 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in east face of sharp rock projecting from side of cut, and 23.58 meters (77.4 feet) from station in azimuth 33°31'. Station *Deo* (see description and geographic position thereof) is visible from ground in azimuth 2°58'24''. Station *Dem* (see description and geographic position thereof) is visible from ground in azimuth 163°16'38''.

Dem (Franklin County, M. Steinberg, 1918; 1933).—About 5½ miles north of railway station at Franklinton, 350 meters (1,148 feet) north of milepost 125 of Seaboard Air Line Railway, 40 meters (131 feet) north of cut through high rocks 3 meters (10 feet) south of road crossing, and 1.89 meters (6.2 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in west face of large rock on same side of track, and 43.06 meters (141.3 feet) from station in azimuth 341°20'. Station *Den* (see description and geographic position thereof) is visible from ground in azimuth 343°16'35''. Station *Del* (see description and geographic position thereof) is visible from ground in azimuth 159°01'38''.

Del (Vance County, M. Steinberg, 1918; 1933).—About 3 miles south of railway station at Kittrell, midway between second and third curves of Seaboard Air Line Railway, south of railway station, 850 meters (2,789 feet) north of milepost 125, 50 meters (164 feet) south of whistle post, 1 meter (3 feet) north of road crossing of road leading to house on opposite side of track, and 3.15 meters (10.3 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in east face of stone foundation of above-mentioned house, 2 feet north of south end of porch bay, 3 feet above ground, and 88.88 meters (291.6 feet) from station in azimuth 80°57'. Station *Dem* (see description and geographic position thereof) is visible from ground in azimuth 339°01'33''. Station *Del* (see description and geographic position thereof) is visible from ground in azimuth 156°56'47''.

Dek (Vance County, M. Steinberg, 1918; 1933).—About $2\frac{1}{4}$ miles south of railway station at Kittrell, on first curve of Seaboard Air Line Railway south of railway station, on southward prolongation of tangent to east rail, 150 meters (492 feet) south of milepost 124, 120 meters (394 feet) north of road crossing, 25 meters (82 feet) south of tobacco barn, and 7 meters (23 feet) west of edge of top of high cut. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on same side of track, and 16.65 meters (54.6 feet) from station in azimuth $336^{\circ}15'$. Station *Del* (see description and geographic position thereof) is visible from ground in azimuth $336^{\circ}56'41''$. Station *Kittrell* (see description and geographic position thereof) is visible from ground in azimuth $178^{\circ}11'21''$.

Kittrell (Vance County, M. Steinberg, 1918; 1933).—About 2 miles south of railway station at Kittrell, at beginning of first curve of Seaboard Air Line Railway south of railway station, on prolongation of tangent to right rail toward Kittrell, 295 meters (968 feet) north of milepost 124, 28 meters (92 feet) north of whistle post, at top of cut, about 6 feet above track, and 7.83 meters (25.7 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, opposite whistle post, 10 meters (33 feet) west of track, and 24.83 meters (81.5 feet) from station in azimuth $13^{\circ}57'$. Station *Dek* (see description and geographic position thereof) is visible from ground in azimuth $358^{\circ}11'21''$.

Deg (Vance County, M. Steinberg, 1918; 1933).—About 1 mile north of railway station at Kittrell, about 400 yards north of milepost 121 of Seaboard Air Line Railway, on first curve north of Kittrell, on prolongation of tangent to east rail from south, 25.66 meters (84.2 feet) west of west rail, in northeast corner of yard of white house formerly owned by Jim Blacknon, 25 meters (82 feet) east of well of this house, 18 feet west of center line of route 1, 21 feet east of east end of signboard, 33 feet south of telephone pole, and 45 feet east of 10-inch shade tree in front yard of house. Surface mark is standard disk station mark in concrete, note 1a. Northeast side of mark is exposed to depth of about 15 inches, due to highway being lower than mark. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in east face of north chimney of above-mentioned house, and 33.75 meters (110.7 feet) from station in azimuth $99^{\circ}12'$. Azimuth mark, established in 1933, is standard reference disk in granite boulder which projects about 1 foot above ground, note 12c, 28 feet west of center line of route 1, on southern slope of hill, 85 feet north of telephone pole no. 110, about 40 yards south of sign on east side of highway marked "S. V. Ellington", and about one-fourth mile from station in azimuth $209^{\circ}10'19''$.

Def (Vance County, M. Steinberg, 1918; 1933).—About $1\frac{1}{2}$ miles north of railway station at Kittrell, on north end of first curve of Seaboard Air Line Railway north of railway station, on prolongation of northward tangent to west rail, 3.96 meters (13.0 feet) west of west rail, on earth thrown out from cut, and about 305 meters (1,001 feet) south of road crossing. Surface mark is standard disk station mark in concrete, note 1a. It was found lying on ground in 1933, and was reset over underground mark which is $\frac{3}{4}$ -inch iron bolt in concrete. Reference mark is standard reference disk in concrete, note 11 a, 25.96 meters (85.2 feet) from station in azimuth $203^{\circ}46'$. Station *Ded* (see description and geographic position thereof) is visible from ground in azimuth $227^{\circ}08'17''$.

Ded (Vance County, M. Steinberg, 1918; 1933).—About $4\frac{3}{4}$ miles south of railway station at Henderson, on first curve of Seaboard Air Line Railway south of Gill siding, about 630 meters (2,067 feet) north of milepost 119, in field, and about 25.0 meters (82 feet) south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in west face of southwest corner of foundation of house of H. A. Finch, about 2 feet above ground, and 90.97 meters (298.5 feet) from station in azimuth $238^{\circ}10'$. Station *Def* (see description and geographic position thereof) is visible from ground in azimuth $47^{\circ}09'08''$.

Dec (Vance County, M. Steinberg, 1918; 1933).—About 3 miles south of railway station at Henderson, one-half mile north of Gill siding, on second curve of Seaboard Air Line Railway south of Henderson, at intersection of tangents to east rail, in middle of cultivated field, 120 meters (394 feet) south of whistle post, about 100 yards north of Negro house, 110 feet east of east rail, 83 feet east of

telephone pole, and 39 feet west of guyed telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in north face of stone chimney of Negro house, 3 feet above ground, and 80.27 meters (263.4 feet) from station in azimuth 338°09'. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 25 yards southeast of stone chimney of farmhouse, just north of grade crossing, 41 feet north of dirt road, in grassy yard between farmhouse and railway, 32 feet west of west rail, 22 feet north of telephone pole, 20 feet east of guyed telephone pole no. 10440, and approximately 300 yards from station in azimuth 15°25'50''.

Mobile (Vance County, M. Steinberg, 1918).—About 1,060 meters (3,478 feet) south of railway station at Henderson, at end of first curve of Seaboard Air Line Railway south of railway station, 20 meters (66 feet) north of railway coal chute, 11 meters (36 feet) south of railway water tank, and 1.72 meters (5.6 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in south face of southeast concrete pier under water tank, and 10.42 meters (34.2 feet) from station in azimuth 173°57'. Station was not recovered in 1933.

Mill (Vance County, M. Steinberg, 1918).—About 720 meters (2,362 feet) south of railway station at Henderson, 15 meters (49 feet) south of south end of Seaboard Produce Co. warehouse, 3 meters (10 feet) south of large switch target, and 2.72 meters (8.9 feet) east of east rail of main track. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in east face of stone foundation of above-mentioned warehouse, and 20.75 meters (68.1 feet) from station in azimuth 155°31'. Station was not recovered in 1933.

Henderson (Vance County, M. Steinberg, 1918; 1933).—About 380 meters (1,247 feet) south of railway station at Henderson, 25 meters (82 feet) south of milepost 114, 1 meter (3 feet) south of second crossing (Orange Street) south of railway station, directly opposite front door of brick schoolhouse on opposite side of track, and 2.58 meters (8.5 feet) west of west rail of main track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in west face of schoolhouse, about 10 meters (33 feet) from south end, 2 meters (7 feet) from ground, and 62.98 meters (206.6 feet) from station in azimuth 328°02'. Station *Daya* (see description and geographic position thereof) is visible from ground in azimuth 230°28'54''.

Daya (Vance County, M. Steinberg, 1918; 1933).—About 300 meters (984 feet) north of railway station at Henderson, on prolongation of southward tangent to west rail, 65 meters (213 feet) south of large switch target, 33 meters (108 feet) north of old building with cupola (used as tobacco warehouse), 2.23 meters (7.3 feet) east of east rail of main track, and directly across from section house. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in north face of stone foundation of above-mentioned warehouse, 5 meters (16 feet) from east end, 2 meters (7 feet) from ground, and 35.62 meters (116.9 feet) from station in azimuth 89°54'. Station *Henderson* (see description and geographic position thereof) is visible from ground in azimuth 50°29'06''.

Dare (Vance County, M. Steinberg, 1918; 1933).—About 630 meters (2,067 feet) north of railway station at Henderson, at north end of curve of Seaboard Air Line Railway, on prolongation of tangent to west rail from north, at foot of bank of about same elevation as track and 3 feet below street, about 30 yards north of street crossing railway, 29.3 feet north of northeast corner of concrete foundation of block signal no. 113.4, 45.8 feet northeast of northeast corner of concrete foundation of block signal no. 113.5, 24.4 feet east of east rail of main track, and 2.9 feet north of large telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. In 1933, surface mark was found to have been moved about 15 feet from its original position. Underground mark was recovered in correct position, and surface mark reset in correct position. Reference mark is standard reference disk in west face of brick foundation of third house north of Rockspring Street, about 1 foot from corner, 2 feet above ground, and 40.90 meters (134.2 feet) from station in azimuth 249°48'. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 125 yards south of milepost 113, on bank between alley and railway, 82.4 feet northwest of southwest corner and 84.9 feet southwest

of northwest corner of large dilapidated brick house on east side of track, 47.8 feet south of telephone pole, 16.1 feet west of west rail, and approximately 0.3 mile from station in azimuth $205^{\circ}50'17''$. Green light on block signal no. 112.4 is on east side of track, and approximately 1 mile from station in azimuth $206^{\circ}30'00''$.

Deb (Vance County, M. Steinberg, 1918; 1933).—About $1\frac{1}{2}$ miles north of railway station at Henderson, on second curve of Seaboard Air Line Railway north of Henderson, on prolongation of tangent to west rail from south, about 135 yards north of block signal no. 112.4, 50 yards northeast of Texaco gas station and road house on west side of route 1, 43.0 feet east of center line of route 1, 51 feet north of grade crossing, 23.5 feet east of power-line pole no. 1768, at bottom of fill, and 15.7 feet (slope) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. It was about 10 inches below ground in 1933. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk near northeast corner of west face of North Henderson High School, and 137.64 meters (451.6 feet) from station in azimuth $324^{\circ}52'27''$. Station *Daz* (see description and geographic position thereof) is visible from ground in azimuth $233^{\circ}47'02''$.

Day (Vance County, M. Steinberg, 1918; 1933).—About $2\frac{1}{4}$ miles north of railway station at Henderson, 1,000 meters (3,281 feet) south of milepost 111 of Seaboard Air Line Railway, 290 meters (951 feet) south of road crossing, about 170 meters (558 feet) north of whistle post, at bottom of cut, and 2.71 meters (8.9 feet) east of east rail. Surface mark was nail in concrete. It was not recovered in 1933. Underground mark is railroad spike in concrete. It was recovered in 1933 about 2 feet below surface of ground. Reference mark is nail in concrete instead of standard reference disk in concrete, note 11a, as reported in 1918. It is on top of cut, about 10 meters (33 feet) east of track, and 22.26 meters (73.03 feet) from station in azimuth $230^{\circ}45'$. Station *Daz* (see description and geographic position thereof) is visible from ground in azimuth $83^{\circ}36'05''$. Station *Das* (see description and geographic position thereof) is visible from ground in azimuth $262^{\circ}55'16''$.

Das (Vance County, M. Steinberg, 1918; 1933).—About $1\frac{1}{4}$ miles south of railway station at Greystone, at south end of first curve of Seaboard Air Line Railway south of Greystone, on prolongation of tangent to west rail from south, 56.6 feet east of east rail, 103.6 feet east of whistle post, 58.3 feet south of guyed telephone pole, 191.1 feet south of railway crossing sign post where dirt highway crosses tracks, directly opposite white house on same side of tracks, and in bottom land which is covered by dirt washed out of fields. Surface mark is standard disk station mark in concrete, note 1a. It was covered by about 8 inches of dirt in 1933. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in west face of north chimney of above-mentioned house, about 4 feet above ground, and 114.12 meters (374.4 feet) from station in azimuth $1^{\circ}43'25''$. Station *Day* (see description and geographic position thereof) is visible from ground in azimuth $82^{\circ}55'36''$.

Dar (Vance County, M. Steinberg, 1918; 1933).—About 1 mile south of railway station at Greystone, at beginning of first curve of Seaboard Air Line Railway south of Greystone, on prolongation of tangent to east rail from north, about 275 yards north of grade crossing, 100 meters (328 feet) north of house on opposite side of track, about 100 meters (328 feet) north of milepost 111, at bottom of fill, about 4 feet below track, 28.9 feet east of east rail, 32.4 feet south of east end of corrugated-iron pipe under track, 53.8 feet north of telephone pole no. E-39, and 53.5 feet north of blazed 16-inch oak tree at northwest corner of woods. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is nail in concrete pier on opposite side of track, in direction of house, on top of cut, about 10 meters (33 feet) west of track, and 40.51 meters (132.9 feet) from station in azimuth $83^{\circ}38'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on high bank about 12 feet above rail, 24.9 feet west of west rail, 111.2 feet north of whistle post, about 80 yards south of whistle post on west side of track, 8 feet east of center line of old road, 28 feet north of telephone pole, and approximately 200 yards from station in azimuth $221^{\circ}30'50''$. Green light on block signal no. 110.6 is on east side of track, and approximately 0.3 mile from station in azimuth $224^{\circ}00'38''$.

Dap (B.M. R 6) (Vance County, M. Steinberg, 1918; 1919).—About 770 meters (2,526 feet) north of railway station at Greystone, at south end of first curve of Seaboard Air Line Railway south of railway station, on prolongation of tangent

to left rail toward Greystone, 375 meters (1,230 feet) south of milepost 108, 40 meters (131 feet) north of small Negro church on same side of track, and 5.75 meters (18.9 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in north face of stone foundation of church, at about middle point, 18 inches above ground, and 36.35 meters (119.3 feet) from station in azimuth $359^{\circ}45'$. Station marks were destroyed by railway construction in 1930.

Daw (B.M. Q 6) (Vance County, M. Steinberg, 1918; 1933).—About 1,010 meters (3,314 feet) north of railway station at Greystone, on first curve of Seaboard Air Line Railway north of Greystone, 425 meters (1,394 feet) south of milepost 109, 50 meters (164 feet) south of small negro house which is on stone foundation, on top of high fill, 1.5 meters (5 feet) east of east rail, and 7 meters (23 feet) south of natural spring at bottom of fill. Surface mark was standard disk station mark in concrete, note 1a and, in 1930, disk was removed from concrete and returned to office. In 1933, concrete post was recovered and re-marked with standard station disk. Underground mark is nail in concrete, note 7c. Reference mark is bolt in west side of lone tall tree, and 16.10 meters (52.8 feet) from station in azimuth $275^{\circ}20'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, at north end of first curve north of Greystone, on prolongation of tangent to east rail from north, about 125 yards south of milepost 109, about 5 feet west of foot of cut, 2 feet below track, 30.0 feet east of east rail, 60.3 feet south of telephone pole no. E-23, 100.0 feet north of another telephone pole, and approximately 250 meters (820 feet) from station in azimuth $184^{\circ}39'11''$.

Dan (B.M. O 6) (Vance County, M. Steinberg, 1918).—About three-fourths mile north of railway station at Greystone, at north end of first curve of Seaboard Air Line Railway north of railway station, 175 meters (574 feet) south of milepost 109, on top of cut about 8 feet above track, and 9.94 meters (32.6 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on top of cut at opposite side of track, and 28.41 meters (93.2 feet) from station in azimuth $37^{\circ}01'$. Station marks were destroyed by railway construction in 1930.

Dal (Vance County, M. Steinberg, 1918; 1933).—About $2\frac{1}{4}$ miles south of railway station at Middleburg, on second curve of Seaboard Air Line Railway south of Middleburg, about 950 meters (3,117 feet) south of milepost 108, 19.62 meters (64.4 feet) west of west rail, on top of cut, in cornfield, at edge of wagon road, and 60 meters (197 feet) north of house on opposite side of track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. N 6) was standard reference disk in concrete, note 11a, at edge of cut, and 19.00 meters (62.3 feet) from station in azimuth $212^{\circ}26'$. Reference mark was destroyed in 1930 by railway construction. Right-hand vertical edge of top of chimney on northeast side of cream-colored house with 2 chimneys is about 0.2 mile from station in azimuth $62^{\circ}33'40''$. Azimuth mark of station *Daw* is standard reference disk in concrete, note 11a, at north end of first curve north of Greystone, on prolongation of tangent to east rail from north, about 125 yards south of milepost 109, about 5 feet west of foot of cut, 2 feet below track, 30.0 feet east of east rail, 60.3 feet south of telephone pole no. E-23, 100.0 feet north of another telephone pole, and approximately 850 meters (2,789 feet) from station in azimuth $340^{\circ}11'43''$. Station *Dag* (see description and geographic position thereof) is visible from ground in azimuth $186^{\circ}03'52''$.

Dag (Vance County, M. Steinberg, 1918; 1933).—About 2 miles west of railway station at Middleburg, at east end of second curve of Seaboard Air Line Railway west of railway station, 30 meters (98 feet) south of road crossing leading to large white house on opposite side of track, directly across track from station whistle post, and 8.55 meters (28.1 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in west face of south chimney of above-mentioned house, and 70.25 meters (230.5 feet) from station in azimuth $265^{\circ}50'$. Station *Dal* (see description and geographic position thereof) is visible from ground in azimuth $6^{\circ}03'53''$. Station *Daf* (see description and geographic position thereof) is visible from ground in azimuth $203^{\circ}59'46''$.

Daf (Vance County, M. Steinberg, 1918; 1933).—About $1\frac{1}{2}$ miles west of railway station at Middleburg, at west end of first curve of Seaboard Air Line Rail-

way west of Middleburg, 115 meters (377 feet) east of milepost 108, 150 meters (492 feet) east of road crossing, 7 meters (23 feet) south of highway which parallels track, on bank of ditch, about level with track, and 5.19 meters (17.0 feet) north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on same side of track, and 41.49 meters (136.1 feet) from station in azimuth $34^{\circ}13'$. Station *Dag* (see description and geographic position thereof) is visible from ground in azimuth $23^{\circ}59'52''$.

Middleburg (Vance County, M. Steinberg, 1918; 1933).—About 1 mile west of railway station at Middleburg, at west end of first curve of Seaboard Air Line Railway west of Middleburg, about 100 yards north of block signal no. 107.5, 23.9 feet west of west rail of main track, 125 meters (410 feet) east of switch target, 35.0 feet south of telephone pole, 64.9 feet west of another telephone pole, and 83.0 feet south of center line of United States route 1. Surface mark is standard disk station mark in concrete, note 1a, 6 inches below surface of ground. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in east face of chimney of Negro cabin, and 71.26 meters (233.8 feet) from station in azimuth $134^{\circ}24'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 0.4 mile southwest of railway station at Middleburg, 80 feet south of most southerly of two concrete posts adjoining Middleburg School grounds, 32 feet west of center line of route 1, 99 feet south of center line of dirt road leading off route 1, 106.8 feet west of west rail, 11 feet east of telephone pole no. 1784, and approximately 0.3 mile from station in azimuth $236^{\circ}21'06''$.

Dad (Vance County, M. Steinberg, 1918).—About 2 miles east of railway station at Middleburg, at beginning of first curve of Seaboard Air Line Railway east of Middleburg, on prolongation of tangent to left rail toward Middleburg, 65 meters (213 feet) west of whistle post, 2 meters (7 feet) east of country road crossing, and 5.67 meters (18.6 feet) south of south rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark (B.M. D 6) was standard reference disk in concrete, note 11a, about 15 meters (49 feet) south of track, and 22.41 meters (73.5 feet) from station in azimuth $245^{\circ}19'$. Station and reference marks were destroyed by railway construction in 1930.

Dab (B.M. C 6) (Vance County, M. Steinberg, 1918; 1919).—About 2 miles east of railway station at Middleburg, on first curve of Seaboard Air Line Railway east of Middleburg, on prolongation of tangent to left rail toward Manson, 270 meters (886 feet) west of road crossing, and 4.24 meters (13.9 feet) south of south rail. Surface mark was nail in 4- by 4-inch stake in concrete. Underground mark was nail in concrete, note 7c. Reference mark (B.M. B 6) was standard reference disk in concrete, note 11a, at top of cut, and 11.07 meters (36.3 feet) from station in azimuth $279^{\circ}48'$. In 1934, a thorough search was made for station and reference marks, but they were not found.

Cuz (B.M. A 6) (Warren County, M. Steinberg, 1918).—About 675 meters (2,215 feet) west of railway station at Manson, at west end of first curve of Seaboard Air Line Railway west of railway station, 115 meters (377 feet) west of milepost 104, 75 meters (246 feet) east of white house with stone chimney, at top edge of fill, and 2.04 meters (6.7 feet) north of north rail. Surface mark was standard disk station mark in concrete, note 1a. In 1934, concrete base was found lying on ground. Underground mark was nail in concrete, note 7c. Reference mark (B.M. Z 5) was standard reference disk in concrete, note 11a, at bottom of fill, and 19.35 meters (63.5 feet) from station in azimuth $112^{\circ}56'$. In 1934, reference mark was searched for but not found.

Cuy (B.M. X 5) (Warren County, M. Steinberg, 1918; 1919).—About 350 meters (1,148 feet) west of railway station at Manson, on top of first hill west of Manson, 59 meters (194 feet) south and 3 meters (10 feet) east of large white house, 31.68 meters (103.9 feet) north of north rail of Seaboard Air Line Railway, and 3 meters (10 feet) south of highway. Marked by nail in top of 4- by 4-inch stake in concrete. In 1934, station mark was searched for but not recovered. Underground mark probably was nail in concrete, note 7c. Reference mark (B.M. Y 5) is standard reference disk in south face of cement pier of above-mentioned house, and 58.59 meters (192.2 feet) from station in azimuth $145^{\circ}19'$. Reference mark was recovered in 1932 but was not found in 1934.

Manson (B.M. W 5) (Warren County, M. Steinberg, 1918; 1934).—On right-of-way of Seaboard Air Line Railway at Manson, 61.7 feet east of southeast corner of railway station platform, 59.8 feet south of center line of route 1, 45.7

feet northwest of dirt road where it intersects center line of main track, 89.1 feet south of southeast corner of concrete foundation of two Gulf gasoline pumps on north side of highway, 51.4 feet northwest of railway crossing signpost on south side of track, 33.6 feet south of west end of south rail of spur track, 23.2 feet north of north rail of main track, 26.5 feet west of telephone pole, and 12.2 feet east of square white wood post. Surface mark is standard disk station mark in concrete, note 1a, covered with about 6 inches of limestone screenings used to make automobile parking space. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in southwest stone pillar of house east of station, and 31.03 meters (101.8 feet) from station in azimuth 266°15'. House has been moved, and reference mark destroyed. Station *Cux* (see description and geographic position thereof) is visible from ground in azimuth 281°01'02''.

Cux (B.M. U 5) (Warren County, M. Steinberg, 1918; 1934).—About 1 mile east of railway station at Manson, on first curve of Seaboard Air Line Railway east of Manson, on prolongation of tangent to right rail toward Manson, 210 meters (689 feet) east of milepost 103, 90 feet north of center line of dirt road, 29.9 feet west of northwest corner and in yard of Negro's house, 20 meters (66 feet) west of tobacco warehouse on opposite side of road, 85 yards south-southwest of center line of dirt road where it crosses main track, and 100 meters (328 feet) south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. T 5) is standard reference disk in concrete, note 11a, 55.2 feet southwest of southeast corner of Negro's house, 20.0 feet northeast of center line of dirt highway, 25 yards northeast of northeast corner of tobacco barn, 105 yards south of railway, and 20.00 meters (65.6 feet) from station in azimuth 330°15'. Station *Manson* (see description and geographic position thereof) is visible from ground in azimuth 101°01'33''.

Ridgeway (B.M. R 5) (Warren County, M. Steinberg, 1918).—About 200 meters (656 feet) east of railway station at Ridgeway, at beginning of first curve of Seaboard Air Line Railway east of railway station, 40 meters (131 feet) east of east end of church, 20 meters (66 feet) east of switch target, and 1.84 meters (6.0 feet) north of north rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark (B.M. S 5) was standard reference disk in concrete, note 11a, at edge of church grounds, 7 meters (23 feet) north of track, and 28.05 meters (92.0 feet) from station in azimuth 70°48'. Station and reference marks were destroyed by railway construction in 1930.

Cuv (B.M. Q 5) (Warren County, M. Steinberg, 1918).—About 490 meters (1,608 feet) east of Ridgeway, on first curve on Seaboard Air Line Railway west of Norlina, on prolongation of tangent to right rail toward Norlina, 20 meters (66 feet) west of whistle post, 20 meters (66 feet) east of Norlina yard-limit sign, at bottom of fill, and about 10 meters (33 feet) north of north rail. Surface mark was standard disk station mark in concrete, note 1a. In 1934, mark was found to have been destroyed. Underground mark was nail in concrete, note 7c. Reference mark (B.M. P 5) was standard reference disk in concrete, note 11a, midway between track and highway, 225 yards west of automatic signal 100.4, 65 yards northeast of yard-limit sign, 36.6 feet south of center line of route 1, 40.7 feet north of north rail of main track, and 25.00 meters (82.0 feet) from station in azimuth 241°22'.

Norlina (B.M. L 5) (Warren County, M. Steinberg, 1918; 1934).—About 1,040 meters (3,412 feet) east of railway station at Norlina, on first curve of Seaboard Air Line Railway east of railway station, on prolongation of tangent to left rail toward Norlina, 95 yards southeast of intersection of dirt road east and dirt road south, 394 feet east of switch target, 51 yards northeast of intersection of dirt road and railway, 25 meters (82 feet) east of small Negro cabin on same side of track, in pea field, and 77.3 feet north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. M 5) is standard reference disk in concrete, note 11a, 78 yards south-southeast of intersection of dirt roads, 29.4 feet northeast of intersection of dirt road and railway, 22.0 feet north of north rail, and 35.55 meters (116.6 feet) from station in azimuth 55°58'. Station *Cus* (see description and geographic position thereof) is visible from ground in azimuth 275°14'12''.

Cus (B.M. J 5) (Warren County, M. Steinberg, 1918; 1934).—About 1 mile east of railway station at Norlina, on first curve of Seaboard Air Line Railway east of railway station, 623 yards west of milepost 114, 15.4 feet east of telegraph pole, 115 meters (377 feet) east of Norlina yard-limit sign, 20 meters (66 feet) east

along track from small Negro cabin on opposite side of cotton field, on top of 8-foot embankment, and 8.92 meters (29.3 feet) north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. K 5) is standard reference disk in concrete, note 11a, 110 yards east of yard-limit sign, 643 yards west of milepost 114, 23.4 feet northwest of 18-inch black oak, 42.5 feet south of south rail, and 31.79 meters (104.3 feet) from station in azimuth $51^{\circ}37'$. Station *Norlina* (see description and geographic position thereof) is visible from ground in azimuth $95^{\circ}14'25''$.

Warren (B.M. H 5) (Warren County, M. Steinberg, 1918; 1934).—About $\frac{1}{4}$ mile east of railway station at Warren Plains, 346 yards east of milepost 113 of Seaboard Air Line Railway, 359 yards east of dirt road crossing, east of beginning of first small cut east of Warren Plains, 46.9 feet south of telegraph pole, about level with track, and 11.2 feet south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 320 yards east of milepost 113, 333 yards east of dirt road crossing, 22.0 feet east of telegraph pole, 18.3 feet north of north rail, and 24.74 meters (81.2 feet) from station in azimuth $130^{\circ}47'$. Station *Cut* (see description and geographic position thereof) is visible from ground in azimuth $288^{\circ}36'46''$. In 1934, surface station mark had been uprooted by railway ditching machine and reset by section foreman, 10 feet south of south rail, and 74.8 feet from reference mark.

Cut (B.M. F 5) (Warren County, M. Steinberg, 1918; 1934).—About 1 mile east of railway station at Warren Plains, on first curve of Seaboard Air Line Railway east of railway station, 58 yards west of milepost 112, 42 yards north of center line of dirt road, 7 meters (23 feet) east of whistle post, 13.0 feet south of intersection of dirt road and railway, at east side of crossroad leading to house directly in front of station, and 10.4 feet south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. G 5) is standard reference disk in concrete, note 11a, 65 yards west of milepost 112, 28.3 feet south of center line of dirt road, 36 yards south of south rail, on west edge of wagon road, and 30.05 meters (98.6 feet) from station in azimuth $29^{\circ}51'$. Station *Warren* (see description and geographic position thereof) is visible from ground in azimuth $108^{\circ}37'16''$. Station *Cur* (see description and geographic position thereof) is visible from ground in azimuth $282^{\circ}08'29''$.

Cur (B.M. D 5) (Warren County, M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles east of railway station at Warren Plains, at middle of second curve of Seaboard Air Line Railway west of Macon, 425 yards east of dirt road, 10.0 feet south of edge of bank, 622 yards east of milepost 112, 390 meters (1,280 feet) east of road crossing, 100 meters (328 feet) west of whistle post, on top of cut 6 feet above track, and 29.8 feet south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, about 12 meters (39 feet) south of track, and 23.35 meters (76.6 feet) from station in azimuth $93^{\circ}12'$. Station *Cut* (see description and geographic position thereof) is visible from ground in azimuth $102^{\circ}08'44''$. Station *Cup* (see description and geographic position thereof) is visible from ground in azimuth $271^{\circ}14'17''$.

Cup (B.M. B 5) (Warren County, M. Steinberg, 1918; 1934).—About 2 miles west of Macon, at beginning of second curve of Seaboard Air Line Railway west of Macon, 465 meters (1,526 feet) west of milepost 111, 36.0 feet northwest of 15-inch pine tree, 13.2 feet south of south rail where dirt road crosses tracks, and 2 meters (7 feet) west of road crossing. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. C 5) is standard reference disk in concrete, note 11a, on east side of dirt road, 24.0 feet southeast of its intersection with wagon road, 13.7 feet north of north rail of main track, and 17.31 meters (56.8 feet) from station in azimuth $188^{\circ}03'$. Station *Cur* (see description and geographic position thereof) is visible from ground in azimuth $91^{\circ}14'30''$.

Macon (B.M. Z 4) (Warren County, M. Steinberg, 1918; 1934).—About three-eighths mile west of railway station at Macon, on first curve of Seaboard Air Line Railway west of Macon, at intersection of tangents to south rail from west and north rail from east, 37.6 feet south of south rail, 16.4 feet north of center line of dirt highway, on edge of bank just north of highway ditch, about 52 yards west of grade crossing, 50 yards west of intersection of dirt road east and dirt road northeast, directly in front of and 120 yards from large house owned by Tom Marks,

125 yards west of whistle post, 106 feet west of 24-inch sycamore tree, and 82.5 feet north of 30-inch pine tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in north face of west chimney of Tom Mark's house, and 101.35 meters (332.5 feet) from station in azimuth $358^{\circ}12'11''$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 150 yards east of grade crossing, about 100 yards south of house on north side of track, 28.7 feet south of south rail, 21 feet north of center line of dirt highway, 118 feet northeast of guyed telephone pole on south side of highway, 69 feet southeast of telephone pole on north side of track, 19 feet east of footpath crossing track, and approximately 300 yards from station in azimuth $83^{\circ}26'46''$.

Cun (B.M. X 4) (Warren County, M. Steinberg, 1918).—About $1\frac{1}{2}$ miles east of railway station at Macon, on first curve of Seaboard Air Line Railway east of Macon, on prolongation of tangent to right rail toward Macon, about 500 meters (1,640 feet) east of milepost 108, about 200 meters (656 feet) west of Negro cabin, at south edge of cotton field, on top of small embankment, about 15 meters (49 feet) north of north rail, and on opposite side of highway from track. Surface mark was standard disk station mark in concrete, note 1a. In 1933 top of mark was reported broken off, and mark was dug out in effort to recover underground mark. Underground mark was reported as nail in concrete, note 7c, when established in 1918. It was not recovered, and surface mark was not replaced. Reference mark (B.M. W 4) is standard reference disk in concrete, note 11a, on same side of track, in cotton field, 78 yards north of north rail, 26 yards north of north edge of highway, 700 yards east of milepost 108, 200 yards west of cabin, 5 yards above level of railway, and 24.24 meters (79.5 feet) from station in azimuth $189^{\circ}25'$. Reference mark was recovered in 1934.

Cum (B.M. U 4) (Warren County, M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles east of railway station at Macon, at center of first curve of Seaboard Air Line Railway east of Macon, on prolongation of tangent to south rail from east, 900 meters (2,953 feet) west of milepost 107, 50 yards east of small house of Matt Faine, 33 yards north of Matt Faine's blacksmith shop, 6 yards north of center of dirt road, on top of small rise about 2 feet above road, 3 meters (10 feet) east of old wagon-repair shop, and 37.57 meters (123.3 feet) north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. V 4) is standard reference disk in east face of chimney of Faine's house, 45 yards north of north rail, 25 yards north of center line of dirt road, 3 feet above level of ground, and 50.71 meters (166.4 feet) from station in azimuth $122^{\circ}06'$. Station *Cul* (see description and geographic position thereof) is visible from ground in azimuth $307^{\circ}45'52''$.

Cul (B.M. S 4) (Warren County, M. Steinberg, 1918; 1934).—About 3 miles east of railway station at Macon, at west end of second curve of Seaboard Air Line Railway east of Macon, 55 meters (180 feet) west of milepost 106, on line perpendicular to track from large white house across field, 15 yards north of center of United States route 158, 3.46 meters (11.4 feet) south of south rail, and about 2 feet below track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. T 4) is standard reference disk in concrete, note 11a, on opposite side of track, and 33.34 meters (109.4 feet) from station in azimuth $142^{\circ}35'$. In 1934 reference mark was searched for but was not found. Station *Cum* (see description and geographic position thereof) is visible from ground in azimuth $127^{\circ}46'39''$. Station *Cug* (see description and geographic position thereof) is visible from ground in azimuth $289^{\circ}01'00''$.

Cug (B.M. R 4) (Warren County, M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles west of railway station at Vaughan, 388 meters (1,273 feet) east of milepost 106 of Seaboard Air Line Railway, on second curve west of Vaughan, on prolongation of tangent to right rail toward Vaughan, 105 meters (344 feet) west of road crossing, 100 meters (328 feet) west of white house, on top of small embankment 4 feet above track, and 7.81 meters (25.6 feet) south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. Q 4) is standard reference disk in concrete, note 11a, 425 yards east of milepost 106, 91 yards west of dirt road crossing, 10 yards south of south rail, 2 feet above top of rails, and 32.07 meters (105.2 feet) from station in azimuth $227^{\circ}34'$. Station *Cul* (see description and geographic position thereof) is visible from ground in azimuth $109^{\circ}01'09''$. Station *Cuf* (see description and geographic position thereof) is visible from ground in azimuth $266^{\circ}18'40''$.

Cuf (B.M. O 4) (Warren County, M. Steinberg, 1918; 1934).—About $1\frac{1}{4}$ miles west of railway station at Vaughan, 370 meters (1,214 feet) west of milepost 105, 40 meters (131 feet) east of house in thicket on opposite side of track, 28 meters (92 feet) east of road crossing, and 5.5 yards north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, in direction of house near crossroad, and 46.26 meters (151.8 feet) from station in azimuth $62^{\circ}17'$. Reference mark was reported destroyed by road construction in 1926. Station *Cug* (see description and geographic position thereof) is visible from ground in azimuth $86^{\circ}19'00''$. Station *Cue* (see description and geographic position thereof) is visible from ground in azimuth $266^{\circ}39'47''$.

Cue (B.M. N 4) (Warren County, M. Steinberg, 1918; 1934).—About 680 meters (2,231 feet) west of railway station at Vaughan, 990 meters (3,243 feet) east of milepost 105 of Seaboard Air Line Railway, on first curve west of Vaughan, on prolongation of tangent to left rail toward Macon, 175 meters (574 feet) east of yard-limit sign, 8.84 meters (29.0 feet) north of north rail, and 1 foot below base of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. M 4) is standard reference disk in concrete, note 11a, 10 yards south of south rail, 3 feet below base of rail, and 22.02 meters (72.2 feet) from station in azimuth $328^{\circ}34'$. Station *Cuf* (see description and geographic position thereof) is visible from ground in azimuth $86^{\circ}40'19''$.

Cud (B.M. L 4) (Warren County, M. Steinberg, 1918; 1919).—About 360 meters (1,181 feet) west of railway station at Vaughan, on first curve of Seaboard Air Line Railway west of railway station, on prolongation of tangent to left rail toward Vaughan, at edge of cornfield, and about 15 meters (49 feet) north of north rail. Marked by nail in top of 4- by 4-inch stake in concrete. In 1934 thorough search was made, but mark was not recovered. Underground mark was nail in concrete, note 7c. Reference mark (B.M. K 4) was standard reference disk in concrete, note 11a, on prolongation of tangent to north rail looking toward Vaughan, 15 yards north of north rail, on fence line, 2 feet below base of rail, about 6 meters (20 feet) north of track, and 30.0 meters (98 feet) from station in azimuth $322^{\circ}03'$.

Vaughan (B.M. I 4) (Warren County, M. Steinberg, 1918; 1934).—About 490 yards east of railway station at Vaughan, on prolongation of tangent to north rail from west of Seaboard Air Line Railway, on top of high bank about 10 feet above track, 90 yards west of switch target, 10 yards north of small Negro church, 38.1 feet south of south rail, 20.1 feet northwest of northwest corner of old wooden church, 30.3 feet east of 18-inch oak stump, 82 meters (269 feet) west of switch target, and about 20 meters (66 feet) east of gin house on opposite side of track. Surface mark is standard disk station mark in concrete, note 1a, projecting about 10 inches above ground. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, in woods, and 92.9 feet from station in azimuth $85^{\circ}07'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 40 yards south of section foreman's house, 95.9 feet east of east end of tool house on south side of track, 100 feet north of north edge of concrete pavement of United States route 158, 23.4 feet south of south rail, 16.5 feet north of power-line pole no. 58 with two guy wires, and approximately 250 yards from station in azimuth $141^{\circ}27'00''$.

Cub (B.M. H 4) (Warren County, M. Steinberg, 1918).—About 790 meters (2,592 feet) east of railway station at Vaughan, 820 meters (2,690 feet) west of milepost 103 of Seaboard Air Line Railway, at east end of first curve east of Vaughan, 75 meters (246 feet) west of whistle post, 6 meters (20 feet) east of Greenleaf, Johnson Lumber Co. freight house, and 3.44 meters (11.3 feet) south of south rail. Surface mark was standard disk station mark in concrete, note 1a. In 1933 top part was reported broken off, and mark was dug out in effort to recover underground mark. Underground mark was reported as nail in concrete, note 7c, when established in 1918. It could not be found in 1933, and surface mark was not replaced. Reference mark (B.M. G 4) is standard reference disk in concrete, note 11a, 30 yards west of whistle post, 12 yards south of south rail, 1 yard above top of rail, and 50.58 meters (165.9 feet) from station in azimuth $298^{\circ}05'$. It was recovered in 1934.

Cru (B.M. E 4) (Warren County, M. Steinberg, 1918; 1934).—About 1 mile east of railway station at Vaughan, 4 meters (13 feet) west of milepost 103 of Seaboard Air Line Railway, 47.5 yards south of south rail of track 45, in field belonging to J. R. Sledge, 40 yards west of Negro cabin, and 30 yards east of

another cabin, and 30 yards north of center of United States route 158. Surface mark is spike in a cedar post. Underground mark is nail in concrete, note 7c. Reference mark (B.M. F 4) is standard reference disk near milepost 103, 45 yards south of south rail, 28 yards north of center of United States route 158, in east face of most southeastern foundation of small Negro tenant house belonging to G. W. Sledge, and 29.39 meters (96.4 feet) from station in azimuth $89^{\circ}02'$. Station *Cro* (see description and geographic position thereof) is visible from ground in azimuth $252^{\circ}52'50''$.

Cro (B.M. D 4) (Warren County, M. Steinberg, 1918; 1934).—About $1\frac{1}{4}$ miles east of railway station at Vaughan, at center of first curve of Seaboard Air Line Railway east of Vaughan, 330 yards east of milepost 103, 300 yards east of 2-story frame house, 50 yards north of center of United States route 158, on top of embankment about 3 yards above track, and 9.5 yards north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. C 4) is standard reference disk in concrete, note 11a, 25 yards north of center of United States route 158, 15 yards south of south rail, $2\frac{1}{2}$ yards above top of rail, and 25.203 meters (82.69 feet) from station in azimuth $341^{\circ}40'$. Station *Cru* (see description and geographic position thereof) is visible from ground in azimuth $72^{\circ}52'58''$. Station *Cole* (see description and geographic position thereof) is visible from ground in azimuth $245^{\circ}12'08''$.

Cote (B.M. A 4) (Warren County, M. Steinberg, 1918; 1934).—About $1\frac{1}{8}$ miles east of railway station at Vaughan, at east end of second curve of Seaboard Air Line Railway east of Vaughan, 1,000 meters (3,281 feet) west of milepost 102, 660 yards east of milepost 103, 20 yards north of center of United States route 158, 300 meters (984 feet) west of road crossing, 20 meters (66 feet) east along track from house which is 50 meters (164 feet) distant 3.78 meters (12.4 feet) south of south rail, and 1 yard below base of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. B 4) is standard reference disk in north face of stone chimney of above-mentioned house, and 48.209 meters (158.17 feet) from station in azimuth $352^{\circ}01'$. Reference mark was not recovered in 1934. Station *Cro* (see description and geographic position thereof) is visible from ground in azimuth $65^{\circ}12'15''$. Station *Cri* (see description and geographic position thereof) is visible from ground in azimuth $227^{\circ}17'13''$.

Cri (B.M. Z 3) (Warren County, M. Steinberg, 1918; 1934).—About $2\frac{1}{8}$ miles east of railway station at Vaughan, at about middle point of third curve of Seaboard Air Line Railway east of Vaughan, on prolongation of tangent to left rail toward Vaughan, 210 meters (689 feet) east of milepost 102, about 35 yards north of north rail, 30 feet north of wagon road running parallel to track, and 3 feet below base of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. Y 3) is standard reference disk in concrete, note 11a, in clearing, 15 yards north of dirt road, 35 yards north of north rail, in small clearing, 3 feet below base of rails, and 25.0 meters (82 feet) from station in azimuth $226^{\circ}29'$. Station *Cote* (see description and geographic position thereof) is visible from ground in azimuth $47^{\circ}17'35''$.

Cre (Warren County, M. Steinberg, 1918).—About $2\frac{1}{8}$ miles west of railway station at Littleton, on second curve of Seaboard Air Line Railway west of Littleton, 675 meters (2,215 feet) west of milepost 100, 220 meters (722 feet) west of road crossing leading to Negro cabin on opposite side of track, and 1.94 meters (6.4 feet) north of north rail. Surface mark was nail in 4-by 4-inch stake projecting 10 inches above ground. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in top of large flat rock, note 12b, at edge of wagon road, and 39.11 meters (128.3 feet) from station in azimuth $156^{\circ}20'$. Station was not recovered in 1933.

Coz (B.M. W 3) (Warren County, M. Steinberg, 1918; 1934).—About 2 miles west of railway station at Littleton, at beginning of second curve of Seaboard Air Line Railway west of Littleton, 480 yards west of milepost 100, 52 meters (171 feet) east of small road crossing leading to Negro cabin on opposite side of track, 1 meter (3 feet) north of edge of top of embankment, 55 yards west of road crossing, 30 yards north of center of United States route 158, 4 yards above top of rail, and 8 yards north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. V 3) is standard reference disk in concrete, note 11a, 11 yards north of north rail, on top of small embankment 6 feet above top of rail,

and 25.73 meters (84.4 feet) from station in azimuth $121^{\circ}08'$. Station *Coy* (see description and geographic position thereof) is visible from ground in azimuth $279^{\circ}09'06''$.

Coy (B.M. U 3) (Warren County, M. Steinberg, 1918; 1934).—About 1 mile west of railway station at Littleton, 425 yards west of milepost 99 of Seaboard Air Line Railway, 13 meters (59 feet) east of section sign marked "52-53", 4 meters (13 feet) east of road crossing, 1 meter (3 feet) east of railway crossing sign, at corner of cornfield, 80 yards east of sign "Yard Limit", 80 yards east of 2-story white house in oak grove, 7 yards south of south rail, 13 yards north of center of United States route 158, and 3 feet below base of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. T 3) is standard reference disk in concrete, note 11a, 100 yards east of sign "Yard Limit", 100 yards east of 2-story white house in oak grove, 5 yards south of south rail, 15 yards north of center of United States route 158, 4 feet below base of rail, at edge of cornfield, and 26.90 meters (88.3 feet) from station in azimuth $269^{\circ}43'$. Station *Coz* (see description and geographic position thereof) is visible from ground in azimuth $99^{\circ}09'42''$.

Littleton (B.M. R 3) (Halifax County, M. Steinberg, 1918).—About 735 meters (2,411 feet) west of railway station at Littleton, on first curve of Seaboard Air Line Railway west of railway station, 345 meters (1,132 feet) east of milepost 99, 150 meters (492 feet) west of road crossing, 120 meters (394 feet) east of east fence of cemetery on opposite side of track, 20.2 meters (66.3 feet) south of south rail, and 2 meters (7 feet) north of stone fence of Littleton Female College. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark (B.M. S 3) was standard reference disk in north face of northwest corner of northwest building of Littleton Female College, and 196.90 meters (646.0 feet) from station in azimuth $21^{\circ}21'26''$. In 1934, search was made for station and reference marks but they were not found. School was burned in 1926.

Cow (B.M. L 3) (Halifax County, M. Steinberg, 1918; 1934).—About 4 miles east of railway station at Littleton, on first curve of Seaboard Air Line Railway east of Littleton, on prolongation of tangent to south rail, 53.56 meters (175.7 feet) west of church, 137.6 feet west of center line of dirt highway crossing, 134.6 feet north of northeast corner of white church on south side of track, and 8.405 meters (27.58 feet) north of north rail, and 2 yards above grade. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, in northeast corner of stone foundation of negro church, and 53.56 meters (175.7 feet) from station in azimuth $315^{\circ}42'$. Station *Cov* (see description and geographic position thereof) is visible from ground in azimuth $256^{\circ}47'14''$.

Cow (B.M. I 3) (Halifax County, M. Steinberg, 1918; 1934).—About $4\frac{1}{4}$ miles east of railway station at Littleton, on first curve of Seaboard Air Line Railway east of Littleton, on prolongation of tangent to left rail looking east, 215 meters (705 feet) west of milepost 94, 210 meters (689 feet) west of whistle post, 100 yards northwest of large white house, 27 yards north of south edge of pine woods, 39.0 feet north of telegraph pole, 20 meters (66 feet) south of wagon road, and 19.31 meters (63.4 feet) north of north rail and 1 yard above grade. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. J 3) is standard reference disk in concrete, note 11a, 250 yards south of white church, 64.5 feet north of north rail, 38.5 feet east of telephone pole, and 42.409 meters (139.14 feet) from station in azimuth $79^{\circ}47'$. Station *Cow* (see description and geographic position thereof) is visible from ground in azimuth $76^{\circ}47'24''$.

Summit (B.M. H 3) (Halifax County, M. Steinberg, 1918).—On second curve of Seaboard Air Line Railway east of Littleton, at Print, 25 meters (82 feet) west of milepost 93, 25 meters (82 feet) west of road crossing, 12.803 meters (42.00 feet) south of south rail, and 3 meters (10 feet) north of highway. Surface mark was standard disk station mark in concrete, note 1a. In 1934, station mark was found to have been destroyed by road construction and concrete post was lying on ground. Underground mark was nail in concrete, note 7c. Reference mark (B.M. G 3) is standard reference disk in concrete, note 11a, in stone chimney of 1-story farmhouse owned by Chas. Zolhcoffer, 115 yards south of track, 38 feet southeast of nearest oak tree, 2 feet south of northeast corner of chimney, 3.2 feet north of southeast corner of chimney, 1.3 feet above surface of ground, and 85.805

For notes in regard to marking of stations see p. 135.

meters (281.51 feet) from station in azimuth $29^{\circ}59'$. Reference mark was recovered in 1934.

Cot (B.M. D 3) (Halifax County, M. Steinberg, 1918; 1934).—About one-fifth mile east of water tank at Summit, 632 meters (2,070 feet) west of milepost 92 of Seaboard Air Line Railway, 93 yards east of west end of first large cut east of Summit, at bottom of cut, 3.560 meters (11.68 feet) north of north rail, 83 meters (272 feet) east of small road crossing, 160 meters (525 feet) east of switch target, 43 meters (141 feet) east of speed-limit sign, and 120 meters (394 feet) west of whistle post. Surface mark is standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Station shows evidence of having been moved from original position. When visited in 1932, mark was found uprooted and lying on ground; and in 1933, was found reset in top of 10-inch concrete cylinder, projecting about 1 foot above ground. Its position as now placed is 12.53 feet from north edge of north rail, and 240.57 feet from reference mark in magnetic azimuth 83° . Reference mark (B. M. E 3) is standard reference disk in concrete, note 11a, and apparently is in correct position. It is 200 yards east of speed-limit signpost, 22 yards east of dirt road crossing, 18 yards east of west end of large cut, 48.4 feet west of telephone pole, 28.9 feet south of south rail, 3 feet south of edge of bank, and 5 feet above top of rail. Its distance and azimuth from station as established in 1918 was 64.730 meters (212.37 feet), $81^{\circ}02'$.

Cos (B.M. C 3) (Halifax County, M. Steinberg, 1918; 1934).—About 1 mile west of railway station at Thelma, on first curve of Seaboard Air Line Railway west of Thelma, on prolongation of tangent to south rail toward west, 193 yards east of milepost 92, at east end of small cut, 9.53 meters (31.3 feet) south of south rail, 120 meters (394 feet) west of negro cabin, 150 meters (492 feet) west of whistle post, 50 meters (164 feet) east of road crossing, 33 yards east of 36-inch pine tree, and level with top of rail. Marked in 1918 by nail in 4-by 4-inch stake in concrete. Re-marked in 1933 by standard disk station mark in concrete, note 1a. There is no underground mark. Reference mark was standard reference disk in concrete, note 11a, toward woods, 3 meters (10 feet) west of largest pine tree, and 29.43 meters (96.6 feet) from station in azimuth $313^{\circ}31'$. In 1934, reference mark was searched for but not found. Station *Cot* (see description and geographic position thereof) which is visible from ground, has been moved and reset in undetermined position. Data to compute its azimuth are not available.

Cor (B.M. B 3) (Halifax County, M. Steinberg, 1918; 1934).—About 0.7 mile west of railway station at Thelma, at east end of first curve of Seaboard Air Line Railway west of Thelma, 890 yards west of milepost 91, about 135 yards west of grade crossing, on top of high bank, about 300 yards west of lumberyard, in group of pines between highway and railway, 72.6 feet south of south rail, 79 feet northeast of center line of highway, 82 feet northwest of center line of rock road, and 3.7 feet east of 8-inch scrub oak which is only oak tree in vicinity, and 15 feet above track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, in grape vineyard on opposite side of road, and 45.090 meters (147.94 feet) from station in azimuth $253^{\circ}15'$. Reference mark was not recovered in 1934. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 31.5 feet south of south rail, about 65 yards east of grade crossing, 127 feet northeast of 36-inch oak tree, 37 feet north of center line of dirt road, 50 feet east of guved telephone pole, and approximately 200 yards from station in azimuth $224^{\circ}20'13''$. Azimuth from station to top of white lightpole in north side of railway station at Thelma, distant 0.7 mile, is $224^{\circ}51'38''$.

Thelma (B.M. Y 2) (Halifax County, M. Steinberg, 1918; 1934).—About 125 yards east of east end of railway station at Thelma, at first curve of Seaboard Air Line Railway east of Thelma, on prolongation of tangent to north rail from west, 152 yards south of milepost 91, about 9 feet below track, 58.4 feet (slope) north of north rail, about 45 yards southeast of negro house on north side of track, 107 feet west of guyed telephone pole, 53 feet west of another telephone pole, and directly across main track from west end of yellow house, and 6 feet below top of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. Z 2) is standard reference disk in east face of railway station, and 115.40 meters (378.6 feet) from station in azimuth $39^{\circ}33'47''$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 70 yards west of railway station, 43.7

feet north of north rail, 22 feet east of center line of dirt road, 21.4 feet west of telephone pole, 39.4 feet south of southwest corner of concrete porch of country store of B. D. Hamel, 41.2 feet northwest of staff of mail rack, and approximately 240 yards from station in azimuth $48^{\circ}57'59''$. Right-hand (north) edge of red brick chimney at northeast corner of white house owned by Oscar Hamel, at point on line with top of red tin roof, is about 250 yards from station in azimuth $76^{\circ}22'58''$.

Cop (B.M. X 2) (Halifax County, M. Steinberg, 1918).—About $1\frac{1}{2}$ miles east of railway station at Thelma, on first curve of Seaboard Air Line Railway east of Thelma, on prolongation of tangent to right rail toward Thelma, 650 meters (2,133 feet) east of milepost 90, 320 meters (1,050 feet) east of road crossing, 60 meters (197 feet) east of beginning of first deep cut east of Thelma, at bottom of cut, and 2.60 meters (8.5 feet) north of north rail. Surface mark was standard disk station mark in concrete, note 1a. In 1934, concrete post was found lying on ground. Underground mark was nail in concrete, note 7c. Reference mark (B.M. W 2) is standard reference disk in projecting boulder at foot of cut, note 12c, 60 yards east of west end of large cut, 8.6 feet south of south rail, 1 foot above top of rail, and 19.326 meters (63.41 feet) from station in azimuth $52^{\circ}16'$. Reference mark was recovered in 1934.

Con (B.M. V 2) (Halifax County, M. Steinberg, 1918; 1919).—About $1\frac{1}{2}$ miles east of railway station at Thelma, 870 meters (2,854 feet) east of milepost 90 of Seaboard Air Line Railway, at second cut (perpendicular) east of Thelma, on prolongation of tangent to right rail toward Weldon, and 1.85 meters (6.1 feet) north of north rail. Marked by nail in top of 4-by 4-inch stake in concrete. In 1934, station mark was searched for but not recovered. Underground mark was nail in concrete, note 7c. Reference mark (B.M. U 2) is standard reference disk in concrete, note 11a, about 200 yards south of Roanoke River, 182 yards west of whistle post, 5 yards east of east end of cut, 9.2 feet north of north rail, 2 feet below top of rail, and 32.40 meters (106.3 feet) from station in azimuth $264^{\circ}57'$. Reference mark was recovered in 1934.

Cog (B.M. T 2) (Halifax County, M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles east of railway station at Thelma, about 500 yards west of milepost 89 of Seaboard Air Line Railway, at west end of long curve, on prolongation of tangent to south rail from west, about 3 yards north of north rail, 125 yards east of whistle post, in edge of footpath which descends embankment into cultivated field at point where roadbed changes from cut to embankment, and 0.6 foot below top of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, at foot of hill, and 21.20 meters (69.6 feet) from station in azimuth $234^{\circ}13'$. In 1934, reference mark was searched for but not recovered. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, at north edge of cultivated field, about 8 yards south of south bank of Roanoke River, opposite mouth of creek which empties into river from north, at head of deep gully which goes down to river from field, about 150 yards north of track, on small mound of earth, about 100 yards west of point where dim road crosses gully between two fields, about 120 feet east of large triangle-blazed 24-inch sycamore tree on bank of river, 33.5 feet west of triangle-blazed 27-inch elm tree on bank of river, 28.8 feet west of triangle-blazed 12-inch birch tree, and about 300 yards from station in azimuth $266^{\circ}18'40''$.

Cof (Halifax County, M. Steinberg, 1918; 1919).—About $1\frac{1}{2}$ miles east of railway station at Thelma, 295 meters (968 feet) west of milepost 89 of Seaboard Air Line Railway, 40 meters (131 feet) west of 40-foot clay embankment on south side of track, opposite cornfield on north side of track, at top of fill, and 1.930 meters (6.33 feet) north of north rail. Marked by nail in top of 4-by 4-inch stake in concrete. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on same side of track, in field at bottom of fill, and 35.20 meters (115.5 feet) from station in azimuth $267^{\circ}34'$. Station was not recovered in 1933.

Coe (B.M. R 2) (Halifax County, M. Steinberg, 1918).—About 2 miles east of railway station at Thelma, 100 meters (328 feet) west of milepost 89 of Seaboard Air Line Railway, 1.840 meters (6.04 feet) north of north rail, 41 meters (135 feet) west of west end of cut east of road crossing, and at beginning of first cut west of road crossing. Surface mark was standard disk station mark in concrete, note 1a. In 1933, it was leaning so much that station was worthless. Mark was dug out in effort to recover underground mark, but it was not found. Underground mark reported as nail in concrete, note 7c, when station was established

in 1918. Surface mark was not replaced. Reference mark was standard reference disk in concrete, note 11a, on same side of track, and 25.0 meters (82 feet) from station in azimuth $314^{\circ}20'$. Reference mark was not recovered in 1933.

Cod (B.M. P 2) (Halifax County, M. Steinberg, 1918; 1934).—About $2\frac{1}{2}$ miles east of railway station at Thelma, 895 meters (2,936 feet) west of milepost 88 of Seaboard Air Line Railway, 347 meters (1,138 feet) west of railway bridge over Roanoke River, 60 meters (197 feet) west of small country road crossing, 46 feet west of 12-inch oak tree, opposite curve in track, 10.880 meters (35.70 feet) south of south rail, and 4 feet above top of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. O 2) is standard reference disk in concrete, note 11a, on same side of track, and 46.665 meters (153.10 feet) from station in azimuth $291^{\circ}48'$. In 1934, reference mark was searched for but not recovered. Station *Cob* (see description and geographic position thereof) is visible from ground in azimuth $284^{\circ}30'04''$.

Cob (B.M. N 2) (Halifax County, M. Steinberg, 1918; 1934).—About 4 miles east of railway station at Thelma, 105 meters (344 feet) west of milepost 87 of Seaboard Air Line Railway, 100 meters (328 feet) west of road crossing, on top of cut about 10 feet above track, 26.9 feet northeast of 36-inch elm tree, and 12 meters (39 feet) south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. M 2) is standard reference disk in concrete, note 11a, 29.7 feet northwest of milepost 87, at east end of slope to cut, 31 feet northeast of dirt road crossing, 25.3 feet north of north rail, 2 feet above top of rail, and 40.0 meters (131 feet) from station in azimuth $254^{\circ}16'$. Station *Cod* (see description and geographic position thereof) is visible from ground in azimuth $104^{\circ}31'00''$.

Coa (B.M. L 2) (Halifax County, M. Steinberg, 1918; 1919).—About $4\frac{1}{2}$ miles east of railway station at Thelma, 120 meters (394 feet) east of milepost 87 of Seaboard Air Line Railway, 63 meters (207 feet) west of country road crossing, at edge of fill, and 2.03 meters (6.7 feet) south of south rail. Surface mark was nail in 4- by 4-inch cedar post projecting 18 inches above ground. Underground mark was nail in concrete, note 7c. Reference mark (B.M. K 2) was standard reference disk in concrete, note 11a, on same side of track, 8 meters (26 feet) east of crossroad, and 70.88 meters (232.5 feet) from station in azimuth $251^{\circ}06'$. Station and reference marks were not recovered in 1934.

Cly (B.M. J 2) (Halifax County, M. Steinberg, 1918; 1934).—About $4\frac{1}{4}$ miles east of railway station at Thelma, 460 meters (1,509 feet) east of milepost 87 of Seaboard Air Line Railway, 40 meters (131 feet) west of first deep cut west of Bolling, 16.2 feet north of north rail, and about 2 feet above track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. I 2) is standard reference disk in top of large boulder, note 12c, in deep cut, and 35.0 meters (115 feet) from station in azimuth $150^{\circ}08'$. Reference mark was not recovered in 1934. Station *Chu* (see description and geographic position thereof) is visible from ground in azimuth $256^{\circ}14'03''$.

Ciu (B.M. H 2) (Halifax County, M. Steinberg, 1918; 1934).—About $4\frac{1}{2}$ miles east of railway station at Thelma, 700 meters (2,297 feet) east of milepost 87 of Seaboard Air Line Railway, 60 meters (197 feet) east of beginning of first deep cut west of Bolling, 29 yards east of northeast corner of north end of concrete culvert under railway, 18.1 feet northwest of telephone pole, 15.4 feet east of 14-inch gum tree, about 12 meters (39 feet) north of north rail, and level with top of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. G 2) is standard reference disk in concrete, note 11a, 2 feet north of wire fence line, 10.10 feet north of 12-inch gum tree, 26.6 feet south of south rail, 5 feet above top of rail, and 37.0 meters (121 feet) from station in azimuth $57^{\circ}11'$. Through error reference mark was stamped "H 2" instead of "G 2". Station *Cly* (see description and geographic position thereof) is visible from ground in azimuth $76^{\circ}14'09''$. Station *Cio* (see description and geographic position thereof) is visible from ground in azimuth $282^{\circ}47'24''$.

Clo (B.M. F 2) (Halifax County, M. Steinberg, 1918; 1933).—About 1 mile west of railway station at Bolling, 360 meters (1,181 feet) east of milepost 86 of Seaboard Air Line Railway, 5 meters (16 feet) from road crossing, half-way up small embankment, and 4.78 meters (15.7 feet) south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. E 2) is standard reference disk

in concrete, note 11a, on opposite side of track, at foot of railroad crossing sign, and 31.646 meters (103.83 feet) from station in azimuth $264^{\circ}58'$. Station *Cli* (see description and geographic position thereof) is visible from ground in azimuth $102^{\circ}47'53''$. Station *Cli* (see description and geographic position thereof) is visible from ground in azimuth $281^{\circ}40'13''$. Station and reference marks were not recovered in 1934.

Cli (B.M. D 2) (Halifax County, M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles west of railway station at Roanoke Junction, on second curve of Seaboard Air Line Railway west of railway station, 910 meters (2,986 feet) west of milepost 84, at south edge of truck garden, directly in front of house about 95 meters (312 feet) distant on same side of track, 35 meters (115 feet) west of road leading to house, 43.7 feet north of north rail, and level with top of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. C 2) is standard reference disk in east face of chimney of above-mentioned house, and 96.19 meters (315.6 feet) from station in azimuth $199^{\circ}59'$. Reference mark not recovered in 1934. Station *Clo* (see description and geographic position thereof) is visible from ground in azimuth $101^{\circ}40'58''$.

Cle (B.M. B 2) (Halifax County, M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles west of railway station at Roanoke Junction, at about middle of first curve of Seaboard Air Line Railway west of Roanoke Junction, at intersection of tangents to right rail toward Roanoke Junction and right rail toward Thelma, 430 meters (1,411 feet) east of milepost 84, about 500 yards southeast of cream-colored stucco one-story dwelling, 360 meters (1,181 feet) east of road crossing, 1 meter (3 feet) east of whistle post, at foot of 8-foot slope, 29.2 feet east of telephone pole, 18.1 feet south of 18-inch pine tree, 9.844 meters (32.30 feet) north of north rail, and 6 feet below top of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. A 2) is standard reference disk in concrete, note 11a, about 250 yards southeast of one-story farmhouse owned by Roasmay Manufacturing Co., about 100 yards west of whistle post, 102 feet east of 18-inch pine tree, 82.3 feet north of north rail, 4 feet below top of rail, and 40.234 meters (132.00 feet) from station in azimuth $283^{\circ}59'$. Station *Roanoke* (see description and geographic position thereof) is visible from ground in azimuth $315^{\circ}32'42''$.

Cla (B.M. X 1) (Halifax County, M. Steinberg, 1918; 1934).—About one-fourth mile east of railway station at Roanoke Junction, on first curve of Seaboard Air Line Railway east of railway station, 640 meters (2,100 feet) west of milepost 82, at intersection of tangents to south rail, 200 meters (656 feet) west of road crossing, in truck garden, 20.53 meters (67.4 feet) south of south rail, 39.4 feet north of center line of road running parallel to track, and 6 feet above top of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. W 1) is standard reference disk in concrete, note 11a, at edge of field, and 46.59 meters (152.9 feet) from station in azimuth $291^{\circ}28'$. Reference mark was not recovered in 1934. Station *Roanoke* (see description and geographic position thereof) is visible from ground in azimuth $134^{\circ}40'28''$. Station *Ciz* (see description and geographic position thereof) is visible from ground in azimuth $297^{\circ}18'37''$.

Ciz (B.M. U 1) (Halifax County, M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles east of railway station at Roanoke Junction, 670 meters (2,198 feet) west of milepost 81 of Seaboard Air Line Railway, 200 meters (656 feet) east along track from large farmhouse, 125 meters (410 feet) west of whistle post, 1 meter (3 feet) north of top of 10-foot rise, about 10 meters (33 feet) north of north rail, and 5 feet above top of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. V 1) is standard reference disk in concrete, note 11a, 25 yards south of small pine thicket, 13 yards north of edge of bank of cut, 62.4 feet north of north rail of track, $4\frac{1}{2}$ feet above track, and 16.75 meters (55.0 feet) from station in azimuth $163^{\circ}24'$. Station *Cla* (see description and geographic position thereof) is visible from ground in azimuth $117^{\circ}19'11''$.

Civ (B.M. T 1) (Halifax County, M. Steinberg, 1918; 1934).—About 2 miles west of railway station at Weldon, 485 meters (1,591 feet) east of milepost 81 of Seaboard Air Line Railway, on prolongation of westward tangent to south rail, on top of small rise about 6 feet above track, 8.11 meters (26.6 feet) south of south rail, and 2.4 feet west of telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. S 1) was standard reference disk in concrete, note

11a, across track, and 34.51 meters (113.2 feet) from station in azimuth $248^{\circ}16'$. In 1934, concrete post of reference mark was found lying on ground. Station *Cit* (see description and geographic position thereof) is visible from ground in azimuth $285^{\circ}24'35''$.

Cit (B.M. Q 1) (Halifax County, M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles west of railway station at Weldon, on second curve of Seaboard Air Line Railway west of Weldon, on prolongation of eastward tangent to south rail, 125 yards east of dirt road crossing which leads to fairgrounds 0.7 mile west of office of Goldsboro Brick Works, 10 meters (33 feet) east of whistle post, 6.950 meters (22.80 feet) south of south rail, and 2 feet above grade. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. R 1) is standard reference disk in concrete, note 11a, 8.3 feet north of fence line 55.3 feet north of north rail, 2 yards below track, and 25.150 meters (82.51 feet) from station in azimuth $176^{\circ}45'$. Station *Civ* (see description and geographic position thereof) is visible from ground in azimuth $105^{\circ}24'44''$. Through error, station mark is stamped "R 1" and reference mark, "Q 1".

Cir (Halifax County, M. Steinberg, 1918).—About 1 mile west of railway station at Weldon, at about middle of first curve of Seaboard Air Line Railway west of Weldon, 2.625 meters (8.61 feet) north of north rail, about 15 meters (49 feet) east of road crossing and office of Goldsboro Brick Works, and 125 meters (410 feet) west of switch target. Surface mark was standard disk station mark in concrete, note 1a. About 24 inches of bottom part of concrete was recovered in 1933, but top had been broken off. Mark was dug out in effort to recover underground mark which was reported to be nail in concrete, note 7c; but it was not found. Surface mark was not replaced. Reference mark (B.M. P 1) is standard reference disk in south face of second brick kiln from the east of Goldsboro Brick Works' office, 8.4 yards west of west end of office, 3.0 feet west of southwest corner of kiln, 3.0 feet above ground, 28.5 feet north of north rail of main track, and 73.703 meters (241.81 feet) from station in azimuth $104^{\circ}16'$. Reference mark was recovered in 1934.

Cip (B.M. L 1) (Halifax County, M. Steinberg, 1918; 1934).—At railway station in Weldon, in northeast corner of a small park, 49.5 feet west of northwest corner of and 65.5 feet north of southwest corner of building occupied by Railway Express Agency, 14.4 feet south of south rail, about 25 meters (82 feet) west of first abutment of Atlantic Coast Line Railroad bridge south of track, 113 feet east of railway water spout, and 3 feet north of electric-light pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. N 1) is standard reference disk, in east face of southeast corner of Terminal Hotel, 85.5 feet south of south rail of main track, and 75.1 meters (246 feet) from station in azimuth $87^{\circ}43'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, between bridge which carries main line of Atlantic Coast Line Railroad and several switch tracks used jointly by Seaboard Air Line Railway and Atlantic Coast Line Railroad, 109 feet north of east end of concrete abutment at south end of bridge, 86.9 feet east of second steel girder north of south abutment of bridge, 24.3 feet north of switch target, 11.2 feet west of west rail of most westerly switch track, and 128.9 meters (423 feet) from station in azimuth $21^{\circ}12'08''$. This mark is also azimuth mark of station *Weldon* (see description thereof).

Weldon (B.M. K 1) (Halifax County, M. Steinberg, 1918; 1934).—About 120 yards east of east end of railway station at Weldon, between main track and switch track of Seaboard Air Line Railway, 100 meters (328 feet) west of most easterly switch target, directly in line between white house about 500 meters (1,640 feet) northwest of track and large smokestack about same distance southeast of track, 6.7 feet east of east rail of main track, 5.3 feet west of west rail of switch track, on prolongation of tangent to west rail from north, 22.1 feet north of deraill on switch track, 99.3 feet southwest of northwest corner and 109 feet northwest of southwest corner of brick building occupied by Coca-Cola Bottling Works Co. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. M 1) is standard reference disk, in east face of white waiting room of railway station, and 133.71 meters (438.7 feet) from station in azimuth $76^{\circ}33'49''$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, between bridge which carries main line of Atlantic Coast Line Railroad and several switch tracks used jointly by Seaboard Air Line Railway and Atlantic Coast

Line Railroad, 109 feet north of east end of concrete abutment at south end of bridge, 86.9 feet east of second steel girder north of south abutment of bridge, 24.3 feet north of switch target, 11.2 feet west of west rail of most westerly switch track, and 279 meters (915 feet) from station in azimuth $61^{\circ}24'25''$. This mark is also azimuth mark of station *Cip* (see description thereof).

Garysburg (B.M. I 1) (Northampton County, M. Steinberg, 1918).—About 450 meters (1,476 feet) west of railway station at Garysburg, on first curve of Seaboard Air Line Railway west of railway station, 65 meters (213 feet) west of road crossing, directly across track from west corner of white house, and about 2 meters (7 feet) north of north rail. Surface mark was standard disk station mark in concrete, note 1a. In 1934, station mark was searched for but not recovered. Underground mark was nail in concrete, note 7c. Reference mark (B.M. H 1) is standard reference disk in west face of brick bank building, 1.0 foot north of southwest corner of building, 8 inches above ground, 75 yards north of dirt road crossing, 80 yards north of west end of overhead bridge, 73 yards north of north rail, and 70.40 meters (231.0 feet) from station in azimuth $175^{\circ}26'$. Reference mark was recovered in 1934.

Cin (B.M. G 1) (Northampton County, M. Steinberg, 1918; 1934).—About one-half mile east of railway station at Garysburg, about 250 meters (820 feet) west of center of first curve of Seaboard Air Line Railway east of railway station, 200 meters (656 feet) east of switch target, 6.14 meters (20.1 feet) south of south rail, 2 feet above top of rail, on opposite side of small ditch from track, 2 meters (7 feet) from road running parallel to track, and about 2 feet above track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on opposite side of track, and 16.51 meters (54.2 feet) from station in azimuth $113^{\circ}21'$. Station *Cin* (see description and geographic position thereof) is visible from ground in azimuth $239^{\circ}25'27''$.

Cim (B.M. E 1) (Northampton County, M. Steinberg, 1918; 1934).—About 2 miles west of railway station at Gumberry, at about middle of first curve of Seaboard Air Line Railway west of railway station, at edge of pine woods, on level ground at top of rise, 250 feet west of whistle post, 10 feet above track, and 15.71 meters (51.5 feet) north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, at top of bank, directly across track, and 27.90 meters (91.5 feet) from station in azimuth $337^{\circ}17'$. Station *Cim* (see description and geographic position thereof) is visible from ground in azimuth $59^{\circ}26'04''$.

Cil (B.M. C 1) (Northampton County, M. Steinberg, 1918; 1934).—About 1 mile east of railway station at Gumberry, on first curve of Seaboard Air Line Railway east of railway station, 0.5 mile west of milepost 21, 200 meters (656 feet) west of road crossing, 100 meters (328 feet) west of white house, 20 meters (66 feet) east of whistle post, at bottom of ditch 4 feet below track, and 4.22 meters (13.8 feet) south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on opposite side of track, and 18.88 meters (61.9 feet) from station in azimuth $196^{\circ}50'$. Station *Cil* (see description and geographic position thereof) is visible from ground in azimuth $242^{\circ}55'00''$.

Cik (B.M. A 1) (Northampton County, M. Steinberg, 1918; 1934).—About 1 mile west of railway station at Seaboard, 100 meters (328 feet) west of milepost 70 of Seaboard Air Line Railway, directly across field from tobacco barn on opposite side of track, on top of 5-foot rise, 8.64 meters (28.3 feet) south of south rail, and 2 feet north of line of telegraph poles. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on top of bank directly across track, and 20.50 meters (67.3 feet) from station in azimuth $143^{\circ}54'$. Station *Cik* (see description and geographic position thereof) is visible from ground in azimuth $62^{\circ}55'52''$.

Cig (Northampton County, M. Steinberg, 1918; 1919).—About 800 meters (2,625 feet) west of railway station at Seaboard, at beginning of first curve of Seaboard Air Line Railway west of railway station, 200 meters (656 feet) west of road crossing, 50 meters (164 feet) east of switch target, 30 meters (98 feet) west of westernmost Negro house on opposite side of track, on top of slope about 1 foot below track, and 5.77 meters (18.9 feet) south of south rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was

nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on opposite side of track, 2 meters (7 feet) from road, and 78.329 meters (256.98 feet) from station in azimuth $221^{\circ}42'$. Station was not recovered in 1933.

Cid (B.M. W) (Northampton County, M. Steinberg, 1918; 1933).—About one-fourth mile east of railway station at Seaboard, at middle of first curve of Seaboard Air Line Railway east of railway station, in cultivated field about 3 feet above track, about 45 feet south of center line of highway, 38.6 feet north of north rail, 98 feet east of telephone pole, 64 feet west of another telephone pole, 54 meters (177 feet) southeast of Negro house, and 54 meters (177 feet) southwest of another Negro house on opposite side of road. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. V) is standard reference disk in south face of chimney of house, and 54.461 meters (178.68 feet) from station in azimuth $106^{\circ}31'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 200 yards east of milepost 69, about 40 yards west of grade crossing, 9.1 feet south of south rail, 24.7 feet south of whistle post, 38.9 feet east of switch target, 22.8 feet north of telephone pole, and approximately 200 yards from station in azimuth $54^{\circ}21'38''$. Station mark was not recovered in 1934, and reference mark was found to be loose in ground.

Cib (B.M. U) (Northampton County, M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles east of railway station at Seaboard, 600 meters (1,969 feet) east of milepost 68 of Seaboard Air Line Railway, 60 meters (197 feet) west of Negro house (only one in vicinity), directly across track from small barn, on opposite side of ditch from track, 6.53 meters (21.4 feet) south of south rail, and about 3 feet above track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. T) is standard reference disk in concrete, note 11a, on opposite side of track, in direction of Negro house, and 38.438 meters (126.11 feet) from station in azimuth $215^{\circ}04'$. Reference mark was not recovered in 1934. Station *Cia* (see description and geographic position thereof) is visible from ground in azimuth $239^{\circ}23'45''$.

Cia (B.M. S) (Northampton County, M. Steinberg, 1918; 1934).—About 2 miles east of railway station at Seaboard, 150 meters (492 feet) east of milepost 67 of Seaboard Air Line Railway, at bottom of 5-foot fill, and 4.65 meters (15.3 feet) north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. R) is standard reference disk in concrete, note 11a, 34 feet south of south rail, level with track, and 25.738 meters (84.44 feet) from station in azimuth $282^{\circ}44'$. Station *Cib* (see description and geographic position thereof) is visible from ground in azimuth $59^{\circ}24'10''$.

Cra (B.M. P) (Northampton County, M. Steinberg, 1918; 1934).—About $2\frac{1}{2}$ miles east of railway station at Seaboard, 830 meters (2,723 feet) west of milepost 66 of Seaboard Air Line Railway, 115 meters (377 feet) east of country road crossing leading to Stancell farm, at top edge of fill, and 2.45 meters (8.0 feet) south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on same side of track, toward road crossing, and 114.57 meters (375.9 feet) from station in azimuth $66^{\circ}51'13''$. Station *Cet* (see description and geographic position thereof) is visible from ground in azimuth $243^{\circ}23'03''$.

Cet (B.M. O) (Northampton County, M. Steinberg, 1918; 1933).—About $2\frac{1}{2}$ miles west of railway station at Margaret, 480 meters (1,575 feet) east of milepost 66 of Seaboard Air Line Railway, 240 meters (787 feet) east of overhead bridge, on level ground at top of rise, 10 feet above track, and 9.73 meters (31.9 feet) south of south rail. Surface mark is standard disk station mark in concrete, note 1a. In 1934, station mark was not recovered and may have been destroyed by enlarging ditch. Underground mark is nail in concrete, note 7c. Reference mark (B.M. N) is standard reference disk in concrete, note 11a, 271 yards east of overhead grade crossing, 28 feet north of north rail, 8 feet above track, and 25.72 meters (84.4 feet) from station in azimuth $175^{\circ}57'$. Station *Cra* (see description and geographic position thereof) is visible from ground in azimuth $63^{\circ}23'32''$. Station not recovered in 1934.

Cer (B.M. M) (Northampton County, M. Steinberg, 1918).—About $2\frac{1}{2}$ miles west of railway station at Margaret, 67 rail lengths west of milepost 65 of Seaboard Air Line Railway, 6 telegraph poles west of section house at road crossing, 31 meters (102 feet) west of whistle post, at foot of cut, on level ground about 1 foot below track, and 4.105 meters (13.47 feet) south of south rail. Surface mark

was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark (B.M. L) was standard reference disk in concrete, note 11a, on same side of track, toward section house, and 82.23 meters (269.8 feet) from station in azimuth $227^{\circ}38'$. Station and reference marks were not recovered in 1934.

Cep (B.M. K) (Northampton County, M. Steinberg, 1918; 1934).—About 2 miles west of railway station at Margaret, 130 meters (427 feet) east of milepost 65 of Seaboard Air Line Railway, 490 meters (1,608 feet) east of road crossing, on opposite side of ditch from track, on level ground at top of small rise 1 meter (3 feet) above track, and 12.665 meters (41.55 feet) north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. J) is standard reference disk in concrete, note 11a, 42 feet south of south rail, 2 feet above top of rail, at center of small cut, and 28.845 meters (94.64 feet) from station in azimuth $301^{\circ}35'$. Station *Cel* (see description and geographic position thereof) is visible from ground in azimuth $229^{\circ}18'14''$.

Cel (B.M. I) (Northampton County, M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles west of railway station at Margaret, 640 meters (2,100 feet) east of milepost 65 of Seaboard Air Line Railway, at edge of woods, on level ground about 1 meter (3 feet) below track, 4 yards east of large pine, and 13.64 meters (44.8 feet) north of north rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. H) is standard reference disk in concrete, note 11a, 87 feet west of 24-inch pine tree, 57 feet south of south rail, 4 meters (13 feet) east of largest pine tree, and 34.415 meters (112.91 feet) from station in azimuth $339^{\circ}12'$. Station *Cep* (see description and geographic position thereof) is visible from ground in azimuth $49^{\circ}18'24''$. Station *Cef* (see description and geographic position thereof) is visible from ground in azimuth $243^{\circ}39'48''$.

Cef (B.M. G) (Northampton County, M. Steinberg, 1918; 1934).—About 1 mile west of railway station at Margaret, at beginning of first curve of Seaboard Air Line Railway west of railway station, at top of fill, 75 feet east of east end of stone culvert, 1.8 meters (6 feet) north of north rail, and 1 foot below base of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. F) was standard reference disk in fourth step from top of culvert under track, and 23.72 meters (77.8 feet) from station in azimuth $76^{\circ}56'$. Reference mark was not recovered in 1934, as part of culvert had been washed out. Station *Cel* (see description and geographic position thereof) is visible from ground in azimuth $63^{\circ}39'56''$. Station *Ced* (see description and geographic position thereof) is visible from ground in azimuth $249^{\circ}34'54''$.

Cez (B.M. E) (Northampton County, M. Steinberg, 1918; 1934).—About 100 meters (328 feet) west of railway station at Margaret, 4.16 meters (13.6 feet) south of south rail of main track of Seaboard Air Line Railway, between main track and passing track, 15 meters (49 feet) east of westernmost switch target, and 25 meters (82 feet) east of road crossing. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Primary traverse station no. 4 (U.S.G.S.) (see description thereof) is 8.369 meters (27.46 feet) from station in azimuth $35^{\circ}42'$. Station *Cef* (see description and geographic position thereof) is visible from ground in azimuth $69^{\circ}35'34''$. Station *Caz* (see description and geographic position thereof) is visible from ground in azimuth $244^{\circ}04'52''$.

Caz (B.M. D) (Northampton County, M. Steinberg, 1918; 1934).—About one-fourth mile east of railway station at Margaret, 375 meters (1,230 feet) west of water tank, about 300 yards east of milepost 63 of Seaboard Air Line Railway, 200 yards east of grade crossing, 100 meters (328 feet) east of small group of Negro cabins, in thicket of briars and weeds on rough ground, 20.6 feet north of north rail, level with top of rail, 68 feet southeast of telephone pole, 36 feet south of center line of dirt road, 108 feet southwest of guyed telephone pole, and 111 feet northwest of triangle-blazed 21-inch willow-oak tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. C) is standard reference disk in south face of southwest post of railway water tank, and 1,230 feet from station in azimuth $250^{\circ}09'08''$. Station *Ced* (see description and geographic position thereof) is visible from ground in azimuth $64^{\circ}05'07''$. Station may have been moved; as description given in 1918 differs from that as recovered in 1933 and 1934.

Care (B.M. A) (Northampton County, M. Steinberg, 1918; 1934).—About $2\frac{1}{2}$ miles east of railway station at Margaret, about one-half mile west of trestle over river, at intersection of tangents of second curve of Seaboard Air Line Railway east of Margaret, about 8 feet below track, in north edge of woods, 35.7 feet south of south rail, about 8 meters (26 feet) east of fence running at right angles to track, 69 feet east of telephone pole with guy wire, and 77 feet west of another telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, at edge of cornfield, and 15.94 meters (52.3 feet) from station in azimuth $28^{\circ}09'$. Reference mark was not recovered in 1933. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 200 yards west of milepost 61, about 150 yards north of old farmhouse, 238 feet east of grade crossing, on bank about 3 feet above track, 21.1 feet north of north rail, 31 feet south of guyed telephone pole, and approximately 200 yards from station in azimuth $73^{\circ}25'18''$.

Ceda (B.M. V 11) (Southampton County, Va., M. Steinberg, 1918; 1934).— $1\frac{1}{2}$ miles west of railway station at Branchville, $23\frac{1}{4}$ telegraph poles west of milepost 58 (to Portsmouth) of Seaboard Air Line Railway, directly in front of east end of house occupied by Robert Oderby, 15 meters (49 feet) east of road leading to his house, 2.95 meters (9.7 feet) south of south rail, and 1 foot above top of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in east face of chimney of above-mentioned house, and 75.53 meters (247.8 feet) from station in azimuth $331^{\circ}35'$.

Cay (B.M. T 11) (Southampton County, Va., M. Steinberg, 1918; 1934).—About one-half mile east of railway station at Branchville, at about middle of first curve of Seaboard Air Line Railway east of railway station, 125 meters (410 feet) east of culvert under track, 15 yards south of telegraph line, 10.42 meters (34.2 feet) north of north rail, 2 feet below track, on opposite side of ditch from track, and 10 meters (33 feet) south of right-of-way fence. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. U 11) is standard reference disk in west face of chimney of Negro dwelling, 2 feet above ground, 71 yards north of center line of railway, and 106.53 meters (349.5 feet) from station in azimuth $221^{\circ}36'34''$.

Boykins (B.M. S 11) (Southampton County, Va., M. Steinberg, 1918).—About 160 meters (525 feet) west of railway station at Boykins, nearly due south of point between third and fourth switch targets of Seaboard Air Line Railway west of railway station, 3 meters (10 feet) southwest of fifth telegraph pole west of railway station, 2 meters (7 feet) south of road running parallel to track, 1 meter (3 feet) north of fence line, and 15.56 meters (51.0 feet) south of south rail of main track. Surface mark is standard disk station mark in concrete, note 1a. In 1934, station mark apparently was covered by sidewalk. Underground mark is nail in concrete, note 7c. Reference mark (B.M. R 11) is standard reference disk in south face of White Motor Company building, 9 inches east of southwest corner of building, 1 foot above concrete sidewalk, and 53.21 meters (174.6 feet) from station in azimuth $198^{\circ}32'$.

Caw (B.M. Q 11) (Southampton County, Va., M. Steinberg, 1918; 1934).—About 200 meters (656 feet) east of railway station at Boykins, 60 meters (197 feet) east of milepost 54 (to Portsmouth) of Seaboard Air Line Railway, 60 meters (197 feet) west of railway water tank, 4 meters (13 feet) east of easternmost switch target at Boykins, and 4.523 meters (14.84 feet) south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. P 11) was standard reference disk in northwest corner of brick warehouse, and 31.50 meters (103.3 feet) from station in azimuth $31^{\circ}49'$. In 1934, brick warehouse was found to have been torn down and reference mark destroyed.

Cat (B.M. O 11) (Southampton County, Va., M. Steinberg, 1918; 1934).—About 1 mile east of railway station at Boykins, 120 meters (394 feet) west of milepost 53 (to Portsmouth) of Seaboard Air Line Railway, at top edge of slope leading from track, 2.01 meters (6.6 feet) north of north rail, and 2 feet below base of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. N 11) is standard reference disk in concrete, note 11a, 38 feet south of south rail, 25 feet southeast of fifth telegraph pole west of milepost 53, 4 feet northwest of 10-inch oak tree, and 34.40 meters (112.9 feet) from station in azimuth $20^{\circ}50'$.

Cas (B.M. M 11) (Southampton County, Va., M. Steinberg, 1918; 1934).—About $1\frac{1}{2}$ miles east of railway station at Boykins, 890 meters (2,920 feet) west of milepost 52 (to Portsmouth) of Seaboard Air Line Railway, 52 feet west of west end of small cut, at edge of slope leading from track, 1,660 meters (5,45 feet) north of north rail, and 1 foot below base of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark (B.M. L 11) is standard reference disk in concrete, note 11a, 42 feet north of north rail, 9 feet southeast of 32-inch pine tree, at east end of long fill and west end of short cut, 1 foot above top of rail, and 22,899 meters (75.13 feet) from station in azimuth $216^{\circ}16'$.

Cap (B.M. K 11) (Southampton County, Va., M. Steinberg, 1918; 1934).—About 2 miles east of railway station at Boykins, 90 meters (295 feet) east of milepost 52 (to Portsmouth) of Seaboard Air Line Railway, 200 meters (656 feet) west of only house in vicinity, 25 meters (82 feet) east of country road crossing, 5,860 meters (19.23 feet) south of south rail, and 2 feet below base of rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 20,805 meters (68.26 feet) from station in azimuth $130^{\circ}14'$.

Supplementary points

Colon (Lee County, C. L. Garner, 1918; 1933).—About 0.7 mile south of railway station at Colon, on right-of-way of Seaboard Air Line Railway, at intersection of tangents to east rail on first curve south of Colon, 95.0 feet west of west rail of south-bound main track, 78 yards south of grade crossing of road to Sanford, 90.0 feet south of large oak tree in south side of yard of section foreman's house, 60.6 feet south of west corner of outhouse, about 60 yards south of farmhouse, 81.6 feet northwest of telephone pole, and 32.6 feet west of wire fence corner. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c; on edge of shallow cut on opposite side of track from station, and 55 meters (180 feet) from station in azimuth $316^{\circ}08'$. In 1933, reference mark was found dug up from ground, lying beside track; and original mass of concrete was reset about 30 feet west of track, in line of poles, between second and third poles south of road crossing, and 155.58 feet from station in magnetic azimuth $206^{\circ}30'$. Azimuth mark, established in 1933, is standard disk station mark in concrete, note 1a, about 75 yards east of milepost 196 and railway telephone house, 25 feet west of center line of sand-gravel road which runs south from Colon, 21 feet northeast of triangular blaze on 21-inch pine tree, and approximately 0.3 mile from station in azimuth $21^{\circ}08'27''$. Green light on block signal no. 196.1, on west side of track, is in azimuth $31^{\circ}01'01''$.

Allenby A (Lee County, C. L. Garner, 1918; 1933).—About three-fourths mile north of railway station at Colon, on right-of-way of Seaboard Air Line Railway, at intersection of tangents to east rail from south and west rail from north, on first curve north of Colon and milepost 195, about 300 meters (984 feet) south of Norfolk Southern Railroad overgrade crossing, about one-fourth mile north of block signal no. 195.1, 101.5 feet northwest of telephone pole no. 4271, 21.8 feet east of telephone pole, and 64.4 feet east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, on bank on opposite side of track from station, about 3 meters (10 feet) from telephone pole, about 20 meters (66 feet) south of whistle post, and 29.41 meters (96.5 feet) from station in azimuth $151^{\circ}59'$. Azimuth mark, established in 1933, is standard disk station mark in drill hole in top of south end of east concrete abutment of Norfolk Southern Railroad overgrade crossing, and approximately 300 yards from station in azimuth $208^{\circ}58'49''$. Green light of second block signal from station, on west side of track, is approximately 1 mile from station in azimuth $66^{\circ}45'20''$.

Allenby B (Lee County, C. L. Garner, 1918).—About one-half mile north of railway station at Colon, on second curve of Seaboard Air Line Railway north of Colon, at intersection of tangents to west rail, about 100 meters (328 feet) north of Norfolk Southern Railroad overgrade crossing, and 2,670 meters (8,76 feet) west of west rail. Marked by nail in 2- by 4-inch stake in concrete.

Allenby C (Lee County, C. L. Garner, 1918).—About three-fourths mile north of railway station at Colon, on third curve of Seaboard Air Line Railway north of Colon, at intersection of tangents to west rail from south and east rail

from north, about 150 yards south of milepost 194, and 2.312 meters (7.59 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 12.565 meters (41.22 feet) from station in azimuth $328^{\circ}28'$. Station was not recovered in 1933.

Allenby D (Lee County, C. L. Garner, 1918).—About one-half mile south of railway station at Osgood, on second curve of Seaboard Air Line Railway south of Osgood, at intersection of tangents to east rail, 200 meters (656 feet) north of milepost 194, 100 meters (328 feet) north of signboard "Colon", and 1.120 meters (3.67 feet) east of east rail. Marked by nail in top of 2- by 4-inch stake in concrete.

Allenby E (Lee County, C. L. Garner, 1918).—About 350 meters (1,148 feet) south of railway station at Osgood, on first curve of Seaboard Air Line Railway south of Osgood, at intersection of tangents to east rail from south and west rail from north, 46 meters (151 feet) south of concrete culvert, and 9.85 meters (32.3 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, on land owned by F. R. Snipes, and 32.231 meters (105.74 feet) from station in azimuth $322^{\circ}54'$. Station was not recovered in 1933.

Fetner (Wake County, M. Steinberg, 1918).—About 150 meters (492 feet) north of railway station at Cary, on prolongation of tangent to left rail of Seaboard Air Line Railway toward railway station, 20 meters (66 feet) south of large white house on same side of track, 1 meter (3 feet) north of highway, on top of small cut, and about 4 meters (13 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on same side of track, across highway, at corner of chicken yard, and 32.61 meters (107.0 feet) from station in azimuth $13^{\circ}25'$. Station was not recovered in 1933.

Dod (Wake County, M. Steinberg, 1918; 1933).—About three-fourths mile north of railway station at Cary, on right-of-way of Seaboard Air Line Railway, on prolongation of tangent to north rail of north-bound track toward Raleigh, in field at top of cut, about 55 feet west of west rail of south-bound track, 52 feet northeast of telephone pole, 144 feet southeast of telephone pole no. 2980 E-16, and 106 feet south of telephone pole no. 2981. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on same side of track as station mark, 10 meters (33 feet) from track, and 41.67 meters (136.7 feet) from station in azimuth $76^{\circ}14'$. In 1933, it was found to have been destroyed by widening of cut. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on right-of-way of railway, approximately 100 yards north of road crossing with sign "Station 1 mile" near it, 42.3 feet south of south rail of north-bound track, 82 feet north of center line of route 1, 7 feet east of telephone pole, 10 feet from edge of bank of cut, and approximately 350 yards from station in azimuth $283^{\circ}54'49''$. Green signal light on block signal no. 163.4 is approximately 0.9 mile from station in azimuth $281^{\circ}37'16''$.

Thompson (Wake County, M. Steinberg, 1918; 1933).—About 5 miles south of railway station Raleigh, on right-of-way of Seaboard Air Line Railway, on prolongation of tangent to north rail from west of north-bound track, at end of 3-mile tangent, about 50 yards west of milepost 162, 44.1 feet south of south rail of north-bound track, 30.8 feet north of center line of route 1, 77 feet west of guyed telephone pole, and directly across road from Standard gasoline station and garage. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, midway between track and highway, and 47.11 meters (154.6 feet) from station in azimuth $264^{\circ}09'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 34.4 feet south of south rail of north-bound track, 26.0 feet south of southeast corner of concrete foundation of block signal no. 162.2, 4 feet east of large telephone pole, 70 feet north of center line of route 1, and approximately 0.2 mile from station in azimuth $98^{\circ}53'09''$. Yellow signal light on block signal no. 163.5, on north side of track, is approximately 1.5 miles from station in azimuth $101^{\circ}42'45''$.

Method (Wake County, M. Steinberg, 1918; 1933).—About $1\frac{1}{2}$ miles south of railway station at Raleigh, on right-of-way of Seaboard Air Line Railway

(Southern Railway), on approximate prolongation of tangent to left rail of north-bound track toward Raleigh, 27.9 feet south of south rail of north-bound track, at north edge of old road, at top of cut, 130 meters (427 feet) east of brick power-plant building, directly across track from large telegraph-wire standard, 10 meters (33 feet) west of small Negro cabin, 45 feet east of 27-inch oak tree, and 62 feet west of 18-inch oak tree. Surface mark is standard disk station mark in concrete, note 1a. Dirt has been washed away from around upper ten inches of mark. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in southeast corner of east face of brick power-plant building, and 136.8 meters (449 feet) from station in azimuth $139^{\circ}20'28''$. Azimuth mark, established in 1933, is standard reference disk in top of west concrete headwall of culvert, at grade crossing just south of Peerless Lumber Co. warehouse, 2.9 feet north of south end of headwall, 10 feet south of south rail of north-bound track, about 40 yards west of milepost 195, and approximately 0.2 mile from station in azimuth $294^{\circ}49'40''$. Azimuth from station to "T" in "STATE" on red brick smoke stack at North Carolina State College is $291^{\circ}45'04''$.

Southern (Wake County, M. Steinberg, 1918; 1933).—In Raleigh, on right-of-way of Southern Railway, about 100 yards east of intersection of tracks of Southern and Seaboard Air Line Railways, 12 feet north of north rail of main track, 20 yards southeast of Raleigh Viaduct Bridge, 15 meters (49 feet) east of semaphore on same side of track, 45 meters (148 feet) east of water tank, 10.5 feet east of southeast corner of Southern Railway yard office, and 7 feet south of telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in base of pier under bridge, and 18.94 meters (62.1 feet) from station in azimuth $145^{\circ}15'$. Reference mark was not recovered in 1933. Azimuth mark, established in 1933, is standard reference disk in top of concrete pier on east side of Ash Avenue overgrade crossing, about 8 feet south of south rail of main track, and approximately 0.6 mile from station in azimuth $113^{\circ}43'48''$. Tip of belfry of Union Station in Raleigh is approximately 0.4 mile from station in azimuth $262^{\circ}44'29''$; and finial of black water tank at Gas Co. is approximately 200 yards from station in azimuth $316^{\circ}22'31''$.

East (Wake County, M. Steinberg, 1918; 1933).—About 1 mile south of railway station at Raleigh, on prolongation of tangent to east rail from south, on first curve south of trestle, on top of hill in Negro residential section, 15 feet east of center line of South Wilmington Street, about 150 yards south of intersection of Bledsoe and South Wilmington Streets, about 125 feet east of east rail of Southern Railway, 70 feet northeast of telephone pole, 69 feet south of twin trees, in middle of dirt sidewalk, 2 feet east of edge of bank, and 12.3 feet west of southwest brick foundation of house. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in west face of southwest pier under first house north of station, and 17.7 meters (58 feet) from station in azimuth $193^{\circ}52'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, at intersection of Bledsoe and South Wilmington Streets, 28 feet west of center line of South Wilmington Street, 20.7 feet east of northeast corner of vacant ramshackle house, 38.4 feet northeast of southeast corner of same house, 34.6 feet south of 8-inch maple tree, 59.0 feet west of iron street sign, and approximately 150 yards from station in azimuth $177^{\circ}53'41''$.

Raleigh longitude (Wake County, B. A. Gould, 1853; 1918).—At Raleigh, in southeast corner of Capitol Grounds, 58.67 meters (192.5 feet) west and 66.94 meters (219.6 feet) south of center of Capitol Building. Marked by two granite posts in ground, one 18 by 18 inches, and other 10 by 10 inches, and each about 5 feet long.

Millbrook (Wake County, M. Steinberg, 1918).—At Millbrook, 70 meters (230 feet) south of large yellow house on west side of Seaboard Air Line Railway track, 22 meters (72 feet) north of railway station, on top of 6-foot cut, and 10 meters (33 feet) west of west rail. Surface mark was standard disk station mark, in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in east face of pier under southeast corner of above-mentioned house, and 78.40 meters (257.2 feet) from station in azimuth $170^{\circ}00'$. Station was not recovered in 1933.

Doc (Wake County, M. Steinberg, 1918).—About one-fifth mile north of railway station at Neuse, on first curve of Seaboard Air Line Railway north of Neuse, on prolongation of tangent to right rail toward Neuse, 110 meters (361 feet) south of milepost 147, 110 meters (361 feet) north of switch target, on top of

small rise at beginning of cut, and 5.5 meters (18 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, 15 meters (49 feet) west of track, and 18.0 meters (59 feet) from station. Station was not recovered in 1933.

Primary traverse station no. 4 (U.S.G.S.) (Northampton County, M. Steinberg, 1918).—About 100 meters (328 feet) west of Seaboard Air Line Railway station at Margaret, and about 2 yards north of road. Marked by iron post stamped "Prim. Trav. Sta. No. 4, 1918". Station *Ced* (see description thereof) is 8.369 meters (27.46 feet) from station in azimuth $215^{\circ}42'$.

Primary traverse station no. 14 (U.S.G.S.) (Southampton County, Va., M. Steinberg, 1918).—About 800 feet west of Seaboard Air Line Railway station at Boykins, 50 feet south of south rail of main-line track, and 30 feet north of north rail of Roanoke and Tar River branch. Marked by iron post stamped "Prim. Tra. Sta. No. 14, 1918".

SANFORD TO WILMINGTON (TRAVERSE)

Principal points

Spout Springs (Harnett County, M. Steinberg, 1918).—About three-fourths mile north of railroad station at Spout Springs, about one-half mile east of track of Atlantic Coast Line Railroad, on prominent hill covered with small oaks, and about 10 meters (33 feet) north of wagon road which is first grade crossing north of Spout Springs. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on opposite side of road, and 20.51 meters (67.3 feet) from station in azimuth $290^{\circ}28'$. Marks were not recovered in 1933.

Prince (Cumberland County, M. Steinberg, 1918; 1933).—About 8 miles northwest of Fayetteville, near northeast boundary of Fort Bragg Military Reservation, 3 feet from edge of top of deep cut on right-of-way of Atlantic Coast Line Railroad, about 200 yards northwest of concrete overgrade crossing of route 53, 53 feet northwest of center line of old dirt road, 107.6 feet southeast of nail in concrete post which marks boundary of military reservation, 53.9 feet (slope) southwest of southwest rail of railroad, 18 feet southeast of telephone pole, and 213.1 feet northwest of United States Engineers' triangulation station and bench mark (elevation 303 feet). To reach from Fayetteville, go northwest about 10 miles on route 53 or 1 mile beyond Fort Bragg to concrete overgrade crossing, turn left before crossing bridge, and proceed along edge of cut about 200 yards to station site. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Caving in of bank of cut may destroy station. Reference mark is standard reference disk in concrete, note 11a, 122.7 feet south of concrete boundary marker, 26 feet southwest of center line of old dirt road, and 25.41 meters (83.4 feet) from station in azimuth $54^{\circ}08'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 35 feet southwest of center line of route 53, about 50 yards northwest of telephone pole, about 20 yards northeast of center line of dirt road, about 40 yards northeast of small one-story yellow house, and approximately 300 yards from station in azimuth $152^{\circ}18'55''$.

Camp (Cumberland County, M. Steinberg, 1918; 1933).—About 7 miles northwest of Fayetteville, 1 mile southeast of concrete overgrade crossing of route 53, just north of northeast boundary of Fort Bragg Military Reservation, on first curve of Atlantic Coast Line Railroad south of Fort Bragg freight station, on prolongation of tangent to northeast rail toward Fayetteville, 42.0 feet (slope) northeast of northeast rail, 5 meters (16 feet) east of edge of 10-foot cut, 37 feet southwest of telephone pole no. 351, 59 feet southwest of center line of sand-clay highway, and 51 feet southeast of 6-inch oak tree. To reach from Fayetteville, go northwest about 10 miles on route 53 or 1 mile beyond Fort Bragg to concrete overgrade crossing, turn right onto sand-clay highway just after crossing bridge, and proceed about 1 mile to station site at curve in highway to right at point where highway parallels railroad. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 40 feet northwest of telephone pole no. 351, at foot of telephone pole no. 353, 24 feet southwest of center line of highway, 76.0 feet (slope) northeast of northeast rail of railroad, and 12.80 meters (42.0 feet) from station in azimuth $194^{\circ}13'$. Azimuth mark, established

in 1933, is standard reference disk in concrete, note 11a, 45 feet southwest of center line of highway, 48.2 feet (slope) northeast of northeast rail of railroad, 53 feet west of telephone pole no. 355, and approximately 200 yards from station in azimuth $137^{\circ}20'26''$.

Lake (Cumberland County, M. Steinberg, 1918; 1933).—About 6 miles northwest of Fayetteville, about 1 mile northwest of Shaws siding and loading platform, on right-of-way of Atlantic Coast Line Railroad, on prolongation to southeast of tangent to northeast rail of first curve north of Shaws, near intersection of tangents, 15.1 feet southwest of southwest rail, 54 feet northeast of center line of sand-clay highway which parallels railroad, at bottom of fill, about 140 yards northeast of milepost 89, 70 feet northeast of fourth telephone pole northeast of milepost 89, and 256.8 feet northeast of concrete whistle post on southwest side of track. To reach from Atlantic Coast Line Railroad passenger station at Fayetteville, go north about two blocks to point where street crosses railroad, turn left (west) onto sand-clay road, proceed 0.1 mile to filling station, turn right, follow sand-clay highway about $5\frac{1}{2}$ miles to Shaws siding, and continue about 1 mile along tangent to curve to right and station site. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 26 feet southwest of center line of highway, about 35 yards west of fourth telephone pole northeast of milepost 89, and 24.47 meters (80.3 feet) from station in azimuth $62^{\circ}16'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 42.6 feet southwest of southwest rail, 21 feet northeast of center line of highway, 22 feet west of second telephone pole southeast of milepost 89, and approximately 250 yards from station in azimuth $325^{\circ}35'58''$.

Shaw (Cumberland County, M. Steinberg, 1918; 1933).—About 3 miles northwest of Fayetteville, about $1\frac{1}{4}$ miles south of Shaws, about 250 yards northwest of milepost 85 of Atlantic Coast Line Railroad, 150 yards southeast of whistle post, on top of small rise, 81 feet south of telephone pole no. 129, 20 feet northeast of southwest right-of-way fence, 28 feet east of 24-inch sycamore tree, and 20.6 feet southwest of southwest rail. To reach from Atlantic Coast Line Railroad passenger station at Fayetteville, go north about two blocks to railroad crossing, turn left (west) onto sand-clay road, follow 0.1 mile to filling station, turn right, follow sand-clay highway about 2 miles to road on right leading through small pine woods, follow this road about 0.1 mile to railroad crossing at milepost 85, turn left along track, and continue about 250 yards to station site at top of rise. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, in southwest right-of-way wire fence, 87 feet southwest of telephone pole no. 129, 38.6 feet southwest of southwest rail, 11 feet northwest of 24-inch sycamore tree, and 10.68 meters (35.0 feet) from station in azimuth $110^{\circ}30'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 19.0 feet northeast of northeast rail, 26 feet southwest of telephone pole no. 120, 25 feet northeast of center of road crossing, 1 foot northwest of milepost 85, 2 feet west of railroad crossing signpost, and approximately 250 yards from station in azimuth $319^{\circ}30'04''$.

Pine (Cumberland County, M. Steinberg, 1918; 1933).—About 2 miles north-northwest of Fayetteville, about 300 yards east of Sanford Division of Atlantic Coast Line Railroad, about 150 yards southeast of southeast corner of cultivated field, on high ground in pine woods, about 250 yards south of top of hill, 57 feet east of center line of woods road, 63 feet east of triangle-blazed 8-inch pine tree, 46 feet southeast of blazed 8-inch pine tree, and 15 feet west of triangle-blazed 8-inch pine tree. To reach from Atlantic Coast Line Railroad passenger station at Fayetteville, go north about 2 blocks, cross railroad tracks (Sanford Division of Atlantic Coast Line Railroad), go west 0.1 mile on sand-clay street, turn right at filling station, follow sand-clay highway about 1 mile to dirt T-road on right just beyond last building of State Normal School, follow this road 0.2 mile to railroad tracks, continue 0.2 mile beyond railroad and up hill to sand road leading north through woods, and follow this road about 100 yards to station site. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, 20.10 meters (65.9 feet) from station in azimuth $79^{\circ}24'$. Top of mark had been broken off when recovered in 1933. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 14 feet east of sandy trail through woods, 52 feet north of blazed 12-inch

pine tree, 21 feet east of blazed 9-inch pine tree, 8.6 feet south of blazed 6-inch pine tree, and approximately 140 yards from station in azimuth $208^{\circ}46'26''$.

Fayetteville (Cumberland County, M. Steinberg, 1918; 1933).—In east edge of Fayetteville, on right-of-way of Atlantic Coast Line Railroad, about 125 yards east of east end of bridge over Cape Fear River, 44 feet (slope) west of west end of trestle over creek, 19 feet (slope) south of south rail, 44 feet (slope) south of southeast corner of grounds of Premier Fertilizer Co., 84 feet northeast of power-line pole, and about 3 feet above bottom of steep fill covered with briars and vines. To reach from Fayetteville, go east on main street across Cape Fear River to Premier Fertilizer Co., and continue through its grounds to railroad and station site. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in southeast corner of Christian Ewing Plant, directly across railroad track, and 32 meters (105 feet) from station in azimuth $197^{\circ}08'$. Factory had disappeared in 1933, and reference mark was not recovered. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 64 feet south of southeast corner of Jesse Royall's house, 25 feet west of center line of Broad Street, 25 feet southeast of power-line pole, 8.3 feet south of south rail of railroad, and approximately 0.2 mile from station in azimuth $101^{\circ}31'18''$.

Vander (Cumberland County, M. Steinberg, 1918; 1933).—About 7 miles east of Fayetteville, on right-of-way of Atlantic Coast Line Railroad at Vander, 30 feet north of northeast corner of section house, 24 feet southwest of southwest corner of section foreman's house, 14 feet southwest of wire fence corner, and 13.6 feet north of north rail. To reach from Fayetteville, go east about $5\frac{1}{2}$ miles on route 24 from bridge over Cape Fear River to dirt T-road on right, follow this road 0.6 mile to railroad track, and proceed to left along north side of track about 0.1 mile to station site. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 3 feet east of northwest corner of garage which has been built on line between station and mark, and 20.18 meters (66.2 feet) from station in azimuth $148^{\circ}18'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, in northeast corner of cultivated field, 73 feet southeast of telephone pole, 52.0 feet southwest of railroad crossing signpost, 23.6 feet southwest of center line of grade crossing, 20.2 feet south of south rail, and approximately 250 yards from station in azimuth $101^{\circ}54'18''$.

Ville (Cumberland County, M. Steinberg, 1918).—About $1\frac{1}{4}$ miles west of railroad station at Autryville, on second curve of Atlantic Coast Line Railroad west of Autryville, on prolongation of tangent to right rail toward Autryville, 85 meters (279 feet) west of road crossing, 2 meters (7 feet) east of country road crossing, and 3.0 meters (10 feet) north of north rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on opposite side of track, and 22.06 meters (72.4 feet) from station in azimuth $10^{\circ}05'$. Station was not recovered in 1933.

Autry (Cumberland County, M. Steinberg, 1918).—About one-half mile west of railroad station at Autryville, at beginning of first curve of Atlantic Coast Line Railroad west of Autryville, 75 meters (246 feet) east of milepost 69, at bottom of small cut, and 4.55 meters (14.9 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, directly across track, and 24.057 meters (78.93 feet) from station in azimuth $35^{\circ}57'$. Station was not recovered in 1933.

Emple (Sampson County, M. Steinberg, 1918).—About three-fourths mile east of railroad station at Autryville, 240 meters (787 feet) west of milepost 67 of Atlantic Coast Line Railroad, 239 meters (784 feet) west of road crossing, 55 meters (180 feet) east of whistle post, and 3 meters (10 feet) south of track. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on opposite side of track and road, at corner of hedge, and 30.1 meters (99 feet) from station in azimuth $187^{\circ}42'$. Station was not recovered in 1933.

Hayne (Sampson County, M. Steinberg, 1918; 1933).—On right-of-way of Atlantic Coast Line Railroad at Hayne, about 60 yards east of east end of railroad station, 50.3 feet northeast of derail target, 112 feet west of switch target, 53 feet south of "Cross Road" signpost, 27 feet south of center line of route 24,

and 19.0 feet northeast of northeast rail. Surface mark is standard disk station mark in concrete, note 1a. Mark was recovered in 1933 in leaning position. It was reset in correct position over underground mark which is nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on opposite side of road, and 28.5 meters (94 feet) from station in azimuth $150^{\circ}01'$. It was destroyed by highway construction on route 24. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 125 yards west of west end of railroad station, 111 feet west of "Cross Road" signpost, 39 feet east of telephone pole, 28 feet south of center line of route 24, 17.9 feet north of north rail, and approximately 200 yards from station in azimuth $110^{\circ}33'56''$. Primary traverse station no. 1 (U.S.G.S.) (see description thereof) is 112.87 meters (370.3 feet) from station in azimuth $105^{\circ}05'50''$.

Roseboro (Sampson County, M. Steinberg, 1918; 1933).—About one-fourth mile north of railroad station at Roseboro, on first curve of Atlantic Coast Line Railroad north of Roseboro, at intersection of tangents to northeast rail from south and southwest rail from north, 206 feet north of north rail, 63.6 feet east of 18-inch oak tree, and 3 feet southwest of center line of sand-clay road running into Roseboro from route 24. Surface mark is standard disk station mark in concrete, note 1a, flush with surface of ground. Underground mark is nail in concrete, note 7c. Reference mark was standard reference disk in concrete, note 11a, on west edge of road, and 33.56 meters (110.1 feet) from station in azimuth $109^{\circ}32'$. Mark was not recovered in 1933. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, in edge of woods, on prolongation of sand-clay road, 132 feet east of south end of large advertising signboard, 60 feet north of road intersection, 41 feet northeast of center line of concrete route 24, 8 feet north of edge of ditch, and approximately 150 yards from station in azimuth $159^{\circ}49'03''$.

Mentz (Sampson County, M. Steinberg, 1918; 1933).—About three-fourths mile south of railroad station at Mints, on first curve of Atlantic Coast Line Railroad south of Mints, at intersection of tangents to right rail toward Mints, 100 meters (328 feet) north of railroad water tank, about 100 yards northwest of Negro house, 50 yards east of another house, 35.4 feet southwest of southwest rail, 26 feet northeast of 12-inch oak tree, and 6 feet northeast of center line of sand road. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, at foot of pine tree, and 20.36 meters (66.8 feet) from station in azimuth $46^{\circ}31'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 46.8 feet southwest of south corner of white house, 31 feet northwest of telephone pole, 23.4 feet northeast of northeast rail, and about 250 yards from station in azimuth $163^{\circ}43'49''$.

Moores (Sampson County, M. Steinberg, 1918; 1933).—About 2 miles south of railroad station at Kerr, about 250 meters (820 feet) south of Moore's siding, level with Atlantic Coast Line Railroad track, about 300 yards southeast of whistle post on north side of track, about 25 yards southeast of small square uncultivated plat of ground on southwest side of track, 20.1 feet northeast of northeast rail, 18 feet southwest of center line of V-shaped fork in road, about 5 yards north of center line of abandoned grade crossing, and 4.6 feet west of telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on opposite side of road, 15 yards east of track, and 54.9 feet from station in azimuth $320^{\circ}40'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, at east corner of woods, at north corner of cultivated field, about 150 yards southeast of whistle post, about 225 yards southeast of grade crossing, 45.9 feet southwest of southwest rail, 13 feet southeast of blazed 15-inch lone pine tree, and approximately 250 yards from station in azimuth $153^{\circ}43'29''$.

Black River (Sampson County, M. Steinberg, 1918; 1933).—On first curve of Atlantic Coast Line Railroad west of bridge over Black River, on prolongation of tangent to northeast rail from bridge, in wooded tract composed of a few tall pines and many scrub oaks, 80 meters (262 feet) west of wagon road, and 125 yards south of track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, in line with bridge, and 25.4 meters (83 feet) from station in azimuth $234^{\circ}25'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on bank about 5 feet above

For notes in regard to marking of stations see p. 135.

track, about 40 yards west of first grade crossing west of bridge, 10 yards north of track, and about 130 yards from station in azimuth $173^{\circ}33'30''$.

Ivanhoe (Sampson County, M. Steinberg, 1918; 1933).—About three-fourths mile north of railroad station at Ivanhoe, opposite middle of first curve of Atlantic Coast Line Railroad north of Ivanhoe, at intersection of tangents to northeast rail, about 150 yards north of track, in middle of old trail through woods, and about 10 yards west of wire fence. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, on opposite side of fence, and 26.00 meters (85.3 feet) from station in azimuth $53^{\circ}09'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, at east side of little clearing, in center of group of trees, about 10 yards south of old trail, and approximately 175 yards from station in azimuth $261^{\circ}22'43''$.

Corbet (Pender County, M. Steinberg, 1918; 1933).—About $\frac{5}{8}$ miles north of Atkinson, about 680 yards northwest of milepost 29 of Atlantic Coast Line Railroad, about 200 yards south of white post on northeast side of track, 8.9 feet southwest of southwest rail, 39 feet southwest of telephone pole, and in center of small fill used as handcar set-off. Surface mark is standard disk station mark in concrete, note 1a. When recovered in 1933, it appeared to have been hit by something and knocked out of its original position. Underground mark which is nail in concrete, note 7c, was recovered; and surface mark was reset in correct position, although in somewhat leaning position, by plumbing over it. Reference mark is standard reference disk in concrete, note 11a, 28.18 meters (92.5 feet) from station in azimuth $47^{\circ}42'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on top of bank about 10 feet above track, 12 feet west of triangular blaze on 8-inch pine tree, 56.8 feet northeast of northeast rail, 72.5 feet north of white post on northeast side of track, and approximately 210 yards from station in azimuth $150^{\circ}23'28''$.

Atkinson (Pender County, M. Steinberg, 1918; 1933).—About three-fourths mile north of Atkinson, about 150 yards south of milepost 25 of Atlantic Coast Line Railroad, in cultivated field, opposite greenhouse, 6 meters (20 feet) north and 8 meters (26 feet) west of fence corner of grounds owned by W. T. Vick, 19.1 feet northeast of northeast rail, and 10.7 feet southeast of telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, at fence corner, and 13.55 meters (44.5 feet) from station in azimuth $255^{\circ}52'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 60 yards northwest of milepost 25, 50 yards southeast of grade crossing, 126 feet northwest of north corner of tool house, 56.9 feet northeast of northeast rail, 21 feet southwest of center line of dirt highway, 15.7 feet southeast of 21-inch sycamore tree, and about 200 yards from station in azimuth $146^{\circ}58'22''$.

Denneys (Pender County, M. Steinberg, 1918; 1933).—About 3 miles south of railroad station at Rooks, on first curve of Atlantic Coast Line Railroad south of Rooks, on prolongation of tangent to left rail toward Rooks, in pine woods, and 60 meters (197 feet) west of track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, about 35 meters (115 feet) west of track, and 25.8 meters (85 feet) from station in azimuth $218^{\circ}17'$. Station *Currie* (see description and geographic position thereof) is visible from ground in azimuth $274^{\circ}52'54''$.

Currie (Pender County, M. Steinberg, 1918; 1933).—About one-fourth mile north of railroad station at Currie, on first curve of Atlantic Coast Line Railroad north of Currie, on prolongation of tangent to left rail toward Currie, among pine trees, and about 30 meters (98 feet) east of track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 15 meters (49 feet) from track, and 23.16 meters (76.0 feet) from station in azimuth $321^{\circ}38'$. Station *Denneys* (see description and geographic position thereof) is visible from ground in azimuth $94^{\circ}53'20''$. Station *Montague* (see description and geographic position thereof) is visible from ground in azimuth $309^{\circ}01'05''$.

Montague (Pender County, M. Steinberg, 1918; 1933).—About 1 mile south of railroad station at Currie, on first curve of Atlantic Coast Line Railroad south of Currie, on prolongation of tangent to right rail toward Currie, on level ground at edge of woods, and 25 meters (82 feet) east of track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete,

note 7c. Reference mark is standard reference disk in concrete, note 11a, at foot of large pine tree, and 13.95 meters (45.3 feet) from station in azimuth $157^{\circ}56'$. Station *Currie* (see description and geographic position thereof) is visible from ground in azimuth $129^{\circ}01'56''$.

Huggins (Pender County, M. Steinberg, 1918; 1933).—About 4 miles north of railroad station at Richards, about 0.4 mile southeast of milepost 13, 16.3 feet southwest of southwest rail, 38 feet southeast of grade crossing, 200 meters (656 feet) north of spur track, about 300 yards southeast of concrete post on southwest side of highway, 81 feet south of blazed 16-inch tree on north side of woods road, 83 feet east of blazed 18-inch pine tree on north side of woods road, and about level with track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 52.4 feet from station in azimuth $84^{\circ}56'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 47.4 feet northeast of northeast rail, 52 feet west of blazed 21-inch pine tree, 118 feet northwest of blazed 24-inch pine tree, and approximately 230 yards from station in azimuth $325^{\circ}23'02''$.

Richards (Pender County, M. Steinberg, 1918; 1933).—About 9 miles north of railroad station at Wilmington, on about highest point of slowly rising hump in track of Atlantic Coast Line Railroad, about 250 yards north of whistle post on southeast side of track, 106 feet north of 12-inch pine tree across track, 100 feet northeast of 16-inch pine tree across track, 15.4 feet northeast of northeast rail, and about 2 feet below track. Surface mark is standard disk station mark in concrete, note 1a, about 2 feet below surface of fill of loose sand. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, about 35 yards east of track, and 80.3 feet from station in azimuth $183^{\circ}44'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on top of bank about 6 feet above track, 34.3 feet southwest of southwest rail, 45.6 feet northeast of blazed 12-inch pine tree, 51.7 feet north of blazed 9-inch pine tree, and about 300 yards from station in azimuth $147^{\circ}21'19''$.

Dru (New Hanover County, M. Steinberg, 1918; 1933).—About $1\frac{1}{2}$ miles north of Yadkin Junction, 18 meters (59 feet) south of milepost 3 of Atlantic Coast Line Railroad, on prolongation of tangent to right rail toward Yadkin Junction, on top of small rise, and 15 meters (49 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, about 39 meters (128 feet) east of track, at foot of large pine tree, and 15.9 meters (52 feet) from station in azimuth $304^{\circ}21'$. Station *Yadkin* (see description and geographic position thereof) is visible from ground in azimuth $350^{\circ}27'59''$.

Yadkin (New Hanover County, M. Steinberg, 1918; 1933).—About three-fourths mile west of Hilton bridge, on old Atlantic Coast Line Railroad roadbed, 130 meters (427 feet) east of milepost 362, 160 meters (525 feet) west of switch leading into Sanford Division, 5 meters (16 feet) south of and about 3 feet lower than south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 12 meters (39 feet) south of track, and 29.0 meters (95 feet) from station in azimuth $85^{\circ}13'$. Station *Dru* (see description and geographic position thereof) is visible from ground in azimuth $170^{\circ}28'07''$. Station *Bridge* (see description and geographic position thereof) is visible from ground in azimuth $277^{\circ}35'13''$.

Supplementary points

Spout Springs K (Lee County, M. Steinberg, 1918).—At Swanns, 55 meters (180 feet) north of switch target on Atlantic Coast Line Railroad. Marked by file scratch on west rail.

Spout Springs J (Harnett County, M. Steinberg, 1918).—In deep cut at top of first hill north of Olivia on Atlantic Coast Line Railroad. Marked by file scratch on west rail.

Spout Springs I (Harnett County, M. Steinberg, 1918).—On first curve of Atlantic Coast Line Railroad south of Olivia, on prolongation of tangent to left rail toward Olivia, and 4 feet west of track. Marked by nail in 2- by 4-inch stake.

Spout Springs H (Harnett County, M. Steinberg, 1918).—At south end of first curve of Atlantic Coast Line Railroad south of Olivia, and 1 meter (3 feet) west of track. Marked by nail in 2- by 4-inch stake.

Spout Springs G (Harnett County, M. Steinberg, 1918).—About $2\frac{1}{4}$ miles north of Pineview, 125 meters (410 feet) south of milepost 102 of Atlantic Coast Line Railroad, and in deep cut. Marked by file scratch on east rail.

Dum (Harnett County, M. Steinberg, 1918; 1933).—About 2 miles north of railroad station at Pineview, on third curve of Atlantic Coast Line Railroad north of Pineview, at intersection of tangents to northeast rail, 30.6 feet southwest of southwest rail, 48 feet northwest of telephone pole, on top of small cut, and 6.2 feet south of concrete whistle post on south side of track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 46.6 feet southwest of southwest rail, 70 feet northwest of concrete whistle post, and 71.6 feet from station in azimuth $139^{\circ}59'$. Station *Dul* (see description and geographic position thereof) is visible from ground in azimuth $323^{\circ}18'32''$.

Dul (Harnett County, M. Steinberg, 1918; 1933).—About $1\frac{1}{2}$ miles northwest of Pineview, on second curve of Atlantic Coast Line Railroad north of Pineview railroad station, at intersection of tangents to right rail toward Fayetteville and right rail toward Sanford, 130 meters (427 feet) south of milepost 106, 27.8 feet northeast of northeast rail, and 15 feet south of 15-inch pine tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 39.6 feet northeast of northeast rail, 12 feet west of 7-inch hickory sapling, and 64.9 feet from station in azimuth $321^{\circ}06'$. Station *Dum* (see description and geographic position thereof) is visible from ground in azimuth $143^{\circ}18'46''$.

Pineview (Harnett County, M. Steinberg, 1918).—About 60 meters (197 feet) north of road crossing at Pineview, on prolongation of tangent to left rail from Pineview of Atlantic Coast Line Railroad, at bottom of cut, and about 2 meters (7 feet) east of track. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was nail in concrete, note 7c. Marks were not recovered in 1933; they are said to have been plowed up by ditching machine. Reference mark is standard reference disk in concrete, note 11a, at road crossing, and 52.3 meters (172 feet) from station in azimuth $340^{\circ}06'$. Reference mark was recovered in 1933.

Spout Springs F (Harnett County, M. Steinberg, 1918).—On first curve of Atlantic Coast Line Railroad south of Pineview, and 30 meters (98 feet) south of whistle post. Marked by nail in 2- by 4-inch stake projecting 2 feet above ground.

Spout Springs E (Harnett County, M. Steinberg, 1918).—On second curve of Atlantic Coast Line Railroad south of Pineview, on prolongation of tangent to left rail toward Pineview, at foot of cut, and 5 meters (16 feet) east of track. Marked by nail in 2- by 4-inch stake projecting 2 feet above ground.

Spout Springs D (Harnett County, M. Steinberg, 1918).—On reverse curve of Atlantic Coast Line Railroad north of Spout Springs, 50 meters (164 feet) east of beginning of deep cut, and 3 feet east of track. Marked by nail in 2- by 4-inch stake projecting 18 inches above ground.

Spout Springs C (Harnett County, M. Steinberg, 1918).—About half-way around reverse curve on Atlantic Coast Line Railroad north of Spout Springs. Marked by nail in 2- by 4-inch stake nailed to crosstie.

Spout Springs B (Harnett County, M. Steinberg, 1918).—On first curve of Atlantic Coast Line Railroad north of Spout Springs, 30 meters (98 feet) west of track, and 25 meters (82 feet) south of road crossing. Marked by nail in 2- by 4-inch stake projecting 2 feet above ground.

Spout Springs A (Harnett County, M. Steinberg, 1918).—At south end of first curve of Atlantic Coast Line Railroad north of Spout Springs, on prolongation of tangent to right rail toward Spout Springs, on top of cut, and 15 meters (49 feet) west of track. Marked by nail in wooden stake.

Prince F Prime (Harnett County, M. Steinberg, 1918).—About 1 mile north of Spout Springs, on Atlantic Coast Line Railroad, and 120 meters (394 feet) north of wagon road crossing on top of hill. Marked by file scratch on east rail.

Prince F (Harnett County, M. Steinberg, 1918).—About three-fourths mile north of Spout Springs, on Atlantic Coast Line Railroad, and 2 meters (7 feet) south of first wagon road crossing north of Spout Springs. Marked by file scratch on east rail.

Prince G (Harnett County, M. Steinberg, 1918).—About three-fourths of a mile north of Spout Springs, about 300 meters (984 feet) east of Atlantic Coast

Line Railroad, and half-way up prominent hill. Marked by nail in 2- by 4-inch stake.

Prince E (Harnett County, M. Steinberg, 1918).—On first curve of Atlantic Coast Line Railroad south of Spout Springs, on prolongation of tangent to right rail toward Spout Springs, at bottom of cut, and 3 meters (10 feet) east of track. Marked by nail in 2- by 4-inch stake projecting 2 feet above ground.

Duf (Harnett County, M. Steinberg, 1918; 1933).—At south end of first curve of Atlantic Coast Line Railroad south of railroad station at Spout Springs, on prolongation of tangent to left rail toward Fayetteville, 40 meters (131 feet) south of whistle post, on top of small ditch, 17.0 feet northeast of northeast rail, and 29 feet west of triangle-blazed 15-inch pine tree. Surface mark is standard disk station mark in concrete, note 1a. It was covered with about 1 foot of sand in 1933. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 57.2 feet northeast of northeast rail, 23 feet northwest of above-mentioned blazed pine tree, 3 feet southwest of wire fence, and 12.74 meters (41.8 feet) from station in azimuth $218^{\circ}13'$. Station *Dud* (see description and geographic position thereof) is visible from ground in azimuth $329^{\circ}52'31''$.

Dud (Harnett County, M. Steinberg, 1918; 1933).—On second curve of Atlantic Coast Line Railroad south of railroad station at Spout Springs, on prolongation of tangent to left rail toward Fayetteville, on top of high cut, 51.1 feet (slope) northeast of northeast rail, and directly opposite telephone pole on southwest side of track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, in group of scrub trees, 91.5 feet (slope) northeast of northeast rail, 11 paces southeast of 8-inch pine tree, and 13.92 meters (45.7 feet) from station in azimuth $213^{\circ}02'$. Station *Duf* (see description and geographic position thereof) is visible from ground in azimuth $149^{\circ}52'38''$.

Duc (Harnett County, M. Steinberg, 1918; 1933).—On second curve of Atlantic Coast Line Railroad north of railroad station at Overhills, at intersection of tangents to left rail toward Fayetteville and right (northeast) rail toward Sanford, 14.3 feet southwest of southwest rail, 56 feet southeast of telephone pole, and about 3 feet from bottom of embankment. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 27.2 feet southwest of southwest rail, 3 feet north of 20-inch pine tree, and 16.98 meters (55.7 feet) from station in azimuth $357^{\circ}05'$. Station *Dub* (see description and geographic position thereof) is visible from ground in azimuth $329^{\circ}02'29''$.

Dub (Harnett County, M. Steinberg, 1918; 1933).—On first curve of Atlantic Coast Line Railroad north of railroad station at Overhills, at intersection of tangents to right rail toward Sanford and right rail toward Fayetteville, on bank of cut at edge of woods, in small valley between two hills, 34.7 feet northeast of northeast rail, 14 feet southwest of 24-inch pine tree, and 23 feet west of another 24-inch pine tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 84.3 feet northeast of northeast rail, 38 feet north of first pine tree mentioned above, and 15.96 meters (52.4 feet) from station in azimuth $227^{\circ}28'$. Station *Duc* (see description and geographic position thereof) is visible from ground in azimuth $149^{\circ}02'44''$.

Prince D (Harnett County, M. Steinberg, 1918).—At north end of curve of Atlantic Coast Line Railroad at Overhills, on prolongation of southward tangent to left rail, and about 20 meters (66 feet) west of track. Marked by nail in 2- by 4-inch stake.

Overhills (Harnett County, M. Steinberg, 1918; 1933).—On right-of-way of Atlantic Coast Line Railroad at Overhills, about 200 yards northwest of block signal at railroad station, 162 feet southeast of milepost 97, 122 feet northwest of north corner of concrete culvert, on prolongation of tangent to right rail toward Fayetteville, and 5.7 feet southwest of southwest rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 60 feet west of west corner of stable or barn, 24 feet east of wire-fence corner, 24 feet north of 24-inch pine tree, and 143.4 feet from station in azimuth $235^{\circ}15'$. Station *Manchester* (see description and geographic position thereof) is visible from ground in azimuth $305^{\circ}11'16''$.

Manchester (Cumberland County, M. Steinberg, 1918; 1933).—On first curve of Atlantic Coast Line Railroad north of railroad station at Manchester,

at intersection of tangents to southwest rail, 68.0 feet northeast of northeast rail, 7 feet southwest of wire fence, and 18 feet northeast of 15-inch pine tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 74.3 feet northeast of northeast rail, 114 feet southeast of 16-inch pine tree, 1 foot southwest of wire fence, and 17.54 meters (57.5 feet) from station in azimuth $146^{\circ}48'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 80 feet south of railroad crossing signpost, 25.6 feet southwest of southwest rail, 14 feet east of center line of sand road which crosses track, 4 feet southeast of telephone pole, and approximately 700 yards from station in azimuth $124^{\circ}27'42''$. Station *Overhills* (see description and geographic position thereof) is visible from ground in azimuth $125^{\circ}11'42''$.

Bragg (Cumberland County, M. Steinberg, 1918; 1933).—On first curve of Atlantic Coast Line Railroad south of railroad station at Manchester, on prolongation of tangent to left rail toward Sanford, just north of northeast corner of Fort Bragg Military Reservation, about 0.7 mile southeast of railroad water tank, about one-fourth mile northwest of milepost 93, about 66 yards southeast of concrete whistle post on north side of track, 23 feet north of telephone pole, and 4.6 feet southwest of southwest rail. To reach from Fayetteville, go about 11 miles on route 53 or about 1 mile beyond overgrade crossing to small white church on right and country road on left leading into woods, follow this road about 1 mile to railroad track, and continue southeast about 600 yards along track to station site. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is nail in concrete, note 7c. Reference mark is standard reference disk in concrete, note 11a, 37.3 feet northeast of northeast rail, 3 feet west of 18-inch pine tree, and 23.93 meters (78.5 feet) from station in azimuth $295^{\circ}45'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 36 feet west of footpath over railroad, 42 feet northeast of telephone pole, 11.7 feet northeast of northeast rail, and approximately 600 yards from station in azimuth $156^{\circ}36'28''$.

Prince C (Cumberland County, M. Steinberg, 1918).—At south end of first curve of Atlantic Coast Line Railroad south of Manchester, on prolongation of northward tangent to right rail, 45 meters (148 feet) north of milepost 93, and 12 meters (39 feet) west of track. Marked by nail in 2- by 4-inch stake projecting $2\frac{1}{2}$ feet above ground.

Prince B (Cumberland County, M. Steinberg, 1918).—On first curve of Atlantic Coast Line Railroad north of Princes siding (Camp Bragg), on prolongation of southward tangent to left rail, 2 meters (7 feet) north of whistle post, and 2 meters (7 feet) west of track. Marked by nail in 2- by 4-inch stake projecting 2 feet above ground.

Prince A (Cumberland County, M. Steinberg, 1918).—At Princes siding (Camp Bragg) on Atlantic Coast Line Railroad, 40 meters (131 feet) north of road crossing, and 4 meters (13 feet) east of track. Marked by nail in wooden stake projecting 18 inches above ground. *Primary traverse station no. 18 (U.S. G.S.)* (see description thereof) is 57.795 meters (189.62 feet) from station in azimuth $296^{\circ}41'32''$.

Fayetteville J (Cumberland County, M. Steinberg, 1918).—On third curve of Atlantic Coast Line Railroad north of Hay Street at Fayetteville, on prolongation of tangent to left rail toward Fayetteville, on side of cut, and 6 meters (20 feet) east of track. Marked by nail in cedar post projecting 1 foot above ground.

Fayetteville I (Cumberland County, M. Steinberg, 1918).—On first curve of Atlantic Coast Line Railroad north of main track crossing at Fayetteville, on prolongation of tangent to left rail toward Fayetteville, and $2\frac{1}{2}$ meters (8 feet) east of track. Marked by nail in 2- by 4-inch stake projecting 18 inches above ground.

Fayetteville H (Cumberland County, M. Steinberg, 1918).—On first curve on northernmost switch track of Atlantic Coast Line Railroad north of Hay Street at Fayetteville, on line of right tangent looking toward Hay Street, and on right tangent looking east. Marked by file scratch on rail.

Fayetteville G (Cumberland County, M. Steinberg, 1918).—Midway between main track and side track of Atlantic Coast Line Railroad, and 10 meters (33 feet) north of Hay Street at Fayetteville. Marked by nail in 2- by 4-inch stake projecting about 8 inches above ground.

Fayetteville E (Cumberland County, M. Steinberg, 1918).—About 150 meters (492 feet) south of Hay Street at Fayetteville, and on side track of Atlantic Coast Line Railroad opposite brick warehouse. Marked by file scratch on rail.

Fayetteville D (Cumberland County, M. Steinberg, 1918).—At corner of Maxwell and Mumford Streets at Fayetteville, on prolongation of tangent to left rail of main track of Atlantic Coast Line Railroad looking from Fayetteville, 9 meters (30 feet) west of switch target, and 4 feet south of track. Marked by iron bolt in road.

Fayetteville C (Cumberland County, M. Steinberg, 1918).—On first curve of Atlantic Coast Line Railroad east of Fayetteville, on prolongation of westward tangent to right rail, 50 meters (164 feet) east of cotton mill, one-half meter (2 feet) north of road, and 9 meters (30 feet) south of track. Marked by nail in 2- by 4-inch stake projecting 2 feet above ground.

Fayetteville B (Cumberland County, M. Steinberg, 1918).—On first curve of Atlantic Coast Line Railroad west of Cape Fear River bridge, on prolongation of tangent to left rail toward bridge, 50 meters (164 feet) west of road crossing, and 2½ meters (8 feet) north of track. Marked by nail in 2- by 4-inch stake projecting 2 feet above ground.

Fayetteville A (Cumberland County, M. Steinberg, 1918).—On Atlantic Coast Line Railroad, 25 meters (82 feet) east of Cape Fear River bridge, and 1¼ meters (4 feet) north of track. Marked by nail in 2- by 4-inch stake projecting 2 feet above ground.

Primary traverse station no. 17 (U.S.G.S.) (Cumberland County, M. Steinberg, 1918).—About one-half mile southeast of Manchester, on east side of Atlantic Coast Line Railroad, 820 feet south of milepost 94, 60 feet south of road crossing at section tool house, near section house and opposite switch, and 20 feet east of track. Marked by iron post stamped "Prim. Trav. Sta. No. 17, 1918, Mac. Elev. 190 feet."

Primary traverse station no. 18 (U.S.G.S.) (Cumberland County, M. Steinberg, 1918).—About 2¼ miles southeast of Manchester, on Atlantic Coast Line Railroad, about 50 feet northeast of road crossing, and on bank about 8 feet above track. Marked by iron post stamped "Prim. Trav. Sta. No. 18, 1918, Mac. Elev. 266 feet." Station *Prince A* (see description thereof) is 57.795 meters (189.62 feet) from station in azimuth 116°41'33".

Fayetteville F (Cumberland County, M. Steinberg, 1918).—On sidetrack of Atlantic Coast Line Railroad at Hay Street crossing at Fayetteville, and in line with middle of sidewalk. Marked by file scratch on east rail.

Primary traverse station no. 4 (U.S.G.S.) (Cumberland County, M. Steinberg, 1918).—At Fayetteville, 14.14 meters (46.4 feet) east of southeast corner of Atlantic Coast Line Railroad station, in line with south end of building, and 0.76 meter (2.5 feet) north of concrete sidewalk. Marked by iron post stamped "Prim. Trav. Sta. No. 4, 1918, Elev. 102 feet."

Primary traverse station no. 3 (U.S.G.S.) (Cumberland County, M. Steinberg, 1918).—About 1¼ miles west of Vander, 20 feet south of track of Atlantic Coast Line Railroad, 300 feet east of milepost 77, and 45 feet west of road crossing at store. Marked by iron post stamped "Prim. Trav. Sta. No. 3, 1918, Mac." In 1933, mark was found on north (wrong) side of track and leaning at angle of about 60° with horizontal.

Primary traverse station no. 2 (U.S.G.S.) (Cumberland County, M. Steinberg, 1918).—At Stedman, across track and directly opposite west end of Atlantic Coast Line Railroad station, and 25 feet south of track. Marked by iron post stamped "Prim. Trav. Sta. No. 2, 1918, Mac."

Primary traverse station no. 1 (U.S.G.S.) (Sampson County, M. Steinberg, 1918).—At Hayne, 40 feet west of Atlantic Coast Line Railroad station, and 20 feet south of track. Marked by iron post stamped "Prim. Trav. Sta. No. 1, 1918, Mac." Station *Hayne* (see description thereof) is 112.87 meters (370.3 feet) from station in azimuth 285°05'47".

Primary traverse station no. 3 (U.S.G.S.) (Brunswick County, M. Steinberg, 1918).—At Navassa, 15 feet south of Atlantic Coast Line Railroad station. Marked by iron post stamped "Prim. Trav. Sta. No. 3."

SANFORD TO OSBORNE (TRAVERSE)

Principal points

Carr (Richmond County, C. L. Garner, 1918; 1933).—About 2 miles north of Hoffman, 350 meters (1,148 feet) north of milepost 237 of Seaboard Air Line Railway, about 150 meters (492 feet) north of intersection of tangents of second curve north of Hoffman, about 25 meters (82 feet) east of east rail, and on edge

of cut of old roadbed which is just east of present roadbed. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, on edge of cut, about 9.92 meters (32.6 feet) west of west rail, and about 35 meters (115 feet) from station in azimuth $148^{\circ}08'$. Azimuth from station to water tank at Southern Pines is $218^{\circ}33'43''$. Station *Hoffman A* (see description and geographic position thereof) is visible from ground in azimuth $71^{\circ}52'03''$.

Hoffman (Richmond County, C. L. Garner, 1918; 1933).—About one-half of a mile north of Hoffman, on first curve of Seaboard Air Line Railway north of Hoffman, at intersection of tangents to west rail, about 400 meters (1,312 feet) north of milepost 239, about 30 meters (98 feet) north of wagon road crossing, about 3 meters (10 feet) east of edge of dirt road running north from Hoffman, and 10.34 meters (33.9 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, on top of ridge midway between railway and dirt road from Hoffman, 7.38 meters (24.2 feet) west of west rail, and 21.87 meters (71.8 feet) from station in azimuth $253^{\circ}07'$. Azimuth from station to railway semaphore signal at Hoffman is $56^{\circ}11'20''$. Station *Hoffman A* (see description and geographic position thereof) is visible from ground in azimuth $253^{\circ}27'42''$. Station *Broadacre* (see description and geographic position thereof) is visible from ground in azimuth $55^{\circ}58'41''$.

Broadacre (Richmond County, C. L. Garner, 1918; 1933).—About 1 mile south of Hoffman, at intersection of tangents to east rail to south and west rail to north of first curve of Seaboard Air Line Railway south of railway station, about 40 meters (131 feet) west of public road, at edge of cultivated field, and about 50 meters (164 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Mark was not recovered in 1933. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, at east edge of public road running south from Hoffman, and 28.40 meters (93.2 feet) from station in azimuth $297^{\circ}05'$. Azimuth from station to milepost 240, distant approximately 200 meters (656 feet), is $241^{\circ}08'11''$; and to railway semaphore at Hoffman is $235^{\circ}49'01''$. Station *Hoffman* (see description and geographic position thereof) is visible from ground in azimuth $235^{\circ}58'03''$. Station *Marston* (see description and geographic position thereof) is visible from ground in azimuth $9^{\circ}36'16''$.

Marston (Richmond County, C. L. Garner, 1918; 1933).—About 120 yards southeast of milepost 242 of Seaboard Air Line Railway, at intersection of tangents to east rail of main track at first curve north of Marston railway station, about 85 yards east of east rail of main track, about 100 feet north of center line of dirt road, 83.5 feet north of 8-inch sycamore tree which is second tree east of track on north side of road, and 101.8 feet west of telephone pole no. 1720. Surface mark was standard disk station mark in concrete, note 1a. It was not recovered in 1933. Underground mark, recovered in 1933, is glass bottle in concrete, note 7d, about 18 inches below ground. (Original description gives copper bolt in concrete, note 7b.) Reference mark was standard reference disk in concrete, note 11c, about 55 meters (180 feet) east of east rail, and 28.20 meters (92.5 feet) from station in azimuth $125^{\circ}30'$. Mark was not recovered in 1933. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, in line with row of telephone poles, 4 feet north of telephone pole, 42.4 feet east of east rail of main track, 13 feet west of center line of dirt road along tracks, and approximately 250 yards from station in azimuth $54^{\circ}22'34''$. Station *Cognac* (see description and geographic position thereof) is visible from ground in azimuth $55^{\circ}09'49''$. Station *Broadacre* (see description and geographic position thereof) is visible from ground in azimuth $189^{\circ}36'03''$.

Cognac (Richmond County, C. L. Garner, 1918; 1933).—About 16 miles south of Aberdeen, at intersection of tangents to east rail at first curve north of milepost 245 of Seaboard Air Line Railway, about 100 yards west of west rail, about 250 yards south of junction of United States route 1 and North Carolina route 204, 66 feet west of center line of route 204, 33 feet west of telephone pole, and on plot of ground covered with small oak trees. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, about 65 yards west of west rail, about 1 yard west of 10-inch oak tree, and 24.14 meters (79.2 feet) from station in azimuth $311^{\circ}07'$. Mark was not recovered in 1933; as it and oak tree were probably destroyed in construction of route 204.

Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, just north of junction of United States route 1 and North Carolina route 204, 27 feet west of center line of route 1, about 100 yards north of Gulf filling station and country store in V of junction, 89 feet north of concrete culvert, 4 feet south of mileage signpost, and approximately 0.2 mile from station in azimuth $228^{\circ}16'26''$. Station *Marston* (see description and geographic position thereof) is visible from ground in azimuth $235^{\circ}08'34''$.

Oise (Richmond County, C. L. Garner, 1918).—On right-of-way of Seaboard Air Line Railway, at first curve north of milepost 247, at intersection of tangents to west rail from south and east rail from north of south-bound track, in middle of old railway roadbed, and about 30 meters (98 feet) east of east rail of south-bound track. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Surface mark found lying on ground in 1933, and underground mark not recovered. Reference mark was standard reference disk in concrete, note 11c, in old railway roadbed, and 20.19 meters (66.2 feet) from station in azimuth $193^{\circ}05'$.

Ainse (Richmond County, C. L. Garner, 1918).—On right-of-way of Seaboard Air Line Railway, on first curve north of milepost 248, at intersection of tangents to east rail from south and west rail from north of south-bound track, about 150 meters (492 feet) south of point where north-bound and south-bound tracks become parallel on fill, about 17 meters (56 feet) east of east rail of south-bound track, and 4 meters (13 feet) west of west rail of north-bound track. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. There was no reference mark. Station was not recovered in 1933, as location was found to be covered by deep fill.

Vesie (Richmond County, C. L. Garner, 1918).—About 2 miles north of railway station at Rockingham, about 750 meters (2,461 feet) north of milepost 250 of Seaboard Air Line Railway, 8.66 meters (28.4 feet) west of west rail of south-bound main track, on highest point of west side of cut, and about 60 meters (197 feet) north of wagon road which crosses tracks. Surface mark was standard disk station mark in concrete, note 1a, and was found lying on its side in 1933. Underground mark was copper bolt in concrete, note 7b, and was not recovered. Reference mark was standard reference disk in concrete, note 11c, on bank of cut about 3 meters (10 feet) above track, 10 meters (33 feet) north of telephone pole, 10 meters (33 feet) west of west rail, and 17.19 meters (56.4 feet) from station in azimuth $64^{\circ}55'$. Mark was not recovered in 1933. Station *Fruitland* (see description thereof) was established in 1933 within a few paces of station.

Hamlet (Richmond County, C. L. Garner, 1918).—Station is, if still in existence, under pavement of middle of Main Street in Hamlet, about 15 yards east of intersection of Main and Entwistle Streets, and about 8 yards south of edge of city water tank. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is center pipe of city water tank, 13.94 meters (45.7 feet) from station in azimuth $217^{\circ}20'$. Azimuth from station to water tank of Seaboard Air Line Railway is $293^{\circ}21'22''$. In 1933, station *Hamlet traverse tie* (see description thereof) was established, and tied to center pipe of city water tank.

Light (Richmond County, C. L. Garner, 1918; 1933).—About $1\frac{1}{2}$ miles north of Osborne, at first curve of Seaboard Air Line Railway south of milepost 258, in deep cut with spring in west bank, at edge of cultivated field, and about 40 meters (131 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Station *Light A* (see description and geographic position thereof) is visible from ground in azimuth $232^{\circ}52'26''$.

Osborne (Marlboro County, S.C., C. L. Garner, 1918).—About one-half mile west of main track of Seaboard Air Line Railway, opposite first curve south of Osborne, N.C., and first curve north of milepost 261, and on highest point of hill covered with second-growth oak trees. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 19.89 meters (65.3 feet) from station in azimuth $228^{\circ}48'$.

Supplementary points

Debeney A (Lee County, C. L. Garner, 1918).—About one-half mile south of railway station at Colon, and 102 meters (335 feet) north of milepost 196 of Seaboard Air Line Railway. Marked by file mark on east rail of main track.

For notes in regard to marking of stations see p. 135.

Debeney (Lee County, C. L. Garner, 1918; 1933).—About 1½ miles south of Colon, on right-of-way of Seaboard Air Line Railway, at intersection of tangents to east rail on second curve north of Sanford, and first curve north of milepost 197, 20.2 feet west of west rail, about 100 yards south of block signal no. 196.7, and 14.8 feet northeast of telephone pole. Erosion of small ditch, 1 foot deep and 3 feet wide, on west side of station will probably destroy station mark in time. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, on edge of washed-out gully, 13.16 meters (43.2 feet) west of west rail, and 18.92 meters (62.1 feet) from station in azimuth 286°13'. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 150 yards north of block signal no. 196.7, 34.8 feet east of east rail, 20.3 feet south of telephone pole, 55.6 feet north of blaze on 12-inch oak tree, and approximately 250 yards from station in azimuth 213°06'57''.

Brook (Lee County, C. L. Garner, 1918).—About one-half mile north of Sanford, on first curve of Seaboard Air Line Railway north of Sanford, at intersection of tangents to east rail, on edge of small brook which passes under track, and 11.31 meters (37.1 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, about 2 meters (7 feet) north of telephone pole, and 27.07 meters (88.81 feet) from station in azimuth 30°32'. Azimuth from station to tall steel water tank at Sanford was 358°34'58''. Station was not recovered in 1933.

Lee (Lee County, C. L. Garner, 1918).—About 100 meters (328 feet) south of railway station at Sanford, about 30 meters (98 feet) north of milepost 199 of Seaboard Air Line Railway, directly opposite crossing of Seaboard Air Line and Atlantic and Yadkin Railways, and 4.01 meters (13.2 feet) west of southwest frog point. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete sidewalk opposite Sanford Supply Co. building, about 1 meter (3 feet) north of telephone pole, and 17.60 meters (57.7 feet) from station in azimuth 49°03'. Azimuth from station to tall steel water tank at Sanford is 164°05'36''. Station was not recovered in 1933.

Sanford C (Lee County, C. L. Garner, 1918; 1933).—About one-half mile south of railway station at Sanford, on first curve of Seaboard Air Line Railway south of railway station, at intersection of tangents to east rail from south and west rail from north, and 1.052 meters (3.45 feet) east of east rail of main track. Marked by nail in 2- by 4-inch stake in concrete.

Sanford B (Lee County, C. L. Garner, 1918).—About 1¼ miles south of Sanford, on second curve of Seaboard Air Line Railway south of Sanford and south of milepost 200, at intersection of tangents to east rail, in old railway roadbed, and 12.07 meters (39.6 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, in old railway roadbed, and 17.75 meters (58.2 feet) from station in azimuth 236°52'. Azimuth from station to tall black steel water tank at Sanford was 178°38'00''. Station was not recovered in 1933.

Sanford A (Lee County, C. L. Garner, 1918; 1933).—About 2 miles south of Sanford, on first curve of Seaboard Air Line Railway south of milepost 201, at intersection of tangents to east rail, and about 25 meters (82 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, about 7 meters (23 feet) west of west rail, and 18.67 meters (61.3 feet) from station in azimuth 239°20'. Station *Troy* (see description and geographic position thereof) is visible from ground in azimuth 344°39'27''.

Troy (Lee County, C. L. Garner, 1918; 1933).—About 2¼ miles south of Sanford, on first curve of Seaboard Air Line Railway north of milepost 202, at intersection of tangents to east rail, about 20 meters (66 feet) south of wagon road which crosses tracks on overgrade crossing, 8 meters (26 feet) east of wagon road, and in cotton field. Surface mark was standard disk station mark in concrete, note 1a. Mark was not recovered in 1933. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 4 meters (13 feet) south of wagon road which crosses tracks on overgrade crossing, about 2 meters (7 feet) south of overgrade bridge, and 34.53

meters (113.3 feet) from station in azimuth $126^{\circ}59'$. Station *Sanford A* (see description and geographic position thereof) is visible from ground in azimuth $164^{\circ}39'35''$.

Fismes (Lee County, C. L. Garner, 1918).—About 4 miles south of Sanford, at curve of Seaboard Air Line Railway opposite milepost 203, at intersection of tangents to east rail, and 6.40 meters (21.0 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 10.5 meters (34 feet) west of west rail, about 3.50 meters (11.5 feet) above track, and 19.52 meters (64.0 feet) from station in azimuth $124^{\circ}08'$. In 1919, station mark reported destroyed.

Lennon (Lee County, C. L. Garner, 1918; 1933).—About $2\frac{1}{2}$ miles north of Lemon Springs, on fourth curve of Seaboard Air Line Railway north of Lemon Springs and first curve north of milepost 204, at intersection of tangents to east rail, on side of slope of cut, and 11.59 meters (38.0 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, about 6 meters (20 feet) east of east rail, 0.50 meter (1.6 feet) north of telephone pole, and 23.59 meters (77.4 feet) from station in azimuth $309^{\circ}33'$. Station *Gum* (see description and geographic position thereof) is visible from ground in azimuth $19^{\circ}55'14''$.

Gum (Lee County, C. L. Garner, 1918; 1933).—About 2 miles north of Lemon Springs, on third curve of Seaboard Air Line Railway north of Lemon Springs and curve opposite milepost 204, at intersection of tangents to east rail from north and west rail from south, at edge of swamp, and about 25 meters (82 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, about 15 meters (49 feet) west of west rail, 1.0 meter (3 feet) south of small oak tree, and 30.03 meters (98.5 feet) from station in azimuth $341^{\circ}47'$. Station *Lennon* (see description and geographic position thereof) is visible from ground in azimuth $199^{\circ}55'07''$.

Alfair (Lee County, C. L. Garner, 1918; 1933).—About 1 mile north of Lemon Springs, on second curve of Seaboard Air Line Railway north of Lemon Springs, at intersection of tangents to east rail from north and west rail from south, and 35 meters (115 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 4.46 meters (14.6 feet) west of west rail, 1 meter (3 feet) north of signboard "Lemon Springs", and 38.92 meters (127.7 feet) from station in azimuth $133^{\circ}11'$. Station *Mangin* (see description and geographic position thereof) is visible from ground in azimuth $17^{\circ}37'00''$.

Mangin (Lee County, C. L. Garner, 1918; 1933).—About three-fourths mile north of Lemon Springs, on right-of-way of Seaboard Air Line Railway, at intersection of tangents to west rail, 27.6 feet west of west rail, on first curve north of Lemon Springs and first curve north of milepost 205, about 4 meters (13 feet) west of edge of bank of cut, about 4 feet above rail, and 28.6 feet south of telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 3 meters (10 feet) south of wagon road crossing, about 9 meters (30 feet) east of east rail, and 32.10 meters (105.3 feet) from station in azimuth $328^{\circ}34'$. Mark was not recovered in 1933. Azimuth mark of station *Lemon C* is standard reference disk in concrete, note 11a, 21 feet east of east rail of main track, 51.5 feet north of telephone pole no. E-54, 181 feet south of south end of railway station at Lemon Springs, and approximately 0.8 mile from station in azimuth $0^{\circ}12'00''$. Station *Alfair* (see description and geographic position thereof) is visible from ground in azimuth $197^{\circ}36'56''$.

Reeves (Lee County, C. L. Garner, 1918; 1919).—About 150 meters (492 feet) south of railway station at Lemon Springs, on first curve of Seaboard Air Line Railway south of railway station and first curve north of milepost 206, at intersection of tangents to west rail, in cotton patch, and about 25 meters (82 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, about 5 meters (16 feet) west of west rail, and 30.00 meters (98.4 feet) from station in azimuth $108^{\circ}08'$. Station was not recovered in 1933.

Lemon C (Lee County, C. L. Garner, 1918; 1933).—About one-half mile south of Lemon Springs, on right-of-way of Seaboard Air Line Railway, on first curve south of milepost 206, at intersection of tangents to west rail, about 8 meters (26 feet) west of west rail, and at bottom of fill about 2 meters (7 feet) below track. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, about 30 meters (98 feet) east of east rail, and 37.00 meters (121.4 feet) from station in azimuth $302^{\circ}14'$. Mark was found dug up in 1933. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, 21 feet east of east rail of main track, 51.5 feet north of telephone pole no. E-54, 181 feet south of south end of railway station at Lemon Springs, and approximately 0.5 mile from station in azimuth $218^{\circ}17'15''$.

Lemon B (Lee County, C. L. Garner, 1918).—About 1 mile south of Lemon Springs, on third curve of Seaboard Air Line Railway south of Lemon Springs and first curve north of milepost 207, at intersection of tangents to west rail, and 1.68 meters (5.5 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 16.0 meters (52 feet) east of east rail, about 1.0 meter (3 feet) from barbed-wire fence, and 20.37 meters (66.8 feet) from station in azimuth $275^{\circ}36'$. Station was not recovered in 1933; probably destroyed by widening cut.

Lemon A (Lee County, C. L. Garner, 1918; 1919).—About $1\frac{1}{2}$ miles south of Lemon Springs, on right-of-way of Seaboard Air Line Railway, at highest point of grade running south out of Lemon Springs, and 6.01 meters (19.7 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 15.5 meters (51 feet) east of east rail, about 3 meters (10 feet) north of telegraph pole, and 22.84 meters (74.9 feet) from station in azimuth $327^{\circ}10'$. Station was not recovered in 1933; probably destroyed by widening and deepening large cut.

Morrison (Lee County, C. L. Garner, 1918; 1933).—About $2\frac{1}{2}$ miles south of Lemon Springs, at first curve of Seaboard Air Line Railway south of milepost 209, at intersection of tangents to west rail from south and east rail from north, and 19.05 meters (62.5 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, on opposite side of track, 0.08 meter (0.3 foot) west of west rail, and 27.04 meters (88.7 feet) from station in azimuth $126^{\circ}16'$. Station *Mihiel* (see description and geographic position thereof) is visible from ground in azimuth $50^{\circ}20'18''$.

Mihiel (Lee County, C. L. Garner, 1918; 1933).—About 3 miles south of Lemon Springs, on first curve of Seaboard Air Line Railway south of milepost 210, at intersection of tangents to west rail, at bottom of fill, and 4.90 meters (16.1 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 15 meters (49 feet) east of east rail, and 23.72 meters (77.8 feet) from station in azimuth $306^{\circ}38'$. Station *Morrison* (see description and geographic position thereof) is visible from ground in azimuth $230^{\circ}20'02''$. Station *Huron* (see description and geographic position thereof) is visible from ground in azimuth $38^{\circ}04'10''$.

Huron (Moore County, C. L. Garner, 1918; 1933).—About one-half mile north of Cameron, about 150 meters (492 feet) north of north point of tangency of second curve of Seaboard Air Line Railway north of Cameron and first curve south of milepost 210, on prolongation of tangent to west rail from north, about 25 meters (82 feet) east of east rail, in edge of swamp, about 3 meters (10 feet) east of large pine tree, and 3 meters (10 feet) north of large sycamore tree. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, about 15 meters (49 feet) east of east rail, 3 meters (10 feet) east of right-of-way, in group of oak trees, and 30.63 meters (100.5 feet) from station in azimuth $219^{\circ}03'$. Station *Mihiel* (see description and geographic position thereof) is visible from ground in azimuth $218^{\circ}03'42''$. Station *Cameron* (see description and geographic position thereof) is visible from ground in azimuth $84^{\circ}20'24''$.

Cameron (Moore County, C. L. Garner, 1918; 1933).—About one-eighth mile north of Cameron, about 175 meters (574 feet) north of point of tangency of first curve of Seaboard Air Line Railway north of Cameron and curve opposite mile-

post 211, on prolongation of tangent to east rail from south, on side of hill in cultivated field, about 75 meters (246 feet) west of west rail, and about 10 meters (33 feet) northeast of summit of hill. Surface mark was standard disk station mark in concrete, note 1a. Mark was not recovered in 1933. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, in field, about 1 meter (3 feet) north of peach tree, and 16.66 meters (54.7 feet) from station in azimuth $50^{\circ}24'$. Station *Huron* (see description and geographic position thereof) is visible from ground in azimuth $264^{\circ}20'06''$. Station *Hayes* (see description and geographic position thereof) is visible from ground in azimuth $28^{\circ}50'25''$.

Hayes (Moore County, C. L. Garner, 1918; 1933).—About 1 mile south of *Cameron*, on first curve of Seaboard Air Line Railway south of *Cameron* and first curve south of milepost 212, at intersection of tangents to east rail, 16.75 meters (55.0 feet) west of west rail, and about 1.0 meter (3 feet) west of old railway roadbed. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard bench-mark disk (A 11), on ridge between old and present railway roadbeds, about 8 meters (26 feet) west of west rail, and 11.41 meters (37.4 feet) from station in azimuth $242^{\circ}28'$. Station *Cameron* (see description and geographic position thereof) is visible from ground in azimuth $208^{\circ}49'57''$.

Hamilton (Moore County, C. L. Garner, 1918; 1919).—About $1\frac{1}{2}$ miles south of *Cameron*, on first curve north of milepost 213 of Seaboard Air Line Railway, at intersection of tangents to east rail from north and west rail from south, in edge of old railway roadbed, and 4.62 meters (15.2 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, on bank of cut about 2 meters (7 feet) above rail, 8.50 meters (27.9 feet) west of west rail, and 27.60 meters (90.6 feet) from station in azimuth $154^{\circ}10'$. Surface mark found lying on ground, in 1933, and underground mark not recovered.

Newton (Moore County, C. L. Garner, 1918; 1933).—About 2 miles north of *Vass*, on third curve of Seaboard Air Line Railway north of *Vass* and first curve south of milepost 214, at intersection of tangents to east rail from south and west rail from north, 8.86 meters (29.1 feet) west of west rail, and in middle of old railway roadbed. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, about 10 meters (33 feet) west of west rail, in middle of old railway roadbed, and 27.23 meters (89.3 feet) from station in azimuth $12^{\circ}27'$. Station *Mount Vernon* (see description and geographic position thereof) is visible from ground in azimuth $2^{\circ}21'35''$.

Mount Vernon (Moore County, C. L. Garner, 1918; 1933).—About $1\frac{1}{2}$ miles north of *Vass*, on second curve of Seaboard Air Line Railway north of *Vass* and opposite milepost 215, at intersection of tangents to west rail from south and east rail from north, 7.11 meters (23.3 feet) east of east rail, and in old railway roadbed. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, about 15 meters (49 feet) east of east rail, in old railway roadbed, and 28.47 meters (93.4 feet) from station in azimuth $196^{\circ}04'$. Station *Newton* (see description and geographic position thereof) is visible from ground in azimuth $182^{\circ}21'34''$. Station *Ailette* (see description and geographic position thereof) is visible from ground in azimuth $13^{\circ}07'06''$.

Ailette (Moore County, C. L. Garner, 1918; 1933).—About 1 mile north of *Vass*, at intersection of tangents to west rail of Seaboard Air Line Railway, 23.72 meters (77.8 feet) east of east rail, and about 8 meters (26 feet) west of wagon road running north from *Vass*. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, about 15 meters (49 feet) east of east rail, 3 meters (10 feet) east of telephone pole, and 24.66 meters (80.9 feet) from station in azimuth $30^{\circ}29'$. Azimuth from station to white steeple (shingle roof) at *Vass*, distant approximately 1 mile, is $46^{\circ}41'59''$. Station *Mount Vernon* (see description and geographic position thereof) is visible from ground in azimuth $193^{\circ}07'02''$.

Vass (Moore County, C. L. Garner, 1918).—About one-fourth mile south of railway station at *Vass*, on first curve of Seaboard Air Line Railway south of milepost 217, at intersection of tangents to east rail from south and west rail

from north, 20 meters (66 feet) east of east rail, and at bottom of fill about 6 meters (20 feet) below rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 24.5 meters (80 feet) east of east rail, on edge of bank of borrow pit, about 1 meter (3 feet) south of 6-inch oak stump 2½ feet high, and 23.90 meters (78.4 feet) from station in azimuth 244°49'. Azimuth from station to water tank at Vass cotton mill was 199°05'40". Station was carefully searched for in 1933, but not recovered; probably destroyed by widening and deepening borrow pit in which station was located. Reference mark was found lying on ground about 10 yards from correct position.

Lakeview A (Moore County, C. L. Garner, 1918; 1933).—About 75 meters (246 feet) south of Lakeview, on first curve of Seaboard Air Line Railway south of railway station, on prolongation of tangent to east rail from north, and 5.07 meters (16.6 feet) east of east rail. Marked by 2- by 4-inch stake in block of concrete. Exact center of station had been destroyed when recovered in 1933. Station *Guynemer A* (see description and geographic position thereof) is visible from ground in azimuth 76°48'50". Azimuth from station to green water tank with black roof at Lakeview is 180°03'35".

Guynemer A (Moore County, C. L. Garner, 1918; 1933).—About one-eighth mile south of railway station at Lakeview, on second curve of Seaboard Air Line Railway north of milepost 219, on prolongation of tangent to east rail from south, about 100 meters (328 feet) from point of tangency, on bank of cut, about 2 meters (7 feet) above rail, and 12.50 meters (41.0 feet) west of west rail. Marked by 2- by 4-inch stake in block of concrete. Exact center of station had been destroyed when recovered in 1933. Station *Lakeview A* (see description and geographic position thereof) is visible from ground in azimuth 256°48'43".

Guynemer (Moore County, C. L. Garner, 1918).—About 1 mile south of Lakeview, about 40 meters (131 feet) north of milepost 219 of Seaboard Air Line Railway, at intersection of tangents to west rail from south and east rail from north, about 2 meters (7 feet) above rail, and 10.5 meters (34 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7c. Surface mark was found lying on ground in 1933, and underground mark was not recovered. Both marks probably moved by widening of cut.

Lakeview (Moore County, C. L. Garner, 1918; 1933).—About one-eighth mile south of Lakeview, about 100 meters (328 feet) east of Seaboard Air Line Railway track at first curve south of Lakeview, in scrub-oak thicket, and 100 meters (328 feet) northwest of highest point of small hill. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 75 meters (246 feet) from highest point of hill, and 15.13 meters (49.6 feet) from station in azimuth 0°21'. Azimuth mark no. 1, established in 1933, is standard reference disk in concrete, note 11a, 26 feet west of center line of Lakeview-Pinehurst Road, about 150 feet north of Lakeview post office, 148 feet north of north end of Lakeview concrete dam, 7 feet east of twin oak trees, and approximately 0.7 mile from station in azimuth 216°38'43". Azimuth mark no. 2, established in 1933, is standard reference disk cemented in auger hole in 10-inch oak tree, 76.1 feet west of west rail, 65.8 feet northwest of 20-inch pine tree, about 75 feet south of station *Guynemer A*, and approximately 200 yards from station in azimuth 103°51'42". Azimuth from station to green water tank with black roof at Lakeview is 197°57'25".

Fonck (Moore County, C. L. Garner, 1918; 1933).—About 2½ miles north of Niagara, on second curve of Seaboard Air Line Railway south of milepost 219 and first curve north of milepost 220, at intersection of tangents to east rail from south and west rail from north, on top of bank of cut, and about 12.0 meters (39 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is piece of rail embedded in concrete, about 20 meters (66 feet) west of west rail, and 17.90 meters (58.7 feet) from station in azimuth 219°44'. Station *Delaware* (see description and geographic position thereof) is visible from ground in azimuth 46°50'37".

Delaware (Moore County, C. L. Garner, 1918; 1933).—About 1½ miles north of Niagara, on first curve of Seaboard Air Line Railway north of milepost 221 and first curve south of milepost 220, at intersection of tangents to east rail, and 4.00 meters (13.1 feet) west of west rail. Surface mark is standard disk station mark

in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 11.05 meters (36.3 feet) east of east rail, 3 meters (10 feet) south of telephone pole, and 17.61 meters (57.8 feet) from station in azimuth $289^{\circ}34'$. Station *Fonck* (see description and geographic position thereof) is visible from ground in azimuth $226^{\circ}50'09''$.

Niagara D (Moore County, C. L. Garner, 1918).—About five-eighths mile north of Niagara, on first curve of Seaboard Air Line Railway south of milepost 221, on prolongation of tangent to east rail from north, about 50 meters (164 feet) from point of tangency, and 2.20 meters (7.2 feet) east of east rail. Station mark was standard disk station mark in concrete, note 1a, and was not recovered in 1933.

Niagara C (Moore County, C. L. Garner, 1918; 1933).—About one-half mile north of railway station at Niagara, on right-of-way of Seaboard Air Line Railway, on prolongation of tangent to east rail from south at second curve north of Niagara, about 100 yards north of point of tangency, 41 feet east of east rail, and 29 feet south of telephone pole. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 7.90 meters (25.9 feet) west of west rail, and 23.58 meters (77.4 feet) from station in azimuth $170^{\circ}57'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on top of high bank about 15 feet above rail, about 10 yards west of track, 9 feet west of edge of bank, 22 feet south of telephone pole, 38 feet southeast of triangular blaze on 8-inch oak tree, about 50 yards east of dirt road, about one-fourth mile north of railway station at Niagara, about 75 yards north of station *Niagara B*, and approximately one-fourth mile from station in azimuth $71^{\circ}01'33''$. Station *Niagara B* (see description and geographic position thereof) is visible from ground in azimuth $70^{\circ}22'21''$.

Niagara (Moore County, C. L. Garner, 1918).—About one-eighth mile east of Niagara, on summit of hill in peach orchard owned by James Swett, about 300 meters (984 feet) southwest of his house, and about 20 meters (66 feet) east of west edge of orchard. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, in west edge of orchard, near scrub-oak thicket, and 32.50 meters (106.6 feet) from station in azimuth $78^{\circ}36'$. Azimuth from station to water tank at Niagara was $69^{\circ}30'21''$. Station was not recovered in 1933.

Niagara B (Moore County, C. L. Garner, 1918; 1933).—About one-fourth mile north of Niagara, about 50.0 meters (164 feet) from point of tangency of curve of Seaboard Air Line Railway at Niagara and first curve north of milepost 222, on prolongation of tangent to east rail from north, and about 5.0 meters (16 feet) west of west rail. Marked by nail in 2- by 4-inch stake in concrete. Azimuth from station to water tank at Niagara is $30^{\circ}27'34''$. Station *Niagara C* (see description and geographic position thereof) is visible from ground in azimuth $250^{\circ}22'13''$. Station *Niagara A* (see description and geographic position thereof) is visible from ground in azimuth $46^{\circ}16'53''$.

Niagara A (Moore County, C. L. Garner, 1918; 1933).—About 20 meters (66 feet) south of Seaboard Air Line Railway station at Niagara, about 100 meters (328 feet) from point of tangency on prolongation of tangent to west rail from south, and 8.46 meters (27.8 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Azimuth from station to water tank at Niagara is $325^{\circ}35'55''$, and to southeast corner of station house is $218^{\circ}01'$. Azimuth mark of station *Foch E* is standard reference disk in concrete, note 11a, just north of pecan grove, about 75 yards east of railway, 93 feet northeast of southeast corner and 100 feet southeast of northeast corner of concrete platform on east side of large warehouse, 52 feet east of brick well casing, 11 feet north of sand road, and approximately one-half mile from station in azimuth $20^{\circ}56'04''$. Azimuth mark of station *Niagara C* is standard reference disk in concrete, note 11a, on top of high bank about 15 feet above rail, about 10 yards west of track, 9 feet west of edge of bank, 22 feet south of telephone pole, 38 feet southeast of triangular blaze on 8-inch oak tree, about 50 yards east of dirt road, about one-fourth mile north of railway station in Niagara, and approximately one-fourth mile from station in azimuth $226^{\circ}08'43''$. Station *Niagara B* (see description and geographic position thereof) is visible from ground in azimuth $226^{\circ}16'48''$.

Foch E (Moore County, C. L. Garner, 1918; 1933).—About 0.3 mile south of railway station at Niagara, on first curve of Seaboard Air Line Railway south of Niagara, at intersection of tangents to west rail from north and east rail from south, 35 feet (slope) east of east rail, at bottom of cut, 1 meter (3 feet) south of abandoned grade crossing, 23 feet west of telephone pole, and about 40 yards west of telephone pole no. 867. Surface mark was standard disk station mark in concrete, note 1a. It was not recovered in 1933. Underground mark is copper bolt in concrete, note 7b. It was found in good condition. Reference mark was standard reference disk in concrete, note 11c, about 25 meters (82 feet) east of east rail, in northwest corner of vineyard, about 0.5 meter (2 feet) from corner post, and 25.30 meters (83.0 feet) from station in azimuth $295^{\circ}24'$. Mark was not recovered in 1933. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, just north of pecan grove, about 75 yards east of railway, 93 feet northeast of southeast corner and 100 feet southeast of northeast corner of concrete floor or platform on east side of large warehouse which is located between sand-gravel highway which runs from route 1 at Niagara and railway, 52 feet east of brick well casing, 11 feet north of sand road, and approximately 250 yards from station in azimuth $24^{\circ}16'20''$. Azimuth from station to water tank at Southern Pines is $34^{\circ}04'41''$; and to tip of red-roofed wooden water tank at Niagara, distant approximately one-half mile, is $209^{\circ}41'17''$.

Foch D (Moore County, C. L. Garner, 1918; 1919).—About 1 mile north of railway station at Southern Pines on curve of Seaboard Air Line Railway opposite milepost 224, on prolongation of tangent to east rail from north, about 75 meters (246 feet) south of point of tangency, and 6.84 meters (22.4 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, on opposite side of track, about 3 meters (10 feet) north of telephone pole, 17.29 meters (56.7 feet) west of west rail, and 20.03 meters (65.7 feet) from station in azimuth $162^{\circ}49'$. Station was not recovered in 1933; believed to have been destroyed by addition of another track.

Foch C (Moore County, C. L. Garner, 1918; 1933).—About three-fourths mile north of Southern Pines, on second curve of Seaboard Air Line Railway north of Southern Pines, on prolongation of tangent to west rail from south, about 100 meters (328 feet) from point of tangency, in ditch about 1 meter (3 feet) below rail, and 8.53 meters (28.1 feet) east of east rail. Marked by 2- by 4-inch stake in block of concrete which was recovered in 1933 about 2 feet below surface of ground. Exact center of station has been destroyed. There are no reference marks. Station *Foch B* (see description and geographic position thereof) is visible from ground in azimuth $80^{\circ}07'01''$.

Foch B (Moore County, C. L. Garner, 1918; 1933).—About one-half mile north of railway station at Southern Pines, at intersection of west rail tangents of first curve of Seaboard Air Line Railway north of Southern Pines, on top of high cut, about 25 yards east of highway to Pinehurst, and 55 feet west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 50 meters (164 feet) west of west rail, 1 meter (3 feet) west of west edge of road, and 23.68 meters (77.7 feet) from station in azimuth $137^{\circ}47'$. Azimuth mark, established in 1933, is standard reference disk, note 11c, in south sidewalk of New Avenue in Southern Pines, 22.3 feet east of east rail of main track, 44.5 feet east of milepost 225, 83.7 feet south of station *Foch A*, and approximately one-half mile from station in azimuth $52^{\circ}43'26''$. Station *Foch A* (see description and geographic position thereof) is visible from ground in azimuth $53^{\circ}20'44''$. Station *Foch C* (see description and geographic position thereof) is visible from ground in azimuth $260^{\circ}06'51''$. Azimuth from station to railway semaphore at Southern Pines is $53^{\circ}31'48''$.

Foch A (Moore County, C. L. Garner, 1918; 1933).—On right-of-way of Seaboard Air Line Railway, 48.9 feet south of south corner of passenger station at Southern Pines, 69.8 feet north of milepost 225, and 4.6 feet west of west rail of main track. Surface mark is standard disk station mark in concrete, note 1a. When recovered in 1933, it was covered with about 6 inches of limestone and gravel ballast. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard bench-mark disk (U 10) in brick wall, and 28.46 meters (93.4 feet) from station in azimuth $142^{\circ}27'$. Mark was not recovered in 1933. Station *Foch B* (see description and geographic position thereof) is visible from ground in azimuth $233^{\circ}20'28''$. Station *Quentin E* (see description and geographic position thereof) is visible from ground in azimuth $53^{\circ}10'24''$.

For notes in regard to marking of stations see p. 135.

Quentin E (Moore County, C. L. Garner, 1918; 1933).—About one-half mile south of railway station at Southern Pines, on first curve of Seaboard Air Line Railway south of milepost 225, at intersection of tangents to east rail from south and west rail from north, on bank about 2 meters (7 feet) above rail, and 16.93 meters (55.5 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 11.7 meters (38 feet) east of east rail, and 30.42 meters (99.8 feet) from station in azimuth $297^{\circ}56'$. Azimuth mark of station *Foch B* is standard reference disk, note 11c, in concrete sidewalk, approximately one-half mile from station in azimuth $233^{\circ}46'29''$. Azimuth from station to Congregational Church steeple at Southern Pines is $224^{\circ}10'57''$; and to wooden water tank at Pine Crest Manor, distant about 1 mile along railway, is $22^{\circ}32'08''$. Station *Foch A* (see description and geographic position thereof) is visible from ground in azimuth $233^{\circ}10'07''$. Station *Quentin D* (see description and geographic position thereof) is visible from ground in azimuth $25^{\circ}46'56''$.

Quentin D (Moore County, C. L. Garner, 1918; 1933).—About 1 mile south of Seaboard Air Line Railway station at Southern Pines, on prolongation of tangent to east rail from north on second curve south of railway station, about 150 meters (492 feet) south of point of tangency, on bank of railway cut, about 3 meters (10 feet) above rail, 4 meters (13 feet) from edge of cut, one-half meter (2 feet) west of line of telegraph poles, and 17 meters (56 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Azimuth mark of station *Quentin B* is standard reference disk in concrete, note 11a, on bank of cut, 49.9 feet west of west rail, 7 feet east of fence line, 55 feet southwest of telephone pole, and one-fourth mile from station in azimuth $55^{\circ}06'07''$. Station *Quentin E* (see description and geographic position thereof) is visible from ground in azimuth $205^{\circ}46'45''$.

Quentin C (Moore County, C. L. Garner, 1918).—About $1\frac{1}{2}$ miles south of railway station at Southern Pines, about 80 meters (262 feet) north of signboard marked "Southern Pines", about 750 meters (2,461 feet) north of milepost 227 of Seaboard Air Line Railway on third curve north of Aberdeen, 15.27 meters (50.1 feet) west of west rail, and about 4.5 meters (15 feet) above track. Marked by 2- by 4-inch stake in concrete which was found lying on ground in 1933. Reference mark is standard bench-mark disk in concrete (S 10), and about 250 meters (820 feet) from station in azimuth $29^{\circ}39'36''$.

Quentin B (Moore County, C. L. Garner, 1918; 1933).—About $1\frac{1}{2}$ miles south of railway station at Southern Pines, about 500 meters (1,640 feet) north of milepost 227 of Seaboard Air Line Railway, 175 meters (574 feet) south of signboard marked "Southern Pines", on prolongation of tangent to east rail, at south end of third curve north of Aberdeen, and 10.755 meters (35.29 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard bench-mark disk in concrete (S 10), and 11.967 meters (39.26 feet) from station in azimuth $190^{\circ}40'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, on bank of cut, 49.9 feet west of west rail, 7 feet east of fence line, 55 feet southwest of telephone pole, and approximately 300 yards from station in azimuth $237^{\circ}20'52''$.

Quentin A (Moore County, C. L. Garner, 1918).—At north end of second curve of Seaboard Air Line Railway north of railway station at Aberdeen, about 175 meters (574 feet) south of milepost 227, on prolongation of tangent to east rail, and 4.415 meters (14.48 feet) east of east rail. Marked by 2- by 4-inch stake in block of concrete which was found lying on ground in 1933. There were no reference marks.

Quentin (Moore County, C. L. Garner, 1918; 1933).—About $1\frac{1}{2}$ miles north of railway station at Aberdeen, on right-of-way of Seaboard Air Line Railway, about 200 meters (656 feet) from point of tangency on prolongation of tangent to west rail from south, at first curve north of milepost 227 and first curve north of Aberdeen, about 170 yards north of block signal no. 227.2, about 200 yards south of grade crossing, 34.5 feet east of east rail, 15 feet west of center line of sand road, 40 feet north of telephone pole, and 73 feet west of telephone pole no. 1089. To reach from railway station at Aberdeen, go north 1.4 miles on route 1, turn right onto road leading through concrete entrance way, continue 0.35 mile to railroad track, cross track, turn right, and follow sand road along east side of track about 200 yards to station site. Surface mark is standard disk sta-

For notes in regard to marking of stations see p. 135.

tion mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, on edge of cut on opposite side of track from station, 11.29 meters (37.0 feet) west of west rail, and 23.40 meters (76.8 feet) from station in azimuth $128^{\circ}14'$. Mark was not recovered in 1933. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 120 yards south of block signal no. 227.2, 32.3 feet east of east rail, 17 feet west of center line of sand road, 33 feet south of telephone pole, 134 feet west of telephone pole no. 1095, across road from white frame house, and approximately 290 yards from station in azimuth $37^{\circ}55'20''$. Azimuth from station to railway water tank at Aberdeen is $40^{\circ}30'58''$.

Aberdeen (Moore County, C. L. Garner, 1918; 1933).—About 0.2 mile north of railway passenger station at Aberdeen, in center of street which parallels west side of tracks of Seaboard Air Line Railway, on prolongation of tangent to west rail from south, about 200 meters (656 feet) north of point of tangency, 48.3 feet west of west rail, and 37.6 feet south of telephone pole. Surface mark is standard disk station mark in concrete, note 1a, about 8 inches under surface of dirt street. Underground mark is glass bottle in concrete, note 7d. Reference mark is standard reference disk in concrete, note 11c, 65.1 feet west of west rail, 7 feet northeast of northeast corner of garage, and 54.83 feet from station in azimuth $54^{\circ}15'$. Azimuth mark, established in 1933, is standard reference disk in concrete, note 11a, about 110 yards north of railway station, in line with north side of United States post-office building, 49.5 feet east of northeast corner of this building, 43.3 feet west of west rail of main track, 80.4 feet north of telephone pole, and approximately 250 yards from station in azimuth $32^{\circ}31'58''$. Azimuth from station to semaphore is $30^{\circ}27'53''$; and to center of water tank, about 40 yards distant, is $229^{\circ}34'$.

Griffin (Moore County, C. L. Garner, 1918).—About 1 mile south of Aberdeen, on first curve of Seaboard Air Line Railway south of Aberdeen and first curve south of milepost 230, at intersection of tangents to west rail, and 8.78 meters (28.8 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was glass bottle in concrete, note 7d. Reference mark was standard reference disk in concrete, note 11c, on top of bank of small cut, 8.44 meters (27.7 feet) west of west rail, and 34.31 meters (112.6 feet) from station in azimuth $184^{\circ}18'$. In 1933, station reported destroyed; mark found lying on ground.

Pond A (Moore County, C. L. Garner, 1918; 1933).—About one-fourth mile north of Pinebluff, about 150 meters (492 feet) from point of tangency of second curve of Seaboard Air Line Railway north of Pinebluff and first curve north of milepost 231, on prolongation of tangent to west rail from north, about 30 meters (98 feet) from edge of pond, and 25.0 meters (82 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is glass bottle in concrete, note 7d. Reference mark is standard reference disk in concrete, note 11c, about 8 meters (26 feet) east of east rail, on top of bank near deep cut, and 33.07 meters (108.5 feet) from station in azimuth $307^{\circ}31'$. Station *Pond* (see description and geographic position thereof) is visible from ground in azimuth $320^{\circ}41'04''$. Station *Keyser A* (see description and geographic position thereof) is visible from ground in azimuth $24^{\circ}58'59''$.

Keyser A (Moore County, C. L. Garner, 1918; 1933).—About 200 meters (656 feet) north of Pinebluff, about 150 meters (492 feet) from point of tangency of first curve of Seaboard Air Line Railway north of Pinebluff and first curve north of milepost 232, on prolongation of tangent to west rail from south, about 20 meters (66 feet) from edge of pond, and 12.8 meters (42 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is glass bottle in concrete, note 7d. Reference mark is standard reference disk in concrete, note 11c, 10.6 meters (35 feet) east of east rail, about 3 meters (10 feet) south of telephone pole, and 25.10 meters (82.3 feet) from station in azimuth $274^{\circ}40'$. Station *Pond A* (see description and geographic position thereof) is visible from ground in azimuth $204^{\circ}58'55''$. Station *Keyser* (see description and geographic position thereof) is visible from ground in azimuth $5^{\circ}13'31''$.

Keyser (Moore County, C. L. Garner, 1918; 1933).—About one-half mile north of Keyser, on first curve of Seaboard Air Line Railway north of Keyser and first curve north of milepost 233, at intersection of tangents to east rail from south and west rail from north, and 16.12 meters (52.9 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Under-

ground mark is glass bottle in concrete, note 7d. Reference mark is standard reference disk in concrete, note 11c, about 10.64 meters (34.9 feet) west of west rail, and 36.15 meters (118.6 feet) from station in azimuth $70^{\circ}08'$. Azimuth from station to railway water tank at Keyser is $31^{\circ}45'02''$; and to semaphore signal is $32^{\circ}26'50''$. Station *Keyser A* (see description and geographic position thereof) is visible from ground in azimuth $185^{\circ}13'28''$.

Pond (Moore County, C. L. Garner, 1918; 1933).—About one-fourth mile north of Pinebluff, on side of hill east of first curve of Seaboard Air Line Railway north of Pinebluff and first curve south of milepost 231, about 200 meters (656 feet) east of east rail, and about 20 meters (66 feet) from edge of cultivated field. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is glass bottle in concrete, note 7d. Reference mark is standard reference disk in concrete, note 11c, in cultivated field on same side of hill as station, about 125 meters (410 feet) east of east rail, and 29.95 meters (98.3 feet) from station in azimuth $122^{\circ}57'$. Station *Pond A* (see description and geographic position thereof) is visible from ground in azimuth $140^{\circ}41'06''$.

Erie (Moore County, C. L. Garner, 1918; 1933).—About 1 mile south of Keyser, on first curve of Seaboard Air Line Railway south of Keyser, at intersection of tangents to east rail from north and west rail from south, and 1.18 meters (3.9 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is glass bottle in concrete, note 7d. Reference mark is standard reference disk in concrete, note 11c, 10.34 meters (33.9 feet) west of west rail, about 5 meters (16 feet) east of 10-inch oak tree, and 31.85 meters (104.5 feet) from station in azimuth $190^{\circ}01'$. Station *Ralle* (see description and geographic position thereof) is visible from ground in azimuth $39^{\circ}27'09''$.

Ralle (Moore County, C. L. Garner, 1918; 1933).—About $1\frac{1}{2}$ miles south of Keyser, on second curve of Seaboard Air Line Railway south of Keyser and first curve south of milepost 235, at intersection of tangents to west rail, and about 5.00 meters (16.4 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is glass bottle in concrete, note 7d. Reference mark is standard reference disk in concrete, note 11c, 30 meters (98 feet) east of east rail, about 2.0 meters (7 feet) south of telegraph pole, and 22.70 meters (74.5 feet) from station in azimuth $199^{\circ}19'$. Station *Erie* (see description and geographic position thereof) is visible from ground in azimuth $219^{\circ}26'52''$. Station *Alexander* (see description and geographic position thereof) is visible from ground in azimuth $87^{\circ}14'24''$.

Alexander (Richmond County, C. L. Garner, 1918; 1933).—About 3 miles north of Hoffman, on first curve of Seaboard Air Line Railway north of milepost 236, at intersection of tangents to east rail from south and west rail from north, and 9.87 meters (32.4 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Mark was not recovered in 1933. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 10.33 meters (33.9 feet) east of east rail, and 22.34 meters (73.3 feet) from station in azimuth $335^{\circ}08'$. Station *Ralle* (see description and geographic position thereof) is visible from ground in azimuth $267^{\circ}14'07''$.

Richmond (Moore County, C. L. Garner, 1918).—About $2\frac{1}{4}$ miles north of Hoffman, on right-of-way of Seaboard Air Line Railway, on curve opposite and about 200 meters (656 feet) south of milepost 236, at intersection of tangents to east rail from north and west rail from south, and 35.0 meters (115 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Station was carefully searched for in 1933, but not recovered.

Carr A (Richmond County, C. L. Garner, 1918; 1933).—About $2\frac{1}{4}$ miles north of Hoffman, on third curve of Seaboard Air Line Railway north of Hoffman and second curve north of milepost 237, at intersection of tangents to west rail, and 17.5 meters (57 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b.

Hoffman A (Richmond County, C. L. Garner, 1918; 1933).—About 2 miles north of Hoffman, on second curve of Seaboard Air Line Railway north of Hoffman and first curve north of milepost 237, at intersection of tangents to west rail, about 250 meters (820 feet) north of milepost 237, and 4.16 meters (13.6 feet) east of east rail. Surface mark is standard disk station mark in concrete note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, on edge of west side of cut,

9.92 meters (32.5 feet) west of west rail, and 15.35 meters (50.4 feet) from station in azimuth $156^{\circ}42'$. Station *Hoffman* (see description and geographic position thereof) is visible from ground in azimuth $73^{\circ}28'52''$. Station *Carr* (see description and geographic position thereof) is visible from ground in azimuth $251^{\circ}51'59''$.

Hamlet F (Richmond County, C. L. Garner, 1918).—About $1\frac{1}{4}$ miles north of railway station at Hamlet, on prolongation of southward tangent to west rail of Seaboard Air Line Railway, 6 meters (20 feet) south of point of tangency, 5 telephone poles north of milepost 252, and 4.59 meters (15.1 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 8.92 meters (29.3 feet) from rail, and 13.76 meters (45.1 feet) from station. Station was not recovered in 1933.

Hamlet E (Richmond County, C. L. Garner, 1918).—About 0.7 mile north of railway station at Hamlet, on prolongation of northward tangent to west rail of Seaboard Air Line Railway, 300 meters (984 feet) north of railway coal elevator in yards, at second sidetrack east of ice plant, 1.31 meters (4.3 feet) east of east rail, and 1.44 meters (4.7 feet) east of main-line rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Station was not recovered in 1933.

Hamlet D (Richmond County, C. L. Garner, 1918).—In Hamlet, at intersection of east curb line of Raleigh Street and south curb line of last east-and-west cross street, at corner of picket fence, and about 200 meters (656 feet) south of ice plant. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Station was not recovered in 1933.

Hamlet C (Richmond County, C. L. Garner, 1918).—In Hamlet, about 1.5 meters (5 feet) south of south rail of main track of Seaboard Air Line Railway (Wilmington-Charlotte division), and on line with east curb of Raleigh Street. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Station was not recovered in 1933.

Hamlet B (Richmond County, C. L. Garner, 1918).—About 15 meters (49 feet) east of railway station at Hamlet, near crossing of Savannah-Norfolk and Wilmington-Charlotte divisions of Seaboard Air Line Railway, 1.859 meters (6.10 feet) west of west rail, and 1.5 meters (5 feet) south of south rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 2.286 meters (7.50 feet) from station. Station was not recovered in 1933.

Hamlet A (Richmond County, C. L. Garner, 1918).—About 400 meters (1,312 feet) south of railway station at Hamlet, 6.401 meters (21.00 feet) east of east rail of Seaboard Air Line Railway, on cut opposite elevated switch light, and 1 telephone pole north of milepost 253. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 9.098 meters (29.85 feet) from east rail, and 12.527 meters (41.10 feet) from station in azimuth $44^{\circ}56'$. Azimuth from station to flagstaff on Seaboard Hotel was $228^{\circ}11'03''$. Station was not recovered in 1933.

Light I (Richmond County, C. L. Garner, 1918).—About $1\frac{1}{4}$ miles south of Hamlet, 3 telegraph poles north of milepost 255 of Seaboard Air Line Railway, about 50 meters (164 feet) north of point of tangency, 5.85 meters (19.2 feet) west of west rail, and about 5 feet from edge of bank of cut. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, in azimuth $4^{\circ}01'$ from station. Station was not recovered in 1933.

Light J (Richmond County, C. L. Garner, 1918).—About $1\frac{1}{4}$ miles south of Hamlet. Marked by 2- by 4-inch stake in mass of concrete between tracks of Seaboard Air Line Railway, flush with grade.

Light H (Richmond County, C. L. Garner, 1918; 1933).—About $1\frac{1}{4}$ miles south of railway station at Hamlet, on first cut on Seaboard Air Line Railway south of railway station, about one-half mile south of railway crossing, about 30 meters (98 feet) north of block signal, and 6.08 meters (19.9 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 62.30 meters (204.4 feet) from rail, and 16.73

meters (54.9 feet) from station in azimuth $224^{\circ}13'$. Station *Light G* (see description and geographic position thereof) is visible from ground in azimuth $43^{\circ}42'01''$.

Light G (Richmond County, C. L. Garner, 1918; 1933).—About 3 miles south of railway station at Hamlet, about 50 meters (164 feet) south of milepost 257 of Seaboard Air Line Railway, at intersection of tangents to west rail to south and east rail to north, and 15.61 meters (51.2 feet) from rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 24.31 meters (79.8 feet) from rail, and 23.28 meters (76.4 feet) from station in azimuth $255^{\circ}47'$. Station *Light H* (see description and geographic position thereof) is visible from ground in azimuth $223^{\circ}41'26''$.

Light F (Richmond County, C. L. Garner, 1918).—About 3 miles south of railway station at Hamlet, 7 telegraph poles south of milepost 257 of Seaboard Air Line Railway, in deep cut, and 0.380 meter (1.25 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Station was not recovered in 1933.

Light D (Richmond County, C. L. Garner, 1918; 1933).—About $3\frac{1}{2}$ miles north of railway station at Osborne, 11 telegraph poles south of milepost 257 of Seaboard Air Line Railway, in deep cut, and 1.95 meters (6.4 feet) south of south rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Station *Light C* (see description and geographic position thereof) is visible from ground in azimuth $46^{\circ}58'33''$.

Light C (Richmond County, C. L. Garner, 1918; 1933).—About $3\frac{1}{2}$ miles north of railway station at Osborne, 14 telephone poles south of milepost 257 of Seaboard Air Line Railway, on prolongation to northward of tangent to east rail, 125 meters (410 feet) north of point of tangency, and 34.06 meters (111.7 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 9.153 meters (30.03 feet) from rail, and 75.90 meters (249.0 feet) from station in azimuth $1^{\circ}21'$. Station *Light D* (see description and geographic position thereof) is visible from ground in azimuth $226^{\circ}55'30''$.

Light E (Richmond County, C. L. Garner, 1918).—About 3 miles south of railway station at Hamlet, 7 telegraph poles south of milepost 257 of Seaboard Air Line Railway, on bank of deep cut, about 7.00 meters (23.0 feet) above station *Light F*, and 12.93 meters (42.4 feet) from rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Station was not recovered in 1933.

Light B (Richmond County, C. L. Garner, 1918).—At north end of first curve of Seaboard Air Line Railway south of milepost 258, on prolongation of tangent to east rail, 100 meters (328 feet) south of point of tangency, and 9.80 meters (32.2 feet) east of east rail. Marked by 2- by 4-inch stake in mass of concrete.

Light A (Richmond County, C. L. Garner, 1918; 1933).—At south end of first curve of Seaboard Air Line Railway south of milepost 258, on prolongation of tangent to west rail, about 150 meters (492 feet) north of point of tangency, and 14.95 meters (49.0 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, on bank about 10 meters (33 feet) above rail, 20 meters (66 feet) east of rail, and 16.17 meters (53.1 feet) from station in azimuth $233^{\circ}53'$. Station *Light* (see description and geographic position thereof) is visible from ground in azimuth $52^{\circ}52'29''$.

Osborne I (Richmond County, C. L. Garner, 1918).—About one-half mile south of milepost 258 of Seaboard Air Line Railway, 250 meters (820 feet) northeast of station *Osborne H*, and about 25 meters (82 feet) south of spring in big cut. Marked by file mark on west rail.

Osborne H (Richmond County, C. L. Garner, 1918).—About $2\frac{1}{4}$ miles north of railway station at Osborne, 10 telegraph poles from milepost 259 of Seaboard Air Line Railway, on prolongation of tangent to west rail from north, 25 meters (82 feet) south of point of tangency, and 0.35 meter (1.1 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Station was not recovered in 1933.

Osborne G (Richmond County, C. L. Garner, 1918).—About 2 miles north of railway station at Osborne, 5 telephone poles northwest of milepost 259 of Seaboard Air Line Railway, on prolongation of tangent to east rail to north, 100 meters (328 feet) northwest of point of tangency, and 5.22 meters (17.1 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a.

Underground mark was copper bolt in concrete, note 7b. Station was not recovered in 1933.

Osborne F (Richmond County, C. L. Garner, 1918; 1933).—About $1\frac{1}{2}$ miles north of railway station at Osborne, 25 telephone poles north of milepost 260 of Seaboard Air Line Railway, at intersection of tangents to west rail to south and east rail to north, and 10.83 meters (35.5 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 7.75 meters (25.4 feet) from rail, and 20.58 meters (67.5 feet) from station in azimuth $29^{\circ}12'$. Station *Osborne D* (see description and geographic position thereof) is visible from ground in azimuth $26^{\circ}40'26''$.

Osborne E (Richmond County, C. L. Garner, 1918).—About 1 mile north of railway station at Osborne, 15 telegraph poles north of milepost 260 of Seaboard Air Line Railway, on prolongation of tangent to west rail to north, 60 meters (197 feet) north of point of tangency, and 2.70 meters (8.9 feet) west of west rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Station was not recovered in 1933.

Osborne D (Richmond County, C. L. Garner, 1918; 1933).—About three-fourths mile north of railway station at Osborne, 10 telegraph poles north of milepost 260 of Seaboard Air Line Railway, on prolongation of tangent to east rail to north, 125 meters (410 feet) north of point of tangency, and 12.28 meters (40.3 feet) west of west rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. Reference mark is standard reference disk in concrete, note 11c, 22.06 meters (72.4 feet) from rail, and 14.26 meters (46.8 feet) from station in azimuth $133^{\circ}49'$. Station *Osborne F* (see description and geographic position thereof) is visible from ground in azimuth $206^{\circ}40'19''$.

Osborne C (Richmond County, C. L. Garner, 1918).—About 500 meters (1,640 feet) north of railway station at Osborne, 3 telegraph poles north of milepost 260 of Seaboard Air Line Railway, on prolongation of tangent to west rail to south, 30 meters (98 feet) south of point of tangency, and 0.38 meter (1.2 feet) from rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Station was not recovered in 1933.

Osborne B (Richmond County, C. L. Garner, 1918).—About 300 meters (984 feet) north of railway station at Osborne, 1 telegraph pole south of milepost 260 of Seaboard Air Line Railway, 55 meters (180 feet) north of point of tangency on prolongation of tangent to east rail, and 3.26 meters (10.7 feet) east of east rail. Surface mark was standard disk station mark in concrete, note 1a. Underground mark was copper bolt in concrete, note 7b. Reference mark was standard reference disk in concrete, note 11c, 11.72 meters (38.5 feet) from rail, and 17.79 meters (58.4 feet) from station in azimuth $69^{\circ}04'$. Station was not recovered in 1933.

Osborne A (Marlboro County, S.C., C. L. Garner, 1918).—About one-half mile south of railway station at Osborne, 6 telephone poles north of milepost 261 of Seaboard Air Line Railway, 50 meters (164 feet) south of point of tangency of east rail, and 1.19 meters (3.9 feet) east of east rail. Surface mark is standard disk station mark in concrete, note 1a. Underground mark is copper bolt in concrete, note 7b. No reference mark.

For notes in regard to marking of stations see p. 135.



FIGURE 3.—Arcs included in the eastern adjustment and loop closures.

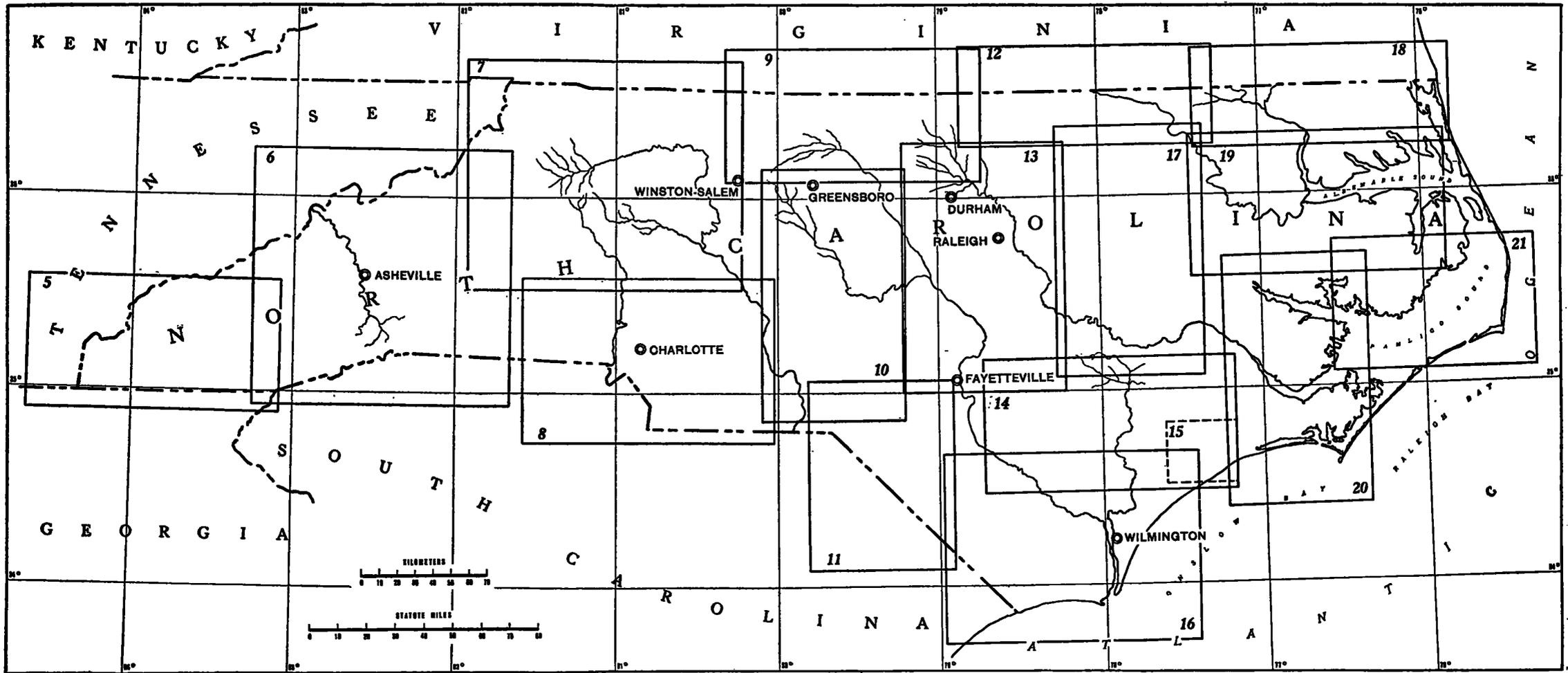


FIGURE 4.—Index map of North Carolina showing areas covered by each of the following sketches, figs. 5 to 21.

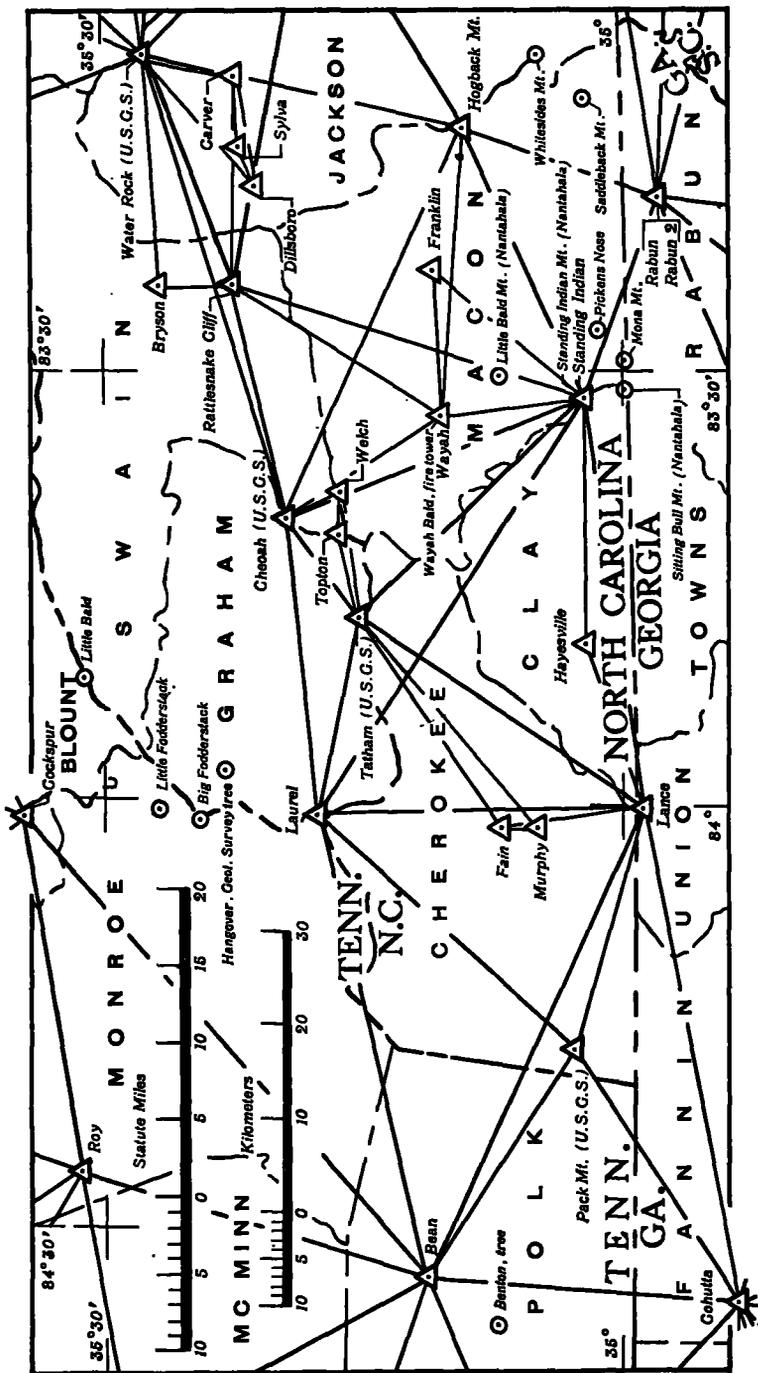


FIGURE 5.—First-order triangulation, Western North Carolina and Eastern Obitque arcs, west end of State.

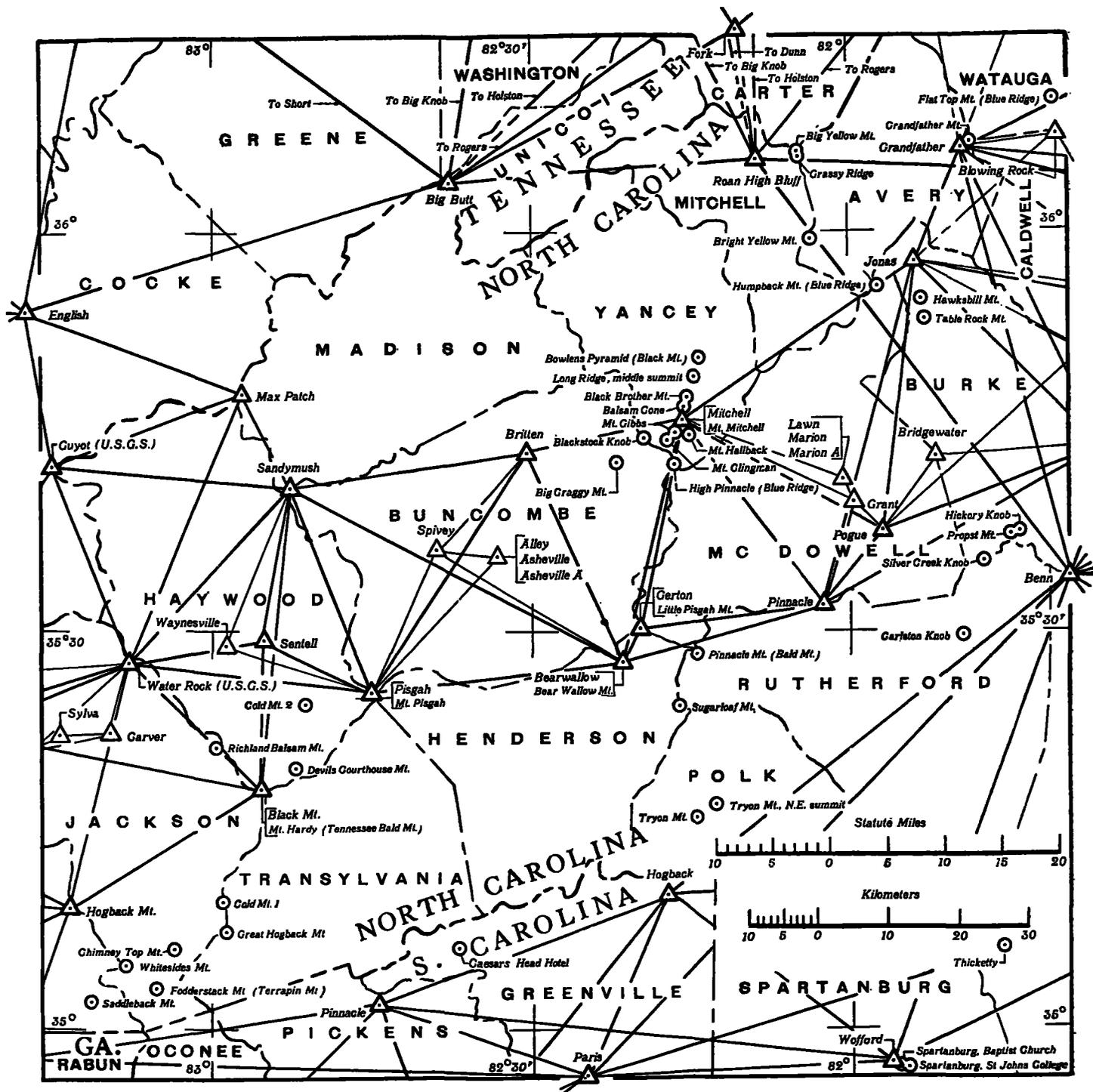


FIGURE 6.—First-order triangulation, Western North Carolina and Eastern Oblique arcs, area surrounding Asheville. 83050"—35. (Face p. 374.) No. 1

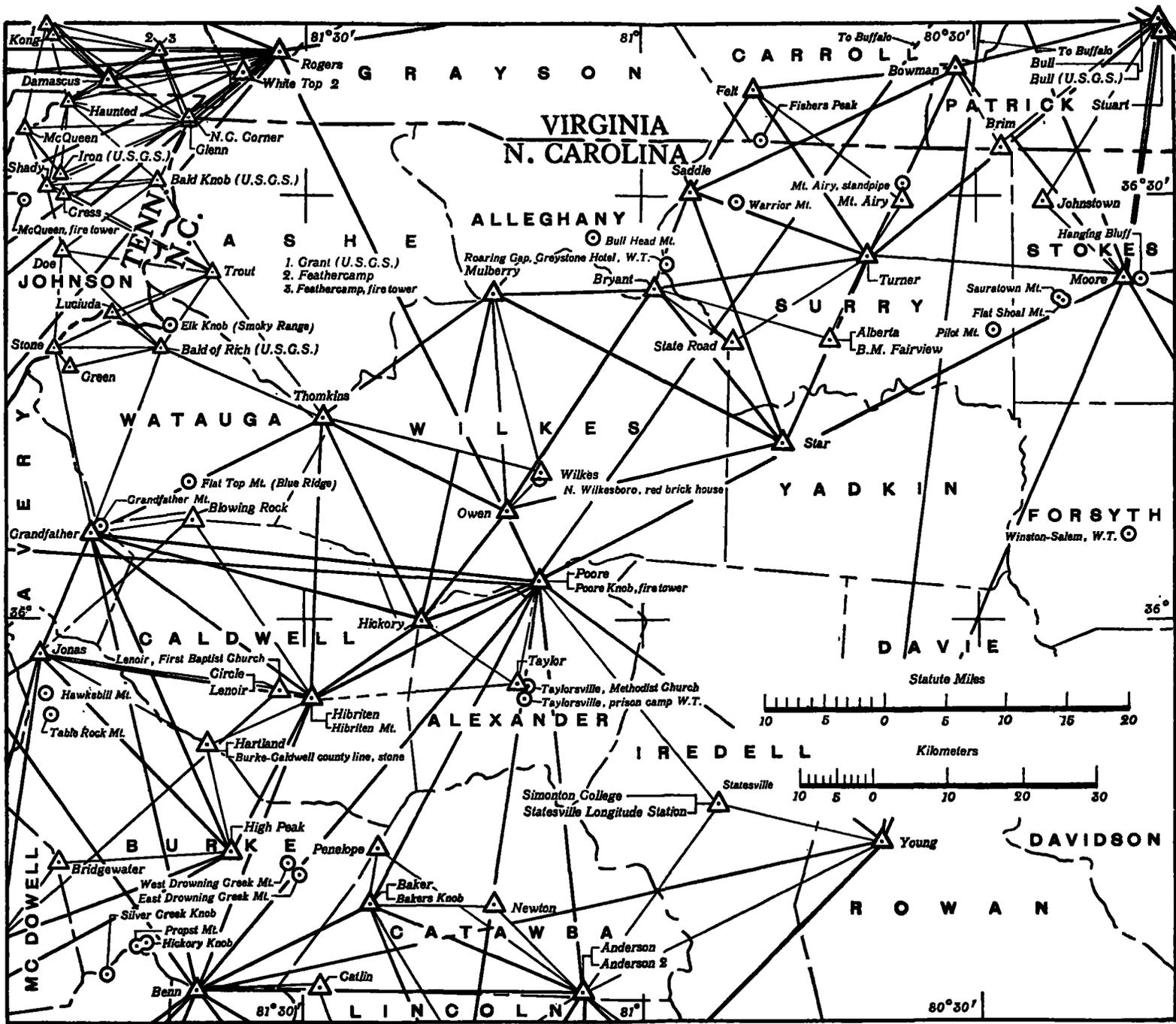


FIGURE 7.—First- and second-order triangulation, northwest corner of State.

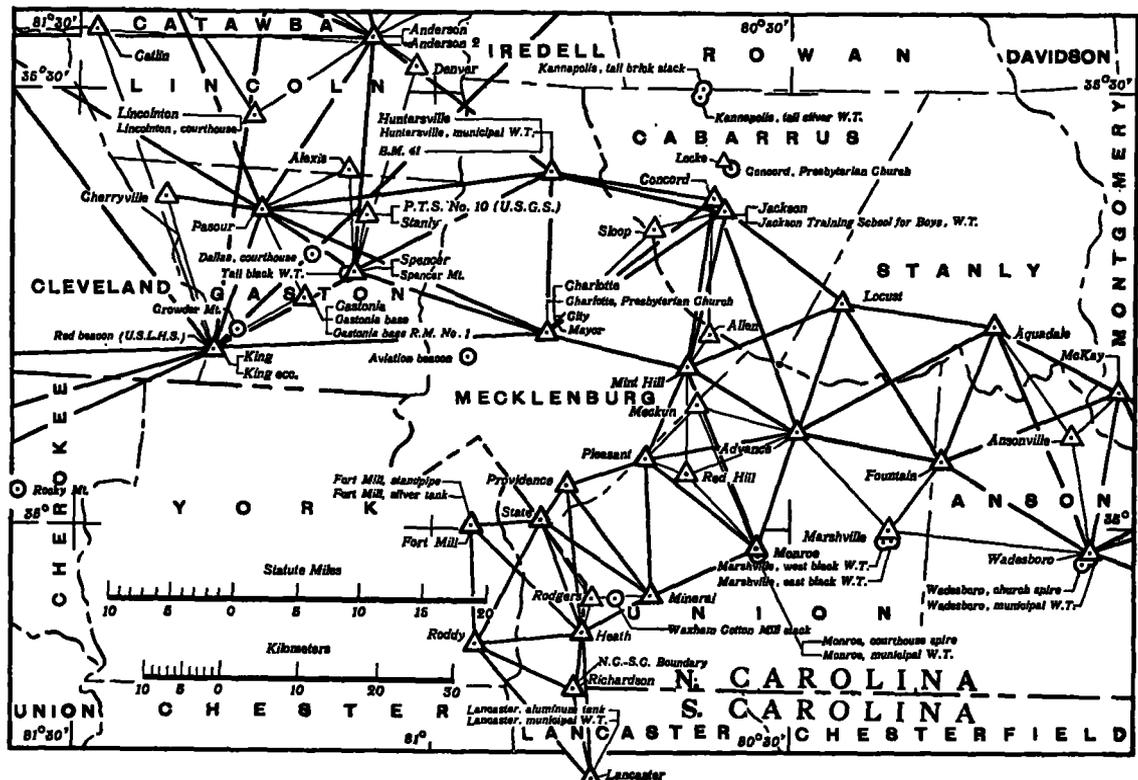


FIGURE 8.—First-order triangulation, near central part of South Carolina boundary.

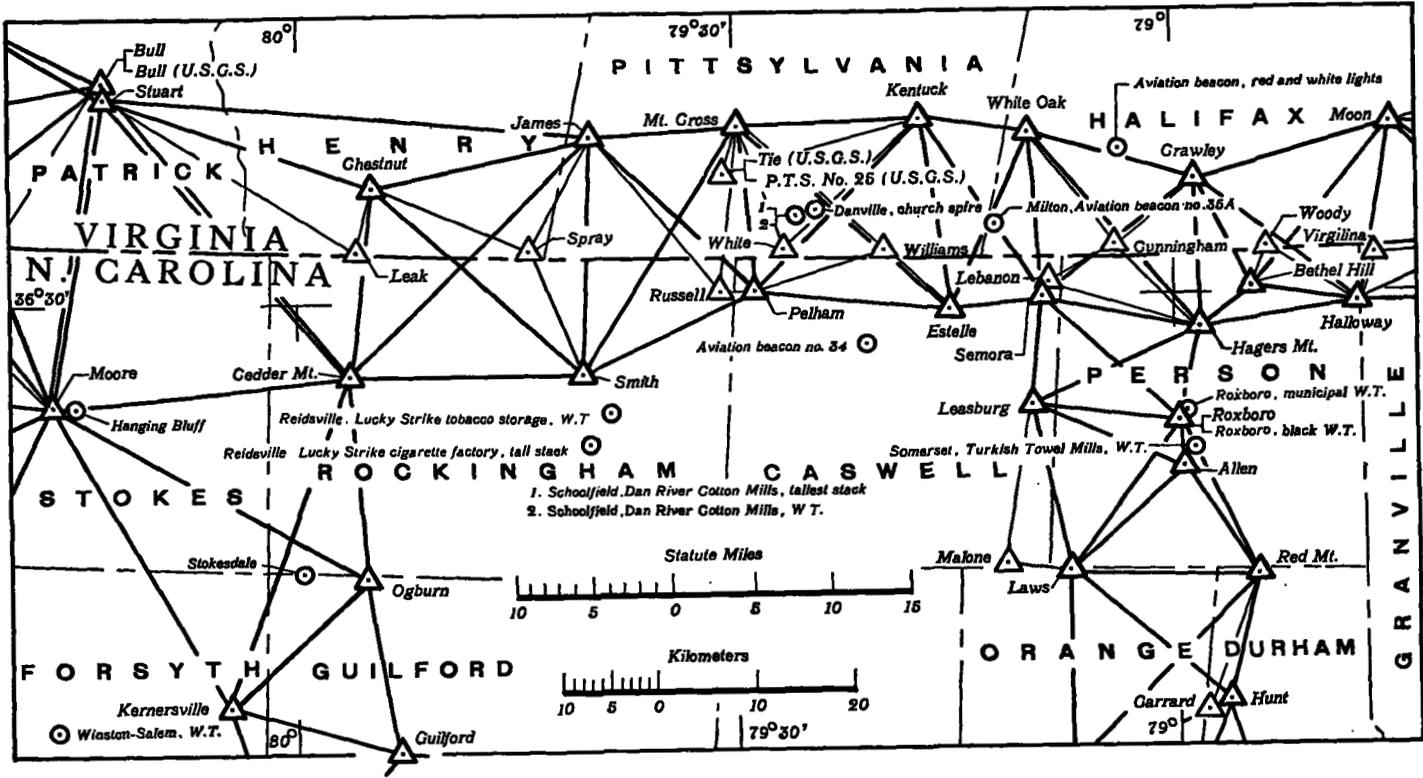


FIGURE 9.—First-order triangulation, west central part of Virginia boundary.

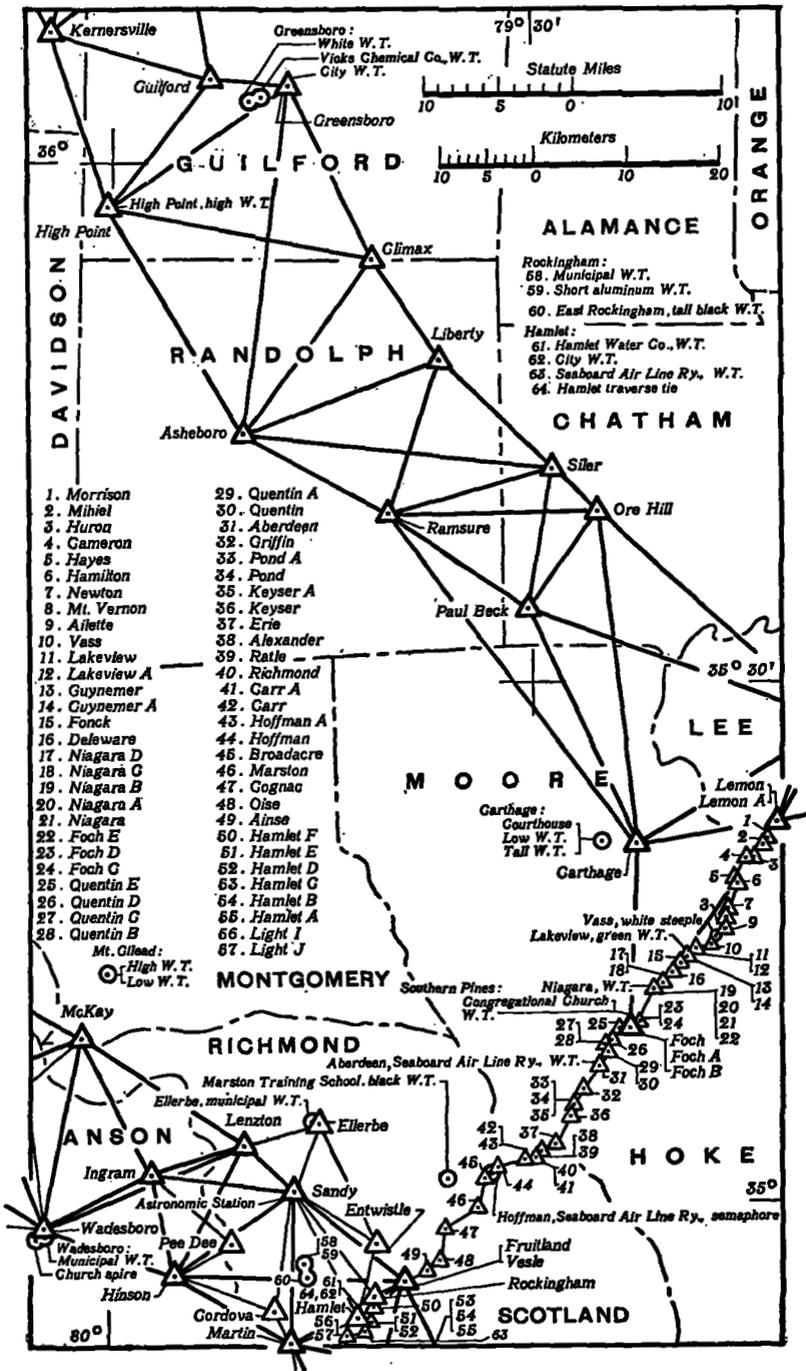


FIGURE 10.—First-order triangulation and traverse, Greensboro to South Carolina boundary arc.

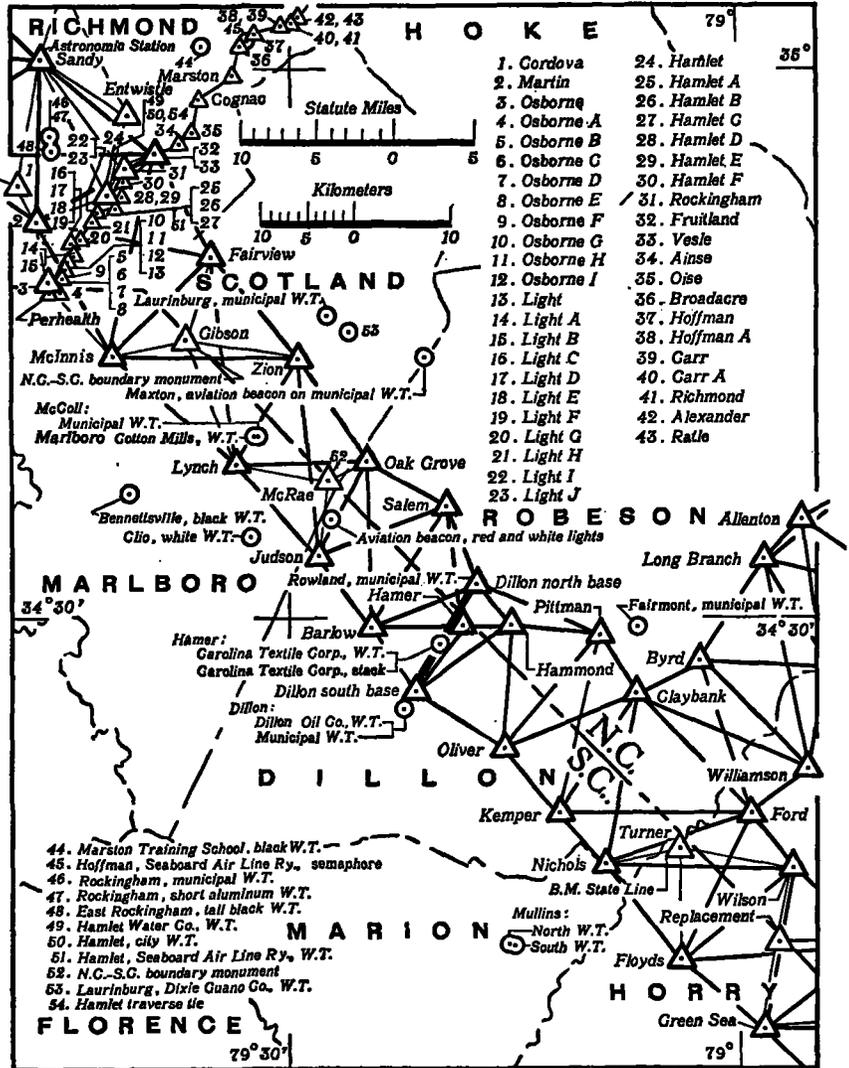


FIGURE 11.—First-order triangulation and traverse, near eastern end of South Carolina boundary.

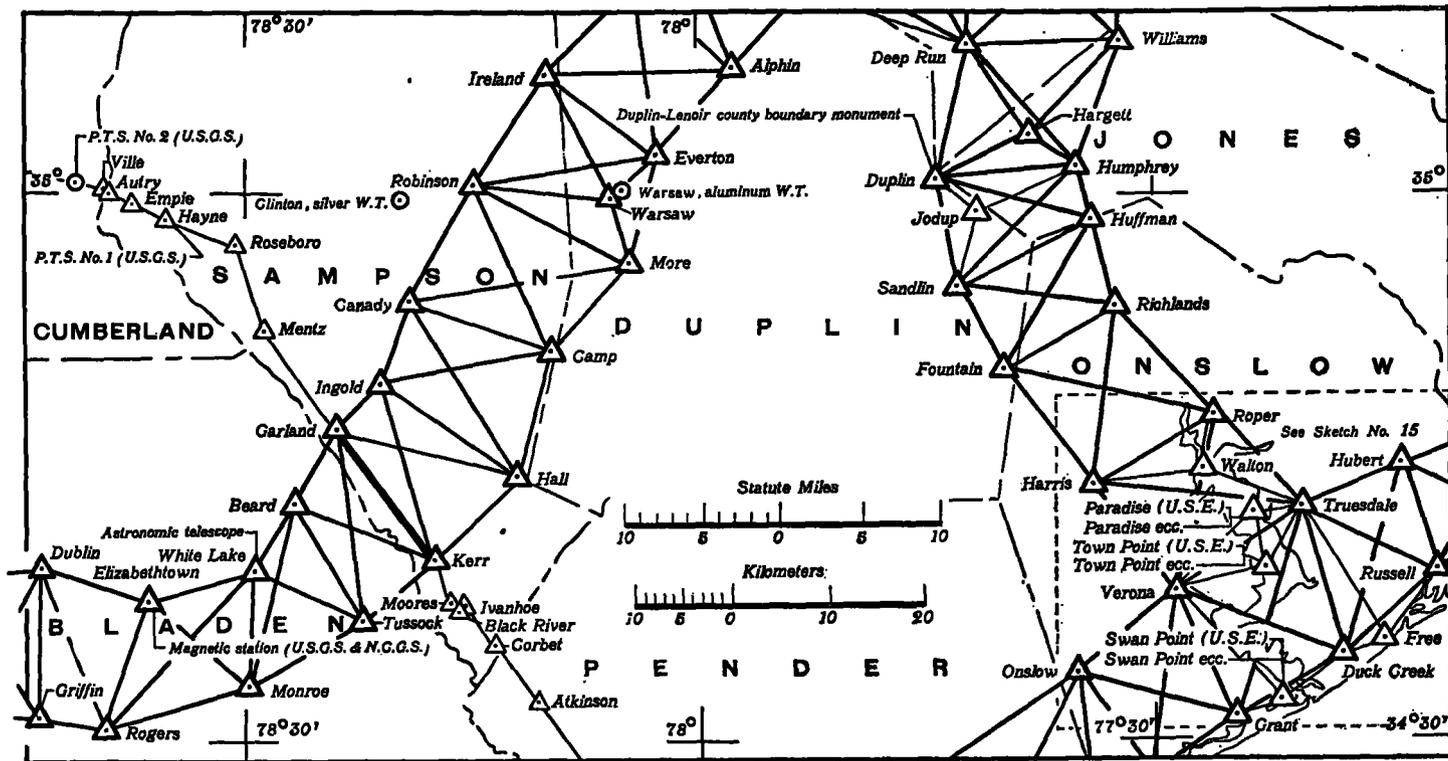


FIGURE 14.—First-order triangulation and traverse, Jacksonville westward.

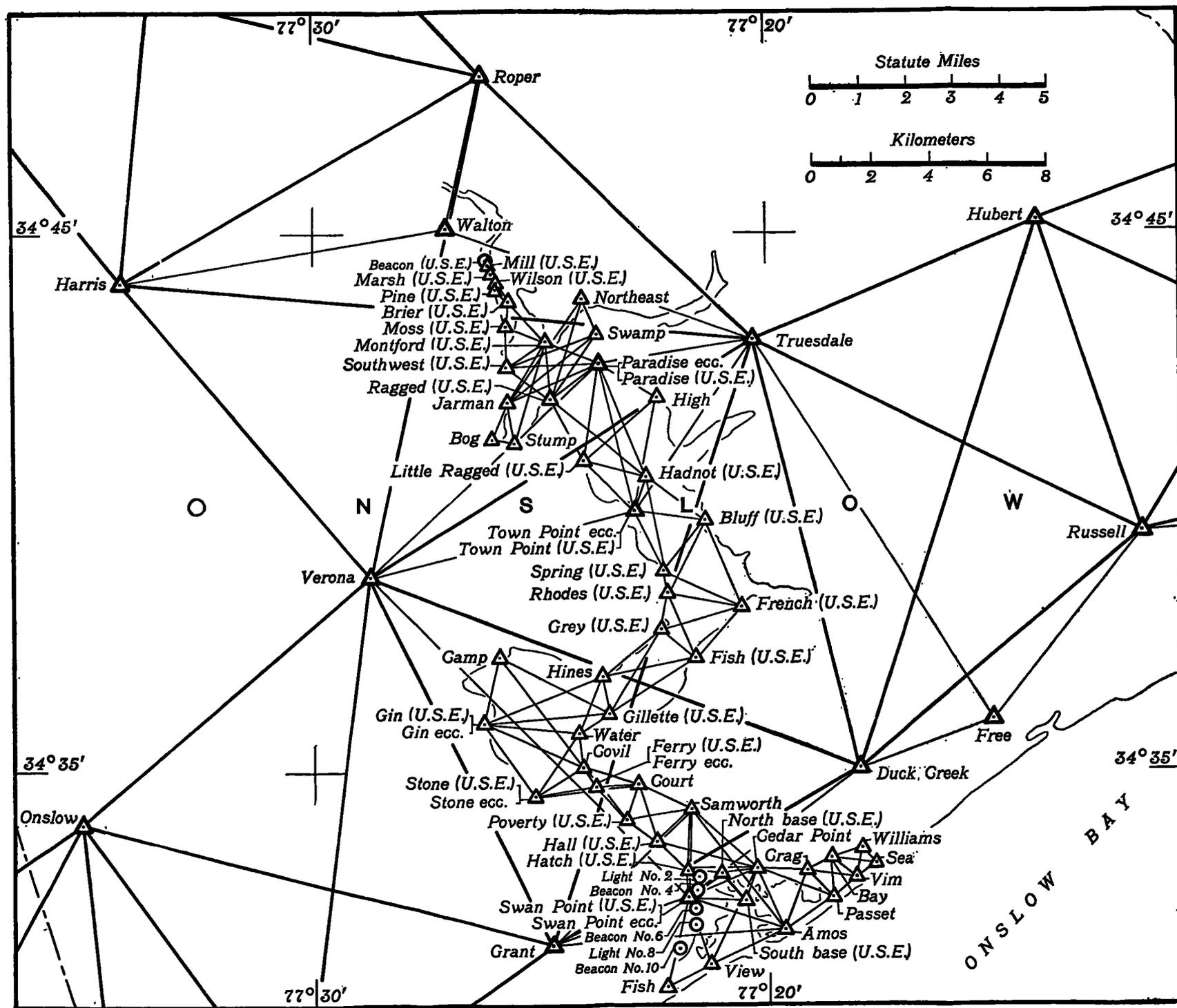


FIGURE 15.—First- and second-order triangulation, New River and vicinity (enlargement of part of fig. 14)

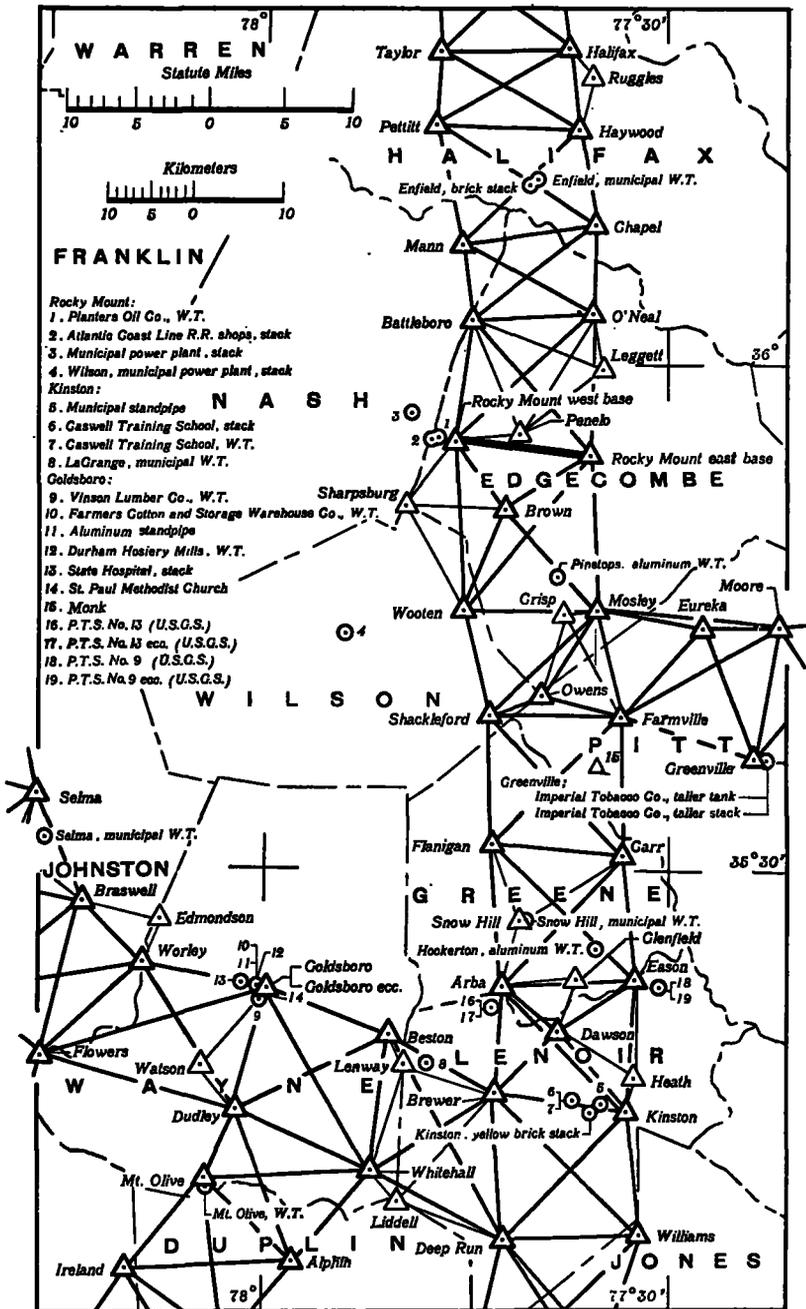


FIGURE 17.—First-order triangulation, Neuse River northward.

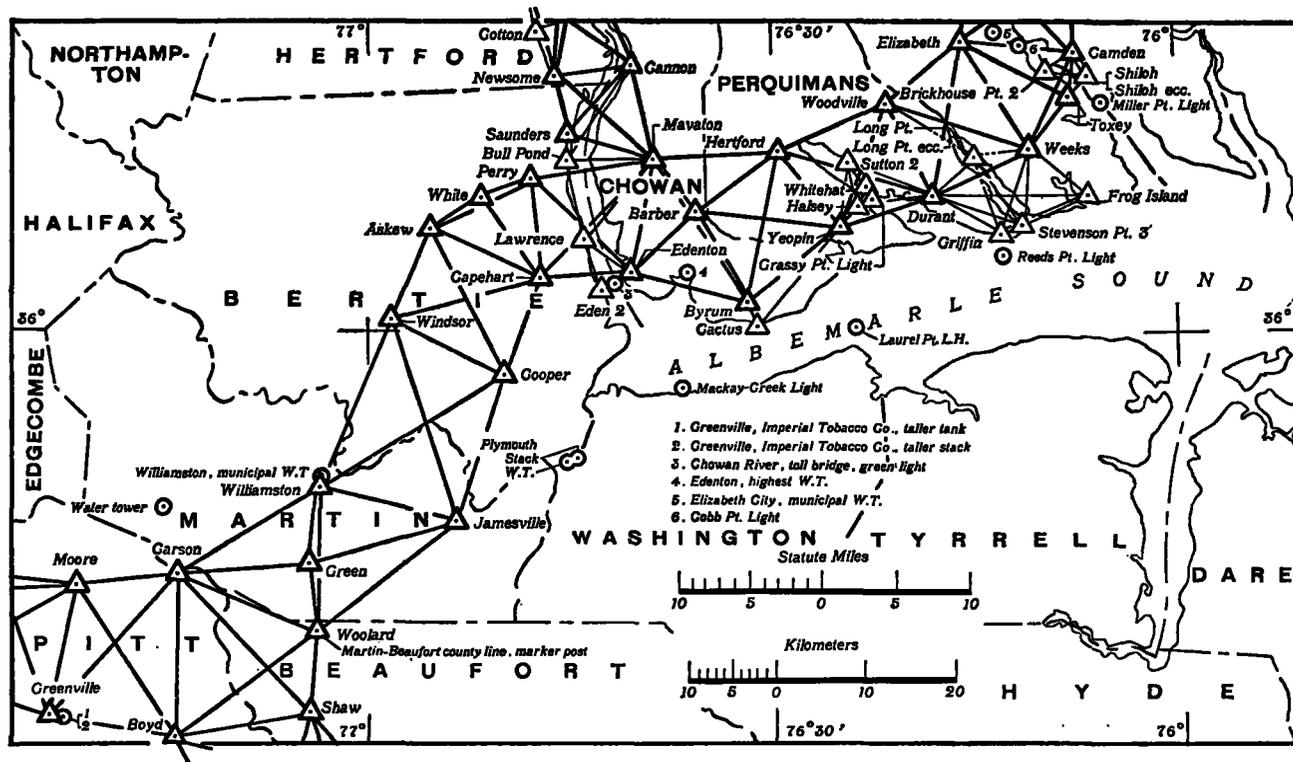


FIGURE 19.—First- and second-order triangulation, vicinity of Albemarle Sound.

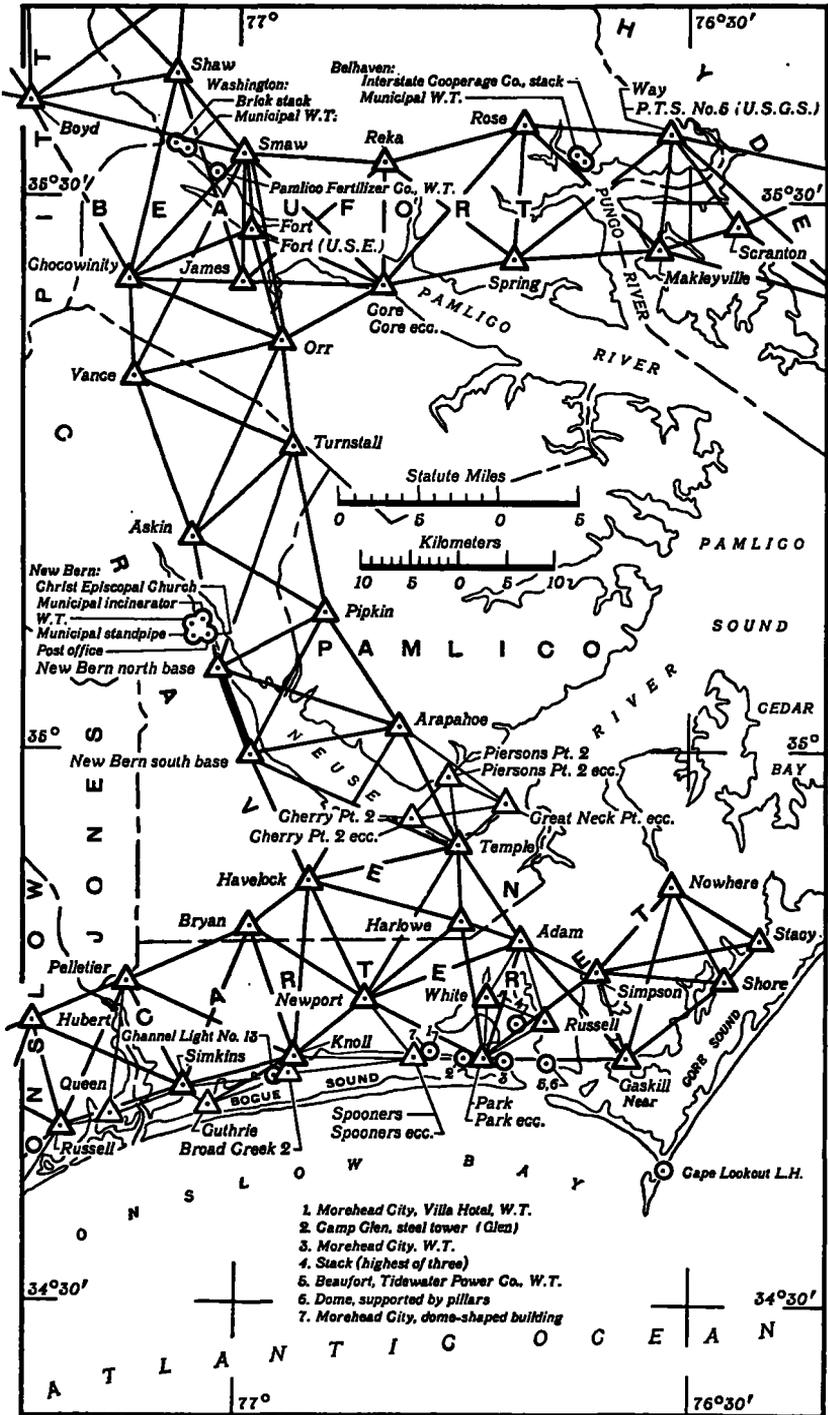


FIGURE 20.—First-order triangulation, vicinity of western end of Pamlico Sound.

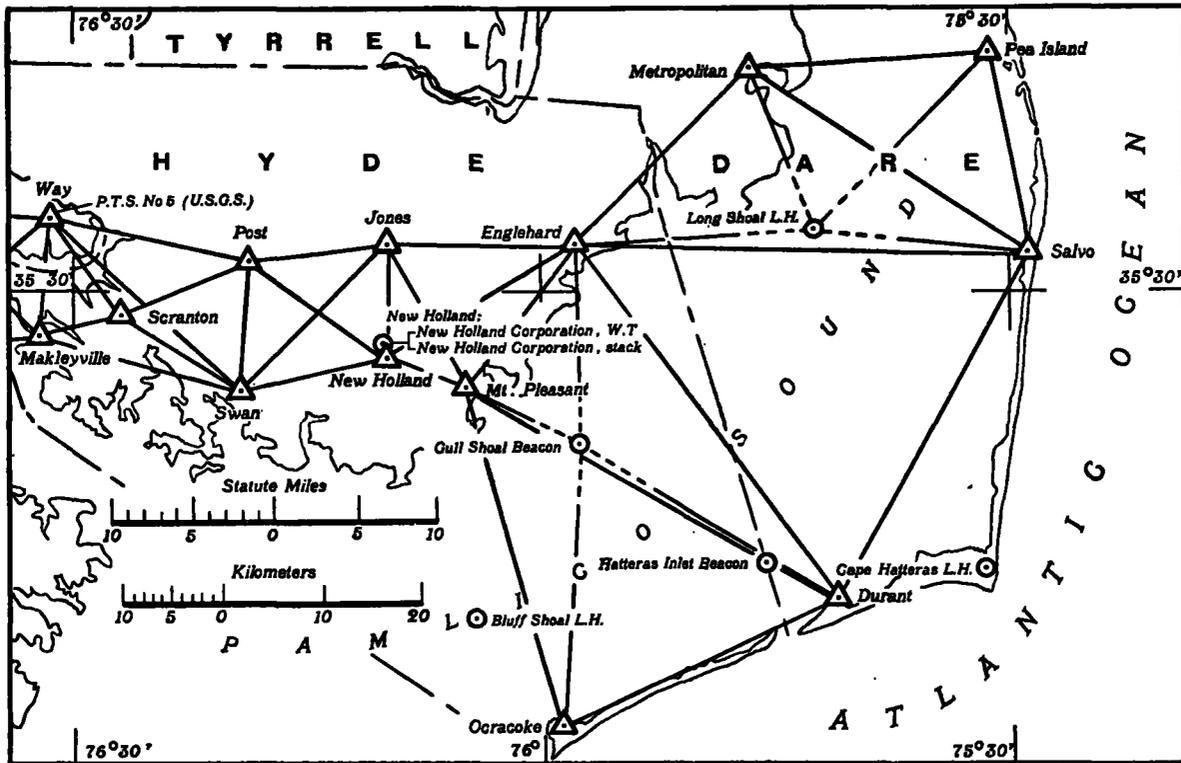


FIGURE 21.—First-order triangulation, Washington to Pamlico Sound arc.

SUPPLEMENTARY DESCRIPTIONS OF TRAVERSE STATIONS

In the fall of 1934 and early winter of 1935 a number of traverse stations were recovered. In order to make this latest recovery information available in this publication, such data as would materially supplement or correct the original description have been added below. In all cases the page referred to directly after the name of the station should be consulted to obtain the complete description of the station.

SANFORD TO VIRGINIA BOUNDARY (TRAVERSE)

Principal points

Dre (B.M. L 21) (see p. 313).—In 1935, surface mark was recovered and further described as being S. 20° E. from Negro school building on north side of railway tracks and United States route 1, opposite heavy cut on route 1, just west of bottom of fill along tracks, and about 48 feet northwest of northeast corner of wire pasture fence.

Dos (B.M. D 21) (see p. 315).—In 1935, surface mark was recovered and further described as being about 0.2 mile south of milepost 174 and about 12 yards north of center line of road crossing.

Dor (B.M. C 21) (see p. 315).—In 1935, surface mark was recovered and re-described as follows: About 2¼ miles southwest of railway station at Apex, about 125 yards north of south end of third curve southwest of Apex, about 117 yards northeast of road crossing, about 110 yards north of James Bailey's small cottage, about 85 yards northeast of block signal 173.0, and 30.3 feet east of east rail.

Don (B.M. A 21) (see p. 315).—In 1935, surface mark was recovered and further described as being about 350 feet northeast of southwest end of curve, about 175 yards southwest of milepost 172, in front of cottage on north side of both railway and United States route 1, about level with track on top of west ditch bank, and 23.7 feet south of south rail.

Baldwin (B.M. Z 20) (see p. 315).—In 1935, surface mark was recovered and further described as being on property of H. B. Baldwin (colored), about 45 yards northwest of northwest corner of house, about 800 or 900 feet southwest of northeast end of curve, about 500 feet northeast of brick, Negro school building, about 250 feet northeast of road crossing, 24 feet east of row of poles, and 45 feet northeast of one guyed pole and 35 feet southeast of another guyed pole.

Apex (B.M. Y 20) (see p. 315).—In 1935, surface mark was recovered and further described as being about 5 feet east of east rail of Seaboard Air Line Railway.

Dol (B.M. W 20) (see p. 316).—In 1935, surface mark was recovered and re-described as follows: About 2.35 miles northeast of railway station at Apex, 0.2 mile south of northeast end of first curve northeast of Apex, about 106 yards south of private road crossing, about 130 feet northeast of small tenant house on west side of United States route 1, 63 feet east of east edge of pavement of route 1, 54 feet west of west rail, and 14 feet east of 14-inch hickory tree on east side of old road.

Dok (B.M. V 20) (see p. 316).—In 1935, surface mark was recovered and re-described as follows: About 2.55 miles southwest of railway station at Cary, near southwest end of second curve southwest of Cary, on northward prolongation of east rail of south tangent, about 400 feet southeast of Mrs. M. J. Adams' farmhouse on west side of railway, about 150 yards northeast of southwest point of curve, about 23 yards north of both whistle post and pole marked "E 22", about 32 feet east of east rail, on top of cut about 11 feet high, and 3 feet east of edge of cut.

Doi (B.M. U 20) (see p. 316).—In 1935, surface mark was recovered and further described as being on ridge in field, on north edge of private road leading to farmhouse, about 250 yards west of farmhouse, and 32 yards east of east rail at road crossing.

Doh (B.M. T 20) (see p. 316).—In 1935, surface mark was recovered and further described as being about 10 feet north of prolongation of center line of T-road which intersects another road running nearly parallel to and on west side of tracks.

Hilltop (B.M. G 20) (see p. 317).—In 1935, surface mark was recovered and redescribed as follows: About $1\frac{1}{2}$ miles northeast of Seaboard Air Line Railway station at Millbrook, on west edge of field, 0.4 mile northeast of concrete overpass of United States route 1 over railway, about $\frac{1}{4}$ mile east of railway, on property of the J. B. Wiggins Estate, about 250 feet east or to rear of Wiggins' residence, and about 150 yards east of route 1.

Dix (B.M. A 20) (see p. 317).—In 1935, surface mark was recovered and further described as being about 75 feet south of 2- by 2-foot stone box culvert under railway.

Div (B.M. Z 9) (see p. 318).—In 1935, surface mark was recovered and further described as being on third curve south of railway station at Wake Forest, on south prolongation of tangent to east rail, and about 42 feet north of intersection of tangents to east rail.

Dir (B.M. T 9) (see p. 318).—In 1935, surface mark was recovered and further described as being in side yard of residence of Mrs. J. B. Carlyle, opposite northeast corner of Wake Forest College athletic field, and about 75 feet north of cross street. The fence which was formerly 1 meter (3 feet) east of station has been removed.

Wake (B.M. Q 9) (see p. 319).—In 1935, surface mark was recovered and redescribed as follows: In Franklin County, about 0.95 mile north of Franklin-Wake County line, about 130 yards north of road crossing, and about 80 yards northeast of dwelling on west side of tracks.

Youngville (B.M. O 9) (see p. 319).—In 1935, surface mark was recovered and further described as being 52.3 feet east of east rail, and on top of cut about 9 feet higher than track. Through error, disk is stamped "YOUNGVILLE". Reference mark was recovered 41.6 feet west of west rail and about 7 feet higher than track. Disk is stamped "YOUNGVILLE" and "P 9".

Dil reference mark (B.M. N 9) (see p. 319).—In 1935, reference mark was recovered and redescribed as follows: About 0.35 mile north of milepost 136, 0.2 mile north of railway water tank, about 77 yards north of water standpipe or penstock between tracks, diagonally across tracks from small section signal house on east side of tracks, 33 feet west of west rail, about 6 feet higher than track, and 2 feet west of edge of top of 8-foot cut.

Tank (B.M. J 9) (see p. 319).—In 1935, surface mark was recovered about 1 inch below ground. Water tank mentioned in original description had been moved about 0.9 mile south, but the concrete foundation piers were still in place.

Dex reference mark (see p. 320).—In 1935, mark was recovered at top of west abutment at north end of steel bridge over Cedar Creek, and was partially covered by two heavy timbers, across top of abutment, which act as ballast headers and ties.

Franklinton reference mark (B.M. U 8) (see p. 321).—In 1935, mark was recovered projecting about 3 inches.

Det reference mark (B.M. P 8) (see p. 321).—In 1935, mark was recovered and redescribed as follows: On top of south abutment of trestle, 6 feet west of west rail, and 2 feet east of west end of abutment.

Deo (B.M. H 8) (see p. 322).—In 1935, surface mark was recovered and further described as being about 120 feet south of 3- by 4-foot stone box culvert under tracks. Reference mark (B.M. I 8) was recovered 16.4 feet west of west rail, on top of west ditch bank, and about level with top of tracks.

Dek (B.M. Z 7) (see p. 323).—In 1935, surface mark was recovered and further described as being 31.2 feet east of east edge of pavement of United States route 1, near south end of curve on highway, and opposite point 35 feet south of south end of woven-wire guard fence on west side of highway. Reference mark had been pulled up and was lying at bottom of cut.

Kittrell (see p. 323).—In 1935, surface station mark and reference mark were found pulled up and lying at bottom of cut.

Def (B.M. T 7) (see p. 323).—In 1935, surface mark was recovered and further described as being level with top of rail, at west ditch bank, and 23.5 feet northeast of pole. Reference mark (B.M. U 7) was further described as being in cultivated field between railway and United States route 1, and 42.5 feet west of west rail.

Daya (B.M. F 7) (see p. 324).—In 1935, surface mark was recovered and further described as being 125 yards south of Andrews Avenue crossing and 7 feet east of east rail of main track. Tobacco warehouse has been destroyed by fire, thus destroying reference mark.

Dal (B.M. M 6) (see p. 326).—In 1935, surface mark was recovered and further described as being about 100 yards south of grade crossing, in cultivated field on "old Mabry tract", about equidistant from two signal-wire poles in bottom of cut, 93.8 feet southwest of one pole and 93.6 feet northwest of other pole, and 15 feet west of top of cut. Wagon road through field has been plowed up.

Daf (B.M. I 6) (see p. 326).—In 1935, surface mark was recovered and further described as being about 143 yards northeast of milepost 108 and on top of north ditch bank. Reference mark (B.M. J 6) was recovered about 100 yards east of milepost 108 and 32.6 feet north of north rail.

Middleburg (see p. 327).—In 1935, station marks were searched for but not recovered. Reference mark (B.M. H 6) was recovered in south face of chimney at east end of cabin.

Cuy reference mark (B.M. Y 5) (see p. 327).—In 1934, reference mark was recovered in face of brick underpinning wall under front of large cottage (under and at back of front porch), about 2½ feet above ground. Cottage is owned by Mrs. John Dowling.

Supplementary points

Fetner (B.M. Q 20) (see p. 344).—In 1935, surface mark was recovered about 6 inches below surface and redescribed as follows: About 0.1 mile east of railway station at Cary, on first curve east of railway station, about 250 feet east of west point of curve, on top of small ridge between railway and parallel road, 88.3 feet east of top of southeast corner of concrete base of signal block 165.08, 22.9 feet south of south rail of main track, about 2 feet higher than top of rail, and 74.5 feet northeast of reference mark.

Dod (B.M. P 20) (see p. 344).—In 1935, surface mark was recovered and further described as being about 100 yards east of county-road crossing.

Method (B.M. N 20) (see p. 344).—In 1935, surface mark was recovered and further described as being at intersection of apparent center lines of tangents of curve of Southern Railway tracks, diagonally across tracks and southeast of electric substation of Carolina Power & Light Co., between edge of cut and old road, about 150 feet east of culvert under railway, and about 100 feet east of beginning of cut. The tracks of the Southern Railway and the Seaboard Air Line Railway run side by side at the point; the Seaboard Air Line on the north and the Southern on the south.

East (B.M. M 20) (see p. 345).—In 1935, surface mark was recovered and redescribed as follows: In south part of Raleigh, about 400 feet north of "City Limit" sign on Southern Railway, about 120 feet east of railway, opposite whistle post in cut, about 85 yards south of south side of Lee Street, in dirt sidewalk in front of Negro dwelling at 1111 South Wilmington Street, 12 feet west of southwest corner of porch, and 18 feet west of main part of dwelling.

Millbrook (B.M. F 20) (see p. 345).—In 1935, surface mark was recovered about 2½ inches below surface and redescribed as being about 230 feet east of large house, and 35.5 feet west of west rail of Seaboard Air Line Railway.

SANFORD TO WILMINGTON (TRAVERSE)

Principal points

Camp (B.M. H 23) (see p. 346).—In 1934, surface mark was recovered and further described as being 0.4 mile northwest of and opposite first curve northwest of milepost 90, and about 350 feet northwest of south point of tangency.

Lake (B.M. G 23) (see p. 347).—In 1934, surface mark was recovered and redescribed as being at intersection of tangents of first curve northwest of milepost 89, about 150 yards northwest of milepost 89, and at toe of 5-foot fill. Through error, bench-mark designation on disk was stamped as "C 23" instead of "G 23".

Vander (B.M. A 23) (see p. 348).—In 1934, surface mark was recovered. Railroad station Vander has been discontinued, and a new site, known as "New Vander", established about 1¼ miles west. Old location is now known as "Old Vander".

Ville (B.M. X 22) (see p. 348).—In 1934, surface mark was found torn up from its original position and lying about 50 feet north of track.

Autry (B.M. W 22) (see p. 348).—In 1934, surface mark was recovered, but with indications that it was not in its original position. It is now 93 yards east of milepost 69 and about 11 feet east of point indicated by arrow on reference mark.

Empie (B.M. U 22) (see p. 348).—In 1934, surface mark was found lying on top of ditch bank on south side of track.

Roseboro (B.M. R 22) (see p. 349).—In 1934, surface mark was recovered near middle of much-traveled road and redescribed as being 64 feet in bearing S. 45° E. from 18-inch oak tree at edge of woods and field. Top of mark was nearly level with road.

Moores (B.M. G 22) (see p. 349).—In 1934, surface mark was recovered and further described as being about 0.35 mile northwest of milepost 33, and about 400 yards southeast of whistle post.

Ivanhoe (B.M. E 22) (see p. 350).—In 1934, surface mark was recovered and redescribed as being 25 feet north of wire fence. Part of top of concrete block has been broken off. South point of tangency to curve is near milepost 32.

Denneys (B.M. Y 21) (see p. 350).—In 1934, surface mark was recovered and redescribed as follows: Three-fourths mile northwest of Currie railroad station, at intersections of tangents of west rail tangent from north and center line tangent from south of second curve north of Currie, about one-fourth mile northwest of Moores Creek crossing, about 150 yards south of milepost 19, about 65 yards west of west rail, in cut-over pine woods, and about 8 feet higher than track.

Richards (B.M. T 21) (see p. 351).—In 1934, station probably had been destroyed by ditching machine.

Dru (B.M. S 21) (see p. 351).—In 1934, surface mark was recovered and further described as being at intersection of tangents of first curve north of Yadkin Junction, and 36.7 feet east of east rail.

Yadkin (B.M. Q 21) (see p. 351).—In 1934, station was searched for but not recovered.

Supplementary points

Dum (B.M. U 23) (see p. 352).—In 1934, surface mark was recovered and further described as being about 570 yards south of highway overhead bridge of sand-clay road (former N.C. route 53).

Dul (B.M. T 23) (see p. 352).—In 1934, surface mark was recovered and further described as being about 132 yards south of milepost 106.

Duf (B.M. O 23) (see p. 353).—In 1934, surface mark was recovered and further described as being about ½ mile southeast of railroad station at Spout Springs, and about 350 feet north of south point of tangency.

Dub (B.M. M 23) (see p. 353).—In 1934, surface mark was recovered and redescribed as being in slight cleft or depression in ridge, and opposite 9-foot cut on railroad.

Overhills (see p. 353).—In 1934, surface mark was recovered and further described as being at first curve north of railroad station at Overhills, about 150 feet north of south point of tangency, and 122 feet northwest of north corner of concrete culvert under crossroad. Through error, name of station stamped on disk is "Overhill".

Manchester (see p. 353).—In 1934, surface mark was recovered and further described as being about 150 yards northwest of milepost 96.

Bragg (B.M. I 23) (see p. 354).—In 1934, it was reported that surface mark had been disturbed by railroad ditching machine in the previous year. A railroad section foreman then reset the mark in approximately same location, but its present position has not been accurately redetermined.

Primary traverse station no. 17 (U.S.G.S.) (see p. 355).—In 1934, station was searched for but not recovered.

Primary traverse station no. 4 (U.S.G.S.) (see p. 355).—In 1934, station mark was recovered 3 inches below surface.

Primary traverse station no. 2 (U.S.G.S.) (see p. 355).—In 1934, mark was recovered and redescribed as follows: About 10 feet east of center line of cross road or street, 72.8 feet southwest of southwest corner of railroad station building, and 22.7 feet south of south rail. Marked by United States Geological Survey standard cap riveted to top of 3½-inch iron pipe and projecting about 1½ inches above street level. Railroad station building has been moved about 35 feet east since station was established.

Primary traverse station no. 1 (U.S.G.S.) (see p. 355).—In 1934, station mark was recovered, but with indications that it was not in its original position. It is now 110 feet west of railroad station and 11.9 feet south of south rail of tracks. Pipe was considerably out of vertical and projecting about 10 inches.

SANFORD TO OSBORNE (TRAVERSE)

Supplementary points

Lemon C (see p. 360).—In 1934, surface mark was recovered 22 feet west of west rail.

Mihiel (see p. 360).—In 1934, surface mark was recovered under $4\frac{1}{2}$ feet of fill which was used to widen railway embankment.

Huron (see p. 360).—In 1934, station was recovered and redescribed as follows: About $\frac{3}{4}$ mile northeast of Cameron railway station, about $\frac{1}{2}$ mile southwest of milepost 210, about opposite middle of second curve northeast of railway station, on prolongation of east rail of tangent to south, about 260 yards from point of tangency at north end of curve, about 30 yards along tangent (southwardly) beyond reference mark, and 44 yards in bearing S. 45° E. from point where center line of track crosses center line of 18-inch cast-iron culvert.

Vass (see p. 361).—In 1934, station was further searched for and recovered in low place near foot of high fill. Top of surface mark was found out of plumb about 4 inches below surface and covered with thick growth of grass.

Delaware (see p. 362).—In 1934, surface mark was recovered at toe of fill. Side of block nearest railway is flush with face of fill and opposite side projects about 3 inches.

Niagara A (see p. 363).—In 1934, surface mark was recovered at about same elevation as nearest rail. Through error, name of station had been stamped on disk as "Niagra A."

Foch A (see p. 364).—In 1934, surface mark was recovered in gravel walk and driveway for mail trucks leading to railway station. Mark is about 4 inches below ground, which is about same elevation as rail opposite mark. Bench mark U 10 was recovered in southeast corner of brick building, owned by R. E. and I. F. Chandler, set vertically about 4 feet above sidewalk.

Quentin B (see p. 365).—In 1934, surface mark was recovered about 300 feet (paced) distant in bearing S. 50° E. from rear of tenant house owned by James McCrea.

Pond A (see p. 366).—In 1934, surface mark was recovered. Seaboard Air Line Railway station Pinebluff had been discontinued and torn down. Pond adjacent to station had been drained and roadway had been constructed across dam which impounded water of pond.

Keyser (see p. 366).—In 1934, surface mark was recovered. Name of railway station has been changed from Keyser to Addor.

Rattle (see p. 367).—In 1934, station site was found to be covered to a depth of 4 or 5 feet by railway embankment fill.

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Adams	61	229		12	Aviation beacon no. 34 (see Airway beacon no. 33)				9
Advance	84	276		8	Aviation beacon, red and white lights (see Airway beacon no. 35) (Va.)				9
Alette	127	361		10	Aviation beacon, red and white lights, (see Airway beacon flashing red and white, east of Clio) (S. C.)				11
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Alphin	80	265		14, 17	No. 10	104			15
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Amos	100	303		15	Red, U.S.L.H.S.	95			8
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Anderson 2	83	274		7, 8	Beard	81	268		14
Ansonville	93	290		8	Bear Wallow	74	253		6
Apex	108	{ 315 389		13	Bear Wallow Moun- tain	19		134	6
Apex, municipal water tank	46			13	Beaufort, Tidewater Power Co., water tank, ball on top	70			20
Aquadale	84	276		8	Bell	28	164		18
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Arba	62	230		17					
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Asheville	78	262		6					
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stack	68			20	Britten	75	253		6
Municipal water					Broadacre	124	356		10, 11
tank, black	67			20	Broad Creek 2	32	170		20
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B.M. State Line					County)	73	250		7
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Beston	41	188		17	County, Va.)	55	214		12
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Betha	28	163		16	Bull (U.S.G.S.) (Va.)	47	198		7, 9
Bethel Hill	53	209		9	Bull Head Mountain	17			7
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Big Craggy Mountain	18		134	6	Bull Pond	30	168		19
Big Fodderstack					Burke-Caldwell county-				
(N.C.-Tenn.)	16			5	line stone	78	261		7
Big Knob (Va.)	14	138	133	6	Burnt	20	143		18
Big Yellow Mountain	18			6	Byrd	83	272		11
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Black Mountain	75	255		6					
Black River	120	349		14, 16	Cactus	30	167		19
Blackstock Knob	16		133	6	Caesars Head Hotel,				
Bladenboro, aluminum					largest building, east				
water tank	88			10	end of roof (S.C.)	16			6
Bladenboro Cotton					Cal eccentric (Va.)	57	218		18
Mill:					Callahan	55	213		12
Brick stack	88			16	Camden	20	143		18, 19
Aluminum water					Cameron	126	360		10
tank	88			16	Camp (Cumberland		346		13
Bloodworth	27	162		16	County)	119	391		
Blossom (Va.)	20	141		18	Camp (Northampton				
Blowing Rock	77	260		6, 7	County)	56	217		12
BluffShoal Lighthouse	68			21	Camp (Onslow County)	102			15
Bluff (U.S.E.)	101	304		15	Camp (Sampson County)	81	267		14
Bog	103			15	Camp (Southampton				
Boon	26	159		16	County, Va.)	62	207		18
Boundary monument					Camp (Ilen, steel tower				
(N.C.-S.C.)	33			16	of Ilen)	32	170		20
Boundary monument					Can (Va.)	57	219		18
(N.C.-Va.)	59			18	Canada	81	267		14
Boundary monument					Can eccentric (Va.)	57	218		18
(N.C.-Va.)	28	164		18	Cannon	99	302		18, 19
Boundary monument					Cap (B.M. K 11) (Va.)	117	343		18
no. 14 (N.C.-Va.)	50	222		18	Cape Fear Lighthouse	34			16
Boundary monument					Cape Fear River,				
no. 20 (N.C.-Va.)	59			18	channel light	34			16
Bowlens Pyramid (one					Do	34			16
of the northernmost					Cape Hatteras light-				
summits of Black	19			6	house	68			21
Mountains)					Cape Lookout light-				
Bowman (Va.)	73	249		7	house	69			20
Boyd	23	150		10, 20	Capehart	22	147		19
Boydton, water tank					Care (B.M. A)	117	342		12, 18
(silver color) final					Carleton Knob	18		134	6
(Va.)	55			12	Carpenter	40	183		13
Boykins (B.M. S 11)					Carr (Greene County)	62	231		17
(Va.)	117	342		18	Carr (Richmond				
Boykins, black water					County)	124	355		10, 11
tank (Va.)	57			18	Carr A	129	367		10, 11
Bragg	123	354		13	Carson	23	150		19
		392			Carthage	71	247		10
Braswell	41	187		13, 17	Carthage:				
Brewer	41	189		17	Courthouse dome	131			10
Brickhouse Point 2	29	165		18, 19	Lower water tank	131			10
Bridge	35	175		16	Taller water tank	131			10
Bridgewater	78	261		6, 7	Carver	79	262		5, 6
Brier (U.S.E.)	103	306		15					
Briggs	46	198		13					

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Cary	108	317			Cla (B.M. X 1)	115	337		12
Cary High	40	184		13	Clarendon	87	284		16
Cary, municipal water tank	46			13	Clarksville (Va.)	54	211		12
Cary reference mark	47	108		13	Clarksville, municipal water tank, aluminum, flunal (Va.)	55			12
Cas (B.M. M 11) (Va.)	117	343		18	Claybank	83	272		11
Cat (B.M. O 11) (Va.)	117	342		18	Clayton	40	185		13
Catholic Church, Wilmington, western of twin domes	35			16	Clayton:				
Catlin	95	294		7, 8	Cotton Mills, water tank	47			13
Caw (B.M. Q 11) (Va.)	117	342		18	Liberty Cotton Mills, water tank	47			13
Cay (B.M. T 11) (Va.)	117	342		18	Municipal water tank	47			13
Caz (B.M. D)	117	341		12, 18	Cle (B.M. B 2)	115	337		12
Ced (B.M. E)	117	341		12, 18	Cli (B.M. D 2)	115	337		12
Ceda (B.M. V 11) (Va.)	117	342		12, 18	Climax	71	245	133	10
Cedar Point	100	303		15	Clinch (Va.)	98	208		
Cedder Mountain	37	176	133	9	Clinton, silver-colored water tank	88			14
Cef (B.M. G)	117	341		12, 18	Clio, white water tank (S. C.)	91			11
Cel (B.M. I)	117	341		12, 18	Clo (B.M. F 2)	115	336		12
Cep (B.M. K)	117	341		12, 18	Cliu (B.M. H 2)	115	336		12
Cer (B.M. M)	117	340		12, 18	Cly (B.M. J 2)	115	336		12
Cet (B.M. O)	117	340		12, 18	Clyde	40	185		13
Chadbourne, aluminum water tank	88			16	Coa (B.M. L 2)	115	336		12
Channel light no. 13, flashing white	33			20	Cob (B.M. N 2)	115	336		12
Chapel	61	227		17	Cobb Point light	29			18, 19
Chapel Hill	39	182		13	Cockspur (Tenn.)	15	141		5
Chapel Hill, black water tank	45			13	Cod (B.M. P 2)	115	336		12
Charlotte	84	275		8	Coa (B.M. R 2)	115	335		12
Airport beacon, revolving white light	95				Cof	115	335		12
Presbyterian Church, spire	93			8	Cog (B.M. T 2)	115	335		12
Cheoah (U.S.G.S.)	75	256		5	Cognac	124	356		10, 11
Cherry Point 2	32	169		20	Cohutta (Ga.)	15	139		6
Cherry Point 2, eccentric	32	169		20	Cold Mountain 1	18		134	
Cherryville	94	293		8	Cold Mountain 2	18			6
Chestnut (Va.)	37	176		9	Colon	118	343		13
Chimney Top Mountain	19		134	6	Como	62	207		18
Chocowinity	23	151		20	Con (B.M. V 2)	115	335		12
Chowan River toll bridge, green light on top	30			19	Concord (Cabarrus County)	84	275		8
Church spire:					Concord (N. C. Va.)	57	217		12
Danville (Va.)	44			9	Concord, Presbyterian Church, spire (tall white)	94			8
Henderson	56			12	Congregational Church, Southern Pines, steeple	132			10
Wadesboro, cross on top	92			8, 10	Cooper	22	148		19
Wilmington, low, with broad base	36			16	Cop (B.M. X 2)	115	335		12
Wilmington, low, with weather vane	36			16	Cor (B.M. B 3)	115	334		12
Wilmington, with broad base	36			16	Corapeake	51	204		18
Youngsville	119			13	Corbet	120	350		14, 16
Cia (B.M. S)	117	340		12	Cordova	91	289		10, 11
Cib (B.M. U)	116	340		12	Core	67	240		20
Cid (B.M. W)	116	340		12	Core eccentric	65	235		20
Cij	116	339		12	Cos (B.M. C 3)	115	334		12
Cik (B.M. A 1)	116	339		12	Cot (B.M. D 3)	114	334		12
Cil (B.M. C 1)	116	339		12	Cote (B.M. A 4)	114	332		12
Cim (B.M. E 1)	116	339		12	Cotton	99	302		18, 19
Cin (B.M. G 1)	116	339		12	Court	100	303		15
Cip (B.M. L 1)	116	338		12	Courthouse:				
Cir	116	338		12	Carthage, dome	131			10
Circle	78	261		7	Dallas, cupola	17			8
Cit (B.M. Q 1)	116	338		12	Lincolnton, yellow cupola	15		133	8
City	94	292		8	Monroe, spire	97			8
Civ (B.M. T 1)	116	337		12	Cov (B.M. I 3)	114	333		12
Ciz (B.M. U 1)	115	337		12	Covil	100	304		15
					Cow (B.M. L 3)	114	333		12
					Cox (B.M. N 3)	63	232		12
					Cox eccentric	62	231		12
					Coy (B.M. U 3)	114	333		12
					Coz (B.M. W 3)	114	332		12
					Cra (B.M. P)	117	340		12, 18
					Crag	102	305		15

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Crawley (Va.)	38	179		9					
Cre	114	332		12	Denreys	120	350		16
Cress (Tenn.)	106	312		7	Denver	95	293		8
Cri (B.M. Z 3)	114	332		12	Deo	110	322		13
Crisp	64	233		17	Dep	110	322		13
Cro (B.M. D 4)	114	332		12	Der	110	321		13
Crowder Mountain	16		133	8	Des	110	321		13
Cru (B.M. E 4)	114	331		12	Det	110	321		13
Cub (B.M. H 4)	114	331		12	Det reference mark		321		
Cud (B.M. L 4)	113	331		12	Deter	110	321		13
Cue (B.M. N 4)	113	331		12	Davils Courthouse				
Cuf (B.M. O 4)	113	331		12	Mountain	18			6
Cug (B.M. R 4)	113	330		12	Dew	110	320		13
Cul (B.M. S 4)	113	330		12	Dex	110	320		13
Cum (B.M. U 4)	113	330		12	Dex reference mark		320		
Cun (B.M. X 4)	113	330		12	Dey	110	320		13
Cunningham (Va.)	44	195		9	Der	110	320		13
Cup (B.M. B 5)	113	329		12	Dib	110	320		13
Cur (B.M. D 5)	113	329		12	Die	110	320		13
Curria	120	350		16	Did	109	320		13
Currituck Beachlight-house	28			18	Dif	109	319		13
Cus (B.M. J 5)	113	328		12	Dig	109	319		13
Cut (B.M. F 5)	113	329		12	Dik	109	319		13
Cuv (B.M. Q 5)	113	328		12	Dil (B.M. M 9)	109	319		13
Cux (B.M. U 5)	112	328		12	Dil reference mark		319		
Cuy (B.M. X 5)	112	327		12	Dillon:				
Cuy reference mark		327			Dillon Oil Co., tall,				
Cuz (B.M. A 6)	112	327		12	slender, black				
Cypress	27	160		16	water tank (S.C.)	89			11
Dab (B.M. C 6)	112	327		12	Municipal water				
Dad	112	327		12	tank, red (S.C.)	90			11
Daf	112	326		12	North base	86	281		11
Dag	112	326		12	South base (S.C.)	86	282		11
Dail	48	199		13	Dillsboro	79	262		5
Dal	112	326		12	Dim	109	318		13
Dallas:		326			Dip	109	318		13
Courthouse, cupola	17			8	Dir	109	318		13
Water tank, tall,					Dis	109	318		13
black, near white					Dit	109	318		13
factory	94			8	Div	109	318		13
Damascus (Va.-Tenn.)	98	300		7	Dix	109	317		13
Dan (B.M. O 6)	112	326		12	Diz	109	317		13
Daniel	53	209		12	Dob	109	317		13
Danville, church spire	44			9	Doc	119	345		13
(Va.)					Dod	118	344		13
Dap (B.M. R 6)	112	325		12	Doa (Tenn.)	105	309		7
Dar	111	325		12	Dof	108	316		13
Dare	111	324		12	Dog	108	316		13
Das	111	325		12	Doh	108	316		13
Davis	106	312		13	Doi	108	316		13
Daw (B.M. Q 6)	112	326		12	Dok	108	316		13
Dawson	62	230		17	Dol	108	316		13
Day	111	325		12	Dom	108	316		13
Daya	111	324		12	Dome supported by				
Daz	55	215		12	pillars	33			20
Daz eccentric	55	215		12	Don	108	315		13
Deb	111	325		12	Dop	107	315		13
Debeney	125	358		13	Dor	107	315		13
Debeney A	125	357		13	Dos	107	315		13
Dec	111	323		12	Dot	107	315		13
Dec	111	323		12, 13	Dothan (N.C.-S.C.)	89	287		16
Deep Run	42	189		14, 17	Dov	107	314		13
Def	111	323		13	Dow	107	314		13
Deg	111	323		13					
Dek	111	323		13					
Del	111	322		13					
Delaware	127	362		10					
Dem	111	322		13					
Den	111	322		13					

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Dro.....	107	313		13	Ellerbe.....	92	290		10
Dru.....	121	{ 351 } 392		16	Ellerbe, municipal water tank, black.....	92			10
Drummond (N.C.-Va.).....	59	223		18	Ellis (Va.).....	53	208		12, 18
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Dublin.....	82	270		14, 16	Emporia (Va.).....	53	209		12
Duc.....	122	353		13	Emporia, water tank, aluminum (Va.).....	57			12
Duck Creek.....	25	155		14, 15	Enfield: Brick stack.....	63			17
Dud.....	122	353		13	Municipal water tank, squat, black.....	63			17
Dudley.....	41	188		17	Englehard.....	67	238		21
Duf.....	122	{ 353 } 392		13	English (Tenn.).....	75	255		6
Duke.....	45	197		13	Entwistle.....	91	289		10, 11
Duke University, Durham, chapel tower, northwest corner.....	45			13	Episcopal Church, Christ, New Bern, spire.....	31			20
Dul.....	121	{ 352 } 392		13	Erie.....	129	307		10
Dum.....	121	{ 352 } 392		13	Esprey.....	107	312		13
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Durant (Perquimans County).....	21	145		19	Fain (U.S.G.S.).....	80	264		
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Chesterfield Cigarette Factory, tall brick stack.....	45			13	Fairview.....	85	279		11
Durham Cotton Mill, tall stack.....	45			13	Fairview (bench mark).....	77	260		7
Duke University, chapel tower, northwest corner.....	45			13	Farley.....	107	313		13
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					Felt (Va.).....	73	249		7
					Ferry eccentric.....	100	303		15
					Ferry (U.S.E.).....	103	307		15
					Fetner.....	118	{ 344 } 391		13
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					Fire tower, Wayah Bald.....	79			5
					Fish (Brunswick County).....	33	172		16
					Fish (Onslow County).....	102	305		15
					Fish (U.S.E.).....	101	304		15
					Fisher's Peak.....	17			7
					Fisnes.....	125	359		13
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Seaboard Air Line Ry., water tank.....	132	10, 11	Huntersville, municipal water tank.....	94	8
Hammond.....	86	282	11	Huron.....	126	{ 360 393 }	10
Hampstead.....	27	162	16	Ingold.....	81	267	14
Hanging Bluff.....	16	7, 9	Ingram.....	85	277	10
Hangover tree (Geo- logical Survey).....	16	5	Ireland.....	80	266	14, 17
Hargett.....	42	190	14	Iron (U.S.G.S.) (Tenn.).....	106	310	7
Harlowe.....	24	154	20	Iron Hill.....	87	285	16
Harrell (Va.).....	62	205	18	Ivanhoe.....	120	{ 350 392 }	14, 16
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Hartland.....	77	260	7	Jackson Training School for Boys, water tank.....	93	8
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Haywood.....	61	227	17	Jonesboro, tall square whita steep with spiral, tail square.....	71	247	13
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Heath (Union County).....	96	296	8	Jordon.....	51	204	12
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Church spire.....	56	12	Tall silver water tank.....	93	8
Henderson Cotton Mills, tank, alumi- num.....	56	12	Kemper (S.C.).....	87	283	11
Hertford.....	71	145	19	Kentuck (Va.).....	38	178	9
Hibriten.....	24	251	7	Kernersville.....	70	244	133	9, 10
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Hickory Knob.....	18	6, 7	Keyser A.....	129	366	10
High Peak.....	101	305	15	King.....	14	137	133	8
High Peak (Blue Ridge).....	74	252	7	King eccentric.....	83	273	8
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Hillsboro.....	39	181	13	Caswell Training School, water tank.....	50	17
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Hines.....	101	304	15	Yellow brick stack.....	49	17
Hinson.....	85	278	10	Kirkland.....	27	162	16
Hocutt.....	40	186	13	Kittrell.....	111	{ 323 390 }	13
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Hoffman, Seaboard Air Line Ry., sema- phore.....	132	10, 11	Knoll.....	24	155	20
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Lakeview	127	362		10	Little Bald Mountain (Nantahala)	19		134	5
Lakeview A	127	362		10	Little Fodderstack (Tenn.)	16			5
Lakeview, green water tank with black roof.	132			10	Little Pisgah Mountain	18		134	6
Lancaster (S. C.)	97	298		8	Little Ragged (U.S. E.)	101	305		15
Lancaster:					Little River (S.C.)	25	158		16
Aluminum tank (S. C.)	97			8	Littleton (B.M. R3)	114	333		12
Municipal water tank (S. C.)	97			8	Littleton, municipal water tank, black	63			12
Lance (Ga.)	76	257		5	Locke	63	291		8
Laurel	76	258		5	Locust	84	276		8
Laurel Point Light-house	30			19	Long Branch	82	271		11, 16
Laurinburg:					Long Point	33	171		19
Dixie Guano Co., tank	90			11	Long Point eccentric	29	165		19
Municipal water tank	91			11	Long Ridge, middle summit	19			6
Lawn	78	261		6	Long Shoal Lighthouse	67			21
Lawrence	30	167		10	Loris (S. C.)	87	285		16
Laws	39	180		9, 13	Luciuda (Tenn.)	106	311		7
Leak	43	193		9	Lutheran Church, Wilmington, spire	36			16
Leasburg	39	180		9	Lynch (Brunswick County, Va.)	55	213		12
Lebanon	44	195		9	Lynch (Marlboro County, S.C.)	85	280		11
Lee (Currituck County)	28	164		18					
Lee (Lee County)	125	358		13	McCull:				
Leggett	63	232		17	Marlboro Cotton Mills, tank, aluminum (S.C.)	90			11
Lemon	71	247		10, 13	Municipal water tank, aluminum (S.C.)	90			11
Lemon A	126	360		10, 13	Melnnis (S. C.)	85	280		11
Lemon B	126	360		10, 13	McKay	84	277		8, 10
Lemon C	126	{ 360 393 }		13	McQueen (Tenn.)	105	310		7
Lennon	125	359		13	McQueen, fire tower (Tenn.)	106			7
Lenoir	77	260		7	McRae (N.C.-S.C.)	90	287		11
Lenoir, First Baptist Church, spire	78			7	Mackay Creek light	30			19
Lenway	49	200		17	Macon (B.M. Z4)	113	229		12
Lenzton	85	278		10	Magnetic station (N. C. G. S. and U.S.G.S. (1898))	89	286		14, 16
Leon (S. C.)	25	157		16	Makleyville	66	237		20, 21
Liberty	71	245	133	10	Malone	51	202		9, 13
Liddell	50	200		17	Manchester	122	{ 353 392 }		13
Light:					Mangin	126	359		13
Cape Fear River, channel	34			16	Mann	61	227		17
Do	34			16	Manson (B. M. W 5)	112	327		12
Channel, no. 13, flashing white	33			20	Marion	78	261		6
Cobb Point	29			18, 19	Marlon A. (S.E.)	78			6
Mackay Creek	30			19	Marsh (U.S.E.)	103	307		15
Miller Point	29			19	Marshville	93	290		8
Reed Point	29			19	Marshville, black water tank, ball on top:				
Lighthouse:					East one	93			8
Bald Head	34			16	West one	93			8
Bluff Shoal	65			21	Marston	124	356		10, 11
Cape Fear	34			16	Marston, Marston Training School, black water tank	92			10, 11
Cape Hatteras	68			21	Martin	85	279		10, 11
Cape Lookout	69			20	Martin-Beaufort County line, marker post	31			19
Currituck Beach	28			18	Mason (Bladen County)	82	271		16
Grassy Point	30			19	Mason (Hertford County)	99	302		18
Laurel Point	30			19	Mason (New Hanover County)	35	174		16
Long Shoal	67			21	Mason (N.C.-Va.)	57	217		12
Light:	125	357		11					
Light A	130	369		11					
Light B	130	369		11					
Light C	130	369		11					
Light D	130	369		11					
Light E	130	369		11					
Light F	130	369		11					
Light G	130	369		11					
Light H	130	368		11					
Light I	130	368		10, 11					
Light J	130	368		10, 11					
Light no. 2	104			15					
Light no. 8	104			15					
Lilly	51	204		18					
Lincolnton	95	294		8					

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Mavaton	21	146		19	Mount Gilead, water tank:				
Max Patch	75	255		6	Higher of two	92			10
Maxton, aviation beacon on municipal water tank	90			11	Lower of two	93			10
Mayor	94	292		8	Mount Hallback	18			6
Meckun	96	297		8	Mount Hardy (Tennessee Bald Mountain)	18		134	6
Meherrin	99	301		18	Mount Mitchell	15		133	6
Mentz	120	349		14	Mount Olive	80	265		17
Method	118	{ 344 391 }		13	Mount Olive, municipal water tank, aluminum	88			17
Methodist Church: Goldsboro, St. Paul, spire	49			17	Mount Pisgah	18		134	6
Raleigh, Edenton, tall spire	47			13	Mount Pleasant	67		238	21
Taylorsville, spire	77			7	Mount Vernon	127		361	10
Metropolitan	67	{ 239 327 391 }		21	Moyock	20		142	18
Middleburg	112	{ 327 391 360 393 }		12	Mulberry	73		251	7
Mihiel	126	{ 360 393 }		10	Mullins, ball on top of: Northernly black water tank (S.C.)	89			11
Mill (Brunswick County)	27	160		16	Southerly black water tank (S.C.)	89			11
Mill (U.S.E.)	103	307		15	Murphy	80	265		5
Mill (Vance County)	111	324		12	N.C.-S.C. Boundary (see State-line monument (1813))				8
Millbrook	119	{ 345 391 }		13	N.C.-S.C. boundary monument (see State-line monument, Scotland-Marlboro Counties)				11
Miller Point Light	29			19	N.C.-S.C. boundary monument (see State-line monument (1905))				11
Milton, airway beacon no. 34 (Va.)	44				N.C. corner (N.C.-Va.-Tenn.)	98	300		7
Milton, aviation beacon no. 35A (see Milton, airway beacon no. 34) (Va.)				9	Near	70	243		20
Mineral	95	295		8	Nelson	45	196		13
Mint Hill	84	275		8	New Bern:				
Mitchell	74	252		6	Christ Episcopal Church, spire	31			20
Mobile	111	324		12	Municipal incinerator, weather vane	31			20
Mona Mountain	17			5	Municipal stand-pipe	31			20
Moncure	107	313		13	North base	24	152		20
Monk	65	234		17	South base	24	153		20
Monroe (Bladen County)	82	269		14, 16	U. S. Post Office, dome	31			20
Monroe (Union County)	95	294		8	Water tank	31			20
Monroe: Courthouse spire	97			8	New Holland	66	238		21
Municipal water tank	97			8	New Holland, New Holland Corporation:				
Montague	121	350		16	Stack	68			21
Montford (U.S.E.)	103	306		15	Water tank	68			21
Moon (Va.)	53	210		9, 12	Newport	24	154		20
Moore (Pitt County)	59	223		17, 19	Newsome	99	302		18, 19
Moore (Stokes County)	14	{ 136 349 392 }	133	7, 9	Newton (Catawba County)	95	293		7
Moores	120	{ 349 392 }		14, 16	Newton (Moore County)	126	361		10
More	81	267		14	Niagara	127	363		10
Morehead City: Pole on dome-shaped building	33			20	Niagara A.	127	{ 363 393 }		10
Villa Hotel, water tank (Vi)	32	171		20	Niagara B.	127	363		10
Water tank	32	171		20	Niagara C.	127	363		10
Moriah	47	198		13	Niagara D.	127	363		10
Morgan (Va.)	52	205		18	Niagara, water tank	132			10
Morrison	126	360		10	Nichols (S.C.)	87	283		11
Mosley	60	224		17	Nixon (S.C.)	33	172		16
Mess (U.S.E.)	103	306		15	Norlina (B.M. L 5)	113	328		12
Mount Airy	77	259		7	North base (U.S.E.)	101	305		15
Mount Airy, stand-pipe next to water tank	76			7					
Mount Clingman	17			6					
Mount Cross (Va.)	38	177		9					
Mount Gibbs	18			6					

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North Wilkesboro, red brick house of Mrs. Claudill, spire.....	77			7	Pinetops, water tank, aluminum.....	64			17
Northeast.....	103	306		15	Pineview.....	121	352		13
Nowhere.....	69	242		20	Pinnacle (Pickens County, S.C.).....	15	139		6
Oak Grove.....	86	280		11	Pinnacle (Rutherford County).....	74	253		6
Oak Island, U.S. Coast Guard, flagpole.....	33			10	Pinnacle Mountain (Bald Mountain).....	18		134	6
Oakland, Cleveland High School, water tank.....	48			13	Pipkin.....	23	152		20
Oakville.....	54	212		12	Pisgah.....	75	254		6
Observation tower, Wrightsville Beach, Oceanic Hotel, flagpole.....	35			16	Pit.....	57	218		12
Ocracoke.....	67	239		21	Pittman.....	87	282		11
Ogburn.....	70	243	133	9	Piver.....	26	158		16
Oise.....	124	357		10, 11	Pleasant.....	95	295		8
Old.....	20	142		18	Plymouth, stack.....	30			19
Oliver (S.C.).....	87	283		11	Plymouth, water tank.....	31			19
O'Neal.....	61	227		17	Pogue.....	74	252		6
Onslow.....	28	163		14, 15, 16	Pond.....	129	367		10
Ore Hill.....	71	246		10	Pond A.....	129	{ 366 393 }		10
Orr.....	23	151		20	Poore.....	14	136	133	7
Osborne (S.C.).....	125	357		11	Poore Knob, fire tower (no position).....				7
Osborne A (S.C.).....	131	370		11	Post.....	66	237		21
Osborne B.....	131	370		11	Poverty.....	100	303		
Osborne C.....	131	370		11	Poverty (U.S.E.) (see Poverty).....				15
Osborne D.....	131	370		11	Powell (Va.).....	51	203		12
Osborne E.....	131	370		11	Presbyterian Church: Charlotte, spire.....	93			8
Osborne F.....	131	370		11	Concord, spire.....	94			8
Osborne G.....	131	369		11	Wilmington, tall spire with cross.....	36			16
Osborne H.....	131	369		11	Primary traverse station no. 1 (U.S.G.S.).....	124	{ 355 393 }		14
Osborne I.....	130	369		11	Primary traverse station no. 2 (U.S.G.S.).....	124	{ 355 392 }		13, 14
Osgood.....	106	312		13	Primary traverse station no. 3 (U.S.G.S.) (Brunswick County).....	124	355		16
Overhills.....	122	{ 353 392 }		13	Primary traverse station no. 3 (U.S.G.S.) (Cumberland County).....	124	355		12
Owen.....	73	250		7	Primary traverse station no. 3 P (U.S.G.S.) (N.C.-Va.).....	59	222		18
Owens.....	60	224		17	Primary traverse station no. 4 (U.S.G.S.) (Cumberland County).....	123	{ 355 392 }		13
Pack Mountain (U.S. G.S.).....	70	258		5	Primary traverse station no. 4 (U.S.G.S.) (Northampton County).....	119	346		12, 18
Pamlico Fertilizer Co. water tank.....	31			20	Primary traverse station no. 5 (U.S.G.S.).....	68	240		20, 21
Paradise eccentric.....	50	201		14, 15	Primary traverse station no. 9 (U.S.G.S.) (Hertford County).....	58	221		18
Paradise (U.S.E.).....	51	202		14, 15	Primary traverse station no. 9 (U.S.G.S.) (Lenoir County).....	64	233		17
Paris (S.C.).....	15	139		6	Primary traverse station no. 9 eccentric.....	64			17
Park.....	69	241		20	Primary traverse station no. 10 (U.S.G.S.).....	95	294		8
Park eccentric.....	68	240		20	Primary traverse station no. 11 (U.S.G.S.) (Gates County).....	59	221		18
Parker.....	58	220		19	Primary traverse station no. 11 (U.S.G.S.) (Northampton County).....	57	217		12
Paschal.....	56	216		12					
Pasour.....	83	273		8					
Passet.....	102	305		15					
Paul Beck.....	71	246		10					
Pea Island.....	67	240		21					
Pea Dee.....	91	289		10					
Pelham.....	38	177		9					
Pelletier.....	25	156		20					
Pender.....	27	163		16					
Penelo.....	63	232		17					
Penelope.....	95	293		7					
Perhealth (N.C.-S.C.).....	91	288		11					
Perry (Bertie County).....	22	147		19					
Perry (New Hanover County).....	27	162		16					
Pettitt.....	61	228		17					
Pickens Nose.....	19		134	5					
Piersons Point 2.....	32	169		20					
Piersons Point 2 eccentric.....	31	169		20					
Pigott.....	26	158		16					
Piland.....	99	301		13					
Pilgrim.....	27	161		16					
Pilot Mountain.....	72		134	7					
Pine.....	119	347		13					
Pine (U.S.E.).....	103	307		15					

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Primary traverse station no. 12 (U.S. G.S.) (Va.)	57	219		18	Reeves	126	359		13
Primary traverse station no. 12 eccentric (Va.)	57			18	Reidsville:				
Primary traverse station no. 13 (U.S. G.S.)	65	234		17	Lucky Strike Cigarette factory, tall stack	43			
Primary traverse station no. 13 eccentric	64			17	Most northerly of three Lucky Strike tobacco storage water tanks	43			9
Primary traverse station no. 14 (U.S. G.S.) (Va.)	119	346		18	Reka	65	235		20
Primary traverse station no. 17 (U.S. G.S.)	123	{ 355 392 }		13	Replacement (N.C.-S.C.)	89	286		11, 16
Primary traverse station no. 18 (U.S. G.S.)	123	355		13	Rhodes (U.S.E.)	101	304		15
Primary traverse station no. 25 (U.S. G.S.) (Va.)	43	194		9	Richards	121	{ 351 392 }		16
Prince	119	346		13	Richardson	97	207		8
Prince A	123	354		13	Richland Balsam Mountain	18		134	6
Prince B	123	354		13	Richlands	42	192		14
Prince C	123	354		13	Richmond	129	367		10, 11
Prince D	122	353		13	Ridgeway (B.M. R 5)	113	328		12
Prince E	122	353		13	Roan High Bluff	14	138	133	6
Prince F	122	352		13	Roanoke (B.M. Z 1)	63	232		12
Prince F Prime	122	352		13	Roanoke eccentric	62	229		12
Prince G	122	352		13	Roanoke Rapids:				
Propst Mountain	18			6, 7	High, large, globular water tank	56			12
Providence	96	295		8	Large, squat aluminum water tank in east side	63			12
Quay (Va.)	52	206		18	Rosemary Mills, red brick stack on west side	57			12
Queen	33	171		20	Roaring Gap, Grey-stone Hotel, water tank	77			7
Quentin	123	365		10	Robinson	81	266		14
Quentin A	123	365		10	Rockingham	91	289		10, 11
Quentin B	123	{ 365 393 }		10	Rockingham:				
Quentin C	123	365		10	Municipal water tank, aluminum	92			10, 11
Quentin D	123	365		10	Short aluminum water tank (see East Rockingham, short aluminum water tank)				10, 11
Quentin E	123	365		10	Rocky Mount:				
R (U.S.E.)	34	173		16	Atlantic Coast Line				
Rabun (Ga.)	15	139		5	R. R. shops, red brick stack	63			17
Rabun 2 (Ga.)	76	257		5	East base	60	226		17
Ragged (U.S.E.)	102	306		15	Municipal power plant, high, yellow, brick stack	63			17
Raleigh	108	317		13	Planters Oil Co., water tank, black	64			17
Raleigh longitude	118	345		13	West base	61	226		17
Raleigh reference mark	47	199		13	Rocky Mountain, near Daytonville (S.C.)	17			8
Raleigh 2	40	184		13	Roddy (S.C.)	96	296		8
Raleigh:					Rodgers	97	293		8
Airway beacon green and white flashing	47				Rogers (Bladen County)	82	270		14, 16
Berry Kelly Training School, black water tank, ball on top	47			13	Rogers (Grayson-Smyth Counties, Va.)	14	137	133	7
Carolina Hotel, revolving red beacon	46			13	Roper	43	193		14, 45
Edenton Methodist Church tall spire	47			13	Rose	66	236		20
Meredith College, black water tank, ball on top	47			13	Roseboro	120	{ 349 392 }		14
Meredith College, tall brick stack	47			13	Rowland, municipal water tank, ball on top	90			11
State College, brick stack	47			13	Roxboro	39	180		9
Ramsure	71	{ 246 367 393 }	133	10	Roxboro:				
Rattle-snake Cliff	75	256		5	Black water tank	47			9
Rawlings (Va.)	51	203		12	Municipal water tank	45			9
Reel Beacon U.S.L.H.S.	95			8	Roy (Tenn.)	15	140		5
Red Hill	96	297		8					
Red Mount	39	181		9, 13					
Red Point light	29			19					

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Runs	34	173		16	Smith	38	177		20
Russell (Carteret County)	60	243		20	Smithfield:				9
Russell (Onslow County)	25	157		14, 15, 20	Concrete stack	48			
Russell (Rockingham County)	43	193		9	Cotton Mill, yellow brick stack	48			13
Saddle	73	249		7	Municipal water tank	48			13
Sadelback Mountain	19		134	5, 6	Snow Hill	64	233		13
St. James Church	35	174		16	Snow Hill, municipal water tank, aluminum	64			17
St. Johns College, Spartanburg, east turret (S. C.)	17			6	Somerset Turkish towel mills, black water tank, ball on top	45			17
Salem	86	281		11	South base (U.S.E.)	102	305		9
Salvo	67	239		21	South Hill, water tank (silver color) finial (Va.)	55			15
Samway	48	199		13	Southern	118	345		12
Samworth	100	303		15	Southern Pines: Congregational Church, steeple	132			13
Sanders	41	187		13	Water tank	132			10
Sandlin	42	191		14	Southport:				10
Sandy	85	273		10, 11	East base	27	160		
Sandymush	75	254		6	Water tank	33			16
Sanford	71	248		13	West base	26	159		16
Sanford A	125	358		13	White spire	34			16
Sanford B	125	358		13	Southwest (U.S.E.)	103	306		16
Sanford C	125	358		13	Spartanburg: Baptist Church (S. C.)	17			15
Red steel standpipe	131			13	St. Johns College, east turret (S. C.)	17			6
Tall steel water tank	131			13	Spencer	83	274		8
Saunders (Bertie County)	99	303		19	Spencer Mountain	16		133	8
Saunders (Gates County)	59	222		18	Spivey	78	261		6
Sauratown Mountain	19			7	Spooners	32	170		20
Schoolfield, Dan River Cotton Mills:					Spooners eccentric	32	170		20
Tallest and most westerly of three stacks (Va.)	44			9	Spout Springs	119	346		13
Water tank (Va.)	44			9	Spout Springs A	122	352		13
Scranton	66	237		20, 21	Spout Springs B	122	352		13
Sea	102	306		15	Spout Springs C	121	352		13
Selma	41	186		13, 17	Spout Springs D	121	352		13
Selma, municipal water tank (black)	48			13, 17	Spout Springs E	121	352		13
Semora	38	178		9	Spout Springs F	121	352		13
Sentell	75	254		6	Spout Springs G	121	352		13
Severn	52	208		18	Spout Springs H	121	351		13
Shackleford	60	225		17	Spout Springs I	121	351		13
Shady (Tenn.)	105	308		7	Spout Springs J	121	351		13
Sharpsburg	63	233		17	Spout Springs K	121	351		13
Sharp spire, Wilmington, with weather vane	37			16	Spray (Va.)	43	193		9
Shaw (Beaufort County)	23	150		19, 20	Spring	66	236		20
Shaw (Cumberland County)	119	347		13	Spring (U.S.E.)	101	304		15
Shiloh (Camden County)	33	172		18, 19	Sprunt	35	173		16
Shiloh eccentric (Camden County)	29	164		18, 19	Stack:				
Shiloh (Southampton County, Va.)	53	208		18	Belhaven, Interstate Cooperage Co., yellow brick	68			20
Shore	69	242		20	Bladenboro Cotton Mill, brick	88			16
Siler	71	246	133	10	Durham, Chesterfield Cigarette Factory, tall brick	45			13
Silver Creek Knob	16		133	6, 7	Durham, Durham Cotton Mill, tall	45			13
Simkins	25	156		20	Enfield, brick	63			17
Simonton College, center of cupola	17			7	Fort Caswell	34			16
Simpson (Carteret County)	69	241		20	Franklin, tall brick (Va.)	58			18
Simpson (Horry County, S. C.)	38	286		16	Goldsboro, State Hospital	49			17
Sitting Bull Mountain (Ridge Pole), middle summit of Nantahala	19		134	5	Greenville, Imperial Tobacco Co., taller of two	64			17, 19
Sloop	93	291		8	Hamer, Carolina Textile Corporation (S. C.)	90			11
Smathers (Tenn.)	98	300		8	Highest of three	70			20

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Raleigh, Meredith College, tall brick	47			13	State Road				
Raleigh, State College, brick	47			13	Statesville (Iredell County)	95	293		7
Reidsville, Lucky Strike Cigarette Factory, tall	43			9	Statesville (N.C.-Va.)	58	219		18
Roanoke Rapids, Rosemary Mills, red brick, on west side	57			12	Statesville longitude	17	141		7
Rocky Mount, Atlantic Coast Line R. R. shops, red brick	63			17	Stevenson Point 3	29	165		19
Rocky Mount, municipal power plant, high, yellow, brick	63			17	Stokesdale	72			9
Schoolfield, Dan River Cotton Mills, tallest and most westerly of three (Va.)	44			9	Stone (N.C.-Tenn.)	105	310		7
Smithfield, concrete	48			13	Stone (U.S.E.)	103	307		15
Smithfield, Cotton Mill, yellow brick	48			13	Stone eccentric	100	304		15
Washington, brick	31			20	Stuart (Va.)	37	175	133	7, 9
Waxham, cotton mill	97			8	Stump	103	306		15
Wilmington	37			16	Sugarloaf Mountain	18		134	6
Wilmington, high	37			16	Summit (B.M. H 3)	114	333		12
Wilmington, highest	37			16	Supply	26	159		16
Wilson, municipal power plant, tall brick	64			17	Sutton 2	20	166		19
Stacy	69	242		20	Swamp	103	306		15
Stake A	35			16	Swan (Hyde County)	66	237		21
Stancell (N.C.-Va.)	51	263		12	Swan (Lee County)	72	248		13
Standing Indian	75	257		5	Swan eccentric	72	248		
Standing Indian, fire tower	79				Swan Point eccentric	33	171		14, 15
Standing Indian Mountain, north summit of Nantahala	19		134	5	Swan Point (U.S.E.)	33	171		14, 15
Standpipe:					Sykes (N.C.-Va.)	56	216		12
Fort Mill (S.C.)	97			8	Sylva	79	263		5, 6
Goldsboro, aluminum	49			17	Table Rock Mountain	18			6, 7
Mount Airy, next to water tank	76			7	Tabor (N.C.-S.C.)	89	287		16
New Bern, municipal	31			20	Tabor, municipal water tank, aluminum	89			16
Sanford, red steel	131			13	Tank	109	{ 319 } { 390 }		13
Stanly	94	292		8	Tank:				
Star	73	250		7	Durham, Chesterfield Cigarette Factory, aluminum	45			13
State	96	290		8	Fort Mill, silver (S.C.)	97			8
State boundary monument (N.C.-Va.)	28	164		18	Franklin, flat top (Va.)	58			18
State boundary monument no. 14 (N.C.-Va.)	59	222		18	Greenville, Imperial Tobacco Co., taller of two	64			17, 19
State boundary monument no. 20 (N.C.-Va.)	59			18	Henderson, American Agricultural Chemical Co., tall black	56			12
State College	46	198		13	Henderson Cotton Mills, aluminum	56			12
State Line (bench mark) (N.C.-S.C.)	89	286		11	High Point, higher	72			10
State-line monument (N.C.-S.C.) (Columbus-Horry Counties)	89	287		16	Lancaster, aluminum (S.C.)	97			8
State-line monument (N.C.-S.C.) (Scotland-Marlboro Counties)	91	288			Laurinburg, Dixie Guano Co.	90			11
State-line monument (1813) (N.C.-S.C.)	97	298			McColl, Marlboro Cotton Mills, aluminum (S.C.)	90			
State-line monument (1905) (N.C.-S.C.)	90	288			Tar	20	142		11
					Tatham (U.S.G.S.)	76	257		5
					Taylor (Alexander County)	77	260		7
					Taylor (Halifax County)	61	228		12, 17
					Taylorville:				
					Methodist Church, spire	77			7
					Prison camp, water tower	77			7
					Temple	24	153		20
					Thelma (B.M. Y2)	115	334		12
					Thicketty (S.C.)	17			6
					Thomkins	73	251		7
					Thompson	118	344		13
					Tie (U.S.G.S.) (see G.S. Tie)				9
					Tippers	40	183		13
					Topton	79	264		5
					Town Point eccentric	50	201		14, 15
					Town Point (U.S.E.)	50	202		14, 15
					Townsville	54	211		12
					Toxey	21	144		19
					Trout	105	309		7

Index to positions, descriptions, elevations, and sketches—Continued

	Position	Description	Elevation	Sketch		Position	Description	Elevation	Sketch
	Page	Page	Page	Figure		Page	Page	Page	Figure
Troy	125	358		13	Water tank—Con.				
Trussdale	25	155		14, 15	Bladenboro Cotton Mill, aluminum	88			16
Tryon Mountain	19		134	6	Boynton (silver color) (Va.)	55			12
Tryon Mountain northeast summit	19		134	6	Boykins, black (Va.)	57			18
Tunis	99	301		18	Carthage, lower	131			10
Turner (N.C.-S.C.)	89	286		11	Carthage, taller	131			10
Turner (Surry County)	73	249		7	Cary, municipal	46			13
Turnsta!	23	152		20	Chadbourn, aluminum	88			16
Tussock	81	269		14, 16	Chapel Hill, black	45			13
Union	35	174		16	Clarksville, municipal (Va.)	55			12
University	45	196		13	Clayton Cotton Mills	47			13
University of North Carolina, bell tower	45			13	Clayton, Liberty Cotton Mills	47			13
Vance	23	151		20	Clayton, municipal	47			13
Vander	119	348		13	Clinton, silver colored	88			14
Vann	52	206		18	Clio, white (S.C.)	91			11
Vass	127	361		10	Dallas, tall, black, near white factory	94			8
Vass, white steeple with shingle roof	131	393		10	Dillon, Dillon Oil Co., tall, slender, black (S.C.)	89			11
Vaughan (B.M. 14)	113	331		12	Dillon, municipal (S.C.)	90			11
Verona	24	155		14, 15, 16	East Durham, Lucky Strike Tobacco Storage, northeasterly one of two	46			13
Vesle	125	357		10, 11	East Durham, Lucky Strike Tobacco Storage, southwesterly one of two, aluminum	46			13
V1 (Morehead City, Villa Hotel, water tank)	32	171		20	East Rockingham, Hannah-Picket no. 2, black	92			10, 11
View	102	305		15	East Rockingham, short aluminum, red top	92			
Villa	120	348		14	Edenton, highest	30			19
Vim	102	305		15	Elizabeth City, municipal	28			18, 19
Virginia-North Carolina boundary monument (N.C.-Va.)	28	164		18	Elerbe, municipal	92			10
Vulture	51	202		12	Emporia, aluminum (Va.)	57			12
Wadesboro	85	277		8, 10	Enfield, municipal	63			17
Wadesboro: Church spire, cross on top	92			8, 10	Fairmont, municipal	89			11
Municipal water tank, aluminum	92			8, 10	Fayetteville	124			13
Wake	109	319		13	Goldsboro, Durham Hoslery Mills, aluminum, higher of two	49			17
Wake Forest, water tank	119	390		13	Goldsboro, Farmers Cotton and Storage Warehouse Co.	49			17
Walker	55	214		12	Goldsboro, Vinson Lumber Co.	40			17
Wallaceton (Va.)	51	204		18	Greensboro, city	72			10
Walton	50	201		14, 15	Greensboro, Vicks Chemical Co.	72			10
Warren (B.M. H 5)	113	329		12	Greensboro, white	72			10
Warrior Mount	18			7	Greystone Hotel, Roaring Gap	77			7
Warsaw	80	260		14	Hamer, Carolina Textile Corporation (S.C.)	90			11
Warsaw, aluminum water tank	88			14	Hamlet, Seaboard Air Line Ry.	132			10, 11
Washington: Brick stack	31			20	Hookerton, aluminum	65			17
Municipal water tank	31			20	Huntersville, municipal	94			8
Water	101			15					
Water Rock (U.S.G.S.)	75	254		5, 6					
Water tank:									
Aberdeen, Seaboard Air Line Ry.	132			10					
Apex, municipal	46			13					
Beaufort, Tidewater Power Co., ball on top	70			20					
Belhaven, municipal	67			20					
Bennettsville, black (S.C.)	91			11					
Benson	48			13					
Bladenboro, aluminum	88			16					

Index to positions, descriptions, elevations, and sketches—Continued

	Position	Description	Elevation	Sketch		Position	Description	Elevation	Sketch
Water tank—Con.					Water tank—Con.				
Jackson Training School for Boys	Page 93	Page	Page	Figure 8	Snow Hill, municipal	Page 64	Page	Page	Figure 17
La Grange, municipal	50			17	Somerset, Turkish towel mills, black	45			9
Lakeview, green, with black roof	132			10	South Hill (Va.)	55			12
Lancaster, municipal (S. C.)	97			8	Southern Pines	132			10
Laurinburg, municipal	91			11	Southport	33			10
Littleton, municipal	63			12	Tabor, municipal	89			10
McColl, municipal (S. C.)	90			11	Wadesboro, municipal	92			8, 10
Marshville, black, ball on top, east one	93			8	Wake Forest	119			13
Marshville, black, ball on top, west one	93			8	Warsaw, aluminum	88			14
Marston Training School, black	92			10, 11	Washington, municipal	31			20
Maxton aviation beacon on municipal	90			11	Weldon, Eastern Cotton Oil Co., black	63			12
Monroe municipal	97			8	Wendell, black	48			13
Morehead City	32	171		20	Williamston, municipal	31			19
Morehead City, Villa Hotel (Vi)	32	171		30	Wilmington	36			16
Mount Gilead, higher of two	92			10	Wilmington, black	36			16
Mount Gilead, lower of two	93			10	Wilmington, silver, with black writing	36			16
Mount Olive, municipal	88			17	Wilmington, silver, with scale on side and ball on top	77			16
Mullins, ball on top of, northerly, black (S. C.)	89			11	Winston-Salem	32			7, 9
Mullins, ball on top of, southerly, black (S. C.)	89			11	Wrightsville Beach	35			16
New Bern	31			20	Water tower	31			19
New Holland, New Holland Corporation	68			21	Water tower, Taylorsville, prison camp	49			7
Niagara	132			10	Watson	77	199		17
Oakland, Cleveland High School	48			13	Waxham, cotton mill stack	97			8
Pamlico Fertilizer Co.	31			20	Way	66	236		20, 21
Pinetops, aluminum	64			17	Wayah	79	263		5
Plymouth	31			19	Wayah Bald, fire tower	79			5
Raleigh, Berry Kelly Training School, black	47			13	Waynesville	79	262		6
Reidsville, most northerly of three, Lucky Strike tobacco storage	43			9	Weeks	21	144		19
Roanoke Rapids, high, large, globular	56			12	Welch	70	263		5
Roanoke Rapids, large, squat, aluminum, in east side	63			12	Weldon (B. M. K. I.)	116	338		12
Rockingham, municipal	92			10, 11	Weldon, Eastern Cotton Oil Co., water tank, black	63			12
Rocky Mount, Planters Oil Co.	64			17	Wendell, black water tank	48			13
Rowland, municipal	90			11	West Drowning Creek Mountain	18		134	7
Roxboro, black	47			9	White (Bertie County)	22	147		19
Roxboro, municipal	45			9	White (Carteret County)	69	243		20
Sanford, tall, steel	131			13	White (Fittsylvania County, Va.)	43	194		9
Schoolfield, Dan River Cotton Mills (Va.)	44			9	Whitehall	41	189		17
Selma, municipal	48			13, 17	Whitehat	29	167		19
Smithfield, municipal	48			13	White Lake	81	209		14, 16
					White Oak (Va.)	38	179		9
					Whitesides Mountain	19		134	5, 6
					White Top 2 (Va.)	98	300		7
					Wilkes	77	260		7
					Williams (Jones-Lenoir Counties)	42	190		14, 17
					Williams (N. C. Va.)	44	185		9
					Williams (Onslow County)	102	306		15
					Williamson	83	272		11, 16
					Williamston	22	149		19
					Williamston, municipal water tank	31			19
					Wilmington	27	161		16
					Wilmington: Baptist Church, tall spire with cock weather vane	36			16
					Black water tank	36			16

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	Position	Description	Elevation	Sketch		Position	Description	Elevation	Sketch
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Wilmington—Contd.					Windsor				
Catholic Church, western one of twin domes	35			16	Winston-Salem, water tank	72			19
Church spire with broad base	36			16	Winthrop (S.C.)	96	297		7, 9
First Baptist Church, spire	37			16	Winton	58	220		18
High stack	37			16	Wise	56	216		12
Highest stack	37			16	Wofford (S.C.)	15	139	133	6
Low church spire with broad base	36			16	Woodard	53	208		12, 18
Low church spire with weather vane	36			16	Woodville	21	145		19
Lutheran Church, spire	36			16	Woody	55	214		9
Presbyterian Church, tall spire with cross	36			16	Woolard	23	149		19
Sharp spire with weather vane	37			16	Wooten	60	225		17
Silver water tank with black writing	36			16	Worley	41	188		17
Silver water tank with scale on side and ball on top	36			16	Wrightsville Beach: Oceanic Hotel, observation tower, flag-pole	35			16
Spire	37			16	Water tank	35			16
Stack	37			16	Wrightsville northwest base	35	174		16
Water tank	36			16	Wrightsville northwest base eccentric	35	174		16
Wilson	87	284		11, 16	Yadkin	121	{ 351 } { 392 }		16
Wilson (U.S.E.)	103	307		15	Yeopin	21	145		19
Wilson, municipal power plant, tall brick stack	64			17	Young	14	137	133	7
					Youngsville	109	{ 319 } { 390 }		13
					Youngsville, church spire	119			13
					Zion	85	280		11

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