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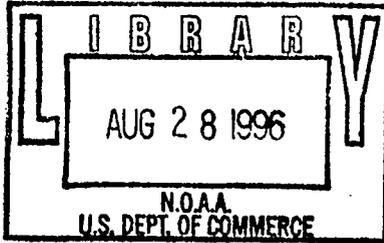
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# LEVELING IN ARKANSAS

By

HOWARD S. RAPPLEYE  
MATHEMATICIAN



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# LEVELING IN ARKANSAS

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## GENERAL STATEMENT

This publication contains the descriptions and elevations of bench marks, in the State of Arkansas, the elevations of which have been determined by first- or second-order leveling executed by the Coast

and Geodetic Survey. Other lines have been included, the elevations of which were determined by first-order leveling run by the Corps of Engineers, United States Army.

Approximately 2,000 miles of first-order leveling and 550 miles of second-order leveling have been run within the limits of this State. Of this amount, 320 miles of first-order leveling were run by the Corps of Engineers, United States Army.

The several lines are listed below, together with the years in which the field work was done.

|   |         |
|---|---------|
| Line 1, Arkansas City to Little Rock, Ark.....                        | 1887-88 |
| Line 2, Russellville to Little Rock, Ark.....                         | 1888    |
| Line 3, Little Rock, Ark., to Parkeville, La. (part).....             | 1895    |
| Line 4, Arkansas City, Ark., to Parkeville, La. (part).....           | 1897    |
| Line 5, Camden, Ark., to Shreveport, La. (part).....                  | 1900    |
| Line 6, Little Rock to Hazen, Ark.....                                | 1916    |
| Line 7, Forrest City to Proctor, Ark.....                             | 1916    |
| Line 8, Monett, Mo., to Bridge Junction, Ark. (part).....             | 1928    |
| Line 9, Proctor, Ark., to Memphis, Tenn. (part).....                  | 1928    |
| Line 10, Seligman, Mo., to Kensett, Ark. (part).....                  | 1931-32 |
| Line 11, Kensett to Hoxie, Ark.....                                   | 1931-32 |
| Line 12, Kensett to Little Rock, Ark.....                             | 1931-32 |
| Line 13, Vicinity of Little Rock, Ark. (parts of several lines).....  | 1932    |
| Line 14, Pine Bluff to Camden, Ark. (second-order leveling).....      | 1931-32 |
| Line 15, Crossett to Montrose, Ark. (second-order leveling).....      | 1933    |
| Line 16, Grady to Hazen, Ark. (second-order leveling).....            | 1932    |
| Line 17, Wheatley to Helena, Ark.....                                 | 1933    |
| Line 18, Forrest City to Newport, Ark.....                            | 1932-33 |
| Line 19, Mammoth Spring to Shirley, Ark.....                          | 1933    |
| Line 20, Harrison to Clarksville, Ark. (second-order leveling).....   | 1932    |
| Line 21, Fort Smith to Lewisville, Ark.....                           | 1931-32 |
| Line 22, Gurdon to Boles, Ark. (second-order leveling).....           | 1932    |
| Line 23, Mount Ida to Russellville, Ark. (second-order leveling)..... | 1932    |
| Line 24, Cape Girardeau, Mo., to Hoxie, Ark. (part).....              | 1932    |
| Line 25, Seligman, Mo., to Fort Smith, Ark. (part).....               | 1932-33 |
| Line 26, Van Buren to Russellville, Ark.....                          | 1932-33 |
| Line 27, Hazen to Forrest City, Ark.....                              | 1932-33 |

A short paragraph descriptive of each line will be found at the beginning of the list of descriptions and elevations of the bench marks along the line.

## INSTRUMENTS AND FIELD METHODS

The first-order leveling by the Coast and Geodetic Survey in Arkansas was all run with instrumental equipment either exactly like, or very similar to, that described in Coast and Geodetic Survey Special Publication No. 129, Geodetic Level and Rod. The field work was done in accordance with the instructions and specifications given in Coast and Geodetic Survey Special Publication No. 140, Manual of First-order Leveling.

The second-order leveling by this Bureau was run with the same instrumental equipment and under the same instructions as the first-order leveling with the exception that a single running was permitted instead of the double running in opposite directions required for first-order work. The leveling on alternate days on the second-order leveling was run in opposite directions with regard to the general direction of progress, so that approximately half of the second-order leveling was done in a forward direction and the remainder in a backward direction.



The first-order leveling in Arkansas which was run by the Corps of Engineers, United States Army, was done with equipment and leveling program very similar to that used by the Coast and Geodetic Survey prior to 1900, as described in Appendix No. 8, Report for 1898-99. (This publication is now out of print but may be found in the libraries of the larger cities.)

### COMPUTATIONS AND ADJUSTMENTS

The office computation of the leveling done by this Bureau in Arkansas was carried out in accordance with the instructions given in Special Publication No. 140, Manual of First-order Leveling. Rod and temperature corrections were applied to the observed differences and, in cases where it was necessary, the level corrections and the corrections for index errors of the rods were also applied.

These corrections, with modern leveling equipment, especially with well-graduated invar rods, are very small and usually are of small moment except in mountainous country where large differences are encountered.

The computations and corrections for the Coast and Geodetic Survey leveling were carried to four decimal places in meters until the final elevations were derived, when they were rounded off to the nearest millimeter for publication. The elevations in feet were determined by converting the metric elevations, using the factor, 1 meter = 3.2808333 feet.

### ORTHOMETRIC CORRECTION

Owing to the fact that the earth is an oblate spheroid, level surfaces at different elevations are not parallel but tend to converge slightly toward the poles of the earth. This necessitates the application of an orthometric correction to the observed differences of elevations in order that the resulting elevations of the bench marks may represent their true heights above mean sea level. The orthometric correction and the methods used in computing it are discussed in detail in Special Publication No. 140, Manual of First-order Leveling.

The orthometric correction reaches a maximum on north-and-south lines run at high elevations, and it is zero on east-and-west lines. The orthometric correction has been applied to the leveling included in this publication. In order that persons using this publication may form an idea as to the order of size of the orthometric correction, the following example is cited:

The difference in elevation between two bench marks at about the latitude of Little Rock, Ark., in such locations that their geographic latitudes would differ by 2 minutes and the average elevation of the line of levels connecting them would be 300 feet, would require an orthometric correction of 0.0009 foot. This correction varies directly with the average elevation and with the difference in latitude between the marks and depends slightly upon the latitude. Tables for use in computing the orthometric correction are given in Special Publication No. 140.

## THE 1929 GENERAL ADJUSTMENT

From time to time adjustments of the first-order level net of the United States have been made for the purpose of obtaining elevations which were, from a theoretical standpoint, nearer the exact truth than those derived from unadjusted observations or the arbitrary fitting of new lines to old adjusted values of junction points. In 1898 the first adjustment of the net was made and in 1903 there was another general adjustment. In 1907 and 1912, adjustments of the first-order level net were made. These last two adjustments cannot be considered as strictly general adjustments for the reason that portions of the net as adjusted in 1903 were held fixed in the adjustments of 1907 and 1912.

By 1929 so much additional leveling had been run throughout the United States that a new general adjustment was needed. It was believed that the net would be considerably strengthened by the introduction of the first-order leveling of Canada. Upon request, the Geodetic Survey of Canada kindly placed at the disposal of this Bureau the results of some 20,000 miles of first-order leveling in the Dominion of Canada. This leveling, combined with about 40,000 miles of leveling in the United States, was all adjusted in a single least-squares adjustment in which mean sea level was held at zero, as observed at 26 tidal stations (21 in the United States and 5 in Canada). The elevations resulting from the general adjustment are the best elevations obtainable from the data available at the time of the adjustment.

## THE ARKANSAS SUPPLEMENTARY ADJUSTMENT

In 1932 and 1933 an intensive campaign of control leveling was carried out in Arkansas. Prior to the 1929 general adjustment, only lines 1 to 9 and 25 to 27, inclusive, had been run in Arkansas, and lines 25 to 27, inclusive, were rerun in 1932 and 1933, giving new elevations throughout the lines and superseding the values derived in the 1929 general adjustment.

Rather than to fit the new leveling to the 1929 general adjustment by fitting in the lines, one at a time, as they were run, it was decided to fit the new leveling in by means of a supplementary least-squares adjustment, in which the following junction bench marks of the 1929 general adjustment were held fixed:

*Table of junction elevations, from 1929 general adjustment, held fixed in the Arkansas supplementary adjustment*

| Place               | Bench mark                | Elevation     |
|---------------------|---------------------------|---------------|
|                     |                           | <i>Meters</i> |
| Lewisville.....     | B.M. 4 (R.R.S.).....      | 70.4905       |
| Greenville.....     | L 2.....                  | 108.9001      |
| El Reno.....        | 1327.....                 | 405.0617      |
| Monett.....         | CIX.....                  | 396.3216      |
| Mammoth Spring..... | F 1.....                  | 153.6608      |
| Hoxie.....          | T 2.....                  | 81.9563       |
| Proctor.....        | R.M. Proctor.....         | 61.7527       |
| Austin.....         | Austin I.....             | 59.9567       |
| Friar Point.....    | Friar Point II (old)..... | 55.2480       |
| Little Rock.....    | O.....                    | 87.9908       |
| Cape Girardeau..... | P.B.M. 60.....            | 104.3437      |

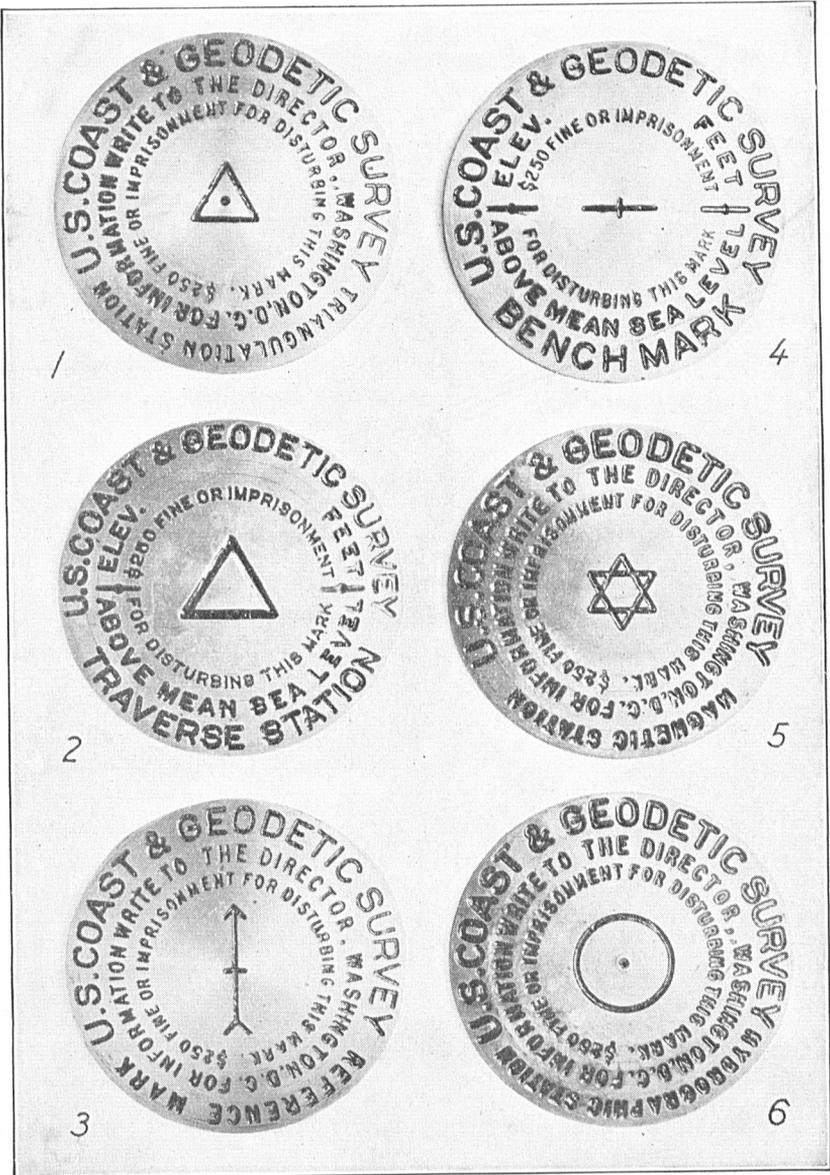


FIGURE 2.—STANDARD MARKS OF THE U.S. COAST AND GEODETIC SURVEY.

- |                                |                               |
|--------------------------------|-------------------------------|
| 1. Triangulation station mark. | 4. Bench mark.                |
| 2. Traverse station mark.      | 5. Magnetic station mark.     |
| 3. Reference mark.             | 6. Hydrographic station mark. |

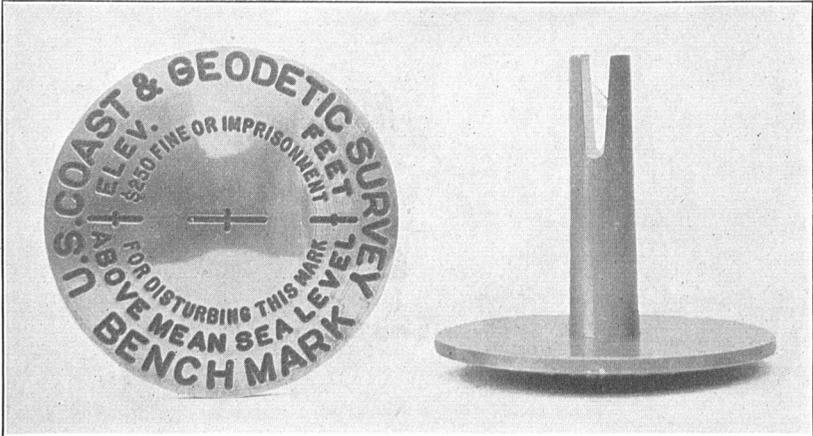


FIGURE 3.—STANDARD BENCH MARK DISK, SHOWING SHANK BY WHICH IT IS FASTENED IN PLACE.

The first-order leveling in Arkansas was adjusted to the above-mentioned fixed points by the method of least squares. The supplementary adjustment gave elevations for all of the junction bench marks at the intersections of the various lines of leveling. Corrections were then distributed throughout the various lines in proportion to distance to obtain the final elevations of all bench marks.

The second-order leveling was fitted to the first-order leveling either by simply distributing the necessary correction uniformly in proportion to distance or by means of small supplementary adjustments in cases where several short lines formed circuits.

As a result of this process of adjustment, the elevations of all bench marks given in this publication are in harmony with the results of the 1929 general adjustment and are the best elevations obtainable from the data available at present.

### BENCH MARKS

The standard bench-mark disk now used by the Coast and Geodetic Survey is shown in figures 2 and 3. These disks are set in existing structures, in concrete posts cast in place for the special purpose, and in outcrops of rock where such outcrops are available. The concrete posts extend deep enough below the surface of the ground to be reasonably free from disturbance from frost action. They usually project a few inches above the ground to aid in their recovery.

In this publication will be found the descriptions and elevations for many points not marked with the standard disks of this Bureau. The United States Geological Survey established many of the bench marks which are included in this publication. A standard disk, somewhat similar to that used by the Coast and Geodetic Survey, forms the standard type of mark used by that Bureau. In all other cases the character of the mark is given with the description.

In starting new leveling, difficulty is sometimes encountered by field parties in connecting with bench marks which are disks set vertically in walls or which are small chiseled squares with the elevations referred to the bottoms of the holes. The wall bench marks present no difficulty if the levelman uses a tape instead of a rod in taking the sight on the bench mark. If the mark is high on the wall, a tape can be allowed to hang down from the mark, giving a "minus backsight" or a "plus foresight."

In connecting with the bottom of a chiseled square which is too small to admit the foot of an ordinary level rod, a small block can be put in the hole. The rod is held on it for the backsight and the same block is carried forward and placed on the first turning point while the foresight is being taken. Then, if the block is removed from the first turning point before the next backsight is taken, the elevation carried forward will be the same as if the rod had been held directly on the bottom of the square. A  $\frac{3}{4}$ -inch length of  $\frac{1}{2}$ - or  $\frac{5}{8}$ -inch dowel stick, or a similar piece of metal rod, makes an excellent block for use in small chiseled squares.

### COOPERATION IN THE PRESERVATION OF BENCH MARKS

A bench mark is useful only as long as it is recoverable. When changes occur, as they often do, in the surrounding natural and cul-

tural features with relation to which the mark is described, it becomes increasingly difficult to find the mark by means of the published description. Engineers and others who have occasion to visit any bench marks established by this Bureau or other Government organizations will be doing a public service if they will report the condition of the marks and make suggestions as to needed changes in the descriptions.

Form 685, Report on Condition of Bench Mark (see fig. 4), is a 5- by 8-inch card with blanks to be filled in regarding the condition of the mark. Copies of this form will be furnished on request to anyone who may have occasion to visit any of these marks. Envelops addressed to the Director, United States Coast and Geodetic Survey, Washington, D.C., and requiring no postage, will also be furnished for returning these reports.

The Coast and Geodetic Survey proposes to issue from time to time, probably in the form of mimeographed sheets, supplements to

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
FORM 685  
Ed. Oct., 1929

R

## REPORT ON CONDITION OF BENCH MARK

Designation of mark F 14 State Texas County Mitchell  
Mark searched for or recovered by—(Name) Robert Muldron  
Date June 14, 1929 (Occupation) Engineer  
(Address) Mims Bldg., Abilene, Tex.  
Present condition of the mark Good  
Letters or numbers found stamped on (not cast in) the mark None

Use the following space for reporting upon the thoroughness of the search in case mark was not recovered, or for suggesting needed changes in the published description, if the mark was recovered

*This mark in good condition and has not been disturbed. The railroad station mentioned in the description has been moved one and one-half miles east.*

U. S. GOVERNMENT PRINTING OFFICE: 1929

Signed Robert Muldron

FIGURE 4.—Facsimile of Form 685, Report on Condition of Bench Mark.

this publication and to other State leveling publications, in which will be given such changes in descriptions as may be reported to this office by engineers and others who have visited any of the marks and found the descriptions to be in need of revision. Persons or organizations who have copies of this publication and who wish to receive the supplements as they are issued should write to the Director, United States Coast and Geodetic Survey, Washington, D.C., stating the title and number of the publication for which the supplements are desired.

## RAIL ELEVATIONS

Interspersed throughout the descriptions and elevations of bench marks will be found the descriptions and elevations, in tenths of feet, of tops of rails opposite railroad stations or at railroad and highway crossings. These elevations are approximate only, since the track does not accurately maintain a constant elevation for any great length of time.

## Descriptions and elevations of bench marks

## LINE 1, ARKANSAS CITY TO LITTLE ROCK, ARK.

[First-order leveling]

This line follows the Missouri Pacific Railroad from Arkansas City to Little Rock. The field work was done, during the winter of 1887-88, by a party in charge of J. E. McGrath, subassistant.

F.—At Arkansas City, Desha County, about 90 yards southwest of the Missouri Pacific Railroad station, 114 feet south of the center line of the main track, at the switch point for the north spur line, 85 feet southwest of the northeast end of a warehouse, 23 feet southeast of the northwest side of the warehouse, and about 15 feet northwest of the toe of the levee. The bottom of a square surrounded by the letters "U.S.B.M." cut in the top of a 6- by 6-inch granite post. (42.371 meters or 139.012 feet.)

NOTE.—A hole was cut in the floor of the warehouse to allow the level rod to rest on the mark.

G.—Destroyed. (45.774 meters or 150.177 feet.)

H.—At Tillar, Drew County, at the chimney at the back of the store owned in 1888 by H. L. Henry and Brothers, in the eleventh course from the ground, and in the third brick east of the side of the house. The center of a cross on the head of a copper bolt led horizontally into the brick. (46.715 meters or 153.264 feet.)

I.—At Walnut Lake, Desha County, at the north side of the house owned in 1888 by R. A. Picken, at the west side of the chimney, and in the eighteenth course of brick above the ground. The center of a cross on a 2½-inch copper bolt led horizontally into a brick. (49.990 meters or 164.009 feet.)

J.—At Varner, Lincoln County, about 300 yards east of the Missouri Pacific Railroad station, about 1¼ poles west of milepost 415, about 140 feet south of the track, in the front yard of G. W. Paschal's residence, which is the first house east of the bayou, 48 feet northeast of the northeast corner of the front porch, and 30 feet southwest of a 24-inch hickory tree. The bottom of a square surrounded by the letters "U.S.B.M." cut in the top of a granite post. (54.738 meters or 179.580 feet.)

For additional bench marks in this vicinity, see page 78.

K.—At Noble Lake, Jefferson County, 51.9 feet southeast of the train-order signal in front of the Missouri Pacific Railroad station, 54 feet northwest of the center of a grade crossing, 50 feet south of a 3-foot cottonwood tree which is the southeastermost one of a row of four, and 11.8 feet northeast of the gage line of the northeast rail. The bottom of a square surrounded by the letters "U.S.B.M." cut in the top of a granite post buried under about 2 feet of platform cinders. (61.859 meters or 202.949 feet.)

For additional bench marks in this vicinity, see pages 64 and 65.

N.—At Pine Bluff, Jefferson County, in a vacant lot at the northwest corner of the intersection of West Fourth Avenue and Oak Street, about 55 feet north of the center line of the north track of the Missouri Pacific Railroad, 29.3 feet west of the west curb on Oak Street, and 20.8 feet north of the north curb on West Fourth Avenue. The bottom of a square surrounded by the letters "U.S.B.M." cut in the top of a granite post set flush with the ground. (68.522 meters or 224.809 feet.)

L.—Destroyed. (71.547 meters or 234.734 feet.)

E.—About 5½ miles southeast along the Missouri Pacific Railroad from Redfield, Jefferson County, about 25 yards south of the second pole south of milepost 85, and about 20 feet west of the track. The bottom of a square surrounded by the letters "U.S.B.M." cut in the top of a granite post. (103.833 meters or 340.659 feet.)

D.—At Redfield, Jefferson County, about 100 feet south of the west end of a bridge over the Missouri Pacific Railroad, and at the west edge of a concrete walk between C. M. Washburn's grocery store and an old frame store building. The bottom of a square surrounded by the letters "U.S.B.M." cut in the top of a granite post. (93.921 meters or 308.139 feet.)

C.—Destroyed. (78.771 meters or 258.435 feet.)

P.B.M. II.—About 5 miles northwest along the Missouri Pacific Railroad from Wrightsville, Pulaski County, between mileposts 106 and 107, and in the top of the southwest block which supports the platform in front of section house 2. The top of a brass nail almost in the center of an equilateral triangle formed by three copper nails. (81.329 meters or 266.827 feet.)

For bench marks in the vicinity of Little Rock, see pages 61–64.

LINE 2, RUSSELLVILLE TO LITTLE ROCK, ARK.

[First-order leveling]

This line follows the Missouri Pacific Railroad from Russellville to Little Rock. The field work was done, during the fall of 1888, by a party in charge of Isaac Winston, subassistant.

For bench marks in the vicinity of Russellville, see pages 127, 151, and 152.

XV.—At Galla Creek, Pope County, at the northeast corner of the yard to the large frame house owned by J. Potts and T. H. Ragsdale. The lowest point in a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (113.453 meters or 372.220 feet.)

XIV.—At Atkins, Pope County, at the northeast corner of Railroad Avenue and Dover Street, at the southwest corner of the brick building owned in 1888 by E. A. Darr, and in the southwest corner of the stone doorsill. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." (108.770 meters or 356.856 feet.)

XIII.—At Blackville, Conway County, at the southwest corner of the yard of the house owned in 1888 by W. R. Jones. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (99.476 meters or 326.364 feet.)

XII.—At Germantown, Conway County, at the southeast corner of the yard of Missouri Pacific Railroad section house 7. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (93.692 meters or 307.388 feet.)

XI.—Destroyed. (118.489 meters or 388.743 feet.)

X.—At Plumerville, Conway County, at the southeast corner of the yard of the Sims Hotel. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (89.317 meters or 293.034 feet.)

IX.—At Menifee, Conway County, a few feet west of a storehouse used in 1888 as a post office, in line with the front of the building, and near an old well. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (87.376 meters or 286.666 feet.)

VIII.—In Faulkner County, about  $2\frac{1}{2}$  miles southeast along the Missouri Pacific Railroad from Menifee, Conway County, in the top of the east stone abutment of the bridge over Cadron Creek, and north of the track. The bottom of a chiseled square, flanked by the letters "U.S.B.M." (86.606 meters or 284.140 feet.)

VII.—About  $5\frac{1}{2}$  miles west along the Missouri Pacific Railroad from Conway, Faulkner County, nearly opposite section house 5, and near the fence to the yard in front of the house where the section hands live. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (100.889 meters or 331.000 feet.)

VI.—Destroyed. (97.806 meters or 320.885 feet.)

V.—At Preston, Faulkner County, in line with the north end of the building which in 1888 contained the post office and store, in the west end of the yard owned in 1888 by J. W. Austin, and close to the fence line. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (84.190 meters or 276.213 feet.)

IV.—At Mayflower, Faulkner County, almost due east of the Missouri Pacific Railroad station, and in the southwest corner of the yard in front of a house belonging in 1888 to J. R. Miller. An outlined square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (87.684 meters or 287.977 feet.)

III.—At Palarm, Faulkner County, in line with the south end of the Missouri Pacific Railroad station platform, about 10 yards north of the building which

in 1888 contained the post office, and in the west end of the yard owned in 1888 by Daniel Chism, postmaster. An outlined square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (82.413 meters or 270.383 feet.)

II.—At **Marche**, Pulaski County, at the southwest corner of the yard in front of Charles Chonoski's residence, which in 1888 joined the store and post office. An outlined square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (82.044 meters or 269.173 feet.)

I.—About  $4\frac{1}{2}$  miles west along the Missouri Pacific Railroad from **Little Rock**, Pulaski County, between mileposts 4 and 5, 5 feet west of the sixth pole west of trestle 12, and about 4 yards north of the track. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a granite post. (96.350 meters or 316.108 feet.)

For bench marks in the vicinity of Little Rock, see pages 61–64.

**LINE 3, LITTLE ROCK, ARK., TO PARKEVILLE, LA. (PART)**

[First-order leveling by the Corps of Engineers, U.S. Army]

This line follows the Missouri Pacific Railroad from Little Rock to Camden; a dirt road from Camden to Frenchport; and a chain-line cut along Ouachita River from Frenchport, through Champagnolle and Lake Landing, to the Arkansas-Louisiana State line. The field work on the portion from Little Rock to Frenchport was done, during the fall of 1894, by a party in charge of T. C. Thomas. The field work on the portion from Frenchport to Champagnolle was done, during the summer of 1897, by a party in charge of W. R. Neely. The field work on the portion from Champagnolle to the Arkansas-Louisiana State line was done, during the fall of 1895, by a party in charge of W. H. Polk.

For bench marks in the vicinity of Little Rock, see pages 61–64.

**P.B.M. Ensign.**—At **Ensign**, Pulaski County, on the Missouri Pacific Railroad, at the east fence of the yard around the section house, about 10 yards east south wall, and at the southeast corner of a small garden enclosure. A chiseled cross on the top of a section of rail set vertically in the ground. (89.599 meters or 293.959 feet.)

**P.B.M. Mabelvale.**—At **Mabelvale**, Pulaski County, about 90 yards east of the Missouri Pacific Railroad station, about 25 yards south of the track, and on the top of the iron casting at the east side of the enclosure around the public well. Witnessed in 1894 by triangular blazes on trees, as follows: 12-inch sweet gum, about 2 yards north; 16-inch black oak, about 2 yards south; and 24-inch black oak, about 9 yards west. A chiseled cross. (94.706 meters or 310.715 feet.)

**P.B.M. Alexander.**—At **Alexander**, Pulaski County, about 10 feet west of the west wall of the Missouri Pacific Railroad station, about 8 feet south of the south wall, and at the southeast corner of a small garden enclosure. A chiseled cross on the top of a section of rail set vertically in the ground. (99.643 meters or 326.912 feet.)

**P.B.M. Benton.**—Destroyed. (91.144 meters or 299.028 feet.)

**P.B.M. Saline River.**—Destroyed. (86.255 meters or 282.983 feet.)

**P.B.M. Traskwood.**—At **Traskwood**, Saline County, opposite the west end of the Missouri Pacific Railroad station, about 200 feet south of the track, in front of a hotel owned in 1894 by G. W. Winter, and at the northeast corner of a wooded lot. A chiseled cross on the top of a section of rail set vertically in the ground. (89.174 meters or 292.585 feet.)

**P.B.M. Malvern.**—At **Malvern**, Hot Spring County, about 220 yards west of the Missouri Pacific Railroad station, about 110 yards north of the track, at a Government cotton warehouse, and on the north end of the stone sill to the door at the southeast corner. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." (82.706 meters or 271.345 feet.)

**P.B.M. Donaldson.**—At **Donaldson**, Hot Spring County, in line with the south wall of the Missouri Pacific Railroad station, and about 8 feet from the east wall. A chiseled cross on the top of a section of rail set vertically in the ground. (69.813 meters or 229.045 feet.)

**P.B.M. Daleville.**—At Daleville, Clark County, about 0.4 mile north of Ouachita River, about 55 yards northeast of the Missouri Pacific Railroad station, at the northwest side of the office building of the Arkadelphia Lumber Co., at the north corner of the base of the chimney, and on the second footing course from the top. A chiseled cross. (57.187 meters or 187.621 feet.)

**P.B.M. Ouachita River.**—About 0.6 mile north along the Missouri Pacific Railroad from Arkadelphia, Clark County, at the south end of the bridge over Ouachita River, on the top of the pedestal stone at the downstream end of the pier, 1½ inches northwest of the northwest edge of the footplate of the truss, and 5 inches from the northeast edge. A chiseled cross. (59.590 meters or 195.505 feet.)

**Gage B.M. B (Ewens).**—About 0.6 mile north along the Missouri Pacific Railroad from Arkadelphia, Clark County, near the south end of the bridge over Ouachita River, about 20 yards back of the middle section of the gage, immediately below a small ravine running past the section, and in the running root of a large gum tree, about ½ foot in front of the letter "B" marked on a small blaze on the root. A nail. (56.935 meters or 186.794 feet.)

**P.B.M. Arkadelphia I.**—At Arkadelphia, Clark County, at the west corner of a small enclosure immediately northeast of the Missouri Pacific Railroad station. A cross cut on the top of a section of rail set vertically in the ground and projecting about 4 inches above ground. (57.588 meters or 188.937 feet.)

**P.B.M. Arkadelphia II.**—At Arkadelphia, Clark County, on a pine knoll northwest of the Missouri Pacific Railroad station, about 45 yards along Maddox Street from the foot of the hill, and about 50 feet northeast of Maddox Street. Witnessed in 1894 by triangular blazes on trees, as follows: 2½-foot pine, 7.2 feet east; 2¼-foot pine, 6.9 feet southwest; and 2¼-foot pine, 6.2 feet northwest. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (66.082 meters or 216.804 feet.)

**P.B.M. Gum Springs.**—At Gum Springs, Clark County, near the southwest corner of the Missouri Pacific Railroad section house, in line with the west wall of the main part, and in line with the south wall of the L. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (65.382 meters or 214.507 feet.)

**P.B.M. Curtis.**—At Curtis, Clark County, at the intersection of the prolongation of the south wall of the Missouri Pacific Railroad station and the prolongation of the front of the stores northwest of the station, in a roadway, about 80 feet west of the west wall of the station, and about 50 feet south of the south wall of the nearest store to the north. The top of the cap on a 1½-inch iron pipe. (56.603 meters or 185.705 feet.)

**P.B.M. Smithton.**—About ¾ mile northeast along the Missouri Pacific Railroad from Smithton, Clark County, opposite milepost 423, and about ½ yard from the west right-of-way fence. The top of the cap on a 1½-inch iron pipe. (63.043 meters or 206.834 feet.)

**P.B.M. Gurdon I.**—Destroyed. (63.834 meters or 209.429 feet.)

**P.B.M. Gurdon II.**—Destroyed. (63.683 meters or 208.933 feet.)

**P.B.M. Whelen.**—At Whelen Springs, Clark County, in line with the north wall of the Missouri Pacific Railroad station, about 30 yards east of the east wall, about 30 yards south of the south wall of a store, about 1 yard west of the west wall, about 1 yard west of a fence around a garden enclosure just south of the store, and about 4 yards north of the southwest corner of the garden. The top of the cap on a 1½-inch iron pipe. (77.098 meters or 252.946 feet.)

**P.B.M. Little Missouri.**—About 4 miles south along the Missouri Pacific Railroad from Whelen Springs, Clark County, on the top of the stone pier at the north end of the bridge over Little Missouri River, midway between the rails of the track, 4 inches from the south edge of the capstone of the pier, and near the letter "V" cut with the vertex pointing to the bench mark. A chiseled cross, surrounded by the letters "USBM." (50.712 meters or 166.378 feet.)

**P.B.M. Chidester.**—At Chidester, Ouachita County, about 22 yards north of the north wall of the Missouri Pacific Railroad station, about 24 yards east of the east wall, at the southwest corner of a yard owned in 1894 by Dr. Tidwell, about 1 yard north of the south fence, and about ¾ foot east of the west fence. Witnessed in 1894 by triangular blazes on trees, as follows: 12-inch oak, 7 yards northwest; and 8-inch white oak, 6 yards east. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (70.392 meters or 230.944 feet.)

**P.B.M. Lester.**—At Lester, Ouachita County, about 220 yards east of the Missouri Pacific Railroad station, opposite milepost 452, about 50 feet south of the track, and at the edge of a clearing along the railroad right-of-way. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (34.851 meters or 114.340 feet.)

**P.R.P. Camden I.**—At Camden, Ouachita County, near the crossing of the St. Louis Southwestern Railway and a spur line of the Missouri Pacific Railroad, about 5 yards north of the north end of the cotton shed of the Camden compress, about 10 yards east of the track to the compress, at the southwest corner of the yard of the Shiloh Methodist Church (colored), about ¾ yard from the west fence, and about ½ yard from the south fence. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (42.394 meters or 139.088 feet.)

**P.B.M. Camden II.**—At Camden, Ouachita County, on Harrison Street, between Jackson and Jefferson Streets, at the west entrance to the courthouse, on the south edge of the second step from the bottom of a flight of 8 stone steps, 3 inches from the south end of the step, and 6 inches from the west edge. A chiseled cross. (60.926 meters or 199.888 feet.)

**NOTE.**—In 1932, it was reported that the courthouse was wrecked by a tornado in December 1931, but that the bench mark was then in good condition.

For additional bench marks in the vicinity of Camden, see pages 15, 71, and 72.

**P.R.P. Camden III (St.L.Swn.Ry.).**—Near Camden, Ouachita County, about 290 yards southwest of the St. Louis Southwestern Railway bridge over Ouachita River, about 11 yards west of the track, and about 4 yards from the foot of the embankment. The top of a small pipe set vertically inside a 4-inch pipe which projects about 10 inches above it. The cap on the pipe is marked "St.L.A. & T.Ry. B.M. T 2696." (32.990 meters or 108.235 feet.)

**P.B.M. Camden IV.**—Near Camden, Ouachita County, at the St. Louis Southwestern Railway bridge over Ouachita River, on the stone cap to the iron tubular pier under the west end of the north truss, in line with the west edge of the rest plate, and 1.1 feet north of the north edge. A chiseled square, marked "USBM." (35.240 meters or 115.617 feet.)

**NOTE.**—In 1932, it was reported that the bridge had been rebuilt in 1931 and that part of the top of the pier was covered by a concrete slab, making recovery of the exact point impossible. Leveling in 1932 indicated that a point on the old stone cap, 4 inches southwest of the southwest side of the concrete slab and immediately northwest of the joint in the stone cap, differed in elevation from the original mark by less than 0.01 foot.

**Gage B.M. A (Ewens).**—At Camden, Ouachita County, on the north side of Main Street, about 250 feet east of the St. Louis Southwestern Railway track, and in the granite sill of the east door of a store owned in 1894 by George L. Ritchie. A chiseled cross. (40.866 meters or 134.075 feet.)

**P.B.M. Elliott.**—At Elliott, Ouachita County, at the southwest corner of the north store building, in line with the west or front wall of the store, and 1 foot from the south wall. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (77.606 meters or 254.612 feet.)

**P.R.P. Frenchport I.**—About 12¾ miles downstream along the Ouachita River from Camden, Ouachita County, at Frenchport, about 1 mile downstream from White Hall Place, about 170 yards back from the river bank, about 25 yards west of the west wall of an old dwelling, and about 1 yard north of the north wall. Witnessed in 1894 by triangular blazes on trees, as follows: 3-foot gum, about 2 yards south; and 4-foot gum, about 2 yards north. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (34.921 meters or 114.570 feet.)

**P.R.P. Frenchport II.**—About 12¾ miles downstream along the Ouachita River from Camden, Ouachita County, at Frenchport, about 1 mile downstream from White Hall Place, about 140 yards back from the river bank, about 110 yards south of an old dwelling, and on the top of a small knoll. Witnessed in 1894 by triangular blazes on trees, as follows: 3-foot pine, about 2 yards west; and 2-foot pine, about 2 yards east. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (37.661 meters or 123.559 feet.)

**P.R.P. Walnut Hill.**—About 18½ miles downstream along the Ouachita River from Camden, Ouachita County, about 0.9 mile downstream from the center of the S-bend at Spoon Camp Shoals, about 250 yards west of the place where the hills join the river bank, about 25 yards from the foot of Walnut

Hill, and about 25 yards south of the right bank of the bayou. Witnessed in 1897 by triangular blazes on trees, as follows: 5-foot tupeol gum, about 5 yards distant; 10-inch hackberry, about 14 yards distant; and 10-inch elm, about 9 yards distant. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (27.688 meters or 90.840 feet.)

**T.B.M. 5.**—About 18½ miles downstream along the Ouachita River from Camden, Ouachita County, about 0.9 mile downstream from the center of the S-bend at Spoon Camp Shoals, about 10 yards from the right bank of the river at the place where Walnut Hill joins the river, about 10 yards west of a large gum tree, and in the root of a 6-inch lime tree. The character of the bench mark is not known but it is probably a spike. (31.804 meters or 104.344 feet.)

**P.R.P. Beech Hill.**—About 22½ miles downstream along the Ouachita River from Camden, Ouachita County, about 2½ miles upstream from the mouth of English Bee Slough, about 70 yards northwest of the place where the hills meet the river bank, at the foot of Beech Hill, and about 110 yards northwest of a shanty on the top of the hill. Witnessed in 1897 by blazes on trees, as follows: 4-foot black gum, about 3 yards north; 2-foot beech, about 9 yards west; and 3-foot beech, about 14 yards southwest. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (28.505 meters or 93.520 feet.)

**P.R.P. Little Bay.**—In Ouachita County, about 17¾ miles upstream along the Ouachita River from Champagnolle, Union County, at the mouth of Little Bay, on the left bank of the river and left top bank of the bay, and about 4 yards back from the edge of the top or main bank. Witnessed in 1897 by blazes on trees, as follows: 18-inch black gum, about 3 yards in azimuth 99°; 18-inch sweet gum, about 4 yards in azimuth 170°; 15-inch holly, about 12 yards in azimuth 278°; and 54-inch black oak, about 19 yards in azimuth 308°. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (27.732 meters or 90.934 feet.)

**P.R.P. Leppard.**—In Ouachita County, about 12½ miles upstream along the Ouachita River from Champagnolle, Union County, about 1 mile upstream from the mouth of King's Slough, at Leppards Camp, about 50 yards back from the left bank of the river, about 35 yards back from the upper back corner of a cabin, and in line with the upstream side of the cabin. Witnessed in 1897 by blazes on trees, as follows: 15-inch forked holly, about 11 yards in azimuth 101°; 40-inch sweet gum, about 3 yards in azimuth 160°; 30-inch sweet gum, about 15 yards in azimuth 255°; and 24-inch white oak, about 4 yards in azimuth 258°. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (27.731 meters or 90.981 feet.)

**P.R.P. Smackover.**—About 6¾ miles upstream along the Ouachita River from Champagnolle, Union County, about 25 yards below the mouth of Smackover Creek, about 20 yards back from the edge of the right bank of the river, and about 5 yards from the head of a slash leading back to a swamp. Witnessed in 1897 by blazes on trees, as follows: 36-inch sweet gum, about 3 yards in azimuth 86°; 24-inch sweet gum, about 7 yards in azimuth 196°; and 30-inch sweet gum, about 5 yards in azimuth 324°. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (26.530 meters or 87.041 feet.)

**P.R.P. El Dorado.**—About 2 miles upstream along the Ouachita River from Champagnolle, Union County, about 0.6 mile downstream from the mouth of Chappelle Slough, at El Dorado Landing, in the west corner of the yard belonging in 1897 to R. T. Goodwin, in the prolongation of the south wall of the dwelling, and about 8 yards west of the west wall. Witnessed in 1897 by blazes on trees, as follows: 12-inch chinaberry, about 3 yards north 10° east; 4-inch cedar, about 9 yards south 80° east; and 8-inch cedar, about 5 yards south 10°

west. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (26,970 meters or 88,484 feet.)

**P.R.P. Champagnolle.**—At the landing at Champagnolle, Union County, about 400 yards east of the mouth of Mill Creek, about 500 feet back from the river bank, between the forks of a small valley entering the river immediately below a store, and about 5 yards from the foot of a slope. Witnessed in 1895 by triangular blazes on trees, as follows: 18-inch black oak, about 4 yards north 20° east; and 18-inch black oak, about 5 yards north 15° west. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (29,857 meters or 97,956 feet.)

**P.R.P. Bell Field.**—About 1¼ miles straight east of the landing at Champagnolle, Union County, about 500 yards west of the west bank of Ouachita River, about half-way between a road leading to Champagnolle and a neighborhood road, on the south side of a field owned in 1895 by Mr. Bell, and about 500 feet from the west end of the field. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (24,812 meters or 81,404 feet.)

**P.R.P. Franklin.**—About 9¼ miles downstream along the Ouachita River from Champagnolle, Union County, about ¾ miles upstream along the river from Wilmington, about 270 yards northwest of the mouth of Franklin Bayou, about 190 yards north of the bayou at its nearest point, on the first ridge above the bayou, and about 130 yards southwest of the river. Witnessed in 1895 by triangular blazes on trees, as follows: 18-inch water oak, about 7 yards in azimuth 14°45'; 27-inch sweet gum, about 13 yards in azimuth 97°06'; and 27-inch white oak, about 4 yards in azimuth 258°03'. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (22,790 meters or 74,770 feet.)

**P.R.P. Fletcher.**—About 1½ miles downstream along the Ouachita River from Wilmington, Union County, about 550 yards below Fletchers Landing, about 45 yards south of the river, at the edge of the woods, and on the east side of a field. Witnessed in 1895 by triangular blazes on trees, as follows: 15-inch water oak, about 16 yards in azimuth 208°41'; 21-inch white oak, about 21 yards in azimuth 271°30'; and 24-inch hickory, about 19 yards in azimuth 309°00'. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (25,863 meters or 84,852 feet.)

**P.R.P. Pigeon Hill.**—About 6½ miles downstream along the Ouachita River from Wilmington, Union County, about 0.6 mile downstream from the mouth of Paw Paw Bayou, at Pigeon Hill Landing, about 250 feet south 15° west from a warehouse at the landing, and on a hillside, about 15 yards from the foot of the slope. Witnessed in 1895 by triangular blazes on trees, as follows: 27-inch pine, about 4 yards north 45° east; 15-inch pine, about 5 yards south 30° east; and 18-inch pine, about 4 yards south 45° west. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (27,958 meters or 91,726 feet.)

**P.R.P. Careyville.**—About 10¼ miles downstream along the Ouachita River from Wilmington, Union County, at the old Careyville Landing, about 500 feet south of the river, about 425 feet southwest of a tenant house, about 520 feet west of the road leading to the landing, about 130 feet south of a peach tree in a cleared field, and on the south side of the cleared field. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (25,159 meters or 82,542 feet.)

For additional bench marks in this vicinity, see page 73.

**P.R.P. Jacks Island.**—About  $14\frac{1}{4}$  miles downstream along the Ouachita River from Wilmington, Union County, about 500 yards east of Jacks Landing and camp house, about 150 feet east of Jacks Island, about 80 yards southeast of the river bank, and about 65 yards southeast of a 2-foot gum tree painted "U.S.C.E.B.M." The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (23.922 meters or 78.484 feet.)

**P.R.P. Eutaw.**—About 24 miles downstream along the Ouachita River from Wilmington, Union County, about 1.3 miles downstream from the outlet of Perigeethe Lake, about 600 yards below Eutaw Shoals, about 65 yards west of the west bank of the river, about 65 yards south of an old road, and on the bank of a small slough. Witnessed in 1895 by triangular blazes on trees, as follows: 18-inch sweet gum, in azimuth  $29^{\circ}00'$ ; 36-inch water oak, in azimuth  $182^{\circ}40'$ ; and 27-inch sweet gum, in azimuth  $261^{\circ}21'$ . The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (22.220 meters or 72.900 feet.)

**P.R.P. Belle Point.**—About  $33\frac{1}{2}$  miles downstream along the Ouachita River from Wilmington, Union County, about 220 yards southwest of Ouachita Belle Landing, and about 190 yards south of a road leading back from the river. Witnessed in 1895 by triangular blazes on trees, as follows: 18-inch sweet gum, about 17 yards in azimuth  $71^{\circ}47'$ ; 6-inch white oak, about 5 yards in azimuth  $164^{\circ}25'$ ; and 15-inch Spanish oak, about 5 yards in azimuth  $273^{\circ}54'$ . The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (19.751 meters or 64.800 feet.)

**T.B.M. 39.**—About  $33\frac{1}{2}$  miles downstream along the Ouachita River from Wilmington, Union County, about 220 yards southwest of Ouachita Belle Landing, and in the root of a white-oak tree, about 5 yards from P.R.P. Belle Point, described above. A boat spike. (20.847 meters or 68.396 feet.)

**P.R.P. Lapile.**—About  $44\frac{1}{2}$  miles downstream along the Ouachita River from Wilmington, Union County, about 1 mile upstream from the mouth of Bayou Lapile, in the woods, and about 90 yards west of the west bank of the river. Witnessed in 1895 by triangular blazes on trees, as follows: 15-inch post oak, about 10 yards in azimuth  $203^{\circ}23'$ ; 12-inch post oak, about 5 yards in azimuth  $247^{\circ}15'$ ; and 27-inch post oak, about 8 yards in azimuth  $341^{\circ}37'$ . The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (18.870 meters or 61.909 feet.)

**P.R.P. Lake.**—About 50 miles downstream along the Ouachita River from Wilmington, Union County, about 270 yards below Lake Landing, about 270 yards southeast of the boat channel connecting Lake St. Mary and the river, about 90 yards southwest of the west bank of the river, and about 17 yards east of the east bank of Pool's Bayou. Witnessed in 1895 by triangular blazes on trees, as follows: 24-inch post oak, about 16 yards in azimuth  $104^{\circ}10'$ ; 12-inch post oak, about 10 yards in azimuth  $213^{\circ}08'$ ; and 18-inch post oak, about 4 yards in azimuth  $285^{\circ}34'$ . The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (18.148 meters or 59.541 feet.)

The line enters Louisiana.

LINE 4, ARKANSAS CITY, ARK., TO PARKEVILLE, LA. (PART)

[First-order levelling by the Corps of Engineers, U.S. Army]

This line follows the Missouri Pacific Railroad from Arkansas City through Wilmot to the Arkansas-Louisiana State line. The

field work was done, during the summer of 1897, by a party in charge of Walter H. Polk.

For additional bench marks between Arkansas City and Wilmot, see pages 7 and 76-78.

**T.B.M. 117=Levee B.M.**—At Arkansas City, Desha County, about 110 yards from the river, on the west slope of the levee, and on the west slope of a railroad dump. The top of an iron pipe. (44.236 meters or 145.131 feet.)

**P.B.M. Trippe.**—Probably destroyed. (44.222 meters or 145.085 feet.)

**P.B.M. McGehee.**—Probably destroyed. (45.437 meters or 149.071 feet.)

**P.R.P. Baxter.**—At Baxter, Drew County, on the Warren Branch of the Missouri Pacific Railroad, about 55 yards west of the west end of the bridge over Bayou Bartholomew, 98 feet south of the south rail, 6½ feet west of the northeast corner of the yard to W. R. McCloy's house, and 1 foot south of a fence line. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (43.373 meters or 142.300 feet.)

**P.B.M. Dermott.**—Probably destroyed. (42.840 meters or 140.551 feet.)

**P.B.M. Hudspeth.**—About ¼ mile north of the Missouri Pacific Railroad station at Hudspeth, Chicot County, 208 feet south of the south end of the section house, 85 feet south of the center of a grade crossing, and 46 feet east of a point on the east rail 8 feet south of the north switch point. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (40.781 meters or 133.796 feet.)

**P.B.M. Morrell.**—Probably destroyed. (39.825 meters or 130.659 feet.)

**P.B.M. Kidd.**—Probably destroyed. (38.087 meters or 124.793 feet.)

**P.B.M. Portland.**—Probably destroyed. (39.016 meters or 128.005 feet.)

**P.B.M. Sunshine.**—Probably destroyed. (36.126 meters or 118.523 feet.)

**P.B.M. Parkdale.**—Probably destroyed. (35.653 meters or 116.972 feet.)

**P.R.P. Noble 1.**—Probably destroyed. (34.845 meters or 114.321 feet.)

**P.B.M. Wilmot.**—At Wilmot, Ashley County, about 55 yards northeast of the Missouri Pacific Railroad station, about 33 yards west of the track, and in the southeast corner of the yard around Hotel Chesmett. The top of the cap on a 1½-inch iron pipe projecting about 4 inches above ground. (35.028 meters or 114.921 feet.)

**P.R.P. La.-Ark.**—Probably destroyed. (32.805 meters or 107.628 feet.)

The line continues into Louisiana.

#### LINE 5, CAMDEN, ARK., TO SHREVEPORT, LA. (PART)

[First-order leveling by the Corps of Engineers, U.S. Army]

This line follows the St. Louis Southwestern Railway from Camden through Millers Bluff to the Arkansas-Louisiana State line.

The field work was done, during the fall of 1900, by a party in charge of W. H. Polk.

**287 (U.S.G.S.).**—At Buena Vista, Ouachita County, about 38 yards west of the northwest corner of the St. Louis Southwestern Railway station, 75 feet south of the main track, in an angle formed by the post office and the fence around the adjoining yard, and in front of the residence of Mrs. Martha E. Sifford. A United States Geological Survey standard cap, stamped "287" and riveted on the top of a 3½-inch iron pipe. (87.839 meters or 288.185 feet.)

**P.B.M. Buena Vista.**—At Buena Vista, Ouachita County, about 120 yards south of the southeast corner of the St. Louis Southwestern Railway station, and about 10 yards west of the main track. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (86.190 meters or 282.775 feet.)

**P.B.M. Stephens.**—At Stephens, Ouachita County, at the northeast corner of the yard of the hotel belonging to Mrs. S. Boggs, 84 yards from the corner of the St. Louis Southwestern Railway station, 27 yards west of the track, 27 yards from the corner of the hotel, and 28 yards from the corner of a gin.

The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "7 U.S." (72,004 meters or 236,233 feet.)

**P.B.M. McNeil.**—At McNeil, Columbia County, about 185 yards from the St. Louis Southwestern Railway station, about 30 yards south of the main track, about 60 feet from the south end of the transfer shed, and at the east side of the northeast corner of the cattle pen. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (98,411 meters or 322,870 feet.)

**P.B.M. Waldo.**—At Waldo, Columbia County, on the St. Louis Southwestern Railway, about 295 yards east of the station, about 65 yards from the switch at the end of a siding, about 52½ yards south of the track and at the south edge of the right-of-way. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (107,472 meters or 352,598 feet.)

**P.B.M. Stamp.**—At Stamps, Lafayette County, in the northeast corner of the lot inclosing the offices and buildings of the Louisiana & Arkansas Railway, about 41½ yards north of the main track of the St. Louis Southwestern Railway, and about 55 yards from the station. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (81,615 meters or 267,765 feet.)

**P.B.M. Lewisville.**—At New Lewisville, Lafayette County, on the St. Louis Southwestern Railway, about 100 yards southwest of the station, about 30 yards east of the main track, and at the east corner of the cattle pen. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (79,375 meters or 260,416 feet.)

**NOTE.**—It was reported in March 1932 that this mark had evidently been covered by sidings in the St. Louis Southwestern Railway yards

**T.B.M. 239.**—Destroyed. (83,932 meters or 275,367 feet.)

**P.B.M. Garland.**—At Garland City, Miller County, on the right bank of Red River 0.3 mile south of the St. Louis Southwestern Railway Station, about 100 yards northwest of the pier of the approach to the railroad drawbridge, and 26 yards west of the main track. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (70,703 meters or 231,965 feet.)

**B.M. 4 (Red River Survey).**—At Garland City, Miller County, 2,020 feet from the center pier of the St. Louis Southwestern Railway drawbridge and 70 feet north of the track, in an open space along the right-of-way fence. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (70,490 meters or 231,266 feet.)

**NOTE.**—A report, dated October 1930, states that the cap is missing, and that the iron pipe has rusted off at the ground and is filled with stone.

**P.B.M. Jordan.**—At Jordan Ferry, Lafayette County, about 500 feet east of the left bank of Red River, on the Ward place, and about 10 feet south of Terrell Bayou, at the edge of a road. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (65,866 meters or 216,095 feet.)

**P.R.P. 14 (Red River Survey).**—On the left bank of Red River, about 800 feet back of Jordan Landing, Lafayette County, about 500 feet south of Terrell Bayou, and at an angle in the levee between the Terrell and Dixon plantations. The top of a round-headed copper bolt, surrounded by the letters "USBM"

and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (65.958 meters or 216.397 feet.)

**P.B.M. Canfield.**—At Canfield, Lafayette County, about 100 yards northwest of the corner of the St. Louis Southwestern Railway station, about 60 feet west of the main track, and about 9 feet from the southwest corner of the cattle pen. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (79.005 meters or 259.202 feet.)

**P.B.M. Bradley.**—At Bradley, Lafayette County, on the St. Louis Southwestern Railway, at the northwest corner of the station, and about 14 yards west of the main track. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (77.126 meters or 253.038 feet.)

**P.B.M. Lusk.**—At Millers Bluff, Lafayette County, Arkansas, about 7 miles west of Plain Dealing, Bossier Parish, Louisiana, about  $\frac{1}{4}$  mile from the bank of Red River, at Lusks Ferry, at the southwest corner of the yard of Jake Lusk, and about  $5\frac{1}{2}$  yards north of the road. The top of a round-headed copper bolt, surrounded by the letters "USBM" and set in a block of limestone, about 4 feet under ground. Access to the mark is had through an iron pipe, on the top of which is bolted an iron cap bearing a small boss and the letters "USEBM." (70.016 meters or 229.711 feet.)

The line enters Louisiana.

#### LINE 6, LITTLE ROCK TO HAZEN, ARK.

[First-order leveling]

This line follows the Chicago, Rock Island & Pacific Railway from Little Rock to Hazen. The field work was done, during the fall of 1916, by a party in charge of E. H. Pagenhart, assistant.

For bench marks in the vicinity of Little Rock, see pages 61–64.

**Northwest Base.**—Destroyed in 1931. (78.489 meters or 257.509 feet.)

**Northwest Base (Reset).**—About  $1\frac{1}{4}$  miles east along the Chicago, Rock Island & Pacific Railway from Argenta, Pulaski County, about 100 feet southeast of the crossing of a spur of the St. Louis Southwestern Railway at Dixie Mills, 68 feet south of the south rail of the main track of the former railroad, and 32 feet north of the north rail of the latter. A standard triangulation-station disk, stamped "NORTHWEST BASE" and set in the top of a concrete post, about 1 foot under ground. (256.542 feet.)

**NOTE.**—The elevation of this bench mark was determined by the Corps of Engineers, United States Army.

**Tie.**—At Tie Plant, Pulaski County, on the right-of-way of the Chicago, Rock Island & Pacific Railway, about 90 feet east of the signboard, and 31 feet north of the nearest point of the north rail of the main track. A standard triangulation-station disk, stamped "TIE 1916 1920" and set in the top of a concrete post. (77.926 meters or 255.662 feet.)

**Plant.**—About 1.6 miles east along the Chicago, Rock Island & Pacific Railway from Tie Plant, Pulaski County, at the first curve east of Tie Plant, and on the right-of-way, about 45 feet north of the north rail of the track. A standard triangulation-station disk, stamped "PLANT 1916 1920" and set in the top of a concrete post. (76.705 meters or 251.656 feet.)

**R.M. Plant.**—About 1.6 miles east along the Chicago, Rock Island & Pacific Railway from Tie Plant, Pulaski County, about 71 feet southwest of Plant, described above, and in the coping at the north end of a concrete culvert. A drill hole. (76.976 meters or 252.545 feet.)

**Galloway.**—At Galloway, Pulaski County, on the right-of-way of the Chicago, Rock Island & Pacific Railway, about 130 feet beyond the twelfth pole west of the station, about 650 feet east of a switch stand, and 13 feet north of the north rail of the track. A standard triangulation-station disk, stamped

"GALLOWAY 1916 1920" and set in the top of a concrete post. (76.993 meters or 252.601 feet.)

At Galloway, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (251.9 feet.)

**Kerr.**—At the curve about 1 mile west along the Chicago, Rock Island & Pacific Railway from Kerr, Lonoke County, and 8 feet north of the north rail of the track. A standard triangulation-station disk, stamped "KERR 1916 1920" and set in the top of a concrete post. (74.936 meters or 245.853 feet.)

**Kerr**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (245.1 feet.)

**P.**—At Kerr, Lonoke County, 72 feet east of a semaphore at the Chicago, Rock Island & Pacific Railway station, on land belonging to H. A. Young, about 80 feet north of the track, and 16 feet north of a 4-foot oak tree. A stone post. (74.190 meters or 243.405 feet.)

**Meto.**—About 0.4 mile west along the Chicago, Rock Island & Pacific Railway from Meto, Lonoke County, about 1,050 feet east of a switch stand at the west end of a side track, 79 feet beyond the eighth pole west of the signboard "Meto", and 11 feet north of the north rail of the main track. A standard triangulation-station disk, stamped "METO 1916 1920" and set in the top of a concrete post. (73.192 meters or 240.131 feet.)

**Meto**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (237.4 feet.)

**Daniel.**—About 2½ miles west along the Chicago, Rock Island & Pacific Railway from Lonoke, Lonoke County, 42 feet west of the crossing of a private road leading to W. M. Daniel's plantation, 30 feet north of the south fence, 19 feet south of the south rail of the track, and 6 feet west of a pole. A standard triangulation-station disk, stamped "DANIEL 1916 1920" and set in the top of a concrete post. (73.230 meters or 240.255 feet.)

**R.M. Daniel.**—Destroyed. (73.103 meters or 239.839 feet.)

**244.6 (C. R. I. & P. Ry.)**—At Lonoke, Lonoke County, at the Chicago, Rock Island & Pacific Railway station, and on the northeast corner of the concrete base of the semaphore. An outlined square. (74.541 meters or 244.557 feet.)

**Lonoke**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (243.9 feet.)

**288.8 (U.S.D.A.)**—At Lonoke, Lonoke County, at the northwest section of the courthouse yard, about 50 feet southeast of the northwest corner, and about 40 feet northeast of the "Daughters of the Confederacy" monument. A brass cap bearing the legend "U.S. Dept. of Agriculture, Office of Experiment Stations, Drainage Elevation 288.8 feet" and fastened on the top of an iron pipe. (72.854 meters or 239.022 feet.)

**Courthouse.**—At Lonoke, Lonoke County, in the courthouse yard. A stone post. (72.770 meters or 238.746 feet.)

**Lonoke.**—At Lonoke, Lonoke County, 398 yards east of the Chicago, Rock Island & Pacific Railway station, 18 feet south of the south rail of the main track, and 2 inches below the ground. A standard triangulation-station disk, stamped "LONOKE" and set in the top of a concrete post. (73.692 meters or 241.771 feet.)

**R.M. Lonoke.**—At Lonoke, Lonoke County, about 120 feet north of Lonoke, described above, 2.4 feet west of the southwest corner of the yard fence of R. M. Griffen's house and 1.3 feet north of the north edge of a public sidewalk. A standard reference-mark disk, stamped "LONOKE B.M. 1916 1920" and set in the top of a concrete post. (73.694 meters or 241.778 feet.)

**Q.**—About ½ mile east along the Chicago, Rock Island & Pacific Railway from the station at Lonoke, Lonoke County, about 130 feet southeast of the switch stand at the east end of a side track, 52 feet south of the track, and 3 feet south of the right-of-way fence. A stone post, marked "Q." (72.016 meters or 236.272 feet.)

**Sisemore.**—About ¾ mile east along the Chicago, Rock Island & Pacific Railway from Sisemore, Lonoke County, 257 feet southeast of the southeast corner of the base of the brick chimney on the east end of Grover Hick's residence, 181 feet west of a private road which crosses the track and leads to the house, and on a small knob, about 27 feet north of the north rail of the track. A standard triangulation-station disk, stamped "SISEMORE 1916 1920" and set in the top of a concrete post. (71.762 meters or 235.439 feet.)

**NOTE.**—It was reported in January 1929 that the railroad cut had been widened, leaving the mark sticking up above the ground and so loose in the ground as to be no longer of use as a first-order bench mark.

**McCreanor**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (228.9 feet.)

**McCreanor**.—At **McCreanor**, Lonoke County, on the right-of-way of the Chicago, Rock Island & Pacific Railway, about 225 feet east of the switch stand at the west end of a side track, 81 feet east of the signboard "McCreanor", and 22 feet north of the north rail of the main track. A standard triangulation-station disk, stamped "McCREANOR 1916 1920" and set in the top of a concrete post. (70.981 meters or 229.924 feet.)

**R.**—At **Carlisle**, Lonoke County, near the Chicago, Rock Island & Pacific Railway station, near the center of the railroad park, about 150 feet west of the semaphore at the station, and 59 feet north of the track. A stone post, marked "R." (71.183 meters or 233.540 feet.)

**Carlisle**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (232.9 feet.)

**Carlisle**.—About  $\frac{3}{4}$  mile east along the Chicago, Rock Island & Pacific Railway from **Carlisle**, Lonoke County, 36 feet east of the fence line of a public road, and 15 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "CARLISLE" and set in the top of a concrete post. (71.631 meters or 235.009 feet.)

**R.M. Carlisle**.—Destroyed. (71.310 meters or 233.956 feet.)

**Prairie Center**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (239.5 feet.)

**Prairie**.—About 1.2 miles east along the Chicago, Rock Island & Pacific Railway from **Prairie Center**, Prairie County, 820 feet east of the "1-mile" signboard, and 30 feet north of the north rail of the main track. A standard triangulation-station disk, stamped "PRAIRIE 1916 B. M. 1920" and set in the top of a concrete post. (73.071 meters or 239.734 feet.)

**R.M. Prairie**.—About 1.2 miles east along the Chicago, Rock Island & Pacific Railway from **Prairie Center**, Prairie County, about 68 feet north of **Prairie**, described above, and at the north fence line. A standard reference-mark disk, stamped "PRAIRIE 1916 B.M. 1920" and set in the top of a concrete post. (72.475 meters or 237.778 feet.)

**Screeton**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (237.3 feet.)

**Cuneo**.—About 0.6 mile west along the Chicago, Rock Island & Pacific Railway from the signboard at the switch at **Cuneo**, Prairie County, about  $18\frac{1}{4}$  poles west of milepost 96, 49 feet west of an iron whistle post, and 30 feet north of the north rail of the main track. A standard triangulation-station disk, stamped "CUNEO 1916 B.M. 1920" and set in the top of a concrete post. (72.105 meters or 236.564 feet.)

**R.M. Cuneo**.—About 0.6 mile west along the Chicago, Rock Island & Pacific Railway from the signboard at the switch at **Cuneo**, Prairie County, about  $18\frac{1}{4}$  poles west of milepost 96, about 66 feet north of **Cuneo**, described above, and at the north fence line. A standard reference-mark disk, stamped "CUNEO 1916 1920" and set in the top of a concrete post. (72.195 meters or 236.860 feet.)

#### LINE 7, FORREST CITY TO PROCTOR, ARK.

[First-order leveling]

This line follows the Chicago, Rock Island & Pacific Railway from Forrest City to Proctor. The field work was done, during the fall of 1916, by a party in charge of E. H. Pagenhart, assistant.

For additional bench marks in the vicinity of Forrest City, see pages 87, 88, and 157.

**Crow**.—Destroyed prior to 1933. (82.176 meters or 269.606 feet.)

**R.M. Crow**.—Destroyed prior to 1933. (82.300 meters or 270.308 feet.)

**Creek**.—At **Crow Creek**, St. Francis County, on the right-of-way of the Chicago, Rock Island & Pacific Railway, 280 feet west of the signboard, about 50 feet southeast of the east abutment of bridge 419 over **Crow Creek**, 10 feet east of the fifth pole east of milepost 42, and 43 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "CREEK 1916 1920" and set in the top of a concrete post. (68.619 meters or 225.128 feet.)

**R.M. Creek.**—At **Crow Creek**, St. Francis County, about 47 feet southwest of Creek, described above, and about 15 feet north of the south fence of the right-of-way. A standard reference-mark disk, stamped "REF. CREEK 1916 B.M. 1920" and set in the top of a concrete post. (68.561 meters or 224.937 feet.)

**Crow Creek**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (229.2 feet.)

**209.4 (C. R. I. & P. Ry.).**—At **Madison**, St. Francis County, on the south end of the west abutment of the Chicago, Rock Island & Pacific Railway bridge over St. Francis River. An outlined square. (63.850 meters or 209.481 feet.)

**Madison**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (214.7 feet.)

**Widener**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (212.0 feet.)

**Widener.**—About  $\frac{3}{4}$  mile east along the Chicago, Rock Island & Pacific Railway from **Widener**, St. Francis County, about 528 feet west of bridge 376, at a curve, on the side of a fill, and 16 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "WIDENER 1916 1920" and set in the top of a concrete post. (62.097 meters or 203.730 feet.)

**R.M. Widener.**—About  $\frac{3}{4}$  mile east along the Chicago, Rock Island & Pacific Railway from **Widener**, St. Francis County, and 36 feet southeast of **Widener**, described above. A standard reference-mark disk, stamped "WIDENER" and set in the top of a concrete post. (60.585 meters or 198.769 feet.)

**NOTE.**—This bench mark was searched for but not recovered in 1933.

**Round Pond**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (208.8 feet.)

**Round Pond.**—At **Round Pond**, St. Francis County, about  $\frac{1}{3}$  mile east of the Chicago, Rock Island & Pacific Railway station, at a curve, about 180 feet northwest of the twenty-fifth pole west of milepost 33, 48 feet north of the north rail of the main track, and 7 feet lower than the track. A standard triangulation-station disk, stamped "ROUND POND 1916 1920" and set in the top of a concrete post. (60.578 meters or 198.746 feet.)

**R.M. Round Pond.**—Destroyed. (59.639 meters or 195.666 feet.)

**Blackfish.**—About 1 mile east along the Chicago, Rock Island & Pacific Railway from **Round Pond**, St. Francis County, 160 feet northwest of the second pole west of milepost 33, just outside the right-of-way, 104 feet north of the north rail of the main track, and 33 feet north of the center line of a public road. A standard triangulation-station disk, stamped "BLACKFISH 1916 1920" and set in the top of a concrete post. (61.298 meters or 201.109 feet.)

**R.M. Blackfish.**—About 1 mile east along the Chicago, Rock Island & Pacific Railway from **Round Pond**, St. Francis County, 109 feet southeast of **Blackfish**, described above, between the road and the track, and 5 feet east of pole 1486. A standard reference-mark disk, stamped "BLACKFISH 1916 1920" and set in the top of a concrete post. (61.798 meters or 202.749 feet.)

**Blackfish**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (211.7 feet.)

**Whitmore**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (208.5 feet.)

**Lucern**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (208.3 feet.)

**Cicalla**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (207.7 feet.)

**Cicalla.**—Destroyed prior to 1930. (61.583 meters or 202.044 feet.)

**R.M. Cicalla.**—Destroyed prior to 1930. (61.266 meters or 201.004 feet.)

**Heth**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (207.7 feet.)

**Z.**—At **Heth**, St. Francis County, on the right-of-way of the Chicago, Rock Island & Pacific Railway, on the northeast corner of the northeast footing of the water tank. An outlined square, lettered "U.S." below the bench mark. (63.500 meters or 208.333 feet.)

**A 1.**—About 0.7 mile west along the Chicago, Rock Island & Pacific Railway from **Jonquil**, St. Francis County, 115 feet east of the prolongation of the north-south drainage ditch north of the track, 73 feet east of milepost 25, 67 feet south of the track, and 7 feet lower than the rail. A stone post, marked "A." (60.668 meters or 199.042 feet.)

**Jonquil.**—Destroyed prior to 1920. (63.946 meters or 209.766 feet.)

**R.M. Jonquil.**—Destroyed prior to 1928. (62.144 meters or 203.884 feet.)

**Curve.**—About 2 miles west along the Chicago, Rock Island & Pacific Railway from the station at **Browns**, St. Francis County, at the middle of a curve, about 54 feet east of the twenty-fourth pole west of milepost 22, and about 24.6 feet south of the south rail of the main track. A standard triangulation-station disk, set in the top of a concrete post. (62.741 meters or 205.843 feet.)

**NOTE.**—It was reported in 1928, that this bench mark had been reset prior to 1928. The elevation is based on the 1928 leveling.

**R.M. Curve.**—About 2 miles west along the Chicago, Rock Island & Pacific Railway from the station at **Browns**, St. Francis County, at the middle of a curve about 53 feet north of Curve, described above, and 12 feet north of the north rail. A standard reference-mark disk, set in the top of a concrete post. (62.640 meters or 205.511 feet.)

**NOTE.**—It was reported in 1928, that this bench mark had been reset prior to 1928. The elevation is based on the 1928 leveling.

**Browns.**—At **Browns**, St. Francis County, on the right-of-way of the Chicago, Rock Island & Pacific Railway, 108 feet northeast of the twenty-fourth pole west of milepost 20, 83 feet east of the switch stand at the east end of the spur track to the sawmills, and 10 feet north of the track. A standard triangulation-station disk, stamped "BROWNS" and set in the top of a concrete post. (63.785 meters or 209.268 feet.)

**R.M. Browns.**—Destroyed. (62.575 meters or 205.298 feet.)

For bench marks in the vicinity of Proctor, see page 34.

#### LINE 8, MONETT, MO., TO BRIDGE JUNCTION, ARK. (PART)

[First-order leveling]

This line enters Arkansas in the vicinity of Mammoth Spring, and follows the St. Louis-San Francisco Railway through Hoxie, Bono, Jonesboro, Nettleton, Truman, and Turrell, to Bridge Junction. The field work was done, during the fall of 1928, by a party in charge of P. C. Doran, junior hydrographic and geodetic engineer.

**E 1.**—About 0.3 mile northeast along the St. Louis-San Francisco Railway from the station at **Mammoth Spring**, Fulton County, about 150 feet across the track from the Mammoth Spring Co. building, 65 feet northwest of a whistle post, about 30 feet southwest of the Missouri-Arkansas State line sign, across the track from a point between poles 341+36 and 341+37, and 31 feet northwest of the center line of the main track. A standard disk, stamped "E 1 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (157.706 meters or 517.407 feet.)

**Mammoth Spring**, top of rail opposite the St. Louis-San Francisco Railway station. (509.7 feet.)

**F 1.**—About  $\frac{1}{4}$  mile south along the St. Louis-San Francisco Railway from the station at **Mammoth Spring**, Fulton County, at plate-girder bridge 342.5 which is the first railroad bridge south of the station, 6 feet west of the west rail, and in the east end of the south abutment. A standard disk, stamped "F 1 1928." (153.661 meters or 504.136 feet.)

**NOTE.**—A report, dated April 1932, states that this bridge was remodeled and that the bench mark was removed and reset. Later in 1932, a Coast and Geodetic Survey field party touched upon this mark, and found its elevation to be the same as for the mark in its original position.

**Peach**, top of rail opposite the St. Louis-San Francisco Railway siding signpost. (499.4 feet.)

**G 1.**—About  $1\frac{1}{4}$  miles south along the St. Louis-San Francisco Railway from the station at **Mammoth Spring**, Fulton County, at the north corner of the grade crossing of United States Highway 63, 42 feet northeast of the center line of the highway, 33 feet northwest of the center line of the main track, near a lunch pavilion, and 6 feet southeast of the west right-of-way fence. A standard disk, stamped "G 1 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (146.004 meters or 479.015 feet.)

**Hilton**, top of rail opposite the St. Louis-San Francisco Railway siding signpost. (481.9 feet.)

**H 1.**—About  $3\frac{1}{4}$  miles south along the St. Louis-San Francisco Railway from the station at **Mammoth Spring**, Fulton County, between poles 345+30 and 345+31, at plate-girder bridge 345.8, in the east end of the south abutment, 7.3 feet east of the center line of the main track, and 1.4 feet lower than the top of the rail. A standard disk, stamped "H 1 1928." (141.694 meters or 464.874 feet.)

**J 1.**—About 3.8 miles north along the St. Louis-San Francisco Railway from the station at **Many Islands**, Fulton County, between poles 347+21 and 347+22, at plate-girder bridge 347.8, in the east corner of the south abutment, 8 feet east of the center line of the main track, and 1 foot lower than the top of the rail. A standard disk, stamped "J 1 1928." (139.742 meters or 458.470 feet.)

**Fickinger**, top of rail opposite the St. Louis-San Francisco Railway station signpost. (428.7 feet.)

**K 1.**—About 1 mile north along the St. Louis-San Francisco Railway from the station at **Many Islands**, Fulton County, about 0.2 mile south of **Fickinger**, about 60 feet north of semaphores 350.4 and 350.5, opposite pole 350+17, at a concrete culvert, in the south end of the head wall, and  $12\frac{1}{2}$  feet west of the center line of the track. A standard disk, stamped "K 1 1928." (127.340 meters or 417.781 feet.)

**Many Islands**, top of rail opposite the St. Louis-San Francisco Railway station. (423.2 feet.)

**L 1.**—At **Many Islands**, Fulton County,  $23\frac{1}{2}$  feet south of the south end of the St. Louis-San Francisco Railway station, 69 feet west of pole 351+15,  $28\frac{1}{2}$  feet west of the center line of the main track, and 29 feet northwest of the mall crane. A standard disk, stamped "L 1 1928" and set in the top of a concrete post, projecting about 3 inches above ground. (128.639 meters or 422.043 feet.)

**M 1.**—About 2.2 miles south along the St. Louis-San Francisco Railway from the station at **Many Islands**, Fulton County, opposite pole 353+23, at a masonry and concrete arch bridge, in the east end of the south abutment, 12 feet east of the center line of the track, and 3.8 feet lower than the top of the rail. A standard disk, stamped "M 1 1928." (118.140 meters or 387.598 feet.)

**N 1.**—About 2.5 miles northwest along the St. Louis-San Francisco Railway from the station at **Hardy**, Sharp County, about 100 feet northeast of a grade crossing,  $24\frac{1}{2}$  feet southeast of semaphore 355.7, between poles 355+27 and 355+28, 13.6 feet southeast of the center line of the main track, 7.2 feet east of a signal box, in a rock ledge, and  $3\frac{1}{2}$  feet higher than the ground. A standard disk, stamped "N 1 1928" and set vertically. (116.223 meters or 381.308 feet.)

**O 1.**—About 0.1 mile west along the St. Louis-San Francisco Railway from the station at **Hardy**, Sharp County, about 150 feet west of the corner of the Standard Oil Co. plant, about 21 feet east of a cattle guard, between poles 358+4 and 358+5, at a low concrete culvert, 9.5 feet south of the center line of the main track, and in the east end of the head wall. A standard disk, stamped "O 1 1928." (109.027 meters or 357.699 feet.)

**P 1.**—At **Hardy**, Sharp County, about 300 feet west of the semaphore in front of the St. Louis-San Francisco Railway passenger station, between the main track and the platform of the freight station,  $45\frac{1}{2}$  feet north of the west end of the platform, 10 feet east of the mall crane, and 12 feet south of the center line of the main track. A standard disk, stamped "P 1 1928" and set in the top of a concrete post, projecting about 2 inches above ground. (110.068 meters or 361.115 feet.)

**Hardy**, top of rail opposite the St. Louis-San Francisco Railway station. (362.4 feet.)

**Q 1.**—About  $\frac{1}{2}$  mile east along the St. Louis-San Francisco Railway from the station at **Hardy**, Sharp County, opposite a group of buildings on United States Highway 63 comprising a tourist camp, a store, and the Ozark Garage, between poles 358+30 and 358+31, at a small concrete culvert, 11 feet south of the center line of the main track, in the west end of the head wall, and  $2\frac{1}{2}$  feet lower than the top of the rail. A standard disk, stamped "Q 1 1928." (110.096 meters or 361.207 feet.)

**R 1.**—About 2.1 miles southeast along the St. Louis-San Francisco Railway from the station at **Hardy**, Sharp County, at plate-girder bridge 360.4, opposite pole 360+15, 6.4 feet east of the center line of the main track, in the upstream end of the southeast abutment, and 1 foot lower than the top of the rail. A standard disk, stamped "R 1 1928." (109.070 meters or 357.840 feet.)

**Baker**, top of rail opposite the St. Louis-San Francisco Railway siding signpost. (341.6 feet.)

**S 1**.—About 4.7 miles southeast along the St. Louis-San Francisco Railway from the station at **Hardy**, Sharp County, about 660 feet east of the **Baker** signpost, between poles 363+2 and 363+3, at a concrete culvert, 25½ feet southwest of the center line of the main track, and 1.2 feet east of the west end of the head wall. A standard disk, stamped "S 1 1928." (103.701 meters or 340.226 feet.)

**T 1**.—About 2.4 miles west along the St. Louis-San Francisco Railway from the station at **Williford**, Sharp County, between poles 365+38 and 365+39, at bridge 365.9, 8 feet south of the center line of the track, in the south end of the west abutment, and 1.5 feet lower than the top of the rail. A standard disk, stamped "T 1 1928." (101.484 meters or 332.952 feet.)

**U 1**.—About 0.2 mile west along the St. Louis-San Francisco Railway from the station at **Williford**, Sharp County, at the northwest corner of a grade crossing, between poles 368+5 and 368+6, 44 feet north of a switch stand, 26 feet west of the highway, and 4½ feet south of the north right-of-way fence. A standard disk, stamped "U 1 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (98.015 meters or 321.571 feet.)

**V 1**.—At **Williford**, Sharp County, just south of the St. Louis-San Francisco Railway station, at a steel water tank, in the northwest corner of the north concrete pedestal, and about 2 feet above ground. A standard disk, stamped "V 1 1928." (98.045 meters or 321.669 feet.)

**Williford**, top of rail opposite the St. Louis-San Francisco Railway station. (321.7 feet.)

**W 1**.—About 0.4 mile northeast along the St. Louis-San Francisco Railway from the station at **Williford**, Sharp County, at culvert 368.7, in the south end of the west head wall, 24 feet southwest of the center line of the main track, and 1 foot lower than the top of the rail. A standard disk, stamped "W 1 1928." (97.910 meters or 321.226 feet.)

**X 1**.—About 2.4 miles southeast along the St. Louis-San Francisco Railway from the station at **Williford**, Sharp County, at plate-girder bridge 370.7, in the east end of the south abutment, 7½ feet east of the center line of the track, and 1 foot lower than the top of the rail. A standard disk, stamped "X 1 1928." (96.003 meters or 314.970 feet.)

**Y 1**.—About 1.7 miles west along the St. Louis-San Francisco Railway from the station at **Ravenden**, Lawrence County, between poles 373+19 and 373+20, at a small concrete culvert, in the west end of the south head wall, and 6 feet lower than the top of the rail. A standard disk, stamped "Y 1 1928." (91.391 meters or 299.839 feet.)

**Z 1**.—At **Ravenden**, Lawrence County, about 360 feet west of the St. Louis-San Francisco Railway station, 26 feet south of the center line of the siding north of the station, 12 feet north of the center line of the main track, and 12½ feet east of a concrete signal box. A standard disk, stamped "Z 1 1928" and set in the top of a concrete post, projecting about 3 inches above ground. (92.013 meters or 301.879 feet.)

**Ravenden**, top of rail opposite the St. Louis-San Francisco Railway station. (302.2 feet.)

**A 2**.—About 0.2 mile east along the St. Louis-San Francisco Railway from the station at **Ravenden**, Lawrence County, opposite pole 375+14, at a concrete culvert, 12.7 feet north of the center line of the main track, in the west end of the head wall, 2.5 feet lower than the top of the rail, and 1 foot east of the west end. A standard disk, stamped "A 2 1928." (91.333 meters or 299.648 feet.)

**B 2**.—About 2.0 miles southeast along the St. Louis-San Francisco Railway from the station at **Ravenden**, Lawrence County, about 320 feet west of a private-road crossing near semaphore 377.2, at a plate-girder bridge, in the north end of the east abutment, 8.5 feet north of the center line of the track, and 1 foot lower than the top of the rail. A standard disk, stamped "B 2 1928." (89.595 meters or 293.946 feet.)

**C 2**.—About 2.4 miles northwest along the St. Louis-San Francisco Railway from the station at **Imboden**, Lawrence County, between poles 378+17 and 378+18, at a culvert, 9.5 feet south of the center line of the main track, and in the west end of the head wall. A standard disk, stamped "C 2 1928." (87.905 meters or 288.402 feet.)

**D 2**.—About 0.2 mile west along the St. Louis-San Francisco Railway from the station at **Imboden**, Lawrence County, about 120 feet west of the crossing

of the highway leading to Pocahontas, 58 feet east of pole 380+20, 55 feet north of the center line of the main track, and 10 feet south of the north right-of-way fence. A standard disk, stamped "D 2 1928" and set in the top of a concrete post, projecting about 3 inches above ground. (84.269 meters 276.473 feet.)

**Imboden**, top of rail opposite the St. Louis-San Francisco Railway station. (285.2 feet.)

**E 2**.—About 0.2 mile east along the St. Louis-San Francisco Railway from the station at **Imboden**, Lawrence County, 69 feet east of pole 380+35, about 65 feet northwest of the center of a private-road crossing, 41 feet north of the center line of the main track, and 7½ feet south of the north right-of-way fence. A standard disk, stamped "E 2 1928" and set in the top of a concrete post, projecting about 3 inches above ground. (86.236 meters or 282.926 feet.)

**F 2**.—About 1.9 miles southeast along the St. Louis-San Francisco Railway from the station at **Imboden**, Lawrence County, at plate-girder bridge 382.6, in the east end of the south masonry abutment, 7½ feet east of the center line of the track, and 5 feet lower than the top of the rail. A standard disk, stamped "F 2 1928." (83.697 meters or 274.596 feet.)

**G 2**.—Destroyed in March 1930. (82.613 meters or 271.039 feet.)

**G 2 (RESET)** (St. L.-S. F. Ry.).—About 5.5 miles northwest along the St. Louis-San Francisco Railway from the station at **Black Rock**, Lawrence County, between poles 384+16 and 384+17, at plate-girder bridge 384.4, in the north end of the west masonry abutment, 7 feet north of the center line of the track, and 5½ feet lower than the top of the rail. A standard disk, stamped "G 2 1928." (81.34 meters or 266.87 feet.)

**NOTE**.—This bench mark was established and its elevation determined by engineers of the St. Louis-San Francisco Railway in 1930.

**H 2**.—About 3.5 miles northwest along the St. Louis-San Francisco Railway from the station at **Black Rock**, Lawrence County, between poles 386+15 and 386+16, 92.4 feet southeast of the southwest corner of the concrete base of semaphore 386.4, 45 feet southeast of the center of a grade crossing, 44 feet west of the road, 14 feet south of the center line of the track, and about 2 feet higher than the top of the rail, in a rock ledge. A standard disk, stamped "H 2 1928." (82.599 meters or 270.994 feet.)

**Lutesville**, top of rail opposite the St. Louis-San Francisco Railway station signpost. (266.0 feet.)

**J 2**.—About 1 mile north along the St. Louis-San Francisco Railway from the station at **Black Rock**, Lawrence County, about 250 feet northwest of a private-road crossing, 76 feet south of pole 388+29, in the first solid outcrop of rock northwest of the crossing, 27.7 feet southwest of the center line of the main track, 7.5 feet north of a secondary line of poles, and 1.5 feet higher than the top of the rail in a rock ledge. A standard disk, stamped "J 2 1928." (79.796 meters or 261.797 feet.)

**K 2**.—At **Black Rock**, Lawrence County, about 250 feet north of the St. Louis-San Francisco Railway station, 11 feet north of the north footing of the water tank, 21 feet west of the center line of the main track, and 17 feet east of the center line of the track leading to the rear of the freight platform. A standard disk, stamped "K 2 1928" and set in the top of a concrete post, projecting about 3 inches above ground. (79.414 meters or 260.544 feet.)

**Black Rock**, top of rail opposite the St. Louis-San Francisco Railway station. (260.7 feet.)

**L 2**.—At **Black Rock**, Lawrence County, about 360 feet south of the St. Louis-San Francisco Railway station, at semaphore 390.2, 11 feet east of the center line of the main track, and in the northwest corner of the concrete base. A standard disk, stamped "L 2 1928." (79.796 meters or 261.797 feet.)

**M 2**.—About 0.2 mile south along the St. Louis-San Francisco Railway from the station at **Black Rock**, Lawrence County, at steel-truss bridge 390.2 over Black River, in the west end of the north pier, 8.5 feet west of the center line of the track, 6.5 feet lower than the top of the rail, 1.5 feet south of the north side of the pier, 1.8 feet east of the west end of the pier, and 0.7 foot east of a bench mark established by the Corps of Engineers, United States Army. A standard disk, stamped "M 2 1928." (79.198 meters or 259.835 feet.)

**N 2**.—At **Portia**, Lawrence County, 21.2 feet west of the west end of the St. Louis-San Francisco Railway station, about 120 feet north of the main street, and 35 feet south of the center line of the main track. A standard disk,

stamped "N 2 1928" and set in the top of a concrete post, projecting about 3 inches above ground. (79.923 meters or 262.214 feet.)

**Portia**, top of rail opposite the St. Louis-San Francisco Railway station. (263.6 feet.)

**O 2**.—About 0.2 mile southeast along the St. Louis-San Francisco Railway from the station at **Portia**, Lawrence County, at the southeast corner of the second grade crossing east of the station, between poles 392+16 and 392+17, at a concrete culvert, 26½ feet east of the center line of the road, 19 feet south of the center line of the main track, in the east end of the head wall, and 1 foot west of the east end. A standard disk, stamped "O 2 1928." (80.404 meters or 263.792 feet.)

**P 2**.—About 3.1 miles southeast along the St. Louis-San Francisco Railway from the station at **Portia**, Lawrence County, at the northeast corner of a grade crossing, 28 feet northwest of pole 395+8, 33 feet north of the center line of the main track, 25 feet east of the center line of the road, and 6 feet south of the north right-of-way fence. A standard disk, stamped "P 2 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (79.622 meters or 261.227 feet.)

**Q 2**.—About 1.4 miles northwest along the St. Louis-San Francisco Railway from the station at **Hoxie**, Lawrence County, 66 feet southeast of the center of a grade crossing, opposite pole 396+25, 44 feet south of the center line of the main track, and 35 feet east of the center line of the road. A standard disk, stamped "Q 2 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (81.899 meters or 268.697 feet.)

**R 2**.—About 0.2 mile northwest along the St. Louis-San Francisco Railway from the station at **Hoxie**, Lawrence County, at the first grade crossing, between poles 397+26 and 397+27, 58 feet southwest of the center of the crossing, 44 feet west of the road, 34 feet south of the center line of the track, and 19 feet west of a pole. A standard disk, stamped "R 2 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (80.746 meters or 264.914 feet.)

**S 2**.—About 0.1 mile northwest along the St. Louis-San Francisco Railway from the station at **Hoxie**, Lawrence County, between poles 397+31 and 397+32, at a concrete culvert, 26 feet south of the center line of the main track, in the east end of the head wall, and 1 foot lower than the top of the rail. A standard disk, stamped "S 2 1928." (81.613 meters or 267.759 feet.)

**T 2**.—At **Hoxie**, Lawrence County, at the Union Station, 73.5 feet northeast of the center line of the main track of the St. Louis-San Francisco Railway, about 70 feet southeast of the main track of the Missouri Pacific Railroad, in a grass plot between the water tank and the tracks of the St. Louis-San Francisco Railway, and 9 feet southwest of the southwest concrete footing of the water tank. A standard disk, stamped "T 2 1928" and set in the top of a concrete post, projecting about 3 inches above ground. (81.956 meters or 268.884 feet.)

For additional bench marks in the vicinity of **Hoxie**, see pages 53 and 131.

**U 2**.—About 0.2 mile southeast along the St. Louis-San Francisco Railway from the station at **Hoxie**, Lawrence County, between poles 398+8 and 398+9, 78 feet south of the center of a grade crossing, 50 feet southwest of the center line of the main track, and 54 feet southeast of the road. A standard disk, stamped "U 2 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (80.531 meters or 264.209 feet.)

**V 2**.—About 2.3 miles southeast along the St. Louis-San Francisco Railway from the station at **Hoxie**, Lawrence County, between poles 400+10 and 400+11, at the southwest corner of the grade crossing of State Highway 81, at the junction of State Highway 81 and United States Highway 63, 55 feet west of the center of the crossing, 43 feet south of the center line of the main track, 59.4 feet northwest of the center line of United States Highway 63, 7 feet north of the south right-of-way fence, and 19 feet west of a pole. A standard disk, stamped "V 2 1928" and set in the top of a concrete post, projecting about 3 inches above ground. (79.893 meters or 262.116 feet.)

**W 2**.—About 3.0 miles northwest along the St. Louis-San Francisco Railway from the station at **Sedgwick**, Lawrence County, between poles 402+34 and 403, 63 feet south of the center of a grade crossing, 46 feet southwest of the center line of the track, 43 feet east of the center line of the road, 33 feet northeast of the center line of a highway paralleling the track, 17½ feet west

of a pole, and 5.5 feet northeast of the right-of-way fence. A standard disk, stamped "W 2 1928" and set in the top of a concrete post, projecting about 3 inches above ground. (79.170 meters or 259.744 feet.)

**Ponders**, top of rail opposite the St. Louis-San Francisco Railway signpost. (265.0 feet.)

**X 2**.—About 0.9 mile northwest along the St. Louis-San Francisco Railway from the station at **Sedgwick**, Lawrence County, between poles 405+5 and 405+6, 52 feet west of the center of a grade crossing, 42 feet southwest of the center line of the main track, 32 feet northwest of the center line of the road, 13 feet south of a pole, and 9 feet northeast of the right-of-way fence. A standard disk, stamped "X 2 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (79.855 meters or 261.991 feet.)

**Y 2**.—About 0.2 mile northwest along the St. Louis-San Francisco Railway from the station at **Sedgwick**, Lawrence County, opposite pole 405+30, 44 feet southwest of the center line of the main track, 18.4 feet northwest of a fence leading south from a cattle guard, 29 feet northeast of the center line of the highway paralleling the track, and 7 feet northeast of the right-of-way fence. A standard disk, stamped "Y 2 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (79.031 meters or 259.288 feet.)

**Sedgwick**, top of rail opposite the St. Louis-San Francisco Railway station. (263.5 feet.)

**Z 2**.—About 0.1 mile southeast along the St. Louis-San Francisco Railway from the station at **Sedgwick**, Lawrence County, about 92 feet northwest of a switch stand, about 55 feet southeast of a "derail" sign, 31 feet northeast of the center line of the main track, and just west of pole 406+6. A standard disk, stamped "Z 2 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (79.893 meters or 262.116 feet.)

**A 3**.—About 3.3 miles northwest along the St. Louis-San Francisco Railway from the station at **Bono**, Craighead County, 51 feet northwest of the station signpost at **Pauls**, 7½ feet west of pole 409+23, 24 feet northeast of the center line of the main track, in line with a row of poles, and about 4 feet lower than the top of the rail. A standard disk, stamped "A 3 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (76.647 meters or 251.466 feet.)

**B 3**.—At **Bono**, Craighead County, about 0.1 mile northwest of the St. Louis-San Francisco Railway station, near a cotton gin, between poles 411+32 and 411+33, 42 feet southwest of the center line of the main track, 12 feet north of the corner post of the right-of-way fence and the fence from the cattle guard, and 7.5 feet northeast of the right-of-way fence. A standard disk, stamped "B 3 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (79.282 meters or 260.111 feet.)

**Bono**, top of rail opposite the St. Louis-San Francisco Railway station. (265.6 feet.)

**C 3**.—About 0.2 mile southeast along the St. Louis-San Francisco Railway from the station at **Bono**, Craighead County, about 90 feet southeast of the switch stand at **Bono siding**, just south of the first cattle guard southeast of the station, between poles 412+9 and 412+10, 41 feet southwest of the center line of the main track, 10 feet southeast of the fence from the cattle guard, 9 feet northeast of the right-of-way fence, and 3.7 feet lower than the top of the rail. A standard disk, stamped "C 3 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (79.417 meters or 260.554 feet.)

**D 3**.—About 0.5 mile southeast along the St. Louis-San Francisco Railway from the station at **Bono**, Craighead County, between poles 412+20 and 412+21, at a concrete underpass, 13 feet east of the center line of the main track, in the south end of the head wall, and 1.8 feet north of the south end. A standard disk, stamped "D 3 1928." (81.863 meters or 268.579 feet.)

**E 3**.—About 1.3 miles southeast along the St. Louis-San Francisco Railway from the station at **Bono**, Craighead County, at the southeast corner of the grade crossing of the main road between **Bono** and United States Highway 63, 70 feet southeast of a crossing sign, 32 feet southwest of the center line of the main track, 51 feet northeast of the center line of the highway, 5.5 feet north of the south right-of-way fence, and 6 feet lower than the top of the rail. A standard disk, stamped "E 3 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (89.190 meters or 292.618 feet.)

**Marsh**, top of rail opposite the St. Louis-San Francisco Railway signpost. (313.0 feet.)

**F 3**.—About 3.2 miles southeast along the St. Louis-San Francisco Railway from the station at **Bono**, Craighead County, about 225 yards south of the

center of a grade crossing, about 145 yards south of the south end of Marsh siding, between poles 415+11 and 415+12, at a concrete culvert, 14.5 feet east of the center line of the main track, and in the south end of the head wall. A standard disk, stamped "F 3 1928." (92,051 meters or 302,004 feet.)

G 3.—About 2.8 miles west along the St. Louis-San Francisco Railway from the station at Jonesboro, Craighead County, about 120 feet west of a grade crossing, between poles 417+6 and 417+7, opposite a wide place in United States Highway 63, 65 feet west of a pole south of the track, 43 feet south of the center line of the track, 30.5 feet north of the center line of the highway, 7 feet north of the south right-of-way fence, and about 4 feet lower than the top of the rail. A standard disk, stamped "G 3 1928" and set in the top of a concrete post, projecting about 6 inches above ground. (87,875 meters or 288,303 feet.)

H 3.—About 0.9 mile west along the St. Louis-San Francisco Railway from the station at Jonesboro, Craighead County, about 140 feet northwest of the grade crossing at the junction of Floyd Street with United States Highway 63, 26.5 feet east of pole 419+1, 58 feet north of the switch stand for the wye on the north side of the track, about 45 feet northeast of the center line of the main track, 4 feet south of the north right-of-way fence, and 5.3 feet lower than the top of the rail. A standard disk, stamped "H 3 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (88,198 meters or 289,363 feet.)

J 3.—At Jonesboro, Craighead County, between the tracks of the St. Louis-San Francisco Railway and the St. Louis Southwestern Railway, about 150 feet west of the west end of the Railway Express Agency building, at the Union Station, in the grass plot just west of the station, about 35 feet east of the east corner of the yard office, 23 feet north of a fire hydrant, 47.5 feet north of the center line of the main track of the St. Louis Southwestern Railway, and about 25 feet south of the center line of the main track of the St. Louis-San Francisco Railway. A standard disk, stamped "J 3 1928" and set in the top of a concrete post, projecting about 1 inch above ground. (93,269 meters or 306,000 feet.)

Jonesboro, top of rail opposite the St. Louis-San Francisco Railway station. (306.3 feet.)

K 3.—At Jonesboro, Craighead County, about 740 feet east of the Union Station, between poles 420+5 and 420+6, 45 feet north of the main track of the St. Louis Southwestern Railway, 28 feet south of the main track of the St. Louis-San Francisco Railway, 18 feet west of a pole, and directly north of the inside penstock at the roundhouse of the St. Louis Southwestern Railway. A standard disk, stamped "K 3 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (93,969 meters or 308,297 feet.)

L 3.—About 0.5 mile east along the St. Louis-San Francisco Railway from the station at Jonesboro, Craighead County, at the northwest corner of the Fisher Street grade crossing, 44 feet west of the center line of Fisher Street, 43 feet north of the center line of the main track, 30 feet southwest of the southeast corner of a concrete-block store, and 11 feet northwest of pole 420+17. A standard disk, stamped "L 3 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (93,312 meters or 306,141 feet.)

M 3.—About 1.8 miles southeast along the St. Louis-San Francisco Railway from the station at Jonesboro, Craighead County, about 2,500 feet northwest of the crossing of the St. Louis-San Francisco Railway and the St. Louis Southwestern Railway, at the southwest corner of the grade crossing of the paved highway leading from United States Highway 63 to the State Agricultural School, opposite pole 421+21, 19.7 feet south of the center line of the main track, 12 feet west of the center line of the highway, at a concrete culvert, and in the "V" formed by the west head wall and the northwest wing wall. A standard disk, stamped "M 3 1928." (84,628 meters or 277,650 feet.)

N 3.—About 2.2 miles southeast along the St. Louis-San Francisco Railway from the station at Jonesboro, Craighead County, 113.5 feet northwest of the center of the crossing of the St. Louis Southwestern Railway, between poles 422+5 and 422+6, 43.5 feet north of the center line of the main track of the St. Louis-San Francisco Railway, 4 feet east of the fence leading from the cattle guard, 4 feet south of the north right-of-way fence, and 4.5 feet lower than the top of the rail. A standard disk, stamped "N 3 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (80,967 meters or 265,639 feet.)

**O 3.**—About 1.0 mile northwest along the St. Louis-San Francisco Railway from the station at **Nettleton**, Craighead County, about 2,800 feet southeast of the crossing of the St. Louis Southwestern Railway, at the point where United States Highway 63 starts to parallel the track, about 75 feet northwest of the west end of a gate in the south right-of-way fence, between poles 422+27 and 422+28, 58.4 feet southeast of the "Station 1 mile" sign, 44 feet south of the center line of the main track, 13 feet south of a pole, and 6 feet north of the south right-of-way fence. A standard disk, stamped "O 3 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (79.314 meters or 260.216 feet.)

**P 3.**—About 0.2 mile northwest along the St. Louis-San Francisco Railway from the station at **Nettleton**, Craighead County, about 110 feet east of the junction of United States Highway 63 and State Highway 18, 78 feet southeast of the center of the grade crossing of State Highway 18, between poles 423+18 and 423+17, 25.4 feet south of the center line of the track, 53 feet north of the center line of a gravel road, and 3.5 feet lower than the top of the rail. A standard disk, stamped "P 3 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (76.608 meters or 251.338 feet.)

**Nettleton**, top of rail opposite the St. Louis-San Francisco Railway station. (252.4 feet.)

**Nettleton**, top of rail at crossing of St. Louis-San Francisco Railway and Missouri Pacific Railroad. (251.7 feet.)

**Q 3.**—At **Nettleton**, Craighead County, about 200 feet southeast of the semaphore at the St. Louis-San Francisco Railway station, 133 feet southeast of the crossing of the Missouri Pacific Railroad, between poles 423+27 and 423+28, 52 feet south of a switch stand, 17 feet east of a pole, 30.5 feet south of the center line of the main track, and 3 feet lower than the top of the rail. A standard disk, stamped "Q 3 1928" and set in the top of a concrete post, projecting about 6 inches above ground. (75.915 meters or 249.064 feet.)

**R 3.**—About  $\frac{1}{2}$  mile southeast along the St. Louis-San Francisco Railway from the station at **Nettleton**, Craighead County, 104 feet southeast of the center of a grade crossing, between poles 424+11 and 424+12, 45 feet southwest of the center line of the main track, 31 feet north of the center line of United States Highway 63, 44 feet south of the center line of the road,  $20\frac{1}{2}$  feet west of a pole, and 4 feet lower than the top of the rail. A standard disk, stamped "R 3 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (73.894 meters or 242.434 feet.)

**S 3.**—About 2.4 miles southeast along the St. Louis-San Francisco Railway from the station at **Nettleton**, Craighead County, between poles 426 and 426+1, at a concrete culvert, in the west end of the south head wall, and about 2 feet lower than the top of the rail. A standard disk, stamped "S 3 1928." (72.198 meters or 236.870 feet.)

**T 3.**—About 4.2 miles southeast along the St. Louis-San Francisco Railway from the station at **Nettleton**, Craighead County, about 0.6 mile northwest of the **Herget** signpost, between poles 427+32 and 427+33, 42 feet southwest of the center line of the main track, 7.5 feet northeast of the right-of-way fence, 20 feet south of a pole, and 5 feet lower than the top of the rail. A standard disk, stamped "T 3 1928" and set in the top of a concrete post, projecting about 6 inches above ground. (70.250 meters or 230.479 feet.)

**Herget**, top of rail opposite the St. Louis-San Francisco Railway signpost. (232.1 feet.)

**U 3.**—About 0.8 mile northwest along the St. Louis-San Francisco Railway from the station at **Bay**, Craighead County, 103 feet north of the center of the grade crossing of United States Highway 63, 41 feet northeast of the center line of the main track, about 100 feet northwest of the center line of the highway, 8 feet southeast of pole 429+33,  $11\frac{1}{2}$  feet southwest of the north right-of-way fence, and 5 feet lower than the top of the rail. A standard disk, stamped "U 3 1928" and set in the top of a concrete post, projecting about 6 inches above ground. (69.014 meters or 226.423 feet.)

**Bay**, top of rail opposite the St. Louis-San Francisco Railway station. (231.7 feet.)

**V 3.**—At **Bay**, Craighead County, about 170 feet southeast of the St. Louis-San Francisco Railway station, in the west face of the south one of the two west concrete footings of the water tank, 19.5 feet northeast of the center line of the main track, and about 2 feet higher than the ground. A standard disk, stamped "V 3 1928" and set vertically. (70.780 meters or 232.217 feet.)

**W 3.**—About 0.2 mile southeast along the St. Louis-San Francisco Railway from the station at **Bay**, Craighead County, 82 feet east of a switch stand, about 30 feet southeast of pole 430+31, 31.8 feet southwest of the center line of United States Highway 63, 43 feet northeast of the center line of the main track, 7.5 feet southwest of the right-of-way fence, and 5 feet lower than the top of the rail. A standard disk, stamped "W 3 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (68.930 meters or 226.148 feet.)

**X 3.**—About 0.1 mile west along the St. Louis-San Francisco Railway from the station signpost at **Davis**, Craighead County, 32.5 feet north of pole 432+2, at a concrete culvert under United States Highway 63, 65 feet north of the center line of the main track, 15.5 feet south of the center line of the highway, in the south head wall, 5 feet west of the east end, and about 1.8 feet higher than the highway. A standard disk, stamped "X 3 1928." (69.842 meters or 229.140 feet.)

**Davis**, top of rail opposite the St. Louis-San Francisco Railway signpost. (231.3 feet.)

**Y 3.**—At **Herman**, Craighead County, opposite the St. Louis-San Francisco Railway station, about 50 feet east of the corner of a house, 43 feet southwest of the center line of the track, 44 feet southeast of a pole, and 8½ feet lower than the top of the rail. A standard disk, stamped "Y 3 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (67.908 meters or 222.795 feet.)

**Herman**, top of rail opposite the St. Louis-San Francisco Railway station. (231.5 feet.)

**Z 3.**—In Poinsett County, about 1.4 miles southeast along the St. Louis-San Francisco Railway from the station at **Herman**, Craighead County, 50 feet northwest of pole 434+30, 49 feet southwest of the center line of United States Highway 63, 37 feet northeast of the center line of the track, 12.9 feet southwest of the right-of-way fence, and 9.5 feet lower than the top of the rail. A standard disk, stamped "Z 3 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (67.484 meters or 221.404 feet.)

**A 4.**—About 0.1 mile northwest along the St. Louis-San Francisco Railway from the station at **Truman**, Poinsett County, between the main track and the nearest track of a small yard, opposite pole 436+18, 73 feet north of the center line of the road, 30 feet southwest of the center line of the main track, in line with the main row of poles, 15 feet southeast of a pole, and about 9 feet lower than the top of the rail. A standard disk, stamped "A 4 1928" and set in the top of a concrete post, projecting about 6 inches above ground. (67.672 meters or 222.021 feet.)

**Truman**, top of rail opposite the St. Louis-San Francisco Railway station. (231.0 feet.)

**B 4.**—About 0.2 mile southeast along the St. Louis-San Francisco Railway from the station at **Truman**, Poinsett County, east of the city dump, 71 feet south of the south end of bridge 436.8 over a road and the St. Louis Southwestern Railway track, between poles 436+29 and 436+30, 40 feet southwest of the center line of the track, 27 feet east of a fence line, 42.5 feet southeast of a pole, and about 10 feet lower than the top of the rail. A standard disk, stamped "B 4 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (67.435 meters or 221.242 feet.)

**C 4.**—About 2.9 miles southeast along the St. Louis-San Francisco Railway from the station at **Truman**, Poinsett County, about 0.3 mile northwest of the station at **Hatchie Coon**, 89 feet west of the center of a grade crossing, opposite pole 439+19, about 50 feet southwest of the center line of the main track, 59 feet northwest of the center line of the road, 14½ feet north of a pole, and about 13.3 feet lower than the top of the rail. A standard disk, stamped "C 4 1928" and set in the top of a concrete post, projecting about 7 inches above ground. (66.595 meters or 218.487 feet.)

**Hatchie Coon**, top of rail opposite the St. Louis-San Francisco Railway station. (231.8 feet.)

**D 4.**—At **Tulot**, Poinsett County, about 350 feet southeast of the St. Louis-San Francisco Railway station, between poles 440+27 and 440+28, opposite the last house at the end of a street, 37.5 feet southwest of the center line of the track, 5 feet west of a pole, and about 12 feet lower than the top of the rail. A standard disk, stamped "D 4 1928" and set in the top of a concrete

post, projecting about 3 inches above ground. (66.291 meters or 217.490 feet.)

**Tulot**, top of rail opposite the St. Louis-San Francisco Railway station. (231.0 feet.)

**Oak Donic**, top of rail opposite the St. Louis-San Francisco Railway station. (230.6 feet.)

**E 4.**—About 1.4 miles southeast along the St. Louis-San Francisco Railway from the station at **Tulot**, Poinsett County, 73 feet southeast of the platform at **Oak Donic**, 54 feet southeast of pole 442+3, 36 feet northeast of the center line of the track, and 11 feet lower than the top of the rail. A standard disk, stamped "E 4 1928" and set in the top of a concrete post, projecting about 9 inches above ground. (66.967 meters or 219.708 feet.)

**F 4.**—About 2.5 miles southeast along the St. Louis-San Francisco Railway from **Oak Donic**, Poinsett County, about 2.8 miles northwest of **Marked Tree**, between poles 444+21 and 444+22, 45 feet southwest of the center line of the track, 18 feet west of a pole, 5 feet north of the south right-of-way fence, and 14½ feet lower than the top of the rail. A standard disk, stamped "F 4 1928" and set in the top of a concrete post, projecting about 7 inches above ground. (65.137 meters or 213.704 feet.)

**G 4.**—About 0.2 mile northwest along the St. Louis-San Francisco Railway from the station at **Marked Tree**, Poinsett County, about 68 paces southeast along the track from the southeast end of the bridge over St. Francis River, between poles 447+5 and 447+6, 53 feet southeast of a pole, 39 feet southwest of the center line of the track, at a high piece of ground next to a fill, and 10.5 feet lower than the top of the rail. A standard disk, stamped "G 4 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (67.202 meters or 220.479 feet.)

**H 4.**—At **Marked Tree**, Poinsett County, about 400 feet northwest of the St. Louis-San Francisco Railway station, at a concrete bridge over a highway, 23 feet northeast of the center line of the main track, in the east wing wall, 1.6 feet south of the north end, and about 2 feet lower than the top of the rail. A standard disk, stamped "H 4 1928." (69.110 meters or 226.738 feet.)

**Marked Tree**, top of near rail opposite the St. Louis-San Francisco Railway station. (228.0 feet.)

**J 4.**—About 0.7 mile southeast along the St. Louis-San Francisco Railway from the station at **Marked Tree**, Poinsett County, about 120 feet northwest of the west end of bridge 448.1, between poles 447+36 and 448+00, opposite the frog of the switch of a siding north of the main track, 33 feet southwest of the center line of the main track, 7 feet east of a line of poles, and 12 feet lower than the top of the rail. A standard disk, stamped "J 4 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (66.202 meters or 217.198 feet.)

**K 4.**—About 2.1 miles southeast along U.S. Highway 63 from the station at **Marked Tree**, Poinsett County, at a concrete highway bridge, opposite St. Louis-San Francisco Railway bridge 449.4, in the northwest corner post of the highway bridge, and 3.8 feet higher than the highway. A standard disk, stamped "K 4 1928." (68.108 meters or 223.451 feet.)

**L 4.**—About 0.3 mile northwest along the St. Louis-San Francisco Railway from the station at **Tyronza**, Poinsett County, 17 feet east of pole 451+20, 45 feet northeast of the center line of the main track, 4½ feet southwest of the north right-of-way fence, and 8½ feet lower than the top of the rail. A standard disk, stamped "L 4 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (67.403 meters or 221.138 feet.)

**Tyronza**, top of rail opposite the St. Louis-San Francisco Railway station. (229.2 feet.)

**M 4.**—About 0.4 mile southeast along the St. Louis-San Francisco Railway from the station at **Tyronza**, Poinsett County, about 200 feet northwest of a grade crossing of a dirt road, about 160 feet east of the Wilson Light & Power Co., between poles 452+7 and 452+8, 35½ feet southwest of the center line of the main track, 3 feet northwest of a line of poles, and 8½ feet lower than the top of the rail. A standard disk, stamped "M 4 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (67.409 meters or 221.158 feet.)

**N 4.**—About 2.5 miles southeast along the St. Louis-San Francisco Railway from the station at **Tyronza**, Poinsett County, about 75 feet west of the **Beasley** signpost, 51 feet northeast of the center of the grade crossing of United States Highway 63, between poles 454+15 and 454+16, 35 feet south-

west of the center line of the main track, 9 feet south of a pole, and in a plot of ground bounded by the main track, a siding, and United States Highway 63. A standard disk, stamped "N 4 1928" and set in the top of a concrete post, projecting about 6 inches above ground. (67.177 meters or 220.397 feet.)

Beasley, top of rail opposite the St. Louis-San Francisco Railway signpost. (229.1 feet.)

Deckerville, top of rail opposite the St. Louis-San Francisco Railway station. (228.5 feet.)

O 4.—At Deckerville, Poinsett County, about 150 feet southeast of the St. Louis-San Francisco Railway station, opposite pole 456+15, 52 feet southwest of the center line of the main track, 23 feet northeast of the center line of United States Highway 63, 4.7 feet southwest of a pole, and 7½ feet lower than the top of the rail. A standard disk, stamped "O 4 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (67.290 meters or 220.767 feet.)

P 4.—About 0.1 mile northwest along the St. Louis-San Francisco Railway from the station at Gilmore, Crittenden County, 25.4 feet southeast of pole 458+29, about 150 feet east of the center of a grade crossing, 30 feet northeast of the center line of the main track, 67 feet south of the center line of United States Highway 63, and 6 feet lower than the top of the rail. A standard disk, stamped "P 4 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (68.200 meters or 223.753 feet.)

Gilmore, top of rail opposite the St. Louis-San Francisco Railway station. (229.3 feet.)

Q 4.—About 0.3 mile southeast along the St. Louis-San Francisco Railway from the station at Gilmore, Crittenden County, 34 feet northwest of pole 459+9, 32 feet northeast of the center line of the main track, 43 feet southwest of the center line of United States Highway 63, 2 feet northeast of a line of poles, and 6.5 feet lower than the top of the rail. A standard disk, stamped "Q 4 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (67.804 meters or 222.454 feet.)

R 4.—About 1.1 miles northwest along the St. Louis-San Francisco Railway from the station at Turrell, Crittenden County, about 73 paces southeast of the "Yard Limit" sign, between poles 461+4 and 461+5, 25 feet southwest of the center line of the main track, 19.7 feet northwest of the south right-of-way fence, 12.5 feet north of a pole, and 5.7 feet lower than the top of the rail. A standard disk, stamped "R 4 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (68.348 meters or 224.238 feet.)

S 4.—About 0.2 mile northwest along the St. Louis-San Francisco Railway from the station at Turrell, Crittenden County, about 36 paces southeast of the first grade crossing northwest of the station, opposite the store of W. G. Filippo, 43 feet northwest of pole 462+3, 43 feet northeast of the center line of the main track, 38 feet southwest of a large oak tree, 3 feet northeast of a line of poles, and 5½ feet lower than the top of the rail. A standard disk, stamped "S 4 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (68.542 meters or 224.875 feet.)

Turrell, top of rail opposite the St. Louis-San Francisco Railway station. (229.9 feet.)

T 4.—At Turrell, Crittenden County, near the St. Louis-San Francisco Railway station, at the water tank, in the center of the west face of the west one of the two south concrete footings, and about 2 feet above ground. A standard disk, stamped "T 4 1928" and set vertically. (68.273 meters or 223.992 feet.)

U 4.—About ½ mile southeast along the St. Louis-San Francisco Railway from the station at Turrell, Crittenden County, at an underpass of United States Highway 61, near the junction of State Highway 75 at Big Creek Bridge, in the top of the southeast back wall, 10.4 feet southwest of the center line of the main track, 2 feet north of the south end, and 1 foot lower than the top of the rail. A standard disk, stamped "U 4 1928." (69.948 meters or 229.488 feet.)

V 4.—About 1.2 miles southeast along the St. Louis-San Francisco Railway from the station at Turrell, Crittenden County, about 86 paces northwest of a small concrete bridge on United States Highway 61, at a small concrete culvert, opposite pole 463+16, 17.5 feet northeast of the center line of the main track, in the north end of the east head wall, 6 inches south of the north end, and 5 feet lower than the top of the rail. A standard disk, stamped "V 4 1928." (68.647 meters or 225.219 feet.)

**W 4.**—About 1.6 miles northwest along the St. Louis-San Francisco Railway from the station at **Clarkdale**, Crittenden County, about 62 paces northwest of trestle 465.1, about 90 feet southeast of a grade crossing of a secondary road, at the highest point of ground in the locality, 39 feet southwest of the center line of the main track, about 35 feet northeast of the center line of United States Highway 61, 13.3 feet south of a pole, and 1 foot lower than the top of the rail. A standard disk, stamped "W 4 1928" and set in the top of a concrete post, projecting about 3 inches above ground. (70.050 meters or 229.822 feet.)

**X 4.**—At **Clarkdale**, Crittenden County, about 265 feet northwest of the semaphore at the St. Louis-San Francisco Railway station, 28 feet southeast of pole 466+26, opposite a building bearing the sign "Clarke Place, Post Office Clarkdale", 37 feet northeast of the center line of the main track, 15 feet southwest of the center line of a siding leading north from the station, and 1.5 feet lower than the top of the rail. A standard disk, stamped "X 4 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (69.457 meters or 227.877 feet.)

**Clarkdale**, top of rail opposite the St. Louis-San Francisco Railway station. (229.2 feet.)

**Y 4.**—At **Jericho**, Crittenden County, 55 feet south of the St. Louis-San Francisco Railway station signpost, 55.5 feet northwest of the mail crane, 38.3 feet southeast of a pole opposite pole 468+7, 30.5 feet southwest of the center line of the main track, 42.5 feet northeast of the center line of United States Highway 61, in a line of poles, and  $4\frac{1}{2}$  feet lower than the top of the rail. A standard disk, stamped "Y 4 1928" and set in the top of a concrete post, projecting about 5 inches above ground. (68.505 meters or 224.753 feet.)

**Jericho**, top of rail opposite the St. Louis-San Francisco Railway station signpost. (229.0 feet.)

**Z 4.**—Destroyed in 1928. (67.486 meters or 221.410 feet.)

**Z 4 RESET (U.S.E.)**.—About 3.5 miles northwest along the St. Louis-San Francisco Railway from the station at **Marion**, Crittenden County, at **James Mill** station signpost, 92 feet southwest of the center line of the main track, 19 feet southwest of the center line of United States Highway 61, and 6 feet south of a steel signpost marked "U.S. Arkansas 61." A standard disk, stamped "Z 4 1928" and set in the top of a concrete post. (68.253 meters or 223.926 feet.)

**NOTE.**—This mark was reset and its elevation determined by the Corps of Engineers, United States Army, in June 1929.

**James Mill**, top of rail opposite the St. Louis-San Francisco Railway station signpost. (227.3 feet.)

**A 5.**—Destroyed in 1928. (68.760 meters or 225.590 feet.)

**A 5 RESET (U.S.E.)**.—About 2.5 miles northwest along the St. Louis-San Francisco Railway from the station at **Marion**, Crittenden County, about 163 feet northwest of the north yard switch of Harvard Yard, 82 feet southwest of the center line of the main track, about 80 feet northeast of the center line of United States Highway 61, and 20 feet southeast of the center line of a side road leading northeast. A standard disk, stamped "A 5 1928" and set in the top of a concrete post. (68.520 meters or 224.804 feet.)

**NOTE.**—This mark was reset and its elevation determined by the Corps of Engineers, United States Army, in June 1929.

**Harvard**, top of rail opposite the St. Louis-San Francisco Railway station signpost. (227.4 feet.)

**B 5.**—About 0.6 mile northwest along the St. Louis-San Francisco Railway from the station at **Marion**, Crittenden County, opposite pole 473+2, at semaphore 473.0, and in the center of the southwest face of the concrete foundation. A standard disk, stamped "B 5 1928" and set vertically. (68.827 meters or 225.810 feet.)

**C 5.**—At **Marion**, Crittenden County, about 135 feet northwest of the middle of the ticket office of the St. Louis-San Francisco Railway station, at a concrete culvert having iron railings on the head walls, just south of the main grade crossing, 20 feet southeast of the center line of the main street, 16.5 feet northeast of the center line of the main track, and 3 feet southeast of the northwest corner of the head wall. A standard disk, stamped "C 5 1928." (68.576 meters or 224.986 feet.)

**Marion**, top of rail opposite the St. Louis-San Francisco Railway station. (225.8 feet.)

**D 5.**—About  $\frac{1}{2}$  mile southeast along the St. Louis-San Francisco Railway from **Marion**, Crittenden County, about 106 paces northwest of the grade crossing at semaphores 274.2 and 274.3, opposite a deserted house at a siding, 28 feet northeast of the center line of the main track, 13 feet southwest of pole 474+6, and  $5\frac{1}{2}$  feet lower than the top of the rail. A standard disk, stamped "D 5 1928" and set in the top of a concrete post, projecting about 6 inches above ground. (67.274 meters or 220.715 feet.)

**E 5.**—About 2.1 miles southeast along the St. Louis-San Francisco Railway from the station at **Marion**, Crittenden County, between poles 475+29 and 475+30, about 75 feet west of the center of a grade crossing, 25.5 feet southwest of the center line of the southwest track, 4 feet north of a line of poles, and 6 feet lower than the top of the rail. A standard disk, stamped "E 5 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (67.141 meters or 220.278 feet.)

**Critco**, top of rail opposite the St. Louis-San Francisco Railway station signpost. (225.2 feet.)

**F 5.**—About 3.4 miles northwest along the St. Louis-San Francisco Railway from the railroad crossing at **Bridge Junction**, Crittenden County, 77 paces southeast of the southeast end of trestle 477.6, at semaphore 477.7, 10 feet southeast of the center line of the main track, in the center of the northeast face of the concrete base, and 1 foot higher than the top of the rail. A standard disk, stamped "F 5 1928" and set vertically. (69.592 meters or 228.320 feet.)

**G 5.**—About 1.8 miles northwest along the St. Louis-San Francisco Railway from the railroad crossing at **Bridge Junction**, Crittenden County, at the crossing of the St. Francis Levee, between mileposts 149 and 150 of the St. Francis Levee Board Survey, 80 feet south of the south corner of the concrete base of semaphore 479.4, 37 feet west of the center line of the main track, 16 feet from the center line of the levee road, and 2 feet lower than the top of the rail. A standard disk, stamped "G 5 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (71.954 meters or 236.069 feet.)

**H 5.**—About 0.4 mile northwest along the St. Louis-San Francisco Railway from the railroad crossing at **Bridge Junction**, Crittenden County, at the old road bed of the Chicago, Rock Island & Pacific Railway branch to Hopefield, about 90 feet east of the center line of the east one of two St. Louis-San Francisco Railway tracks, 87 feet east of pole 480+38, and 3 feet lower than the top of the rail. A standard disk, stamped "H 5 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (69.844 meters or 229.147 feet.)

**J 5.**—At **Bridge Junction**, Crittenden County, just north of the post office, at the southwest corner of a concrete interlocking tower, at the crossing of the St. Louis-San Francisco Railway, the Chicago, Rock Island & Pacific Railway, and the Missouri Pacific Railroad, in the west face of the tower, 1 foot above the ground, and 1 foot north of the south end of the west wall. A standard disk, stamped "J 5 1928" and set vertically. (70.993 meters or 232.916 feet.)

**Bridge Junction**, top of rail at the crossing of the St. Louis-San Francisco Railway, the Chicago, Rock Island & Pacific Railway, and the Missouri Pacific Railroad. (232.8 feet.)

For additional bench marks in the vicinity of Bridge Junction, see page 35.

#### LINE 9, PROCTOR, ARK., TO MEMPHIS, TENN. (PART)

[First-order leveling]

This line follows the Chicago, Rock Island & Pacific Railway from Proctor, through Edmondson, Mounds, Riceville, Hulbert, Briark, and Bridge Junction, to the State line in the vicinity of Memphis, Tenn. The original field work was done, during the fall of 1916, by a party in charge of E. H. Pagenhart, assistant. The line was rerun, during the fall of 1928, by a party in charge of P. C. Doran, junior hydrographic and geodetic engineer. The elevations given below are based on the latter leveling.

**Proctor.**—Destroyed.

**R.M. Proctor.**—About 1 mile east along the Chicago, Rock Island & Pacific Railway from Proctor, Crittenden County, near bridge 18.9, on the south side of the track. A standard reference-mark disk, stamped "PROCTOR 1916 1920" and set in the top of a concrete post. (61.753 meters or 202.601 feet.)

**Edmondson.**—At Edmondson, Crittenden County, about 160 feet west of the semaphore in front of the Chicago, Rock Island & Pacific Railway station, and 10 feet south of the south rail of the main track, in the north concrete footing of an old water tank. A standard triangulation station disk, stamped "EDMONDSON." (63.929 meters or 209.740 feet.)

**R.M. Edmondson.**—At Edmondson, Crittenden County, about 150 feet west of the semaphore in front of the Chicago, Rock Island & Pacific Railway station, and about 29.4 feet south of the south rail of the main track, in the east concrete footing of an old water tank. A standard reference-mark disk, stamped "EDMONDSON." (62.548 meters or 205.210 feet.)

**Edmondson,** top of rail opposite the Chicago, Rock Island & Pacific Railway station. (211.9 feet.)

**P.T.S. 5 (U.S.G.S.).**—At Mounds, Crittenden County, at the southeast corner of the post office. A United States Geological Survey standard cap, stamped "PRIM. TRAV. STA. NO. 5 1915 211" and riveted on the top of a 3½-inch iron pipe. (64.180 meters or 210.564 feet.)

**NOTE.**—It was reported in 1928 that the pipe had been bent over so far that the bench mark is worthless. The elevation given is based on the 1916 leveling.

**Mounds.**—At Mounds, Crittenden County, on the Chicago, Rock Island & Pacific Railway, 20 feet west of the twenty-first pole west of milepost 13, about 360 feet west of the switch at the east end of the sidetrack, and 16.3 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "MOUNDS" and set in the top of a concrete post. (63.817 meters or 209.373 feet.)

**R.M. Mounds.**—At Mounds, Crittenden County, on the Chicago, Rock Island & Pacific Railway, on the north side of the track, and about 63 feet northeast of Mounds, described above. A standard reference-mark disk, stamped "MOUNDS" and set in the top of a concrete post. (63.857 meters or 209.504 feet.)

**Mounds,** top of rail opposite the Chicago, Rock Island & Pacific Railway station. (213.0 feet.)

**Riceville.**—Destroyed.

**R.M. Riceville.**—Destroyed.

**214 (U.S.G.S.).**—Destroyed.

**O 5.**—At Riceville, Crittenden County, about 100 paces west of the Chicago, Rock Island & Pacific Railway station signboard, about 75 feet west of a grade crossing, 51 feet southwest of the crossing sign, 17 feet south of the center line of the main track, 33.6 feet northwest of pole 11+12, about 50 feet north of the center line of the road paralleling the track, and 2 feet lower than the rail. A standard disk, stamped "O 5 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (65.580 meters or 215.157 feet.)

**Riceville,** top of rail opposite the Chicago, Rock Island & Pacific Railway station. (217.3 feet.)

**Hulbert.**—Destroyed.

**R.M. Hulbert.**—Destroyed.

**Hulbert,** top of rail opposite the Chicago, Rock Island & Pacific Railway station. (217.8 feet.)

**N 5.**—At Hulbert, Crittenden County, at the water tank opposite the Chicago, Rock Island & Pacific Railway station, 16.7 feet north of the center line of the main track, in the south one of the two west footings, in the southwest corner, and about flush with the ground. A standard disk, stamped "N 5 1928." (65.967 meters or 216.427 feet.)

**216 (U.S.G.S.).**—Destroyed.

**215 (U.S.G.S.).**—About 1 mile east along the Chicago, Rock Island & Pacific Railway from Hulbert, Crittenden County, at the residence of Adam Johnson, east of a road crossing, south of the track, and in the yard. A United States Geological Survey standard cap, stamped "215" and riveted on the top of a 3½-inch iron pipe. (65.440 meters or 214.698 feet.)

**NOTE.**—A report, received in 1928, states that the pipe was loose in the ground.

**M 5.**—About 1.0 mile east along the Chicago, Rock Island & Pacific Railway from the station at Hulbert, Crittenden County, 57 feet southeast of the center of a grade crossing, 26.3 feet south of the center line of the main track, 48 feet east of the center line of the road, and 19 feet northwest of pole 8+10. A standard disk, stamped "M 5 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (65.665 meters or 215.436 feet.)

**Levee.**—About 2½ miles east along the Chicago, Rock Island & Pacific Railway from Hulbert, Crittenden County, on the levee, about 145 feet west of milepost 7, and about 15 feet north of the center line of the main track. A standard triangulation-station disk, stamped "LEVEE" and set in the top of a concrete post. (69.275 meters or 227.280 feet.)

**NOTE.**—It was reported in 1928 that this bench mark had probably been buried under a fill. The elevation given is based on the 1916 leveling.

**L 5.**—About 1.2 miles southwest along the Chicago, Rock Island & Pacific Railway from Briark, Crittenden County, about 40 paces west of the west end of bridge 5.3, 26 feet west of the top of the St. Francis Levee at its junction with the road bed, and 51.5 feet north of the center line of the track. A standard disk, stamped "L 5 1928" and set in the top of a concrete post, projecting about 4 inches above ground. (69.080 meters or 226.640 feet.)

**K 5.**—At Briark, Crittenden County, at the junction of the Chicago, Rock Island & Pacific Railway and the Missouri Pacific Railroad, at signal A 375.1, about 35 paces northwest of the interlocking tower, 10.8 feet north of the center line of the Missouri Pacific Railroad track, and in the east face of the concrete base, about 0.7 foot below the top. A standard disk, stamped "K 5 1928" and set vertically. (71.587 meters or 234.865 feet.)

**B 1.**—Destroyed.

For additional bench marks in the vicinity of Bridge Junction, see page 33.

**Crossing.**—Not recovered in 1928.

**Organ.**—Destroyed.

**Hopefield.**—Not recovered in 1928.

**230 (U.S.G.S.).**—Destroyed.

**C 1.**—In Crittenden County, Arkansas, about ¾ mile west of Memphis, Shelby County, Tennessee, at the west end of the Harrihan Bridge across Mississippi River, 7 feet from the west edge, and 1 foot from the south face. A standard disk, stamped "C 1 1916." (82.323 meters or 270.104 feet.)

**NOTE.**—The elevation of this mark is based on leveling in 1928. It was reported in 1928 that the bridge engineer stated that the pier had sunk.

The line enters Tennessee.

#### LINE 10, SELIGMAN, MISSOURI, TO KENSETT, ARK. (PART)

[First-order leveling]

This line enters Arkansas in the vicinity of Beaver and follows the Missouri & North Arkansas Railway through Berryville, Harrison, Leslie, Shirley, and Heber Springs, to Kensett. The field work of the portion from Beaver to Shirley was done, during the winter of 1930-31, by a party in charge of Joseph P. Lushene, junior hydrographic and geodetic engineer. The remaining portion was done, during the winter of 1931-32, by a party in charge of G. R. Fish, junior hydrographic and geodetic engineer.

**P 5.**—About 4.4 miles northwest along the Missouri & North Arkansas Railway from the station at Beaver, Carroll County, about 0.1 mile southeast of the Missouri-Arkansas State line, 38 feet southeast of bridge 69.4, 26 feet east of the east rail, and 8 feet east of the right-of-way fence, in a hard limestone ledge. A standard disk, stamped "P 5 1930." (309.486 meters or 1,015.372 feet.)

**Q 5.**—At Beaver, Carroll County, about 0.1 mile west of the Missouri & North Arkansas Railway station, at the highway bridge over White River, 1 foot

from the north end of the bridge, and in the west wall. A standard disk, stamped "Q 5 1930." (282.451 meters or 926.675 feet.)

**Beaver**, top of rail opposite the Missouri & North Arkansas Railway station. (929.6 feet.)

**Elk Ranch**, top of rail opposite the Missouri & North Arkansas Railway station. (957.3 feet.)

**R 5.**—At **Junction**, Carroll County, on the Missouri & North Arkansas Railway, 124 feet south of a highway bridge, 35 feet east of the center line of a gravel road, 88 feet south of the south rail, and at the corner of a field. A standard disk, stamped "R 5 1930" and set in the top of a concrete post. (313.626 meters or 1,028.955 feet.)

**Tunnel**, top of rail opposite the Missouri & North Arkansas Railway station. (1,256.9 feet.)

**S 5.**—At **Tunnel**, Carroll County, at the Missouri & North Arkansas Railway station, 690 feet west of the west end of the tunnel, 30 feet south of the south rail, and in the concrete foundation pier of an old crane. A standard disk, stamped "S 5 1930." (383.838 meters or 1,259.308 feet.)

**T 5.**—At **Grandview**, Carroll County, 132 feet west of the west end of the Missouri & North Arkansas Railway station, 30 feet south of the south rail, and at the west end of a small park. A standard disk, stamped "T 5 1930" and set in the top of a concrete post. (349.478 meters or 1,146.579 feet.)

**Grandview**, top of rail in front of the Missouri & North Arkansas Railway station. (1,145.5 feet.)

**U 5.**—At **Freeman**, Carroll County, on the Missouri & North Arkansas Railway, 465 feet east of a railroad bridge, 116 feet northeast of a derail sign near a concrete platform, north of the base of the triangle formed by the spur line to Berryville, and 20 feet north of the north rail of the main line. A standard disk, stamped "U 5 1930" and set in the top of a concrete post. (320.492 meters or 1,051.481 feet.)

**V 5.**—At **Urbanette**, Carroll County, 156 feet west of the Missouri & North Arkansas Railway station, 57 feet south of the south rail, and 1 foot north of the property-line fence. A standard disk, stamped "V 5 1930" and set in the top of a concrete post. (388.854 meters or 1,275.765 feet.)

**Urbanette**, top of rail opposite the Missouri & North Arkansas Railway station. (1,276.2 feet.)

**Cisco**, top of rail opposite the Missouri & North Arkansas Railway station. (1,328.0 feet.)

**W 5.**—At **Cisco**, Carroll County, 171 feet east of the Missouri & North Arkansas Railway station, northeast of a grade crossing, 51 feet east of the center line of the road, and 23 feet north of the north rail. A standard disk, stamped "W 5 1930" and set in the top of a concrete post. (403.196 meters or 1,322.819 feet.)

About 1 mile northwest along the Missouri & North Arkansas Railway from the station at **Green Forest**, top of west rail at the crossing of the center line of United States Highway 62. (1,298.3 feet.)

**X 5.**—At **Green Forest**, Carroll County, about 300 feet west of the Missouri & North Arkansas Railway station, 85 feet southeast of the southeast corner of the Magnolia Oil Co. plant, and 44 feet north of the north rail. A standard disk, stamped "X 5 1930" and set in the top of a concrete post. (406.480 meters or 1,333.593 feet.)

**Green Forest**, top of rail opposite the Missouri & North Arkansas Railway station. (1,329.5 feet.)

**Y 5.**—About 1.9 miles west along the Missouri & North Arkansas Railway from the station at **Coin**, Carroll County, 118 feet east of pole 104+15, 37 feet south of the south rail, and at the edge of a field. A standard disk, stamped "Y 5 1930" and set in the top of a concrete post. (347.799 meters or 1,141.071 feet.)

About 1¼ miles west along the Missouri & North Arkansas Railway from the station at **Coin**, top of east rail at the crossing of the center line of United States Highway 62. (1,136.9 feet.)

**Z 5.**—At **Coin**, Carroll County, on the Missouri & North Arkansas Railway, 200 feet east of the station signboard, 225 feet east of a section tool house, 115 feet east of a switch stand, and 53 feet north of the north rail. A standard disk, stamped "Z 5 1930" and set in the top of a concrete post. (337.861 meters or 1,108.466 feet.)

**Alpena**, top of rail opposite the Missouri & North Arkansas Railway station. (1,135.4 feet.)

**1139 (U.S.G.S.)**.—At **Alpena**, Boone County, 27 feet west of the platform at the Missouri & North Arkansas Railway station, and 20 feet south of the south rail. A United States Geological Survey standard cap, stamped "1139 FTVL" and riveted on the top of a 3½-inch iron pipe. (346.257 meters or 1,136.011 feet.)

**A 6.**—At **Alpena**, Boone County, 70 feet east of the Missouri & North Arkansas Railway station, south of the first pole east of the station, and 30 feet south of the south rail. A standard disk, stamped "A 6 1930" and set in the top of a concrete post. (346.013 meters or 1,135.211 feet.)

**B 6.**—About 4.1 miles east along the Missouri & North Arkansas Railway from **Alpena**, Boone County, 100 yards east of milepost 115, northwest of a dirt-road crossing, 30 feet west of the road, and 32 feet north of the north rail. A standard disk, stamped "B 6 1930" and set in the top of a concrete post. (434.350 meters or 1,425.030 feet.)

**Batavia**, top of rail opposite the Missouri & North Arkansas Railway station. (1,488.7 feet.)

**1489 (U.S.G.S.)**.—At **Batavia**, Boone County, near the Missouri & North Arkansas Railway station, about 200 feet north of a spring, and 33 feet east of the northeast corner of the station platform. A United States Geological Survey standard cap, stamped "1489 FTVL" and riveted on the top of a 3½-inch iron pipe. (452.782 meters or 1,485.502 feet.)

**C 6.**—About 1 mile east along the Missouri & North Arkansas Railway from **Batavia**, Boone County, about 60 yards south of pole 118+10, 28 feet south of an old wagon-road crossing, 29 feet west of the west rail, and 42 feet east of United States Highway 62. A standard disk, stamped "C 6 1930" and set in the top of a concrete post. (462.388 meters or 1,517.018 feet.)

**D 6.**—About 3.6 miles west along the Missouri & North Arkansas Railway from **Harrison**, Boone County, southeast of a country-road crossing, 36 feet east of the center line of the road, 34 feet south of the south rail, and 13 feet north of the right-of-way fence line. A standard disk, stamped "D 6 1930" and set in the top of a concrete post. (375.572 meters or 1,232.189 feet.)

About 1.7 miles northwest along the Missouri & North Arkansas Railway from the station at **Harrison**, top of west rail at the crossing of the center line of United States Highway 65. (1,109.2 feet.)

**E 6.**—At **Harrison**, Boone County, 75 yards northwest of the Missouri & North Arkansas Railway station, 79 feet southwest of the switch stand just north of the station, 47 feet south of the south rail, and 8 feet east of a hedge fence. A standard disk, stamped "E 6 1931" and set in the top of a concrete post surrounded by three upright steel rails, painted white. (321.063 meters or 1,053.354 feet.)

For additional bench marks in the vicinity of **Harrison**, see page 101.

**Harrison**, top of rail opposite the Missouri & North Arkansas Railway station. (1,054.4 feet.)

**1052 (U.S.G.S.)**.—At **Harrison**, Boone County, at the northwest corner of the town square. A United States Geological Survey standard cap, stamped "1052 FTVL" and riveted on the top of a 3½-inch iron pipe. (319.693 meters or 1,048.863 feet.)

**F 6.**—About 2.7 miles east along the Missouri & North Arkansas Railway from **Harrison**, Boone County, about 2½ poles east of pole 128+25, southwest of a gravel-road crossing, 36 feet west of the road, and 23 feet south of the south rail. A standard disk, stamped "F 6 1931" and set in the top of a concrete post. (356.589 meters or 1,169.909 feet.)

**G 6.**—At **Bellefonte**, Boone County, 135 feet north of the north end of the Missouri & North Arkansas Railway station, 30 feet east of milepost 131, and 18 feet east of the east rail. A standard disk, stamped "G 6 1931" and set in the top of a concrete post. (323.859 meters or 1,062.527 feet.)

**Bellefonte**, top of rail opposite the Missouri & North Arkansas Railway station. (1,061.5 feet.)

About 1¼ miles east along the Missouri & North Arkansas Railway from the station at **Bellefonte**, top of south rail at crossing of the center line of State Highway 12. (1,020.9 feet.)

**H 6.**—About 2.8 miles east along the Missouri & North Arkansas Railway from the station at **Bellefonte**, Boone County, 6 poles north of milepost 134, northeast of a country-road grade crossing, 44 feet north of the center line of

the country road, and 16 feet east of the east rail. A standard disk, stamped "H 6 1931" and set in the top of a concrete post. (337.206 meters or 1,106.317 feet.)

Olvey, top of rail opposite the Missouri & North Arkansas Railway station. (1,016.0 feet.)

J 6.—At Olvey, Boone County, 220 feet south of the Missouri & North Arkansas Railway station, 9 feet north of pole 136+20, and 18 feet west of the west rail. A standard disk, stamped "J 6 1931" and set in the top of a concrete post. (308.752 meters or 1,012.964 feet.)

K 6.—About 2.4 miles south along the Missouri & North Arkansas Railway from the station at Olvey, Boone County, at the edge of a field, midway between milepost 139 and pole 138+29, and 1 foot east of the east right-of-way fence. A standard disk, stamped "K 6 1931" and set in the top of a concrete post. (315.358 meters or 1,034.637 feet.)

Everton, top of rail opposite the Missouri & North Arkansas Railway station. (855.3 feet.)

L 6.—At Everton, Boone County, 44 feet southwest of the southwest corner of the Missouri & North Arkansas Railway station, 19 feet west of the west rail, and 7 feet east of pole 141+15. A standard disk, stamped "L 6 1931" and set in the top of a concrete post. (260.970 meters or 856.199 feet.)

M 6.—About 2.6 miles south along the Missouri & North Arkansas Railway from the station at Everton, Boone County, 120 feet north of milepost 144, in a shallow cut, and 20 feet east of the east rail. A standard disk, stamped "M 6 1931" and set in the top of a concrete post. (276.899 meters or 908.459 feet.)

N 6.—About 2.2 miles north along the Missouri & North Arkansas Railway from the station at Pindall, Searcy County, about 300 feet south of milepost 146, 2 feet east of the east right-of-way fence, and in a field. A standard disk, stamped "N 6.1931" and set in the top of a concrete post. (293.083 meters or 961.556 feet.)

About 0.2 mile north along the Missouri & North Arkansas Railway from the station at Pindall, top of west rail at the crossing of the center line of United States Highway 65. (1,049.0 feet.)

Pindall, top of rail opposite the Missouri & North Arkansas Railway station. (1,054.9 feet.)

P 6.—At Pindall, Searcy County, about  $\frac{1}{8}$  mile south of the Missouri & North Arkansas Railway station, at the south limits of the town, about 150 yards south of a cannery factory, on the east side of a small hill west of the tracks, midway between poles 148+19 and 148+20, and 3 feet east of the west right-of-way fence. A standard disk, stamped "P 6 1931" and set in the top of a concrete post. (328.140 meters or 1,076.573 feet.)

Q 6.—About 3.1 miles south along the Missouri & North Arkansas Railway from the station at Pindall, Searcy County, 180 feet north of trestle 150.4, 90 feet north of pole 151+10, and 49 feet west of the west rail. A standard disk stamped "Q 6 1931" and set in the top of a concrete post. (310.853 meters or 1,019.857 feet.)

R 6.—About 1.2 miles north along the Missouri & North Arkansas Railway from the station at St. Joe, Searcy County, 12 feet from pole 154+1, at the first bridge south of Mercer, and in the northeast corner of the north pier. A standard disk, stamped "R 6 1931." (247.571 meters or 812.239 feet.)

St. Joe, top of rail opposite the Missouri & North Arkansas Railway station. (793.8 feet.)

About 0.1 mile east along the Missouri & North Arkansas Railway from the station at St. Joe, top of rail at the crossing of U.S. Highway 65. (797.8 feet.)

S 6.—About 1.6 miles south along the Missouri & North Arkansas Railway from the station at St. Joe, Searcy County, 335 feet north of milepost 157, 16 feet north of a stile over the railroad fence, and 2 feet west of the fence. A standard disk, stamped "S 6 1931" and set in the top of a concrete post. (229.938 meters or 751.435 feet.)

T 6.—About 2 miles north along the Missouri & North Arkansas Railway from Gilbert, Searcy County, 240 feet south of a wagon-road crossing, about 45 feet north of pole 159+25, and 7 feet west of the west right-of-way fence. A standard disk, stamped "T 6 1931" and set in the top of a concrete post. (193.465 meters or 634.726 feet.)

U 6.—At Gilbert, Searcy County, 250 feet north of the north end of the Missouri & North Arkansas Railway station, 9 feet south of pole 161+21, east of the section foreman's house, and 23 feet west of the west rail. A standard

disk, stamped "U 6 1931" set in the top of a concrete post. (181.374 meters or 595.058 feet.)

Gilbert, top of rail opposite the Missouri & North Arkansas Railway station. (592.2 feet.)

V 6.—About 2.5 miles north along the Missouri & North Arkansas Railway from the station at Zack, Searcy County, midway between poles 164+22 and 164+23, and 18½ feet west of the west rail. A standard disk, stamped "V 6 1931" and set in the top of a concrete post. (187.986 meters or 616.751 feet.)

W 6.—At Zack, Searcy County, 300 feet north of the Missouri & North Arkansas Railway station, at the north end of a small cut, 16 feet north of pole 167+5, and 22 feet west of the west rail. A standard disk, stamped "W 6 1931" and set in the top of a concrete post. (206.096 meters or 676.167 feet.)

Zack, top of rail opposite the Missouri & North Arkansas Railway station. (677.7 feet.)

X 6.—About 2.4 miles north along the Missouri & North Arkansas Railway from the station at Marshall, Searcy County, between poles 170+13 and 170+14, 60 feet east of the east rail, and in the corner of a field, near the fence. A standard disk, stamped "X 6 1931" and set in the top of a concrete post. (282.270 meters or 926.081 feet.)

Y 6.—At Marshall, Searcy County, in the stone front of the First State Bank building, in a hard limestone ledge at the northeast corner of the building, 1 foot above the sidewalk, and 9 inches from the corner of the adjoining building. A standard disk, stamped "Y 6 1931." (320.177 meters or 1,050.447 feet.)

Marshall, top of rail opposite the Missouri & North Arkansas Railway station. (1,063.3 feet.)

Z 6.—About 2.9 miles south along the Missouri & North Arkansas Railway from the station at Marshall, Searcy County, ⅔ mile south of Baker, opposite pole 175+20, and 21 feet east of the east rail. A standard disk, stamped "Z 6 1931" and set in the top of a concrete post. (351.893 meters or 1,154.502 feet.)

A 7.—About 2.8 miles north along the Missouri & North Arkansas Railway from the station at Leslie, Searcy County, 120 feet north of milepost 179, 23 feet north of an elm tree, and 6 feet west of the east right-of-way fence. A standard disk, stamped "A 7 1931" and set in the top of a concrete post. (311.254 meters or 1,021.172 feet.)

B 7.—At Leslie, Searcy County, at the Missouri & North Arkansas Railway station, in the side of the station facing the track, midway between the door and window of the waiting room, and 4.4 feet above the ground. A standard disk, stamped "B 7 1931" and set vertically. (293.578 meters or 979.535 feet.)

Leslie, top of rail opposite the Missouri & North Arkansas Railway station. (974.5 feet.)

C 7.—About 2.4 miles south along the Missouri & North Arkansas Railway from the station at Leslie, Searcy County, at a road crossing at Noahs, 24 feet south of pole 184+7, 41 feet west of the west rail, and 6 feet east of the east right-of-way fence. A standard disk, stamped "C 7 1931" and set in the top of a concrete post. (285.988 meters or 938.279 feet.)

D 7.—About 4.6 miles north along the Missouri & North Arkansas Railway from the station at Elba, Van Buren County, about 0.8 mile south of Rumley, about 100 yards south of trestle 187.2, opposite pole 187+7, in a small cut, and 15 feet west of the west rail. A standard disk, stamped "D 7 1931" and set in the top of a concrete post. (275.395 meters or 903.525 feet.)

E 7.—About 1.5 miles north along the Missouri & North Arkansas Railway from the station at Elba, Van Buren County, 68 feet south of pole 190+9, 30 feet east of the east rail, and 4 feet from a small walnut tree, on a small knoll. A standard disk, stamped "E 7 1931" and set in the top of a concrete post. (263.325 meters or 863.925 feet.)

Elba, top of rail opposite the Missouri & North Arkansas Railway station. (834.0 feet.)

F 7.—In Stone County, about 1.6 miles south along the Missouri & North Arkansas Railway from the station at Elba, Van Buren County, 50 feet south of a farm road, opposite pole 193+16, and 25 feet west of the west rail. A standard disk, stamped "F 7 1931" and set in the top of a concrete post. (247.550 meters or 812.170 feet.)

G 7.—About 3.8 miles north along the Missouri & North Arkansas Railway from the station at Arlberg, Stone County, in a small cut, opposite pole 197+7, and 24 feet west of the west rail. A standard disk, stamped "G 7 1931" and set in the top of a concrete post. (229.538 meters or 753.076 feet.)

**Arlberg**, top of rail opposite the Missouri & North Arkansas Railway station. (693.4 feet.)

**H 7**.—At **Arlberg**, Stone County, 198 feet south of the Missouri & North Arkansas Railway station, midway between the station and bridge 201.1, 19 feet east of the center line of a county road, and 36 feet east of the east rail. A standard disk, stamped "H 7 1931" and set in the top of a concrete post. (210.870 meters or 691.829 feet.)

**J 7**.—About 3.8 miles south along the Missouri & North Arkansas Railway from the station at **Arlberg**, Stone County, opposite pole 204+24, midway between the track and the right-of-way fence, and 24 feet west of the west rail. A standard disk, stamped "J 7 1931" and set in the top of a concrete post. (194.440 meters or 637.925 feet.)

**K 7**.—About 6.5 miles north along the Missouri & North Arkansas Railway from the station at **Shirley**, Van Buren County, about 2½ miles south of **Lydalisk**, 42 feet north of pole 208+17, and 23 feet east of the east rail. A standard disk, stamped "K 7 1931" and set in the top of a concrete post. (182.749 meters or 599.569 feet.)

**L 7**.—About 2.7 miles north along the Missouri & North Arkansas Railway from the station at **Shirley**, Van Buren County, 55 feet north of pole 212+11, 40 feet east of the east rail, and 1 foot from the right-of-way fence. A standard disk, stamped "L 7 1931" and set in the top of a concrete post. (169.278 meters or 555.373 feet.)

About 2 miles north along the Missouri & North Arkansas Railway from the station at **Shirley**, top of rail opposite milepost 213. (552.0 feet.)

**Shirley**, top of rail opposite the Missouri & North Arkansas Railway station. (542.3 feet.)

**M 7**.—At **Shirley**, Van Buren County, 35 feet south of the Missouri & North Arkansas Railway station, just north of a water tank, and 33 feet east of the east rail. A standard disk, stamped "M 7 1931" and set in the top of a concrete post. (165.284 meters or 542.269 feet.)

For additional bench marks in the vicinity of **Shirley**, see page 100.

About 1 mile south along the Missouri & North Arkansas Railway from the station at **Shirley**, top of rail opposite milepost 216. (532.7 feet.)

About 3 miles south along the Missouri & North Arkansas Railway from the station at **Shirley**, top of rail opposite milepost 218. (502.7 feet.)

About 4 miles south along the Missouri & North Arkansas Railway from the station at **Shirley**, top of rail opposite milepost 219. (491.2 feet.)

**N 7**.—About 4 miles south along the Missouri & North Arkansas Railway from the station at **Shirley**, Van Buren County, opposite pole 219+1, at the middle of a small cut, and 15 feet west of the west rail. A standard disk, stamped "N 7 1931" and set in the top of a concrete post. (150.176 meters or 492.702 feet.)

About 7¼ miles north along the Missouri & North Arkansas Railway from the station at **Edgemont**, top of rail opposite milepost 220. (484.8 feet.)

About 6¼ miles north along the Missouri & North Arkansas Railway from the station at **Edgemont**, top of rail opposite milepost 221. (476.1 feet.)

**P 7**.—About 5.3 miles north along the Missouri & North Arkansas Railway from **Edgemont**, Cleburne County, about 180 feet north of milepost 222, opposite pole 221+29, and 28 feet west of the center line of the track. A standard disk, stamped "P 7 1931" and set in the top of a concrete post. (145.019 meters or 475.783 feet.)

About 5¼ miles north along the Missouri & North Arkansas Railway from the station at **Edgemont**, top of rail opposite milepost 222. (471.6 feet.)

About 4¼ miles north along the Missouri & North Arkansas Railway from the station at **Edgemont**, top of rail opposite milepost 223. (459.6 feet.)

About 3¼ miles north along the Missouri & North Arkansas Railway from the station at **Edgemont**, top of rail opposite milepost 224. (450.0 feet.)

About 2¼ miles north along the Missouri & North Arkansas Railway from the station at **Edgemont**, top of rail opposite milepost 225. (438.2 feet.)

About 1¼ miles north along the Missouri & North Arkansas Railway from the station at **Edgemont**, top of rail opposite milepost 226. (438.1 feet.)

**Q 7**.—About 0.5 mile north along the Missouri & North Arkansas Railway from **Edgemont**, Cleburne County, about 2,530 feet north of the station, at a cut, 13 feet east of the center line of the track, and in a ledge of blue limestone. A standard disk, stamped "Q 7 1931." (140.863 meters or 462.148 feet.)

**Edgemont**, top of rail opposite the Missouri & North Arkansas Railway station. (444.7 feet.)

About  $\frac{3}{4}$  mile south along the Missouri & North Arkansas Railway from the station at **Edgemont**, top of rail opposite milepost 228. (427.0 feet.)

About 0.6 mile north along the Missouri & North Arkansas Railway from the station at **Higden**, top of rail opposite milepost 229. (397.9 feet.)

**Higden**, top of rail opposite the Missouri & North Arkansas Railway station. (403.1 feet.)

**R 7.**—At **Higden**, Cleburne County, 82 feet south of the south end of the Missouri & North Arkansas Railway station, and 22 feet west of the center line of the track. A standard disk, stamped "R 7 1931" and set in the top of a concrete post. (123.863 meters or 406.374 feet.)

About 0.4 mile southeast along the Missouri & North Arkansas Railway from the station at **Higden**, top of rail opposite milepost 230. (398.9 feet.)

About 1.4 miles southeast along the Missouri & North Arkansas Railway from the station at **Higden**, top of rail opposite milepost 231. (382.5 feet.)

About 2.4 miles southeast along the Missouri & North Arkansas Railway from the station at **Higden**, top of rail opposite milepost 232. (384.9 feet.)

About 3.4 miles southeast along the Missouri & North Arkansas Railway from the station at **Higden**, top of rail opposite milepost 233. (371.7 feet.)

**S 7.**—About 3 miles north along the Missouri & North Arkansas Railway from **Miller**, Cleburne County, 118 feet north of milepost 234, and 23 feet west of the center line of the track. A standard disk, stamped "S 7 1931" and set in the top of a concrete post. (114.733 meters or 376.420 feet.)

About 3 miles north along the Missouri & North Arkansas Railway from the station at **Miller**, top of rail opposite milepost 234. (376.9 feet.)

About 2 miles north along the Missouri & North Arkansas Railway from the station at **Miller**, top of rail opposite milepost 235. (372.0 feet.)

About 1 mile north along the Missouri & North Arkansas Railway from the station at **Miller**, top of rail opposite milepost 236. (382.6 feet.)

**Miller**, top of rail opposite Missouri & North Arkansas Railway milepost 237. (387.6 feet.)

**T 7.**—At **Miller**, Cleburne County, on the right-of-way of the Missouri & North Arkansas Railway, 17 feet south of milepost 237, and 30 feet east of the center line of the tracks. A standard disk, stamped "T 7 1931" and set in the top of a concrete post. (117.593 meters or 385.803 feet.)

About 1 mile south along the Missouri & North Arkansas Railway from the station at **Miller**, top of rail opposite milepost 238. (374.8 feet.)

About 2 miles south along the Missouri & North Arkansas Railway from the station at **Miller**, top of rail opposite milepost 239. (399.5 feet.)

**U 7.**—About 2.1 miles south along the Missouri & North Arkansas Railway from **Miller**, Cleburne County, 685 feet south of milepost 239, 43 feet east of the center line of the track, and 13 feet north of pole 239+4. A standard disk, stamped "U 7 1931" and set in the top of a concrete post. (122.560 meters or 402.099 feet.)

About 3 miles south along the Missouri & North Arkansas Railway from the station at **Miller**, top of rail opposite milepost 240. (418.8 feet.)

About  $2\frac{1}{4}$  miles west along the Missouri & North Arkansas Railway from the station at **Heber Springs**, top of rail opposite milepost 241. (396.6 feet.)

About  $1\frac{1}{4}$  miles west along the Missouri & North Arkansas Railway from the station at **Heber Springs**, top of rail opposite milepost 242. (373.6 feet.)

About  $\frac{1}{4}$  mile west along the Missouri & North Arkansas Railway from the station at **Heber Springs**, top of rail opposite milepost 243. (342.7 feet.)

**V 7.**—At **Heber Springs**, Cleburne County, 81 feet north of the north end of the Missouri & North Arkansas Railway station, and 98 feet southwest of the center line of the main track. A standard disk, stamped "V 7 1931" and set in the top of a concrete post. (102.869 meters or 337.496 feet.)

**Heber Springs**, top of east rail opposite the Missouri & North Arkansas Railway station. (335.8 feet.)

**W 7.**—At **Heber Springs**, Cleburne County, at the courthouse, in the concrete floor of the porch, and 6 inches south of the column on the right of the entrance. A standard disk, stamped "W 7 1931." (107.946 meters or 354.153 feet.)

About  $\frac{3}{4}$  mile east along the Missouri & North Arkansas Railway from the station at **Heber Springs**, top of rail opposite milepost 244. (317.9 feet.)

About  $1\frac{3}{4}$  miles south along the Missouri & North Arkansas Railway from the station at **Heber Springs**, top of rail opposite milepost 245. (299.9 feet.)

About 2¾ miles south along the Missouri & North Arkansas Railway from the station at Heber Springs, top of rail opposite milepost 246. (280.9 feet.)

X 7.—About 2¾ miles south along the Missouri & North Arkansas Railway from Heber Springs, Cleburne County, 75 feet southwest of milepost 246, and 42 feet west of the center line of the track. A standard disk, stamped "X 7 1931" and set in the top of a concrete post. (85.206 meters or 279.547 feet.)

About 2.6 miles northwest along the Missouri & North Arkansas Railway from the station at Red River, top of rail opposite milepost 247. (279.7 feet.)

About 1.6 miles northwest along the Missouri & North Arkansas Railway from the station at Red River, top of rail opposite milepost 248. (281.2 feet.)

About 0.6 mile northwest along the Missouri & North Arkansas Railway from the station at Red River, top of rail opposite milepost 249. (276.8 feet.)

Y 7.—At Red River, Cleburne County, on the right-of-way of the Missouri & North Arkansas Railway, 30 feet north of the station sign, near pole 249+18, and 22 feet east of the center line of the track. A standard disk, stamped "Y 7 1931" and set in the top of a concrete post. (83.638 meters or 274.402 feet.)

About 0.4 mile east along the Missouri & North Arkansas Railway from the station at Red River, top of rail opposite milepost 250. (275.0 feet.)

About 1.4 miles east along the Missouri & North Arkansas Railway from the station at Red River, top of rail opposite milepost 251. (275.5 feet.)

About 2.4 miles east along the Missouri & North Arkansas Railway from the station at Red River, top of rail opposite milepost 252. (273.2 feet.)

Z 7.—In Cleburne County, about 4 miles north along the Missouri & North Arkansas Railway from Pangburn, White County, at a grade crossing, 42 feet east of the center line of the track, 20 feet north of the road, and 12 feet north of pole 252+10. A standard disk, stamped "Z 7 1931" and set in the top of a concrete post. (82.317 meters or 270.668 feet.)

About 3.3 miles west along the Missouri & North Arkansas Railway from the station at Pangburn, top of rail opposite milepost 253. (281.6 feet.)

About 2.3 miles west along the Missouri & North Arkansas Railway from the station at Pangburn, top of rail opposite milepost 254. (292.4 feet.)

About 1.3 miles west along the Missouri & North Arkansas Railway from the station at Pangburn, top of rail opposite milepost 255. (299.5 feet.)

About 0.3 mile west along the Missouri & North Arkansas Railway from the station at Pangburn, top of rail opposite milepost 256. (329.0 feet.)

A 8.—At Pangburn, White County, 70 feet north of the north end of the Missouri & North Arkansas Railway station, and 30 feet east of the center line of the track. A standard disk, stamped "A 8 1931" and set in the top of a concrete post. (102.034 meters or 334.757 feet.)

Pangburn, top of rail opposite the Missouri & North Arkansas Railway station. (334.8 feet.)

About 0.7 mile south along the Missouri & North Arkansas Railway from the station at Pangburn, top of rail opposite milepost 257. (322.1 feet.)

About 1.7 miles south along the Missouri & North Arkansas Railway from the station at Pangburn, top of rail opposite milepost 258. (317.6 feet.)

About 2.7 miles south along the Missouri & North Arkansas Railway from the station at Pangburn, top of rail opposite milepost 259. (289.1 feet.)

B 8.—About 3 miles south along the Missouri & North Arkansas Railway from Pangburn, White County, 67 feet north of pole 259+10, at a grade crossing, 51 feet north of the center line of the road, and 45 feet east of the center line of the track. A standard disk, stamped "B 8 1931" and set in the top of a concrete post. (84.914 meters or 278.589 feet.)

About 1.2 miles north along the Missouri & North Arkansas Railway from the station at Letona, top of rail opposite milepost 260. (251.3 feet.)

About 0.2 mile north along the Missouri & North Arkansas Railway from the station at Letona, top of rail opposite milepost 261. (274.5 feet.)

Letona, top of rail opposite the Missouri & North Arkansas Railway station. (275.9 feet.)

C 8.—At Letona, White County, about 1,000 feet south of the Missouri & North Arkansas Railway station, opposite pole 261+12, and 30 feet west of the center line of the track. A standard disk, stamped "C 8 1931" and set in the top of a concrete post. (83.625 meters or 274.360 feet.)

About 0.8 mile south along the Missouri & North Arkansas Railway from the station at Letona, top of rail opposite milepost 262. (257.1 feet.)

About 1.8 miles south along the Missouri & North Arkansas Railway from the station at Letona, top of rail opposite milepost 263. (259.9 feet.)

About 2.8 miles south along the Missouri & North Arkansas Railway from the station at Letona, top of rail opposite milepost 264. (268.0 feet.)

D 8.—About 2.8 miles north along the Missouri & North Arkansas Railway from Armstrong Springs, White County, 8 feet south of milepost 264, and 32.5 feet east of the center line of the track. A standard disk, stamped "D 8 1931" and set in the top of a concrete post. (82.268 meters or 269.908 feet.)

About 1.8 miles north along the Missouri & North Arkansas Railway from the station at Armstrong Springs, top of rail opposite milepost 265. (256.5 feet.)

About 0.8 mile north along the Missouri & North Arkansas Railway from the station at Armstrong Springs, top of rail opposite milepost 266. (262.2 feet.)

Armstrong Springs, top of rail opposite the Missouri & North Arkansas Railway station. (264.5 feet.)

E 8.—At Armstrong Springs, White County, 33 feet south of the Missouri & North Arkansas Railway station, and 27 feet east of the center line of the track. A standard disk, stamped "E 8 1931" and set in the top of a concrete post. (80.431 meters or 263.881 feet.)

About 1.2 miles south along the Missouri & North Arkansas Railway from the station at Armstrong Springs, top of rail opposite milepost 268. (277.3 feet.)

F 8.—About 2 miles south along the Missouri & North Arkansas Railway from Armstrong Springs, White County, about  $\frac{1}{4}$  mile southeast of a grade crossing, at bridge 268.8, and in the southwest end of the concrete abutment. A standard disk, stamped "F 8 1931." (84.892 meters or 278.517 feet.)

About 2.2 miles south along the Missouri & North Arkansas Railway from the station at Armstrong Springs, top of rail opposite milepost 269. (282.8 feet.)

About 3.2 miles south along the Missouri & North Arkansas Railway from the station at Armstrong Springs, top of rail opposite milepost 270. (297.8 feet.)

About 4.2 miles south along the Missouri & North Arkansas Railway from the station at Armstrong Springs, top of rail opposite milepost 271. (294.0 feet.)

G 8.—About 2.1 miles northwest along the Missouri & North Arkansas Railway from Searcy, White County, about  $\frac{1}{4}$  mile west of a grade crossing, 12 feet east of pole 271+18, and 52 feet north of the center line of the track. A standard disk, stamped "G 8 1931" and set in the top of a concrete post. (90.586 meters or 297.198 feet.)

About 1.7 miles west along the Missouri & North Arkansas Railway from the station at Searcy, top of rail opposite milepost 272. (282.0 feet.)

About 0.7 mile west along the Missouri & North Arkansas Railway from the station at Searcy, top of rail opposite milepost 273. (253.2 feet.)

H 8.—At Searcy, White County, at the east or main entrance of the courthouse, and in the north end of the bottom concrete step. A standard disk, stamped "H 8 1931." (80.479 meters or 264.038 feet.)

Searcy, top of rail opposite the Missouri & North Arkansas Railway station. (239.2 feet.)

J 8.—At Searcy, White County, about 800 feet southeast of the Missouri & North Arkansas Railway station, 8 feet east of pole 273+28, and 42 feet north of the center line of the track. A standard disk, stamped "J 8 1931" and set in the top of a concrete post. (71.866 meters or 235.780 feet.)

About  $\frac{3}{8}$  mile southeast along the Missouri & North Arkansas Railway from the station at Searcy, top of east rail at the crossing of the Chicago, Rock Island & Pacific Railroad. (233.4 feet.)

About 1.3 miles east along the Missouri & North Arkansas Railway from the station at Searcy, top of rail opposite milepost 275. (228.3 feet.)

About 1.6 miles west along the Missouri & North Arkansas Railway from the station at Kensett, top of rail opposite milepost 276. (226.2 feet.)

About 0.6 mile west along the Missouri & North Arkansas Railway from the station at Kensett, top of rail opposite milepost 277. (224.8 feet.)

K 8.—At the northwest edge of Kensett, White County, about 1,000 feet southeast of the Missouri & North Arkansas Railway roundhouse, 30 feet southeast of a grade crossing, and 42 feet south of the track. A standard disk, stamped "K 8 1931" and set in the top of a concrete post. (67.253 meters or 220.646 feet.)

L 8.—At Kensett, White County, at the intersection of the Missouri & North Arkansas Railway and the Missouri Pacific Railroad, 38.6 feet east of the center line of the east track of the Missouri Pacific Railroad, and 88 feet north-

east of the center line of the track of the Missouri & North Arkansas Railway. A standard disk, stamped "L 8 1931" and set in the top of a concrete post. (67.739 meters or 222.240 feet.)

**Kensett**, top of rail at the crossing of the Missouri & North Arkansas Railway and the Missouri Pacific Railroad. (224.0 feet.)

For additional bench marks in the vicinity of Kensett, see below and page 54.

LINE 11, KENSETT TO HOXIE, ARK.

[First-order leveling]

This line follows the Missouri Pacific Railroad from Kensett, through Bald Knob and Newport, to Hoxie. The field work was done during the winter of 1931-32, by a party in charge of G. R. Fish, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of Kensett, see above and page 54.

**M 8**.—At Kensett, White County, in the northwest wall of the bank building, 12 feet north of the west corner, and 5 feet above the sidewalk. A standard disk, stamped "M 8 1931" and set vertically. (69.793 meters or 228.979 feet.)

**RV 1 (M. P. R.R.)**.—At Kensett, White County, about 0.5 mile northeast along the main line of the Missouri Pacific Railroad from the station, between poles 295+39 and 296, and in the top of the west end of an 8- by 10-foot culvert. A standard Monel-metal rivet. (67.582 meters or 221.725 feet.)

**RV 2 (M. P. R.R.)**.—About 1 mile northeast along the Missouri Pacific Railroad from Kensett, White County, opposite pole 295+17, and in the southeast abutment of a bridge on United States Highway 67. A standard Monel-metal rivet. (63.948 meters or 209.803 feet.)

**Milepost 295 (M. P. R.R.)**.—About 1½ miles northeast along the Missouri Pacific Railroad from the station at Kensett, White County, in the top of concrete milepost 295. A copper bolt. (65.785 meters or 215.830 feet.)

**RV 3 (M. P. R.R.)**.—About 1.7 miles northeast along the Missouri Pacific Railroad from Kensett, White County, opposite pole 294+27, 100 feet west of the track, and in the east head wall of a double 2½- by 6-foot concrete culvert on United States Highway 67. A standard Monel-metal rivet. (63.332 meters or 207.782 feet.)

**N 8**.—About ½ mile south along the Missouri Pacific Railroad from Judsonia, White County, at bridge 368 over Little Red River, and in the east end of the south concrete abutment. A standard disk, stamped "N 8 1931." (66.393 meters or 217.824 feet.)

**RV 4 (M. P. R.R.)**.—About ½ mile south along the Missouri Pacific Railroad from Judsonia, White County, at bridge 368 over Little Red River, and in the west end of the south concrete abutment. A standard Monel-metal rivet. (66.422 meters or 217.920 feet.)

**Judsonia**, top of west rail opposite the Missouri Pacific Railroad station. (220.7 feet.)

**RV 5 (M. P. R.R.)**.—At Judsonia, White County, in front of the Missouri Pacific Railroad station, and in the northeast corner of the concrete base of the train-order signal. A standard Monel-metal rivet. (67.218 meters or 220.531 feet.)

**RV 6 (M. P. R.R.)**.—About ¼ mile north along the Missouri Pacific Railroad from Judsonia, White County, at pole 291+36, and in the center of the west head wall of a 4- by 4-foot concrete culvert, formerly bridge 366. A standard Monel-metal rivet. (67.266 meters or 220.689 feet.)

**RV 7 (M. P. R.R.)**.—About ¼ miles northeast along the Missouri Pacific Railroad from Judsonia, White County, at pole 291+12, and in the center of the west head wall of a 4- by 6-foot concrete culvert, formerly bridge 364. A standard Monel-metal rivet. (66.099 meters or 216.860 feet.)

**P 8**.—About 1½ miles northeast along the Missouri Pacific Railroad from Judsonia, White County, at the grade crossing 115 feet south of milepost 291, 51 feet northeast of the road, 37 feet west of the center line of the south-bound track, and 4 feet southwest of a pole. A standard disk, stamped "P 8 1931" and set in the top of a concrete post. (68.228 meters or 223.845 feet.)

**RV 8 (M. P. R.R.).**—About 2 miles northeast along the Missouri Pacific Railroad from Judsonia, White County, at pole 290+25, and in the center of the west head wall of a 3- by 3-foot concrete culvert. A standard Monel-metal rivet. (65.608 meters or 215.249 feet.)

**Milepost 290 (M. P. R.R.).**—About 2.7 miles northeast along the Missouri Pacific Railroad from the station at Judsonia, White County, in the top of concrete milepost 290. A copper bolt. (65.846 meters or 216.030 feet.)

**RV 9 (M. P. R.R.).**—About 2¾ miles northeast along the Missouri Pacific Railroad from Judsonia, White County, at pole 289+37, and in the center of the west head wall of a 4- by 4-foot concrete culvert, formerly bridge 360. A standard Monel-metal rivet. (63.382 meters or 207.946 feet.)

**Q 8.**—At Bald Knob, White County, in the east wall of the Missouri Pacific Railroad passenger station, 1.5 feet south of the door of the White waiting room, and 5 feet above the platform. A standard disk, stamped "Q 8 1931" and set vertically. (70.530 meters or 231.397 feet.)

**RV 10 (M. P. R.R.).**—At the southwest edge of Bald Knob, White County, on the main line of the Missouri Pacific Railroad, opposite pole 288+27, and in the center line of the west side of the concrete foundation of a bridge signal. A standard Monel-metal rivet. (69.877 meters or 229.255 feet.)

**Bald Knob,** top of rail opposite the Missouri Pacific Railroad station. (225.9 feet.)

**R 8.**—At Bald Knob, White County, about 650 feet north of the Missouri Pacific Railroad passenger station, at the first street crossing east of block signal 288.1, 141 feet east of the south yard track, 35 feet south of the center line of the street, and 32 feet west of the center line of the track leading to Memphis. A standard disk, stamped "R 8 1931" and set in the top of a concrete post. (67.369 meters or 221.026 feet.)

**S 8.**—At Bald Knob, White County, about 1,200 feet north of the Missouri Pacific Railroad passenger station, 120 feet northwest of the west track, in the north wall of the Klondyke Hotel, 2 feet west of the northeast corner, and 5 feet above the sidewalk. A standard disk, stamped "S 8 1931" and set vertically. (70.515 meters or 231.348 feet.)

**RV 11 (M. P. R.R.).**—At the northeast edge of Bald Knob, White County, on the main line of the Missouri Pacific Railroad, opposite pole 287+36, and in the northwest corner of a concrete battery-feed foundation. A standard Monel-metal rivet. (67.413 meters or 221.171 feet.)

**RV 12 (M. P. R.R.).**—About 1.4 miles northeast along the Missouri Pacific Railroad from Bald Knob, White County, opposite pole 287+04, and in the center line of the west head wall of a double 3- by 4-foot concrete culvert, formerly bridge 357. A standard Monel-metal rivet. (66.839 meters or 219.288 feet.)

**RV 13 (M. P. R.R.).**—About 2 miles northeast along the Missouri Pacific Railroad from Bald Knob, White County, opposite pole 286+21, and in the center line of the west head wall of a double 7- by 10-foot concrete culvert, formerly bridge 355. A standard Monel-metal rivet. (67.825 meters or 222.523 feet.)

**RV 14 (M. P. R.R.).**—About 2.6 miles northeast along the Missouri Pacific Railroad from Bald Knob, White County, opposite pole 285+33, and in the southwest corner of the concrete foundation of signal 2858. A standard Monel-metal rivet. (69.031 meters or 226.479 feet.)

**T 8.**—About 3.2 miles northeast along the Missouri Pacific Railroad from Bald Knob, White County, about 575 feet south of milepost 285, at a farm-road crossing, 52 feet north of the center line of the road, 48 feet east of the center line of the track, and 34 feet south of pole 285+04. A standard disk, stamped "T 8 1931" and set in the top of a concrete post. (67.694 meters or 222.093 feet.)

**RV 15 (M. P. R.R.).**—About 1¾ miles southwest along the Missouri Pacific Railroad from Russell, White County, opposite pole 285+05, and in the northeast corner of the concrete foundation of signal 2853. A standard Monel-metal rivet. (69.116 meters or 226.758 feet.)

**Milepost 285 (M. P. R.R.).**—About 1.7 miles southwest along the Missouri Pacific Railroad from the station at Russell, White County, in the top of concrete milepost 285. A copper bolt. (68.483 meters or 224.681 feet.)

**RV 16 (M. P. R.R.).**—About 1¼ miles southwest along the Missouri Pacific Railroad from Russell, White County, opposite pole 284+21, in the center line of the south abutment of bridge 351, and in the west projection along the track. A standard Monel-metal rivet. (70.245 meters or 230.462 feet.)

**RV 17 (M. P. R.R.).**—About  $\frac{1}{2}$  mile southwest along the Missouri Pacific Railroad from Russell, White County, opposite pole 233+34, and in the center line of the west head wall of a 4- by 4-foot concrete culvert. A standard Monel-metal rivet. (71.950 meters or 236.056 feet.)

Russell, top of west rail opposite the Missouri Pacific Railroad station. (235.9 feet.)

**RV 18 (M. P. R.R.).**—At the northeast edge of Russell, White County, on the main line of the Missouri Pacific Railroad, opposite pole 283+03, and in the southeast corner of the concrete foundation of signal 2830. A standard Monel-metal rivet. (71.679 meters or 235.167 feet.)

**U 8.**—About  $\frac{1}{4}$  mile northeast along the Missouri Pacific Railroad from Russell, White County, opposite milepost 283, and 35 feet northwest of the center line of the northwest track. A standard disk, stamped "U 8 1931" and set in the top of a concrete post. (70.696 meters or 231.942 feet.)

**RV 19 (M. P. R.R.).**—About  $\frac{3}{4}$  mile northeast along the Missouri Pacific Railroad from Russell, White County, opposite pole 282+25, in the center line of the north concrete abutment of a bridge, and in the east projection along United States Highway 67. A standard Monel-metal rivet. (69.061 meters or 226.578 feet.)

**RV 20 (M. P. R.R.).**—About 1.3 miles northeast along the Missouri Pacific Railroad from Russell, White County, opposite pole 281+41, and in the center line of the east head wall of a 4- by 5-foot masonry culvert. A standard Monel-metal rivet. (67.960 meters or 222.965 feet.)

About 2.3 miles northeast along the Missouri Pacific Railroad from the station at Russell, top of east rail opposite milepost 281. (230.1 feet.)

**V 8.**—About 2.4 miles northeast along the Missouri Pacific Railroad from Russell, White County, about 285 feet northeast of milepost 281, 66 feet south of the center of a grade crossing, 48 feet southeast of the center line of the track, 21 feet northeast of pole 280+38, and 2 feet from the right-of-way fence. A standard disk, stamped "V 8 1931" and set in the top of a concrete post. (69.932 meters or 229.435 feet.)

**RV 21 (M. P. R.R.).**—About 2.8 miles northeast along the Missouri Pacific Railroad from Russell, White County, opposite pole 280+24, and in the southwest corner of the concrete foundation of signal 2804. A standard Monel-metal rivet. (70.141 meters or 230.121 feet.)

**Milepost 280 (M. P. R.R.).**—About  $1\frac{3}{4}$  miles southwest along the Missouri Pacific Railroad from the station at Bradford, White County, in the top of concrete milepost 280. A copper bolt. (69.019 meters or 226.440 feet.)

**RV 22 (M. P. R.R.).**—About 1.1 miles southwest along the Missouri Pacific Railroad from Bradford, White County, opposite pole 279+11, and in the center line of the east concrete head wall of a 30-inch vitrified-pipe culvert. A standard Monel-metal rivet. (68.688 meters or 225.354 feet.)

**RV 23 (M. P. R.R.).**—About 0.4 mile southwest along the Missouri Pacific Railroad from Bradford, White County, at the southwest edge of the town, opposite pole 278+23, and in the center line of the east head wall of a double 8- by 8-foot concrete culvert. A standard Monel-metal rivet. (69.170 meters or 226.935 feet.)

**K-11-3 (U. S. E.).**—At Bradford, White County, 171 feet southwest of the Missouri Pacific Railroad station, and 33 feet west of the center line of the west track. A Corps of Engineers, United States Army, standard triangulation-station disk, set in the top of a concrete post. (73.440 meters or 240.944 feet.)

**W 8.**—At Bradford, White County, 29 feet southwest of the south end of the Missouri Pacific Railroad station, and 55 feet west of the center line of the southwest-bound track. A standard disk, stamped "W 8 1931" and set in the top of a concrete post. (73.793 meters or 242.103 feet.)

Bradford, top of west rail opposite the Missouri Pacific Railroad station. (242.8 feet.)

**RV 24 (M. P. R.R.).**—At Bradford, White County, on the main line of the Missouri Pacific Railroad, opposite pole 277+38, and in the center line of the west head wall of a 2- by 3-foot concrete culvert. A standard Monel-metal rivet. (72.825 meters or 238.927 feet.)

**RV 25 (M. P. R.R.).**—About 1.1 miles northeast along the Missouri Pacific Railroad from Bradford, White County, opposite pole 277+03, in the center line of the south abutment of bridge 339, and in the east projection of the concrete back wall. A standard Monel-metal rivet. (66.762 meters or 219.035 feet.)

**217.80 (M. P. R.R.).**—About 1.1 miles northeast along the Missouri Pacific Railroad from **Bradford**, White County, opposite valuation station 14485+75, west of the track, just north of a no. 20 junction switch, and in the east side of a pole holding leads to a battery lead box. A tie spike in a pole. (65.652 meters or 215.393 feet.)

**RV 26 (M. P. R.R.).**—In Jackson County, about 1¾ miles northeast along the Missouri Pacific Railroad from **Bradford**, White County, at pole 276+21, and in the center line of the west head wall of a 2- by 3-foot concrete culvert. A standard Monel-metal rivet. (65.332 meters or 214.343 feet.)

**X 8.**—In Jackson County, about 3 miles northeast along the Missouri Pacific Railroad from **Bradford**, White County, at pole 275+13, and in the north end of the east head wall of a 5- by 5-foot concrete culvert. A standard disk, stamped "X 8 1931." (65.494 meters or 214.875 feet.)

**RV 27 (M. P. R.R.).**—About 1.7 miles south along the Missouri Pacific Railroad from **Grandglaise**, Jackson County, at pole 275+13, and in the center line of the east head wall of a 5- by 6-foot concrete culvert. A standard Monel-metal rivet. (65.499 meters or 214.891 feet.)

**Milepost 275 (M. P. R.R.).**—About 1.4 miles south along the Missouri Pacific Railroad from the station at **Grandglaise**, Jackson County, in the top of concrete milepost 275. A copper bolt. (65.928 meters or 216.299 feet.)

**RV 28 (M. P. R.R.).**—About 0.7 mile south along the Missouri Pacific Railroad from **Grandglaise**, Jackson County, at F. F. Junction, at pole 274+15, and in the center line of the east head wall of an 8- by 12-foot concrete culvert. A standard Monel-metal rivet. (65.405 meters or 214.583 feet.)

**RV 29 (M. P. R.R.).**—About 0.1 mile south along the Missouri Pacific Railroad from **Grandglaise**, Jackson County, on the south-bound main track at pole 273+31, and in the center line of the east concrete head wall of a 24-inch corrugated-iron pipe culvert. A standard Monel-metal rivet. (66.716 meters or 218.884 feet.)

**Grandglaise**, top of west rail of north-bound track opposite the Missouri Pacific Railroad station. (224.1 feet.)

**RV 30 (M. P. R.R.).**—About 0.4 mile north along the Missouri Pacific Railroad from the station at **Grandglaise**, Jackson County, at pole 273+11, and in the center line of the east head wall of a double 6- by 7-foot concrete culvert. A standard Monel-metal rivet. (66.636 meters or 218.622 feet.)

**RV 31 (M. P. R.R.).**—About 1 mile north along the Missouri Pacific Railroad from the station at **Grandglaise**, Jackson County, at pole 272+25, and in the southwest corner of the concrete foundation of signal 2724 R. A standard Monel-metal rivet. (69.231 meters or 227.135 feet.)

**222.00 (M. P. R.R.).**—About 2½ miles south along the Missouri Pacific Railroad from **Olyphant**, Jackson County, at valuation station 14985+26, at pole 272+18, and on the northwest corner of the head wall of a 7- by 12- by 67-foot concrete culvert. The corner of the head wall. (66.859 meters or 219.353 feet.)

**RV 32 (M. P. R.R.).**—About 2 miles south along the Missouri Pacific Railroad from the station at **Olyphant**, Jackson County, at pole 271+34, and in the northeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (68.305 meters or 224.097 feet.)

**RV 33 (M. P. R.R.).**—About 1 mile south along the Missouri Pacific Railroad from the station at **Olyphant**, Jackson County, at pole 270+33, and in the center of the west side of the east concrete foundation of a bridge signal. A standard Monel-metal rivet. (69.887 meters or 229.268 feet.)

**Y 8.**—About 0.8 mile south along the Missouri Pacific Railroad from the station at **Olyphant**, Jackson County, about 170 feet south of a grade crossing, 53 feet east of the center line of the main track, and 6 feet south of pole 270+24. A standard disk, stamped "Y 8 1931" and set in the top of a concrete post. (68.650 meters or 225.229 feet.)

**Olyphant**, top of west rail opposite the Missouri Pacific Railroad station. (229.3 feet.)

**RV 34 (M. P. R.R.).**—About 0.1 mile north along the Missouri Pacific Railroad from the station at **Olyphant**, Jackson County, at pole 269+29, and in the center of the west side of the east concrete foundation of a bridge signal. A standard Monel-metal rivet. (70.112 meters or 230.026 feet.)

**RV 35 (M. P. R.R.).**—About 1.3 miles north along the Missouri Pacific Railroad from the station at **Olyphant**, Jackson County, at pole 268+19, and in the northeast corner of the concrete foundation of signal 2687 L. A standard Monel-metal rivet. (70.840 meters or 232.414 feet.)

**RV 36 (M. P. R.R.).**—About  $2\frac{3}{4}$  miles northeast along the Missouri Pacific Railroad from the station at Olyphant, Jackson County, at Nuckles, at pole 267+00, and in the southwest corner of the concrete foundation of signal 2870. A standard Monel-metal rivet. (71.226 meters or 233.681 feet.)

**Nuckles,** top of west rail opposite the Missouri Pacific Railroad station. (230.8 feet.)

**Z 8.**—About 5 miles southwest along the Missouri Pacific Railroad from Newport, Jackson County, 56 feet north of the second pole north of the grade crossing at Nuckles, 38 feet west of the center line of the south-bound track, and in line with a row of poles. A standard disk, stamped "Z 8 1931" and set in the top of a concrete post. (69.307 meters or 227.385 feet.)

**RV 37 (M. P. R.R.).**—About  $4\frac{1}{4}$  miles southwest along the Missouri Pacific Railroad from the station at Newport, Jackson County, at pole 265+37, in the concrete fire wall of bridge 315-AA, and about 6 feet east of the center line of the south-bound track. A standard Monel-metal rivet. (68.959 meters or 226.243 feet.)

**RV 38 (M. P. R.R.).**—About  $3\frac{3}{4}$  miles southwest along the Missouri Pacific Railroad from the station at Newport, Jackson County, at pole 265+19, in the concrete fire wall of bridge 315, and about 6 feet east of the center line of the south-bound track. A standard Monel-metal rivet. (68.938 meters or 226.174 feet.)

**RV 39 (M. P. R.R.).**—About  $2\frac{3}{4}$  miles southwest along the Missouri Pacific Railroad from the station at Newport, Jackson County, at D. D. Junction, at pole 264+16, and in the southeast corner of the concrete foundation of signal 2646 L. A standard Monel-metal rivet. (71.148 meters or 233.425 feet.)

**A 9.**—About  $2\frac{1}{2}$  miles southwest along the Missouri Pacific Railroad from the station at Newport, Jackson County, at bridge 314 over White River, and in the west end of the first pier south of the south end of the trusses. A standard disk, stamped "A 9 1931." (69.632 meters or 228.451 feet.)

**RV 40 (M. P. R.R.).**—About  $2\frac{1}{4}$  miles southwest along the Missouri Pacific Railroad from the station at Newport, Jackson County, at pole 264+04, in the center line of the north pier of bridge 314, and in the east projection along the track. A standard Monel-metal rivet. (69.293 meters or 227.339 feet.)

**RV 41 (M. P. R.R.).**—About  $1\frac{1}{2}$  miles southwest along the Missouri Pacific Railroad from the station at Newport, Jackson County, at pole 263+11, and in the east end of the concrete fire wall of bridge 312-H. A standard Monel-metal rivet. (70.825 meters or 232.365 feet.)

**RV 42 (M. P. R.R.).**—About 1 mile southwest along the Missouri Pacific Railroad from the station at Newport, Jackson County, at pole 262+27, and in the center of the west side of the east concrete foundation of a bridge signal. A standard Monel-metal rivet. (71.212 meters or 233.635 feet.)

**RV 43 (M. P. R.R.).**—At Newport, Jackson County, about 50 yards west of the main tracks of the Missouri Pacific Railroad, at pole 262+00, and in the center of the top of the concrete sea wall, over the name plate marked "Newport Levee District." A standard Monel-metal rivet. (70.506 meters or 231.318 feet.)

**Newport,** top of east rail opposite the Missouri Pacific Railroad station. (229.8 feet.)

**B 9.**—At Newport, Jackson County, in the front or northwest wall of the Missouri Pacific Railroad station, 2 feet northeast of the corner near the door to the trainmen's room, and 5 feet above the platform. A standard disk, stamped "B 9 1931" and set vertically. (71.572 meters or 234.816 feet.)

**C 9 (City of Newport).**—At Newport, Jackson County, in the south corner of the courthouse yard, 7 feet south of the Confederate Soldiers' Monument, 10 feet northwest of one curbing, and 4 feet northeast of another curbing. A standard disk, stamped "C 9 1931" and set in the top of a concrete post. (68.180 meters or 223.687 feet.)

**229.80 (M. P. R.R.).**—At Newport, Jackson County, at the courthouse, in the south wall, at the opening of the west window, and in the limestone course 1.9 feet above the bottom sill. The second horizontal line cut in the limestone with the letter "A" cut above the mark. (69.169 meters or 226.932 feet.)

**D 9.**—At Newport, Jackson County, in the southwest or front wall of the post office, 4 feet northwest of the main entrance, and 5 feet above the walk. A standard disk, stamped "D 9 1931" and set vertically. (69.455 meters or 227.870 feet.)

For additional bench marks in the vicinity of Newport, see pages 92 and 93.

**RV 44 (M. P. R.R.).**—About  $\frac{1}{2}$  mile north along the Missouri Pacific Railroad from Newport, Jackson County, at pole 261+20, and in the west side of the east concrete foundation of a bridge signal. A standard Monel-metal rivet. (69.846 meters or 229.153 feet.)

**RV 46 (M. P. R.R.).**—About  $1\frac{1}{4}$  miles north along the Missouri Pacific Railroad from Newport, Jackson County, at pole 260+07, and in the center of the north side of the concrete gate-valve frame at Newport Levee. A standard Monel-metal rivet. (70.858 meters or 232.473 feet.)

**Milepost 260 (M. P. R.R.).**—About 0.4 mile southwest along the Missouri Pacific Railroad from the station at Diaz, Jackson County, in the top of concrete milepost 260. A copper bolt. (70.921 meters or 232.630 feet.)

**RV 47 (M. P. R.R.).**—At Diaz, Jackson County, on the main line of the Missouri Pacific Railroad, at pole 259+19, and in the northeast corner of the concrete foundation of cantilever signal 2596. A standard Monel-metal rivet. (71.236 meters or 233.713 feet.)

**Diaz,** top of west rail opposite the Missouri Pacific Railroad station. (233.4 feet.)

**E 9.**—At Diaz, Jackson County, 23 feet north of the northeast corner of the Missouri Pacific Railroad station, 24 feet west of the center line of the south-bound track, and 7 feet south of the first pole north of the station. A standard disk, stamped "E 9 1931" and set in the top of a concrete post. (70.655 meters or 231.807 feet.)

**RV 48 (M. P. R.R.).**—About 0.8 mile northeast along the Missouri Pacific Railroad from Diaz, Jackson County, opposite pole 258+24, and in the northeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (72.027 meters or 236.309 feet.)

**RV 49 (M. P. R.R.).**—About 1.3 miles northeast along the Missouri Pacific Railroad from Diaz, Jackson County, opposite pole 258+03, and in the southwest corner of the concrete foundation of signal 2580. A standard Monel-metal rivet. (72.029 meters or 236.315 feet.)

**RV 50 (M. P. R.R.).**—About 1.8 miles northeast along the Missouri Pacific Railroad from Diaz, Jackson County, opposite pole 257+22, opposite railroad bridge 309, and in the center line of the east head wall of a concrete culvert under U.S. Highway 67. A standard Monel-metal rivet. (70.725 meters or 232.037 feet.)

**RV 51 (M. P. R.R.).**—About 2.4 miles northeast along the Missouri Pacific Railroad from Diaz, Jackson County, opposite pole 257+00, and in the center line of the west head wall of a 3- by 3-foot concrete culvert. A standard Monel-metal rivet. (71.212 meters or 233.635 feet.)

**F 9.**—About 2.6 miles northeast along the Missouri Pacific Railroad from Diaz, Jackson County, at a grade crossing, about 140 feet northeast of the road, 76 feet northeast of pole 256+30, 42 feet east of the center line of the main track, and in line with a row of poles. A standard disk, stamped "F 9 1931" and set in the top of a concrete post. (70.924 meters or 232.690 feet.)

**RV 52 (M. P. R.R.).**—About 2.9 miles northeast along the Missouri Pacific Railroad from Diaz, Jackson County, opposite pole 256+19, and in the center line of the east head wall of a 2- by 3-foot concrete culvert. A standard Monel-metal rivet. (70.152 meters or 230.157 feet.)

**RV 53 (M. P. R.R.).**—About  $3\frac{1}{2}$  miles northeast along the Missouri Pacific Railroad from Diaz, Jackson County, at pole 225+36, and in the southeast corner of the concrete foundation of the battery feed. A standard Monel-metal rivet. (71.017 meters or 232.995 feet.)

**RV 54 (M. P. R.R.).**—About  $3\frac{1}{2}$  miles southwest along the Missouri Pacific Railroad from Tuckerman, Jackson County, at pole 255+18, opposite bridge 306, and in the center of the east head wall of a concrete culvert under U.S. Highway 67. A standard Monel-metal rivet. (70.880 meters or 232.545 feet.)

**RV 55 (M. P. R.R.).**—About 3 miles southwest along the Missouri Pacific Railroad from Tuckerman, Jackson County, at pole 255+01, and in the center of the west head wall of a 5- by 8-foot concrete culvert. A standard Monel-metal rivet. (72.195 meters or 236.860 feet.)

**Milepost 255 (M. P. R.R.).**—About 3 miles southwest along the Missouri Pacific Railroad from the station at Tuckerman, Jackson County, in the top of concrete milepost 255. A copper bolt. (72.912 meters or 239.212 feet.)

**RV 56 (M. P. R.R.).**—About  $2\frac{1}{2}$  miles southwest along the Missouri Pacific Railroad from Tuckerman, Jackson County, at pole 254+20, and in the center

of the west head wall of a 5- by 7-foot concrete culvert. A standard Monel-metal rivet. (73.132 meters or 239.934 feet.)

**RV 57 (M. P. R.R.).**—About 2 miles southwest along the Missouri Pacific Railroad from Tuckerman, Jackson County, at pole 253+37, and in the northwest corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (74.603 meters or 244.760 feet.)

**G 9.**—About 2 miles southwest along the Missouri Pacific Railroad from Tuckerman, Jackson County, 30 feet north of double-pole 253+36, in front of a farmhouse, 38 feet east of the center line of the main track, 37 feet south of a grade crossing, and in line with the row of poles. A standard disk, stamped "G 9 1931" and set in the top of a concrete post. (73.908 meters or 242.480 feet.)

**RV 58 (M. P. R.R.).**—About 1¼ miles southwest along the Missouri Pacific Railroad from Tuckerman, Jackson County, at pole 253+08, and in the southwest corner of the concrete foundation of signal 2532. A standard Monel-metal rivet. (75.195 meters or 246.702 feet.)

**RV 59 (M. P. R.R.).**—About ½ mile southwest along the Missouri Pacific Railroad from Tuckerman, Jackson County, at pole 252+18, and in the southwest corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (75.525 meters or 247.785 feet.)

**Tuckerman,** top of west rail opposite the Missouri Pacific Railroad station. (245.7 feet.)

**RV 60 (M. P. R.R.).**—At Tuckerman, Jackson County, at the Missouri Pacific Railroad station, opposite pole 251+35, and in the northeast corner of the concrete foundation of the train-order signal. A standard Monel-metal rivet. (74.985 meters or 246.013 feet.)

**H 9.**—At Tuckerman, Jackson County, about 100 yards north of the Missouri Pacific Railroad station, in the east wall of the Graham Bros. warehouse, 2 feet north of the southeast corner, and 5 feet above the ground. A standard disk, stamped "H 9 1931" and set vertically. (75.605 meters or 248.047 feet.)

**RV 61 (M. P. R.R.).**—About 1¼ miles northeast along the Missouri Pacific Railroad from Tuckerman, Jackson County, at pole 250+29, immediately south of the point where a former spur line ran to the southeast, in the east side of the south end of a 30-inch concrete arch-top culvert, and 20 feet east of the center line of the track. A standard Monel-metal rivet. (74.155 meters or 243.290 feet.)

**RV 62 (M. P. R.R.).**—About 1.5 miles northeast along the Missouri Pacific Railroad from Tuckerman, Jackson County, opposite pole 250+17, and in the center line of the east head wall of a 2- by 3-foot concrete culvert. A standard Monel-metal rivet. (73.651 meters or 241.637 feet.)

**Milepost 250 (M. P. R.R.).**—About 2 miles northeast along the Missouri Pacific Railroad from the station at Tuckerman, Jackson County, in the top of concrete milepost 250. A copper bolt. (74.714 meters or 245.124 feet.)

**RV 63 (M. P. R.R.).**—About 2.1 miles northeast along the Missouri Pacific Railroad from Tuckerman, Jackson County, opposite pole 249+30, and in the southwest corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (74.885 meters or 245.685 feet.)

**J 9.**—About 3 miles northeast along the Missouri Pacific Railroad from Tuckerman, Jackson County, 38 feet south of a grade crossing, 52 feet northeast of pole 248+38, and 36 feet southeast of the center line of the track. A standard disk, stamped "J 9 1931" and set in the top of a concrete post. (75.496 meters or 247.690 feet.)

**RV 64 (M. P. R.R.).**—About 3.2 miles northeast along the Missouri Pacific Railroad from Tuckerman, Jackson County, opposite pole 248+29, and in the southeast corner of the concrete foundation of signal 2488. A standard Monel-metal rivet. (75.438 meters or 247.500 feet.)

**L-9-1 (U.S.E.).**—About 3.6 miles northeast along the Missouri Pacific Railroad from Tuckerman, Jackson County, at Vance, 50 feet south of pole 248+12, and 35 feet east of the center line of the track. A Corps of Engineers, United States Army, standard triangulation-station-disk, set in the top of a concrete post. (74.456 meters or 244.376 feet.)

**Vance,** top of rail opposite the Missouri Pacific Railroad station. (247.1 feet.)

**RV 65 (M. P. R.R.).**—About 4.4 miles northeast along the Missouri Pacific Railroad from Tuckerman, Jackson County, opposite pole 247+21, and in the southeast corner of the concrete foundation of signal 2476. A standard Monel-metal rivet. (75.918 meters or 249.074 feet.)

**K 9.**—About 2.6 miles southwest along the Missouri Pacific Railroad from Swifton, Jackson County, about 375 feet northeast of a grade crossing, 9 feet southwest of pole 246+37, and 46 feet east of the center line of the track. A standard disk, stamped "K 9 1931" and set in the top of a concrete post. (74.872 meters or 245.643 feet.)

**RV 66 (M. P. R.R.)**.—About 2.5 miles southwest along the Missouri Pacific Railroad from Swifton, Jackson County, opposite pole 246+32, and in the southeast corner of the concrete foundation of signal 2468. A standard Monel-metal rivet. (75.994 meters or 249.324 feet.)

**RV 67 (M. P. R.R.)**.—About 2 miles southwest along the Missouri Pacific Railroad from Swifton, Jackson County, opposite pole 246+14, and in the center line of the east head wall of a 3- by 3-foot concrete culvert under United States Highway 67. A standard Monel-metal rivet. (75.411 meters or 247.411 feet.)

**RV 68 (M. P. R.R.)**.—About 1 mile southwest along the Missouri Pacific Railroad from Swifton, Jackson County, opposite pole 245+14, and in the southeast corner of the concrete foundation of signal 2452. A standard Monel-metal rivet. (75.469 meters or 247.601 feet.)

**Milepost 245 (M. P. R.R.)**.—About ½ mile southeast along the Missouri Pacific Railroad from the station at Swifton, Jackson County, in the top of concrete milepost 245. A copper bolt. (75.719 meters or 248.421 feet.)

**RV 69 (M. P. R.R.)**.—About 0.3 mile southwest along the Missouri Pacific Railroad from Swifton, Jackson County, opposite pole 244+28, and in the center line of the east head wall of an 18-inch concrete culvert under United States Highway 67. A standard Monel-metal rivet. (75.303 meters or 247.057 feet.)

**L 9.**—At Swifton, Jackson County across the tracks from the Missouri Pacific Railroad station, 15 feet northeast of the prolongation of the southwest end of the station, 87 feet northeast of a street crossing, and 64 feet east of the center line of the main track. A standard disk, stamped "L 9 1931" and set in the top of a concrete post. (75.494 meters or 247.683 feet.)

Swifton, top of rail opposite the Missouri Pacific Railroad station. (250.2 feet.)

**L-9-2 (U.S.E.)**.—At Swifton, Jackson County, 234 feet northeast of the northeast end of the Missouri Pacific Railroad station, 24 feet west of the center line of the tracks, and 15 feet northeast of a street crossing. A Corps of Engineers, United States Army, standard triangulation-station disk, set in the top of a concrete post. (75.900 meters or 249.015 feet.)

**RV 70 (M. P. R.R.)**.—At the northeast edge of Swifton, Jackson County, on the main line of the Missouri Pacific Railroad, opposite pole 244+03, and in the southeast corner of the concrete foundation of signal 2440. A standard Monel-metal rivet. (76.422 meters or 250.728 feet.)

**RV 71 (M. P. R.R.)**.—About 0.9 mile northeast along the Missouri Pacific Railroad from Swifton, Jackson County, at pole 243+17, and in the northwest corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (75.991 meters or 249.314 feet.)

**RV 72 (M. P. R.R.)**.—About 1.5 miles northeast along the Missouri Pacific Railroad from Swifton, Jackson County, opposite pole 242+34, and in the southeast corner of the concrete foundation of signal 2428. A standard Monel-metal rivet. (77.384 meters or 253.884 feet.)

**RV 73 (M. P. R.R.)**.—About 2.2 miles northeast along the Missouri Pacific Railroad from Swifton, Jackson County, opposite pole 242+08, and in the center line of the east head wall of an 18-inch culvert under United States Highway 67. A standard Monel-metal rivet. (76.547 meters or 251.138 feet.)

**RV 74 (M. P. R.R.)**.—About 2.7 miles northeast along the Missouri Pacific Railroad from Swifton, Jackson County, opposite pole 241+26, and in the northwest corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (78.870 meters or 258.759 feet.)

**M 9.**—In Jackson County, about 2½ miles southwest along the Missouri Pacific Railroad from Alicia, Lawrence County, 16 feet northeast of pole 241+10, 22 yards northeast of a farm-road crossing, and 48 feet east of the center line of the track. A standard disk, stamped "M 9 1931" and set in the top of a concrete post. (78.042 meters or 256.043 feet.)

**RV 75 (M. P. R.R.)**.—In Jackson County, about 2¼ miles southwest along the Missouri Pacific Railroad from Alicia, Lawrence County, at pole 241+01, and in the center of the east head wall of a 2- by 3-foot concrete culvert. A standard Monel-metal rivet. (76.974 meters or 252.539 feet.)

**RV 76 (M. P. R.R.).**—In Jackson County, about  $1\frac{1}{2}$  miles southwest along the Missouri Pacific Railroad from **Alicia**, Lawrence County, opposite pole 240+19, and in the center of the east head wall of a 24-inch concrete culvert under United States Highway 67. A standard Monel-metal rivet. (77.121 meters or 253.021 feet.)

**RV 77 (M. P. R.R.).**—About 1 mile southwest along the Missouri Pacific Railroad from **Alicia**, Lawrence County, at pole 239+33, and in the southeast corner of the concrete foundation of signal 2398. A standard Monel-metal rivet. (77.834 meters or 255.360 feet.)

**RV 78 (M. P. R.R.).**—About  $\frac{1}{4}$  mile south along the Missouri Pacific Railroad from **Alicia**, Lawrence County, opposite pole 239+04, and in the center of the east head wall of a 24-inch concrete culvert under United States Highway 67. A standard Monel-metal rivet. (77.472 meters or 254.173 feet.)

**Alicia**, top of west rail opposite the Missouri Pacific Railroad station. (255.8 feet.)

**N 9.**—At **Alicia**, Lawrence County, about 85 yards north of the Missouri Pacific Railroad station, 10 feet north of the second pole north of the station, 91 feet south of a grade crossing, 28 feet west of the center line of the main track, and in line with the row of poles. A standard disk, stamped "N 9 1931" and set in the top of a concrete post. (77.471 meters or 254.169 feet.)

**RV 79 (M. P. R.R.).**—About  $\frac{1}{4}$  mile north along the Missouri Pacific Railroad from **Alicia**, Lawrence County, at pole 238+24, and in the center of the east head wall of a 3- by 4-foot concrete culvert. A standard Monel-metal rivet. (76.892 meters or 252.270 feet.)

**RV 80 (M. P. R.R.).**—About 1 mile north along the Missouri Pacific Railroad from **Alicia**, Lawrence County, opposite pole 237+39, and in the center of the east head wall of a 3- by 3-foot concrete culvert under United States Highway 67. A standard Monel-metal rivet. (77.068 meters or 252.847 feet.)

**RV 81 (M. P. R.R.).**—About  $1\frac{1}{2}$  miles north along the Missouri Pacific Railroad from **Alicia**, Lawrence County, at pole 237+16, and in the east projection of the north concrete abutment of bridge 276. A standard Monel-metal rivet. (78.340 meters or 257.020 feet.)

**RV 82 (M. P. R.R.).**—About  $2\frac{1}{4}$  miles north along the Missouri Pacific Railroad from **Alicia**, Lawrence County, about  $\frac{1}{2}$  mile south of the station at **Calvin**, at pole 236+29, and in the northwest corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (78.974 meters or 259.101 feet.)

**Calvin**, top of east rail opposite the Missouri Pacific Railroad station. (256.8 feet.)

**P 9.**—About 2.9 miles northeast along the Missouri Pacific Railroad from **Alicia**, Lawrence County, 22 feet northeast of the northeast end of the Missouri Pacific Railroad station at **Calvin**, 96 feet southwest of milepost 236, 45 feet southwest of a grade crossing, and 20 feet east of the center line of the track. A standard disk, stamped "P 9 1931" and set in the top of a concrete post. (78.025 meters or 255.987 feet.)

**RV 83.**—About 3.5 miles southwest along the Missouri Pacific Railroad from **Minturn**, Lawrence County, opposite pole 235+37, and in the center line of the east head wall of a double 3- by 6-foot concrete culvert under United States Highway 67. A standard Monel-metal rivet. (77.689 meters or 254.885 feet.)

**RV 84.**—About 2.8 miles southwest along the Missouri Pacific Railroad from **Minturn**, Lawrence County, opposite pole 235+11, and in the center line of the east head wall of a 24-inch concrete culvert under United States Highway 67. A standard Monel-metal rivet. (77.577 meters or 254.517 feet.)

**Milepost 235 (M. P. R.R.).**—About  $2\frac{1}{2}$  miles southwest along the Missouri Pacific Railroad from the station at **Minturn**, Lawrence County, in the top of concrete milepost 235. A copper bolt. (78.824 meters or 258.608 feet.)

**RV 85.**—About 2.0 miles southwest along the Missouri Pacific Railroad from **Minturn**, Lawrence County, opposite pole 234+21, and in the southeast corner of the concrete foundation of signal 2346. A standard Monel-metal rivet. (79.227 meters or 259.931 feet.)

**RV 86.**—About 1.5 miles southwest along the Missouri Pacific Railroad from **Minturn**, Lawrence County, opposite pole 233+39, and in the center line of the east head wall of a 2- by 3-foot concrete culvert under United States Highway 67. A standard Monel-metal rivet. (77.922 meters or 255.649 feet.)

**RV 87.**—About 0.8 mile southwest along the Missouri Pacific Railroad from **Minturn**, Lawrence County, opposite pole 233+09, and in the center line of the west head wall of a 2½- by 5½-foot concrete culvert. A standard Monel-metal rivet. (79.164 meters or 259.724 feet.)

**L-9-4 (U.S.E.).**—At **Minturn**, Lawrence County, 225 feet southwest of the southwest end of the Missouri Pacific Railroad station, 6 feet west of pole 232+20, and 42 feet east of the center line of the tracks. A Corps of Engineers, United States Army, standard triangulation-station disk, set in the top of a concrete post. (79.834 meters or 261.922 feet.)

**Minturn**, top of rail opposite the Missouri Pacific Railroad station. (262.8 feet.)

**Q 9.**—At **Minturn**, Lawrence County, 40 feet northeast of the northeast end of the Missouri Pacific Railroad station, and 28 feet west of the center line of the track. A standard disk, stamped "Q 9 1931" and set in the top of a concrete post. (79.816 meters or 261.863 feet.)

**RV 88 (M. P. R.R.).**—About 0.6 mile northeast along the Missouri Pacific Railroad from **Minturn**, Lawrence County, opposite pole 231+32, and in the center line of the east head wall of a 3- by 5-foot concrete culvert under United States Highway 67. A standard Monel-metal rivet. (78.958 meters or 259.048 feet.)

**RV 89 (M. P. R.R.).**—About 1.4 miles northeast along the Missouri Pacific Railroad from **Minturn**, Lawrence County, opposite pole 231+02, and in the center line of the east head wall of a 2- by 3-foot concrete culvert, formerly bridge 270. A standard Monel-metal rivet. (78.374 meters or 257.132 feet.)

**RV 90 (M. P. R.R.).**—About 4 miles south along the Missouri Pacific Railroad from **Hoxie**, Lawrence County, opposite pole 230+16, and in the center of the east head wall of a 2- by 3-foot concrete culvert under United States Highway 67. A standard Monel-metal rivet. (78.519 meters or 257.608 feet.)

**Milepost 230 (M. P. R.R.).**—About 3.7 miles south along the Missouri Pacific Railroad from the station at **Hoxie**, Lawrence County, in the top of concrete milepost 230. A copper bolt. (79.717 meters or 261.538 feet.)

**RV 91 (M. P. R.R.).**—About 3½ miles south along the Missouri Pacific Railroad from **Hoxie**, Lawrence County, at pole 229+29, and in the southeast corner of the concrete foundation of signal 2296. A standard Monel-metal rivet. (80.116 meters or 262.847 feet.)

**R 9.**—About 3 miles south along the Missouri Pacific Railroad from **Hoxie**, Lawrence County, 51 feet south of pole 229+13, at a private-road crossing, 25 feet south of the road, 35 feet east of the center line of the track, and in line with the row of poles. A standard disk, stamped "R 9 1931" and set in the top of a concrete post. (80.105 meters or 262.811 feet.)

**RV 92 (M. P. R.R.).**—About 2¾ miles south along the Missouri Pacific Railroad from **Hoxie**, Lawrence County, at pole 229+03, and in the center of the west head wall of a double 3- by 5-foot concrete culvert. A standard Monel-metal rivet. (79.338 meters or 260.295 feet.)

**RV 93 (M. P. R.R.).**—About 2¼ miles south along the Missouri Pacific Railroad from **Hoxie**, Lawrence County, at A A Junction, at pole 228+20, and in the southwest corner of the concrete foundation of a cantilever signal. A standard Monel-metal rivet. (80.772 meters or 264.999 feet.)

**RV 94 (M. P. R.R.).**—About 1½ miles south along the Missouri Pacific Railroad from **Hoxie**, Lawrence County, opposite pole 227+39, and in the center of the east head wall of a 24-inch concrete culvert under United States Highway 67. A standard Monel-metal rivet. (80.309 meters or 263.480 feet.)

**RV 95 (M. P. R.R.).**—About ½ mile south along the Missouri Pacific Railroad from **Hoxie**, Lawrence County, opposite pole 226+34, and in the center of the east head wall of a double 4- by 5-foot concrete culvert under United States Highway 67. A standard Monel-metal rivet. (80.232 meters or 263.228 feet.)

**RV 96 (M. P. R.R.).**—At **Hoxie**, Lawrence County, just north of the crossing of the Missouri Pacific Railroad and the St. Louis-San Francisco Railway, at pole 226+13, and in the southeast corner of the concrete foundation of the cantilever signal. A standard Monel-metal rivet. (82.681 meters or 271.263 feet.)

**Hoxie**, top of rail at the intersection of the Missouri Pacific Railroad and the St. Louis-San Francisco Railway. (270.2 feet.)

For additional bench marks in the vicinity of **Hoxie**, see pages 25 and 131.

## LINE 12, KENSETT TO LITTLE ROCK, ARK.

[First-order leveling]

This line follows the Missouri Pacific Railroad from Kensett, through Higginson, Austin, and Jacksonville, to Little Rock. The field work was done, during the winter of 1931-32, by a party in charge of G. R. Fish, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of Kensett, see pages 43 and 44.

**RV 97 (M. P. R.R.).**—At Kensett, White County, on the Missouri Pacific Railroad, at pole 296+25, and in the center of the west head wall of a double 3- by 5-foot concrete culvert. A standard Monel-metal rivet. (66.386 meters or 217.801 feet.)

**RV 98 (M. P. R.R.).**—About  $\frac{1}{2}$  mile southwest along the Missouri Pacific Railroad from Kensett, White County, at pole 297+00, and in the southeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (68.173 meters or 223.664 feet.)

**RV 99 (M. P. R.R.).**—About  $\frac{1}{4}$  miles southwest along the Missouri Pacific Railroad from Kensett, White County, at pole 297+27, and in a corner of the concrete foundation of signal 2976. A standard Monel-metal rivet. (69.352 meters or 227.532 feet.)

**RV 100 (M. P. R.R.).**—About  $1\frac{1}{2}$  miles southwest along the Missouri Pacific Railroad from Kensett, White County, at pole 298+05, and in the center of the west concrete head wall of a double cast-iron pipe culvert. A standard Monel-metal rivet. (68.249 meters or 223.914 feet.)

**RV 101 (M. P. R.R.).**—About 1.1 miles northeast along the Missouri Pacific Railroad from the station at Higginson, White County, at pole 298+27, and in the southwest corner of the concrete foundation of signal 2986 R. A standard Monel-metal rivet. (68.685 meters or 225.344 feet.)

**RV 102 (M. P. R.R.).**—About  $\frac{1}{2}$  mile northeast along the Missouri Pacific Railroad from the station at Higginson, White County, at pole 299+08, and in the southeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (67.191 meters or 220.442 feet.)

**RV 103 (M. P. R.R.).**—At Higginson, White County, on the Missouri Pacific Railroad, at pole 299+29, and in the southwest corner of the concrete foundation of signal 2996 R. A standard Monel-metal rivet. (68.150 meters or 223.589 feet.)

**S 9.**—At Higginson, White County, on the Missouri Pacific Railroad, at the crossing of the Chicago, Rock Island & Pacific Railway, 105 feet northeast of the center line of the track of the latter railroad, 70 feet north of the second pole north of the station, 27 feet west of the center line of the south-bound track of the Missouri Pacific Railroad, and in line with a row of power-transmission poles for the signal system. A standard disk, stamped "S 9 1931" and set in the top of a concrete post. (67.421 meters or 221.197 feet.)

**Higginson,** top of west rail in front of the Missouri Pacific Railroad station. (222.6 feet.)

**T 9.**—At Higginson, White County, about 100 yards southwest of the Missouri Pacific Railroad station, 37 feet northeast of the center of a grade crossing, 42 feet northwest of the center line of the south-bound track, and 16 feet east of a pole. A standard disk, stamped "T 9 1931" and set in the top of a concrete post. (66.740 meters or 218.963 feet.)

**RV 104 (M. P. R.R.).**—About 0.4 mile southwest along the Missouri Pacific Railroad from the station at Higginson, White County, at pole 300+06, and in the center of the west head wall of a quadruple 4- by 5-foot concrete culvert. A standard Monel-metal rivet. (66.895 meters or 219.471 feet.)

**RV 105 (M. P. R.R.).**—About 1.1 miles southwest along the Missouri Pacific Railroad from the station at Higginson, White County, at pole 300+35, and in the center of the west head wall of a 3- by 5-foot concrete culvert. A standard Monel-metal rivet. (67.028 meters or 219.908 feet.)

**RV 106 (M. P. R.R.).**—About 15 miles southwest along the Missouri Pacific Railroad from the station at Higginson, White County, at pole 301+11, and in the center of the west concrete head wall of a 24-inch cast-iron pipe culvert. A standard Monel-metal rivet. (67.173 meters or 220.383 feet.)

**220 (?).**—About 1.9 miles southwest along the Missouri Pacific Railroad from the station at Higginson, White County, and in pole 301+26. A spike. (67.187 meters or 220.364 feet.)

**RV 107 (M. P. R.R.).**—About 2.2 miles southwest along the Missouri Pacific Railroad from the station at **Higginson**, White County, at pole 301+38, and in the north end of the west concrete head wall of a 30-inch cast-iron pipe culvert. A standard Monel-metal rivet. (87.524 meters or 221.535 feet.)

**U 9.**—About 2.4 miles southwest along the Missouri Pacific Railroad from the station at **Higginson**, White County, 36 feet northeast of pole 302+08, 92 feet northeast of the center of a grade crossing of a private road leading to a house east of the track, and 34 feet northeast of the center line of the north-bound track. A standard disk, stamped "U 9 1931" and set in the top of a concrete post. (87.306 meters or 220.820 feet.)

**RV 108 (M. P. R.R.).**—About 2.8 miles northeast along the Missouri Pacific Railroad from the station at **Garner**, White County, opposite pole 302+27, opposite bridge 387, in the center line of the east parapet of a concrete bridge on United States Highway 67, and 50 feet from the southwest end of the bridge. A standard Monel-metal rivet. (87.100 meters or 220.144 feet.)

**RV 109 (M. P. R.R.).**—About 2.4 miles northeast along the Missouri Pacific Railroad from the station at **Garner**, White County, at pole 303+04, and in the center of the west concrete head wall of a 36-inch cast-iron pipe culvert. A standard Monel-metal rivet. (86.221 meters or 217.260 feet.)

**RV 110 (M. P. R.R.).**—About 1.7 miles northeast along the Missouri Pacific Railroad from the station at **Garner**, White County, at pole 303+31, and in the center of the west concrete head wall of an 18-inch cast-iron pipe culvert. A standard Monel-metal rivet. (87.533 meters or 221.581 feet.)

**Milepost 305 (M. P. R.R.).**—About 0.5 mile northeast along the Missouri Pacific Railroad from the station at **Garner**, White County, and in the top of the concrete milepost. A copper bolt. (87.364 meters or 221.010 feet.)

**RV 111 (M. P. R.R.).**—About 0.4 mile northeast along the Missouri Pacific Railroad from the station at **Garner**, White County, at pole 305+03, and in the center of the west head wall of a double 5- by 8-foot concrete culvert. A standard Monel-metal rivet. (86.865 meters or 219.373 feet.)

**V 9.**—At **Garner**, White County, about 46 feet northeast of the north end of the Missouri Pacific Railroad station, 38 feet southwest of the center of a grade crossing, and 20 feet northwest of the center line of the south-bound track. A standard disk, stamped "V 9 1931" and set in the top of a concrete post. (87.945 meters or 222.916 feet.)

**Garner**, top of west rail opposite the Missouri Pacific Railroad station. (222.7 feet.)

**RV 112 (M. P. R.R.).**—About  $\frac{1}{4}$  mile southwest along the Missouri Pacific Railroad from the station at **Garner**, White County, at pole 305+29, and in the northeast corner of the concrete foundation of signal 3057. A standard Monel-metal rivet. (87.778 meters or 222.368 feet.)

**RV 113 (M. P. R.R.).**—About 0.9 mile southwest along the Missouri Pacific Railroad from the station at **Garner**, White County, opposite pole 306+12, opposite bridge 396, and in the center of the east parapet of the concrete bridge on United States Highway 67. A standard Monel-metal rivet. (88.547 meters or 224.891 feet.)

**219 (?)**.—About 1.2 miles southwest along the Missouri Pacific Railroad from the station at **Garner**, White County, and in pole 306+23. A spike. (86.778 meters or 219.087 feet.)

**RV 114 (M. P. R.R.).**—About 1.3 miles northeast along the Missouri Pacific Railroad from the station at **McRae**, White County, at pole 306+37, and in the center of the west head wall of a double 3- by 3-foot concrete culvert. A standard Monel-metal rivet. (89.424 meters or 227.769 feet.)

**RV 115 (M. P. R.R.).**—About 0.9 mile northeast along the Missouri Pacific Railroad from the station at **McRae**, White County, opposite pole 307+15, and in the center of the east concrete head wall of an 18-inch culvert on United States Highway 67. A standard Monel-metal rivet. (72.430 meters or 237.631 feet.)

**RV 116 (M. P. R.R.).**—About 0.3 mile northeast along the Missouri Pacific Railroad from the station at **McRae**, White County, at pole 307+37, and in the center of the west head wall of an 8- by 10-foot concrete culvert. A standard Monel-metal rivet. (88.327 meters or 224.169 feet.)

**McRae**, top of east rail opposite the Missouri Pacific Railroad station. (233.6 feet.)

**W 9.**—At **McRae**, White County, 42 feet southwest of the southwest end of the Missouri Pacific Railroad station, 9 feet southwest of pole 308+10, and 28 feet southeast of the center line of the north-bound track. A standard disk,

stamped "W 9 1931" and set in the top of a concrete post. (70.564 meters or 231.509 feet.)

**RV 117 (M. P. R.R.).**—About 0.5 mile southwest along the Missouri Pacific Railroad from the station at **McRae**, White County, at pole 308+29, on the west side of the track, and in the center of the north retaining wall of concrete bridge 397. A standard Monel-metal rivet. (68.781 meters or 225.659 feet.)

**RV 118 (M. P. R.R.).**—About 1.2 miles southwest along the Missouri Pacific Railroad from the station at **McRae**, White County, at pole 309+19, and in the west head wall of a double 4- by 6-foot concrete culvert. A standard Monel-metal rivet. (68.433 meters or 224.517 feet.)

**Milepost 310 (M. P. R.R.).**—About  $1\frac{3}{4}$  miles southwest along the Missouri Pacific Railroad from the station at **McRae**, White County, and in the top of the concrete milepost. A copper bolt. (69.642 meters or 228.484 feet.)

**227 (?)**.—About 1.9 miles southwest along the Missouri Pacific Railroad from the station at **McRae**, White County, and in pole 310+04. A spike. (69.224 meters or 227.112 feet.)

**RV 119 (M. P. R.R.).**—About 2.0 miles southwest along the Missouri Pacific Railroad from the station at **McRae**, White County, at pole 310+08, and in the center of the east concrete head wall of a 24-inch cast-iron pipe culvert. A standard Monel-metal rivet. (69.008 meters or 226.404 feet.)

**X 9.**—About 2.5 miles northeast along the Missouri Pacific Railroad from the station at **Beebe**, White County, 13 feet east of pole 310+10 which is the fourth pole southwest of a grade crossing, in front of a Negro's cabin, and 36 feet southeast of the center line of the north-bound track. A standard disk, stamped "X 9 1931" and set in the top of a concrete post. (69.386 meters or 227.644 feet.)

**RV 120 (M. P. R.R.).**—About 1.8 miles northeast along the Missouri Pacific Railroad from the station at **Beebe**, White County, at pole 310+38, and in the northeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (67.688 meters or 222.073 feet.)

**RV 121 (M. P. R.R.).**—About 1.2 miles northeast along the Missouri Pacific Railroad from the station at **Beebe**, White County, at pole 331+21, and in the southwest corner of the concrete foundation of signal 3114 R. A standard Monel-metal rivet. (70.115 meters or 230.036 feet.)

**RV 122 (M. P. R.R.).**—About 0.3 mile northeast along the Missouri Pacific Railroad from the station at **Beebe**, White County, at pole 312+18, and in the center of the west head wall of a 6- by 10-foot concrete culvert. A standard Monel-metal rivet. (73.270 meters or 240.387 feet.)

**Y 9.**—At **Beebe**, White County, about 100 yards southeast of the Missouri Pacific Railroad station, at the corner of United States Highway 67 and the main street, 56 feet northeast of the center line of the street, 40 feet northwest of the center line of the south-bound track, in line with a row of signal-system power-transmission poles, and 6 feet northeast of the first pole northeast of the street. A standard disk, stamped "Y 9 1931" and set in the top of a concrete post. (74.738 meters or 245.203 feet.)

**Z 9.**—At **Beebe**, White County, in the southeast wall of the Missouri Pacific Railroad station, 10 feet northeast of the southwest end, and 5 feet above the platform. A standard disk, stamped "Z 9 1931" and set vertically. (76.628 meters or 251.404 feet.)

**Beebe**, top of west rail opposite the Missouri Pacific Railroad station. (245.8 feet.)

**RV 123 (M. P. R.R.).**—About 0.2 mile southwest along the Missouri Pacific Railroad from the station at **Beebe**, White County, at pole 312+38, and in the center of the north end of the west concrete head wall of a  $4\frac{1}{2}$ - by 4-foot stone and concrete culvert. A standard Monel-metal rivet. (70.776 meters or 232.204 feet.)

**RV 124 (M. P. R.R.).**—About 0.9 mile southwest along the Missouri Pacific Railroad from the station at **Beebe**, White County, at pole 313+25, and in the center of the west head wall of a double 6- by 6-foot concrete culvert. A standard Monel-metal rivet. (68.849 meters or 225.882 feet.)

**RV 125 (M. P. R.R.).**—About 1.7 miles southwest along the Missouri Pacific Railroad from the station at **Beebe**, White County, at pole 314+18, and in the southeast corner of the foundation of a battery feed. A standard Monel-metal rivet. (67.465 meters or 221.341 feet.)

**Milepost 315 (M. P. R.R.).**—About  $2\frac{1}{4}$  miles southwest along the Missouri Pacific Railroad from the station at **Beebe**, White County, and in the top of the concrete milepost. A copper bolt. (66.631 meters or 218.605 feet.)

**RV 126 (M. P. R.R.).**—In White County, about 2.5 miles northeast along the Missouri Pacific Railroad from the station at **Ward**, Lonoke County, at pole 315+06, and in the southwest corner of the concrete foundation of signal 3150. A standard Monel-metal rivet. (66.949 meters or 219.649 feet.)

**RV 127 (M. P. R.R.).**—About 1.7 miles northeast along the Missouri Pacific Railroad from the station at **Ward**, Lonoke County, at pole 315+38, and in the southeast corner of the foundation of a battery feed. A standard Monel-metal rivet. (67.879 meters or 222.700 feet.)

**RV 128 (M. P. R.R.).**—About 0.9 mile northeast along the Missouri Pacific Railroad from the station at **Ward**, Lonoke County, at pole 316+29, and in the southwest corner of the concrete foundation of signal 3166. A standard Monel-metal rivet. (69.624 meters or 228.425 feet.)

**RV 129 (M. P. R.R.).**—About 0.4 mile northeast along the Missouri Pacific Railroad from the station at **Ward**, Lonoke County, at pole 317+09, and in the center of the west head wall of a 4- by 10-foot concrete culvert. A standard Monel-metal rivet. (71.111 meters or 233.303 feet.)

**A 10.**—About 0.3 mile northeast along the Missouri Pacific Railroad from the station at **Ward**, Lonoke County, at pole 317+12, 45 feet northeast of a grade crossing, 45 feet northwest of the south-bound track, and 7 feet west of a pole. A standard disk, stamped "A 10 1931" and set in the top of a concrete post. (71.154 meters or 233.444 feet.)

**Ward**, top of west rail opposite the Missouri Pacific Railroad station. (244.2 feet.)

**RV 130 (M. P. R.R.).**—About 0.1 mile southwest along the Missouri Pacific Railroad from the station at **Ward**, Lonoke County, at pole 317+28, and in the center of the west head wall of a 3- by 3½-foot concrete culvert. A standard Monel-metal rivet. (73.161 meters or 240.029 feet.)

**RV 131 (M. P. R.R.).**—About 0.6 mile southwest along the Missouri Pacific Railroad from the station at **Ward**, Lonoke County, at pole 318+10, and in the center of the west concrete head wall of a 24-inch cast-iron pipe culvert. A standard Monel-metal rivet. (76.199 meters or 249.996 feet.)

**RV 132 (M. P. R.R.).**—About 1.4 miles northeast along the Missouri Pacific Railroad from the station at **Austin**, Lonoke County, at pole 319+02, and in the center of the west head wall of a 6- by 10-foot concrete culvert. A standard Monel-metal rivet. (72.887 meters or 239.130 feet.)

**RV 133 (M. P. R.R.).**—About ¾ mile northeast along the Missouri Pacific Railroad from the station at **Austin**, Lonoke County, at pole 319+28, and in the center of the west head wall of a triple 7- by 9-foot concrete culvert. A standard Monel-metal rivet. (72.006 meters or 236.240 feet.)

**Milepost 320 (M. P. R.R.).**—About ½ mile northeast along the Missouri Pacific Railroad from the station at **Austin**, Lonoke County, and in the top of the concrete milepost. A copper bolt. (74.105 meters or 243.126 feet.)

**B 10.**—At **Austin**, Lonoke County, about 60 yards northeast of the Missouri Pacific Railroad station, 62 feet west of pole 320+17, 28 feet northeast of the center line of a road, and 25 feet southeast of the center line of the north-bound track. A standard disk, stamped "B 10 1932" and set in the top of a concrete post. (75.831 meters or 248.789 feet.)

**RV 134 (M. P. R.R.).**—At **Austin**, Lonoke County, on the Missouri Pacific Railroad, at pole 320+17, and in the southwest corner of the concrete foundation of signal 3202. A standard Monel-metal rivet. (76.634 meters or 251.423 feet.)

**Austin**, top of east rail opposite the Missouri Pacific Railroad station. (250.4 feet.)

**RV 135 (M. P. R.R.).**—About 0.4 mile southwest along the Missouri Pacific Railroad from the station at **Austin**, Lonoke County, at pole 320+35, and in the center of the west head wall of a 4- by 6-foot concrete culvert. A standard Monel-metal rivet. (75.684 meters or 248.307 feet.)

**RV 136 (M. P. R.R.).**—About 0.9 mile southwest along the Missouri Pacific Railroad from the station at **Austin**, Lonoke County, at pole 321+15, and in a corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (80.531 meters or 264.209 feet.)

**RV 137 (M. P. R.R.).**—About 1.4 miles southwest along the Missouri Pacific Railroad from the station at **Austin**, Lonoke County, at pole 321+35, and in the center of the west head wall of a double 6- by 7-foot concrete culvert. A standard Monel-metal rivet. (80.190 meters or 263.090 feet.)

**RV 138 (M. P. R.R.).**—About 0.5 mile northeast along the Missouri Pacific Railroad from the station at **Cabot**, Lonoke County, at pole 322+21, and in

the center of the west concrete head wall of a 24-inch cast-iron pipe culvert. A standard Monel-metal rivet. (85.141 meters or 279.333 feet.)

**C 10.**—At Cabot, Lonoke County, about 110 yards north of the Missouri Pacific Railroad station, 54 feet south of the center of a grade crossing, 8 feet south of pole 323, and 35 feet east of the center line of the north-bound track. A standard disk, stamped "C 10 1932" and set in the top of a concrete post. (87.946 meters or 288.536 feet.)

**Cabot**, top of west rail opposite the Missouri Pacific Railroad station. (289.5 feet.)

**RV 139 (M. P. R.R.).**—About 0.2 mile southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, at pole 323+10, and in the center of the east side of the west concrete foundation of a bridge signal. A standard Monel-metal rivet. (87.252 meters or 286.259 feet.)

**RV 140 (M. P. R.R.).**—About 0.9 mile southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, at pole 323+39, and in the northeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (83.807 meters or 274.957 feet.)

**RV 141 (M. P. R.R.).**—About 1.4 miles southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, at pole 324+18, and in the southwest corner of the concrete foundation of signal 3244. A standard Monel-metal rivet. (82.080 meters or 269.291 feet.)

**RV 142 (M. P. R.R.).**—About 1.9 miles southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, at pole 325+00, and in the southeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (81.248 meters or 266.561 feet.)

**Milepost 325 (M. P. R.R.).**—About 1.9 miles southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, and in the top of the concrete milepost. A copper bolt. (80.806 meters or 265.111 feet.)

**RV 143 (M. P. R.R.).**—About 2.5 miles southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, at pole 325+23, and in the southwest corner of the concrete foundation of signal 3256. A standard Monel-metal rivet. (80.451 meters or 263.946 feet.)

**RV 144 (M. P. R.R.).**—About 3.0 miles southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, at pole 326+02, and in the southeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (79.932 meters or 262.244 feet.)

**D 10.**—About 3.5 miles southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, at pole 326+22, and in the southeast corner of the concrete foundation of signal 3264 L. A standard disk, stamped "D 10 1932." (79.492 meters or 260.800 feet.)

**RV 145 (M. P. R.R.).**—About 3.5 miles southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, at pole 326+22, and in the southwest corner of the concrete foundation of signal 3264 R. A standard Monel-metal rivet. (79.520 meters or 260.892 feet.)

**Holland**, top of east rail opposite the Missouri Pacific Railroad station sign. (259.4 feet.)

**RV 146 (M. P. R.R.).**—About 3.9 miles southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, at pole 326+39, and in the southeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (79.021 meters or 259.255 feet.)

**RV 147 (M. P. R.R.).**—About 4.3 miles southwest along the Missouri Pacific Railroad from the station at Cabot, Lonoke County, at pole 327+16, and in the southwest corner of the concrete foundation of signal 3274 R. A standard Monel-metal rivet. (78.604 meters or 257.887 feet.)

**RV 148 (M. P. R.R.).**—In Lonoke County, about 4¼ miles northeast along the Missouri Pacific Railroad from the station at Jacksonville, Pulaski County, at pole 327+27, and in the southeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (78.292 meters or 256.863 feet.)

**RV 149 (M. P. R.R.).**—In Lonoke County, about 3.8 miles northeast along the Missouri Pacific Railroad from the station at Jacksonville, Pulaski County, at pole 328+15, and in the southwest corner of the concrete foundation of signal 3282. A standard Monel-metal rivet. (78.105 meters or 256.249 feet.)

**RV 150 (M. P. R.R.).**—In Lonoke County, about 3.2 miles northeast along the Missouri Pacific Railroad from the station at Jacksonville, Pulaski County, at pole 329+00, and in the southeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (78.224 meters or 256.640 feet.)

**E 10.**—About 2.8 miles northeast along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 329+12, 113 feet south of the center line of a road, 48 feet west of the center line of the south-bound track, and 15 feet west of a pole. A standard disk, stamped "E 10 1932" and set in the top of a concrete post. (76.946 meters or 252.447 feet.)

**RV 151 (M. P. R.R.).**—About 2.4 miles northeast along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 329+29, and in the southwest corner of the concrete foundation of signal 3296. A standard Monel-metal rivet. (78.074 meters or 256.148 feet.)

**Milepost 330 (M. P. R.R.).**—About 2.1 miles northeast along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, and in the top of the concrete milepost. A copper bolt. (78.787 meters or 258.487 feet.)

**RV 152 (M. P. R.R.).**—About 1.6 miles northeast along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 330+22, and in the center of the west head wall of a double 5- by 5-foot concrete culvert. A standard Monel-metal rivet. (78.259 meters or 256.755 feet.)

**RV 153 (M. P. R.R.).**—About 1.1 miles northeast along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 331+03, and in the southwest corner of the concrete foundation of signal 3310. A standard Monel-metal rivet. (80.200 meters or 263.123 feet.)

**RV 154 (M. P. R.R.).**—About  $\frac{1}{4}$  mile northeast along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 331+36, and in the center of the west head wall of a 4- by 6 $\frac{1}{2}$ -foot concrete and stone culvert. A standard Monel-metal rivet. (82.450 meters or 270.505 feet.)

**Jacksonville**, top of west rail opposite the Missouri Pacific Railroad station. (278.7 feet.)

**F 10.**—At **Jacksonville**, Pulaski County, about 130 yards south of the Missouri Pacific Railroad station, 48 feet north of the center line of a road, 17 feet south of pole 332+09, and 28 feet east of the center line of the north-bound track. A standard disk, stamped "F 10 1932" and set in the top of a concrete post. (85.868 meters or 281.719 feet.)

**RV 155 (M. P. R.R.).**—About 0.4 mile southwest along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 332+24, and in the center of the west concrete head wall of a 36-inch cast-iron pipe culvert. A standard Monel-metal rivet. (81.025 meters or 265.830 feet.)

**RV 156 (M. P. R.R.).**—About 1.0 mile southwest along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 333+05, and in the center of the west concrete head wall of a 36-inch cast-iron pipe culvert. A standard Monel-metal rivet. (76.800 meters or 251.968 feet.)

**RV 157 (M. P. R.R.).**—About 1.5 miles southwest along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 333+26, west of the track, and in the center line of the south back wall of concrete bridge 467. A standard Monel-metal rivet. (76.861 meters or 252.168 feet.)

**G 10.**—About 2.2 miles southwest along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 334+12, and in the north end of the west head wall of a 4- by 5-foot concrete culvert. A standard disk, stamped "G 10 1932." (73.983 meters or 242.726 feet.)

**RV 158 (M. P. R.R.).**—About 2.2 miles southwest along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 334+12, and in the center of the west head wall of a 5- by 4-foot concrete culvert. A standard Monel-metal rivet. (79.991 meters or 242.752 feet.)

**RV 159 (M. P. R.R.).**—About 2.6 miles southwest along the Missouri Pacific Railroad from the station at **Jacksonville**, Pulaski County, at pole 334+30, and in the center of the west head wall of a double 5- by 9-foot concrete culvert. A standard Monel-metal rivet. (74.612 meters or 244.790 feet.)

**RV 160 (M. P. R.R.).**—About 1.0 mile northeast along the Missouri Pacific Railroad from the station at **Valentine**, Pulaski County, at pole 335+15, and in the southeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (76.212 meters or 250.039 feet.)

**RV 161 (M. P. R.R.).**—About 0.5 mile northeast along the Missouri Pacific Railroad from the station at **Valentine**, Pulaski County, at pole 335+34, and in the southwest corner of the concrete foundation of signal 3358 R. A standard Monel-metal rivet. (76.058 meters or 249.534 feet.)

**H 10.**—At **Valentine**, Pulaski County, 12 feet north of the north end of the Missouri Pacific Railroad station, 7 feet north of pole 336+15, and 24 feet east of the center line of the north-bound track. A standard disk, stamped "H 10 1932" and set in the top of a concrete post. (75.781 meters or 248.625 feet.)

**RV 162 (M. P. R.R.).**—At **Valentine**, Pulaski County, at pole 336+15, west of the Missouri Pacific Railroad track, and in the center line of the concrete train-order signal-pipe carrier. A standard Monel-metal rivet. (75.690 meters or 248.228 feet.)

**Valentine**, top of east rail opposite the Missouri Pacific Railroad station. (249.3 feet.)

**RV 163 (M. P. R.R.).**—About  $\frac{1}{2}$  mile southwest along the Missouri Pacific Railroad from the station at **Valentine**, Pulaski County, at pole 336+33, and in the center of the west head wall of a 3- by 4-foot concrete culvert. A standard Monel-metal rivet. (75.689 meters or 248.323 feet.)

**RV 164 (M. P. R.R.).**—About  $\frac{3}{4}$  mile northeast along the Missouri Pacific Railroad from **McAlmont**, Pulaski County, at pole 337+22, west of the track, and in the center line of the north concrete back wall of the undergrade crossing of United States Highway 67. A standard Monel-metal rivet. (79.392 meters or 260.472 feet.)

**RV 165 (M. P. R.R.).**—At **McAlmont**, Pulaski County, opposite pole 338+06, and in the center of the east head wall of an 18-inch concrete culvert on United States Highway 67. A standard Monel-metal rivet. (81.841 meters or 268.507 feet.)

**RV 166 (M. P. R.R.).**—About  $\frac{1}{2}$  mile southwest along the Missouri Pacific Railroad from **McAlmont**, Pulaski County, opposite pole 338+24, and in the center of the east head wall of a 24-inch concrete culvert on United States Highway 67. A standard Monel-metal rivet. (81.847 meters or 268.526 feet.)

**J 10.**—About  $5\frac{1}{4}$  miles northeast along the Missouri Pacific Railroad from the station at **North Little Rock**, Pulaski County, 10 feet southeast of pole 338+37, 67 feet north of the center of the grade crossing of United States Highway 67, and 36 feet east of the center line of the north-bound track. A standard disk, stamped "J 10 1932" and set in the top of a concrete post. (83.896 meters or 275.249 feet.)

**RV 167 (M. P. R.R.).**—About  $4\frac{3}{4}$  miles northeast along the Missouri Pacific Railroad from the station at **North Little Rock**, Pulaski County, at pole 339+23, and in the southwest corner of the concrete foundation of signal 339A. A standard Monel-metal rivet. (85.832 meters or 281.600 feet.)

**RV 168 (M. P. R.R.).**—About  $3\frac{3}{4}$  miles northeast along the Missouri Pacific Railroad from the station at **North Little Rock**, Pulaski County, at pole 340+23, and in the center of the west head wall of a 3- by 3-foot concrete culvert. A standard Monel-metal rivet. (77.291 meters or 253.579 feet.)

**RV 169 (M. P. R.R.).**—About 3 miles northeast along the Missouri Pacific Railroad from the station at **North Little Rock**, Pulaski County, at **Tie Plant**, at pole 341+11, and in the southwest corner of the concrete foundation of signal 3412. A standard Monel-metal rivet. (78.323 meters or 256.965 feet.)

**K 10.**—About  $2\frac{3}{4}$  miles northeast along the Missouri Pacific Railroad from the station at **North Little Rock**, Pulaski County, 66 feet south of pole 341+24, 30 feet east of the center line of the north-bound track, and 15 feet west of the fence line. A standard disk, stamped "K 10 1932" and set in the top of a concrete post. (76.536 meters or 251.102 feet.)

**RV 170 (M. P. R.R.).**—About  $2\frac{1}{2}$  miles northeast along the Missouri Pacific Railroad from the station at **North Little Rock**, Pulaski County, at pole 341+31, and in the southeast corner of the concrete foundation of a battery feed. A standard Monel-metal rivet. (78.425 meters or 257.299 feet.)

**RV 171 (M. P. R.R.).**—About  $1\frac{3}{4}$  miles northeast along the Missouri Pacific Railroad from the station at **North Little Rock**, Pulaski County, at pole 342+17, and in the center of the east side of the west concrete foundation of a bridge signal. A standard Monel-metal rivet. (77.898 meters or 255.570 feet.)

**RV 172 (M. P. R.R.).**—About 1 mile northeast along the Missouri Pacific Railroad from the station at **North Little Rock**, Pulaski County, at **Cotton Belt Junction**, at pole 343+06, and in the northeast corner of the concrete foundation of signal 3431. A standard Monel-metal rivet. (78.232 meters or 256.666 feet.)

**M 10.**—At **North Little Rock**, Pulaski County, about  $\frac{1}{2}$  mile northeast of the Missouri Pacific Railroad station, at the **Locust Street** crossing, 95 feet east of the center line of **Locust Street**, 25 feet north of the center line of the northernmost side track, and 23 feet east of a pole. A standard disk, stamped "M 10 1932" and set in the top of a concrete post. (77.937 meters or 255.698 feet.)

**RV 173 (M. P. R.R.).**—At **North Little Rock**, Pulaski County, about  $\frac{1}{2}$  mile northeast of the Missouri Pacific Railroad station, at pole 343+32, and in the

southwest corner of the concrete foundation of signal 3438. A standard Monel-metal rivet. (78.483 meters or 257.490 feet.)

For additional bench marks in the vicinity of Little Rock, see below.

**LINE 13, VICINITY OF LITTLE ROCK, ARK. (PARTS OF SEVERAL LINES)**

This list includes portions of lines run at various times from 1887 to 1932. Inasmuch as all bench marks are in the city, no attempt is made to give the details of the routes followed.

For bench marks on lines leading out of Little Rock, see pages 8, 9, 17, and 60.

[First-order leveling]

**N 10.**—At Little Rock, Pulaski County, at the north edge of the city, at the foot of Rock Street, in the south abutment of the Missouri Pacific Railroad single-track bridge over Arkansas River, 13 feet east of the center line of the track, and 1.6 feet south of the north edge of the abutment. A standard disk, stamped "N 10 1932." (82.732 meters or 271.430 feet.)

**No. 6 (Gage B.M.) (U.S.E.)**—At Little Rock, Pulaski County, at the Missouri Pacific Railroad bridge (formerly the Baring Cross Railway bridge) over Arkansas River, and on the iron cylinder cap of the downstream cylinder of the third pier from the right bank. The bottom surface of the cap. (80.270 meters or 263.352 feet.)

**B.M. 1 (Ewens, 1887) (U.S.E.)**—At Little Rock, Pulaski County, at the Missouri Pacific Railroad bridge (formerly the Baring Cross Railway bridge) over Arkansas River, on the west part of the upstream cylinder of the first pier from the right bank, and vertically under Gage B.M. A, described below. The top of the third nut counting down from the top of the pier. (72.177 meters or 236.801 feet.)

**Gage B.M. A (Ewens) (U.S.E.)**—At Little Rock, Pulaski County, at the Missouri Pacific Railroad bridge (formerly the Baring Cross Railway bridge) over the Arkansas River, on the west portion of the upstream cylinder of the first pier from the right bank, and about 6 feet below the second nut from the top of the pier. The horizontal side of a chiseled triangle. (73.942 meters or 242.501 feet.)

**S.S. Gage B.M. (U.S.E.)**—At Little Rock, Pulaski County, about 30 yards east of the south end of the Missouri Pacific Railroad single-track bridge over Arkansas River, and in the "Little Rock." The highest point of a 2-inch rod, sloping to the north at an angle of about 30 degrees from vertical and projecting about 1.5 feet above the top of the rock. (76.022 meters or 249.416 feet.)

**B.M. Whittemore (?)**—At Little Rock, Pulaski County, at the foot of Commerce Street, and at the southeast corner of the Western Hide & Fur Co. building. The top of the water table. (80.517 meters or 264.163 feet.)

**NOTE.**—In 1932 it was reported that a small shed had been built on the east side of the building, so that it was impossible to set the level rod directly on the corner. The elevation given above is that of a point 1 inch south of the corner.

**Abert High-water Mark (U.S.E.)**—At Little Rock, Pulaski County, at the foot of Commerce Street, in the east wall of the Western Hide & Fur Co. building, about 0.3 foot from the north end of the east wall, and about 4 feet above the stone revetment. A chiseled cross. (76.802 meters or 251.975 feet.)

**B.M. Abert (U.S.E.)**—At Little Rock, Pulaski County, at the foot of Commerce Street, at the northeast corner of the Western Hide & Fur Co. building, and 1.390 meters below Abert High-water Mark (U.S.E.), described above. The top of a projecting stone at the bottom of the wall. (75.412 meters or 247.414 feet.)

**NOTE.**—The elevation of this bench mark was determined by subtracting the difference of 1.390 meters (as given on page 689, appendix no. 8, Report for 1898-99) from the elevation of Abert High-water Mark.

**B.M. Merrill (U.S.E.)**—Destroyed. (78.169 meters or 256.450 feet.)

**P.B.M. 1 (or 3)**—At Little Rock, Pulaski County, at the foot of Commerce Street, in the south side of the Western Hide & Fur Co. building, in the sill of the third door from the east wall, 2.3 feet from the west end of the sill,

and 0.2 foot from the north edge. A chiseled square. (80.514 meters or 264.153 feet.)

NOTE.—In 1932 it was reported that the center of the sill appeared to have cracked and sagged.

**P.B.M. Statehouse steps.**—At Little Rock, Pulaski County, on the north side of Markham Street, between Ashley and Conway Streets, at the foot of Center Street, at the middle south entrance of the State War Memorial Building, and on the northwest corner of the lowest step. (87.973 meters or 288.625 feet.)

**O.**—At Little Rock, Pulaski County, on the north side of Markham Street, between Ashley and Conway Streets, at the foot of Center Street, near the main entrance of the State War Memorial Building, and about 45 inches southwest of the southwest corner of the stone porch. The bottom of a chiseled square in the top of a granite post. (87.991 meters or 288.684 feet.)

**A.**—Destroyed. (91.278 meters or 299.468 feet.)

**B.**—Destroyed. (90.874 meters or 298.142 feet.)

**Q 10.**—At Little Rock, Pulaski County, at the main or north entrance to the county courthouse, and in the west end of the third step above the landing. A standard disk, stamped "Q 10 1932." (88.810 meters or 291.371 feet.)

**T.B.M. 6.**—At Little Rock, Pulaski County, at the east entrance to the State Capitol, about 10 feet west of the stone post at the entrance, and on the north curbstone. The raised portion in the center of a chiseled mark. (100.871 meters or 330.941 feet.)

**T.B.M. 7.**—At Little Rock, Pulaski County, at the east entrance to the State Capitol, about 15 feet west of the stone post at the entrance, and on the south curbstone. The raised portion in the center of a chiseled mark. (101.045 meters or 331.512 feet.)

**LITTLE ROCK.**—At Little Rock, Pulaski County, at the east entrance to the capitol grounds, and in the top of the zero milestone. A standard disk, engraved "LITTLE ROCK 1932." (102.047 meters or 334.799 feet.)

**P 10.**—At Little Rock, Pulaski County, in the front or south wall of the Missouri Pacific Railroad station, 6 feet east of the office entrance, 2 feet west of the southeast corner of the first wing east of the clock tower, and 5 feet above the walk. A standard disk, stamped "P 10 1932" and set vertically. (87.153 meters or 285.934 feet.)

Little Rock, top of south rail opposite the Missouri Pacific Railroad station. (263.4 feet.)

**RV 175 (M. P. R.R.).**—At Little Rock, Pulaski County, on the Missouri Pacific Railroad, at pole 345+19, in the east pier of the Lincoln Avenue viaduct, and in the center of the concrete crossbeam. A standard Monel-metal rivet. (82.830 meters or 271.751 feet.)

**L 10.**—At North Little Rock, Pulaski County, at the Missouri Pacific Railroad double-track bridge 477 over Arkansas River, west of the walk, and in the west end of the north abutment. A standard disk, stamped "L 10 1932." (81.770 meters or 268.274 feet.)

**RV 174 (M. P. R.R.).**—At North Little Rock, Pulaski County, at the Missouri Pacific Railroad double-track bridge 477 over Arkansas River, at pole 345+06, and in the center line of the east parapet at the north end of the bridge. A standard Monel-metal rivet. (81.804 meters or 268.385 feet.)

**West Base (U.S.E.).**—Near the east end of North Little Rock, Pulaski County, on the north bank of Arkansas River, and on the extreme south end of the west monument of the Corps of Engineers, United States Army, base line. A chiseled square, marked "U.S." (78.236 meters or 256.679 feet.)

[Second-order leveling]

**T.B.M. 12.**—At Little Rock, Pulaski County, at the southwest corner of West Markham and Rice Streets, and on the concrete curb. The top of the raised center of a chiseled circle. (113.765 meters or 373.244 feet.)

**T.B.M. 13.**—At Little Rock, Pulaski County, at the southwest corner of West Markham and Booker Streets, and on a fire hydrant. The top of the letter "E" in the word "VALVE" cast in the top of the hydrant. (113.369 meters or 371.945 feet.)

**Z 10.**—At Little Rock, Pulaski County, at the intersection of Prospect, Lee, and Fairfax Avenues, between the sidewalk and the curb in the southeast end of the triangular plot, 43 feet southwest of the center line of Prospect Avenue, and 31 feet north of the center line of Lee Avenue. A standard disk, stamped

"Z 10 1932" and set in the top of a concrete post. (134.426 meters or 441.020 feet.)

**T.B.M. 14.**—At Little Rock, Pulaski County, at the southeast corner of Walnut Street and Prospect Avenue, and on the fire hydrant. The top of the casting of the east spout of the hydrant. (138.607 meters or 454.746 feet.)

**Y 10.**—At Little Rock, Pulaski County, at 2917 Prospect Avenue, in the north wall of the Vestal Florist building, 1 foot west of the east end, and 2½ feet above the sidewalk. A standard disk, stamped "Y 10 1932" and set vertically. (140.291 meters or 460.271 feet.)

**T.B.M. 15.**—At Little Rock, Pulaski County, at the northwest corner of North Jackson and Lee Avenues, and on the fire hydrant. The top of the casting on the southwest spout of the hydrant. (120.542 meters or 395.478 feet.)

**X 10.**—At Little Rock, Pulaski County, at the west end of Fair Park, about 150 yards northwest of the zoo, immediately west of the triangular plot of ground at the road intersections, 35 feet south of the center line of the road leading west to the golf course, and 35 feet west of the road leading toward the zoo. A standard disk, stamped "X 10 1932" and set in the top of a concrete post. (109.207 meters or 358.290 feet.)

**T.B.M. 16.**—At Little Rock, Pulaski County, at the northwest corner of Washington and Twelfth Streets, and on the concrete curb. The top of the raised center in a chiseled circle. (102.656 meters or 336.797 feet.)

**W 10.**—At Little Rock, Pulaski County, at the southwest corner of West Twelfth and Cedar Streets, in the north wall of the Highland Methodist Episcopal Church South, 1 foot east of the west end, and 2½ feet above the walk. A standard disk, stamped "W 10 1932" and set vertically. (111.076 meters or 364.422 feet.)

**T.B.M. 17.**—At Little Rock, Pulaski County, at the northwest corner of West Twelfth and Johnson Streets, and on the fire hydrant. The top of the casting on the east spout of the hydrant. (109.265 meters or 358.480 feet.)

**R 10.**—At Little Rock, Pulaski County, 73 feet south of the southeast corner of the Chicago, Rock Island & Pacific Railway station, at the grade crossing of West Tenth Street, 56 feet east of the center line of the track, 29 feet north of the center line of West Tenth Street, and at the intersection of the right-of-way line and a property line. A standard disk, stamped "R 10 1932" and set in the top of a concrete post. (91.837 meters or 301.302 feet.)

**T.B.M. 8.**—At Little Rock, Pulaski County, on the Chicago, Rock Island & Pacific Railway, in the back of the city material yard, 20 feet southwest of bridge 1394, and in the concrete foundation of a signal base. The top of the raised center portion in a chiseled circle. (85.755 meters or 281.348 feet.)

**T.B.M. 9.**—At Little Rock, Pulaski County, on the Chicago, Rock Island & Pacific Railway, at the West Wright Avenue viaduct over the track, and in the east side of the south concrete foundation of the first bent west of the track. The top of the raised center of a chiseled circle. (89.510 meters or 293.667 feet.)

**S 10.**—At Little Rock, Pulaski County, on the Missouri Pacific Railroad, on West Twenty-sixth Street, 42 feet north of the east entrance to the county hospital, and 35 feet west of the center line of the south-bound track. A standard disk, stamped "S 10 1932" and set in the top of a concrete post. (82.444 meters or 270.485 feet.)

**T.B.M. 10.**—At Little Rock, Pulaski County, on the west line of the Chicago, Rock Island & Pacific Railway into the city, just east of pole 137+5, and in the middle of the south head wall of a concrete culvert. The top of the raised center in a chiseled circle. (75.996 meters or 249.330 feet.)

**T 10.**—At Little Rock, Pulaski County, on the Chicago, Rock Island & Pacific Railway, at the end of South Broadway, 42 feet west of the center line of Broadway, 38 feet northwest of the center line of the main track, in line with a row of poles, and 9 feet east of the first pole west of Broadway. A standard disk, stamped "T 10 1932" and set in the top of a concrete post. (78.390 meters or 257.185 feet.)

**U 10.**—At the southeast edge of Little Rock, Pulaski County, on the Chicago, Rock Island & Pacific Railway, at Biddle Shops, 97 feet west of the center line of paved United States Highway 65, 41 feet south of the center line of the south main track, at the south edge of a fill, and at the north edge of a private road. A standard disk, stamped "U 10 1932" and set in the top of a concrete post. (77.696 meters or 254.908 feet.)

**V 10.**—At Little Rock, Pulaski County, on the Chicago, Rock Island & Pacific Railway, at the East Fifteenth Street crossing, 24 feet east of the center line of the north-bound track, 18 feet south of the center line of East Fifteenth Street, and 14 feet southwest of the southwest corner of the Davis Rubber Co. building. A standard disk, stamped "V 10 1932" and set in the top of a concrete post. (80.466 meters or 263.996 feet.)

**T.B.M. 11.**—At Little Rock, Pulaski County, at the Chicago, Rock Island & Pacific Railway bridge over Arkansas River, and in the east edge of the top step of the south abutment. The top of the raised center of a chiseled circle. (82.894 meters or 271.961 feet.)

#### LINE 14, PINE BLUFF TO CAMDEN, ARK.

[Second-order leveling]

This line follows the Missouri Pacific Railroad from Noble Lake through Fairfield to Pine Bluff; and the St. Louis Southwestern Railway from Pine Bluff, through Sorrells, Faith, Kedron, Fordyce, and Eagle Mills, to Camden. The field work was done, during the winter of 1931-32, by a party in charge of G. R. Fish, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of Pine Bluff, see page 7.

**Milepost 395 (M. P. R.R.).**—About 6.6 miles east along the Missouri Pacific Railroad from the station at Pine Bluff, Jefferson County, and in the top of the concrete milepost. A copper bolt. (62.418 meters or 204.783 feet.)

**F 11.**—About 6.3 miles east along the Missouri Pacific Railroad from the station at Pine Bluff, Jefferson County, at Fairfield, about 100 feet east of the center of a grade crossing, 48 feet east of the station sign, 5 feet west of the twenty-first pole east of milepost 394, and 20 feet south of the center line of the track. A standard disk, stamped "F 11 1932" and set in the top of a concrete post. (61.800 meters or 202.755 feet.)

**E 11.**—About 4.3 miles east along the Missouri Pacific Railroad from the station at Pine Bluff, Jefferson County, 50 feet east of the twentieth pole east of milepost 392, 42 feet south of the center line of the track, and 16 feet east of the center of a grade crossing. A standard disk, stamped "E 11 1932" and set in the top of a concrete post. (63.528 meters or 208.425 feet.)

**Milepost 390 (M. P. R.R.).**—About 1.6 miles east along the Missouri Pacific Railroad from the station at Pine Bluff, Jefferson County, and in the top of the concrete milepost. A copper bolt. (64.773 meters or 212.509 feet.)

**A 11.**—At Pine Bluff, Jefferson County, in the south wall of the Missouri Pacific Railroad station, 2 feet east of the door to the White waiting room, and 5 feet above the platform. A standard disk, stamped "A 11 1932" and set vertically. (67.294 meters or 220.780 feet.)

**Pine Bluff,** top of north rail opposite the Missouri Pacific Railroad station. (215.2 feet.)

**B 11 (City of Pine Bluff).**—At Pine Bluff, Jefferson County, at the small lawn south of the post office, 9.6 feet south of the southwest corner of the building, 6 feet south of the inside edge of the sidewalk on West Second Street, and 17 feet east of the inside edge of the sidewalk to the west. A standard disk, stamped "B 11 1932" and set in the top of a concrete post, 10 inches square. (67.216 meters or 220.524 feet.)

**RV 192 (St. L. Swn. Ry.).**—At Pine Bluff, Jefferson County, at the St. Louis Southwestern Railway freight depot; about 1 pole west of milepost 268, and in the concrete walk at the northwest corner of the depot. A standard Monel-metal rivet. (65.089 meters or 213.546 feet.)

**RV 193 (St. L. Swn. Ry.).**—At Pine Bluff, Jefferson County, on the St. Louis Southwestern Railway, 64 feet west of the sixteenth pole west of milepost 268, 6½ feet south of the center line of the track, and in the concrete curb. A standard Monel-metal rivet. (67.466 meters or 221.345 feet.)

**RV 194 (St. L. Swn. Ry.).**—At Pine Bluff, Jefferson County, on the St. Louis Southwestern Railway, in the east edge of the pavement on Mulberry Street, and 21 feet south of the center line of the main track. A standard Monel-metal rivet. (69.585 meters or 228.297 feet.)

**RV 195 (St. L. Swn. Ry.).**—At Pine Bluff, Jefferson County, on the St. Louis Southwestern Railway, at the Hickory Street crossing, 26 feet southeast of the center line of the track, and in the south curb. A standard Monel-metal rivet. (69.977 meters or 229.583 feet.)

**M.**—At Pine Bluff, Jefferson County, at the west city limits, on the Missouri Pacific Railroad, about 700 feet west of the Arkansas Power & Light Co. plant, about 150 feet east of the southeast corner of the Missouri Pacific Railroad baseball park, 58 feet north of the center line of the north main track, 54 feet northeast of the thirteenth pole east of milepost 387, 10 feet south of the south fence of the fairgrounds, and 5 feet east of a 12-inch sweet gum tree. A chiseled square, lettered "U.S.B.M.", cut in the top of a 6- by 6-inch concrete post. (69.752 meters or 228.845 feet.)

**RV 196 (St. L. Swn. Ry.).**—At Pine Bluff, Jefferson County, at the southwest part of the city, on the St. Louis Southwestern Railway, 111 feet south of the nineteenth pole south of milepost 269, and in the center of the east head wall of a concrete culvert. A standard Monel-metal rivet. (69.203 meters or 227.044 feet.)

**C 11.**—At Pine Bluff, Jefferson County, at the southwest edge of the town, on the St. Louis Southwestern Railway, opposite the twenty-ninth pole west of milepost 269, at the West Seventeenth Street crossing, 62 feet west of the center line of the track, 38 feet south of the center line of the paved road, and 7 feet southeast of the northeast corner of a brick building occupied by Bobo's Cash Flour & Feed Co. A standard disk, stamped "C 11 1932" and set in the top of a concrete post. (70.789 meters or 232.247 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 270. (235.0 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 271. (237.0 feet.)

**RV 197 (St. L. Swn. Ry.).**—About  $3\frac{1}{2}$  miles southwest along the St. Louis Southwestern Railway from Pine Bluff, Jefferson County, about  $17\frac{3}{4}$  poles southwest of milepost 271, and in the center of the west head wall of a concrete culvert. A standard Monel-metal rivet. (64.510 meters or 211.647 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 272. (214.8 feet.)

**RV 198 (St. L. Swn. Ry.).**—About  $4\frac{1}{4}$  miles southwest along the St. Louis Southwestern Railway from Pine Bluff, Jefferson County, about  $23\frac{1}{2}$  poles southwest of milepost 272, and in the center of the west head wall of a concrete culvert. A standard Monel-metal rivet. (66.449 meters or 218.008 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 273. (240.8 feet.)

**D 11.**—About 5.9 miles southwest along the St. Louis Southwestern Railway from Pine Bluff, Jefferson County, about 50 yards north of the station at Sorrells, 122 feet north of milepost 274, 26 feet northeast of the center of a grade crossing, and 23 feet northwest of the center line of the track. A standard disk, stamped "D 11 1932" and set in the top of a concrete post. (85.282 meters or 279.796 feet.)

Sorrells, top of east rail opposite the St. Louis Southwestern Railway station. (280.6 feet.)

**RV 199 (St. L. Swn. Ry.).**—About 6 miles southwest along the St. Louis Southwestern Railway from Pine Bluff, Jefferson County, at Sorrells, about  $2\frac{1}{4}$  poles southwest of milepost 274, and in the top of the east end of a concrete pipe culvert. A standard Monel-metal rivet. (83.701 meters or 274.609 feet.)

**RV 176 (St. L. Swn. Ry.).**—About 4 miles northeast along the St. Louis Southwestern Railway from Faith, Jefferson County, about  $14\frac{3}{4}$  poles southwest of milepost 274, and in the center of the east head wall of a concrete culvert. A standard Monel-metal rivet. (85.258 meters or 279.717 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 275. (285.0 feet.)

**RV 177 (St. L. Swn. Ry.).**—About  $3\frac{1}{2}$  miles northeast along the St. Louis Southwestern Railway from Faith, Jefferson County, about 2 poles southwest of milepost 275, and in the center of the east head wall of a concrete culvert. A standard Monel-metal rivet. (84.372 meters or 276.810 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 276. (288.4 feet.)

**G 11.**—About 2 miles northeast along the St. Louis Southwestern Railway from Faith, Jefferson County, at the siding at Allwood, 57 feet south of the nineteenth pole southwest of milepost 276, about 100 yards west of a farmhouse,

24 feet south of the center of a grade crossing, and 47 feet east of the center line of the track. A standard disk, stamped "G 11 1932" and set in the top of a concrete post. (85.804 meters or 281.509 feet.)

Allwood, top of east rail opposite the St. Louis Southwestern Railway station. (285.4 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 277. (264.1 feet.)

RV 178 (St. L. Swn. Ry.).—About 1.2 miles northeast along the St. Louis Southwestern Railway from Faith, Jefferson County, about  $12\frac{1}{2}$  poles southwest of milepost 277, and in the top of the east end of a concrete pipe culvert. A standard Monel-metal rivet. (82.420 meters or 270.406 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 278. (261.1 feet.)

Faith, top of west rail opposite the St. Louis Southwestern Railway station. (243.1 feet.)

H 11.—At Faith, Jefferson County, about 75 yards southwest of the St. Louis Southwestern Railway station, 44 feet northeast of the third pole south of the station, 60 feet northwest of the center line of the track, and on the top of a small knoll. A standard disk, stamped "H 11 1932" and set in the top of a concrete post. (73.535 meters or 241.256 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 279. (228.5 feet.)

RV 179 (St. L. Swn. Ry.).—About 1.4 miles southwest along the St. Louis Southwestern Railway from Faith, Jefferson County, about  $29\frac{1}{4}$  poles southwest of milepost 279, and in the top of the west end of a concrete pipe culvert. A standard Monel-metal rivet. (68.096 meters or 223.412 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 280. (226.7 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 281. (216.4 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 282. (212.5 feet.)

J 11.—At Kedron, Cleveland County, 48 feet north of the northwest corner of the St. Louis Southwestern Railway station, 52 feet west of the center line of the track, 13 feet north of the first pole north of the station, and 4 feet east of a fence line. A standard disk, stamped "J 11 1932" and set in the top of a concrete post. (62.435 meters or 204.839 feet.)

Kedron, top of west rail opposite the St. Louis Southwestern Railway station. (206.8 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 284. (210.7 feet.)

RV 180 (St. L. Swn. Ry.).—About  $5\frac{1}{2}$  miles northeast along the St. Louis Southwestern Railway from the station at Rison, Cleveland County, about  $8\frac{1}{2}$  poles southwest of milepost 284, and in the center of the west head wall of a concrete pipe culvert. A standard Monel-metal rivet. (61.022 meters or 200.203 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 285. (201.4 feet.)

RV 181 (St. L. Swn. Ry.).—About  $4\frac{1}{4}$  miles northeast along the St. Louis Southwestern Railway from the station at Rison, Cleveland County, about  $17\frac{1}{4}$  poles southwest of milepost 285, 145 feet northwest of the track, and in the center of the high part of an old concrete foundation. A standard Monel-metal rivet. (65.372 meters or 214.475 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 286. (209.7 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 287. (241.4 feet.)

K 11.—About 1.9 miles northeast along the St. Louis Southwestern Railway from the station at Rison, Cleveland County, 26 poles southwest of milepost 287, about 100 yards east of a Negro church and cemetery, 46 feet west of the center line of the track, 6 feet north of the east prolongation of the north side of the church, and 18 feet north of a pole. A standard disk, stamped "K 11 1932" and set in the top of a concrete post. (70.076 meters or 229.908 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 288. (237.0 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 289. (242.6 feet.)

**RV 182 (St. L. Swn. Ry.).**—About  $\frac{3}{4}$  mile northeast along the St. Louis Southwestern Railway from the station at **Rison**, Cleveland County, about 1 pole southwest of milepost 289, about 118 feet northwest of the track, and in an old 18- by 24-inch concrete foundation. A standard Monel-metal rivet. (73.200 meters or 240.157 feet.)

**RV 183 (St. L. Swn. Ry.).**—At **Rison**, Cleveland County, in front of the St. Louis Southwestern Railway station, and in the concrete foundation of the train-order signal. A standard Monel-metal rivet. (71.886 meters or 235.846 feet.)

**Rison**, top of west rail opposite the St. Louis Southwestern Railway station. (235.7 feet.)

**L 11.**—At **Rison**, Cleveland County, at the St. Louis Southwestern Railway station, 89 feet south of the train-order signal in front of the station, 50 feet northeast of the center of a grade crossing, and 56 feet southeast of the center line of the main track. A standard disk, stamped "L 11 1932" and set in the top of a concrete post. (72.047 meters or 236.374 feet.)

**RV 184 (St. L. Swn. Ry.).**—About 0.8 mile southwest along the St. Louis Southwestern Railway from the station at **Rison**, Cleveland County, about 18 $\frac{1}{2}$  poles southwest of milepost 290, and in the west head wall of a concrete culvert. A standard Monel-metal rivet. (63.488 meters or 224.698 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 291. (212.7 feet.)

**RV 185 (St. L. Swn. Ry.).**—About 2 miles southwest along the St. Louis Southwestern Railway from the station at **Rison**, Cleveland County, about 22 $\frac{1}{2}$  poles southwest of milepost 291, and in the top of the east end of a concrete pipe culvert. A standard Monel-metal rivet. (56.139 meters or 184.183 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 292. (185.1 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 293. (166.6 feet.)

**RV 186 (St. L. Swn. Ry.).**—About 3 $\frac{1}{2}$  miles southwest along the St. Louis Southwestern Railway from the station at **Rison**, Cleveland County, about 7 poles southwest of milepost 293, and in the top of the west end of a concrete pipe culvert. A standard Monel-metal rivet. (49.847 meters or 163.540 feet.)

**M 11.**—About 3.6 miles southwest along the St. Louis Southwestern Railway from the station at **Rison**, Cleveland County, 11 poles southwest of milepost 293, 102 feet southwest of the center of a grade crossing, 48 feet northwest of the center line of the track, and 21 feet southwest of a pole. A standard disk, stamped "M 11 1932" and set in the top of a concrete post. (51.545 meters or 169.111 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 294. (155.6 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 295. (155.7 feet.)

**RV 187 (St. L. Swn. Ry.).**—About 4.7 miles northeast along the St. Louis Southwestern Railway from the station at **Kingsland**, Cleveland County, about 3 poles southwest of milepost 295, at the Saline River bridge, and in the west end of the concrete cap between the south cylinder piers. A standard Monel-metal rivet. (46.440 meters or 152.362 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 296. (153.7 feet.)

**RV 188 (St. L. Swn. Ry.).**—About 3.4 miles northeast along the St. Louis Southwestern Railway from the station at **Kingsland**, Cleveland County, about 12 poles southwest of milepost 296, and in the east head wall of a concrete culvert under State Highway 3. A standard Monel-metal rivet. (46.487 meters or 152.516 feet.)

**N 11.**—About 3.2 miles northeast along the St. Louis Southwestern Railway from the station at **Kingsland**, Cleveland County, about 19 poles southwest of milepost 296, 29 feet northeast of the third pole southwest of the northeast end of the siding, 46 feet northwest of the center line of the main track, and 2 feet southeast of a fence line. A standard disk, stamped "N 11 1932" and set in the top of a concrete post. (48.678 meters or 159.704 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 297. (163.2 feet.)

**RV 189 (St. L. Swn. Ry.).**—About 2.8 miles northeast along the St. Louis Southwestern Railway from the station at **Kingsland**, Cleveland County, northwest of milepost 297, and in the center of the east head wall of a concrete pipe

culvert under State Highway 3. A standard Monel-metal rivet. (49.101 meters or 161.092 feet.)

**RV 190 (St. L. Swn. Ry.).**—About 2.2 miles northeast along the St. Louis Southwestern Railway from the station at **Kingsland**, Cleveland County, about 18½ poles southwest of milepost 297, and in the center of the east head wall of a concrete pipe culvert under State Highway 3. A standard Monel-metal rivet. (50.587 meters or 165.968 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 298. (172.9 feet.)

**RV 191 (St. L. Swn. Ry.).**—About 1.2 miles northeast along the St. Louis Southwestern Railway from the station at **Kingsland**, Cleveland County, about 18 poles southwest of milepost 298, and in the center of the east head wall of a concrete pipe culvert under State Highway 3. A standard Monel-metal rivet. (53.883 meters or 176.781 feet.)

**P 11.**—At **Kingsland**, Cleveland County, 28 feet east of the southeast corner of the St. Louis Southwestern Railway station, about 90 feet west of the center of a grade crossing, and 19 feet north of the center line of the main track. A standard disk, stamped "P 11 1932" and set in the top of a concrete post. (65.208 meters or 213.937 feet.)

**RV 200 (St. L. Swn. Ry.).**—At **Kingsland**, Cleveland County, in front of the St. Louis Southwestern Railway station, and in the concrete foundation of the train-order signal. A standard Monel-metal rivet. (65.174 meters or 213.825 feet.)

**Kingsland**, top of west rail opposite the St. Louis Southwestern Railway station. (214.3 feet.)

**RV 201 (St. L. Swn. Ry.).**—About two-thirds mile southwest along the St. Louis Southwestern Railway from the station at **Kingsland**, Cleveland County, about 13½ poles southwest of milepost 300, and in the center of the west head wall of a concrete culvert. A standard Monel-metal rivet. (68.930 meters or 226.148 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 301. (256.2 feet.)

**RV 202 (St. L. Swn. Ry.).**—About 1.8 miles southwest along the St. Louis Southwestern Railway from the station at **Kingsland**, Cleveland County, about 18 poles southwest of milepost 301, and in the west end of the south concrete abutment of an underpass. A standard Monel-metal rivet. (69.373 meters or 227.601 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 302. (212.1 feet.)

**Q 11.**—About 2.3 miles southwest along the St. Louis Southwestern Railway from the station at **Kingsland**, Cleveland County, 77 feet southwest of the third pole southwest of milepost 302, about 50 yards southwest of the place where State Highway 3 leaves the railroad to run in a northeasterly direction, and 41 feet southeast of the center line of the track. A standard disk, stamped "Q 11 1932" and set in the top of a concrete post. (68.800 meters or 209.317 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 304. (194.6 feet.)

**R 11.**—About 2½ miles northeast along the St. Louis Southwestern Railway from **Fordyce**, Dallas County, 70 feet northeast of milepost 305, at the top of the north slope of a slight ridge, 47 feet northwest of the center line of State Highway 3, and 29 feet southeast of the center line of the track. A standard disk, stamped "R 11 1932" and set in the top of a concrete post. (68.973 meters or 226.289 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 305. (228.1 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 306. (231.0 feet.)

**RV 203 (St. L. Swn. Ry.).**—About 1 mile northeast along the St. Louis Southwestern Railway from **Fordyce**, Dallas County, southeast of the seventeenth pole southwest of milepost 306, and in the center of the west head wall of a concrete pipe culvert under State Highway 3. A standard Monel-metal rivet. (78.437 meters or 257.339 feet.)

**S 11.**—At **Fordyce**, Dallas County, at the crossing of the St. Louis Southwestern Railway and the Chicago, Rock Island & Pacific Railway, 45 feet west of the center line of the track of the former, 33 feet north of the center line of the track of the latter, and 5 feet east of a pole. A standard disk, stamped

"S 11 1932" and set in the top of a concrete post. (81.322 meters or 266.804 feet.)

**RV 204 (St. L. Swn. Ry.).**—At **Fordyce**, Dallas County, at the crossing of the St. Louis Southwestern Railway and the Chicago, Rock Island & Pacific Railway, about 6¼ poles southwest of milepost 307, 9 feet west of the center line of the St. Louis Southwestern Railway track, immediately north of the Chicago, Rock Island & Pacific Railway track, and in the concrete interlocking foundation of an interlocking apparatus. A standard Monel-metal rivet. (81.431 meters or 267.162 feet.)

**U 11.**—At **Fordyce**, Dallas County, in the front or southwest wall of the post office, 1 foot east of the main entrance, and 5 feet above the top of the steps. A standard disk, stamped "U 11 1932" and set vertically. (88.428 meters or 290.118 feet.)

**T 11.**—At **Fordyce**, Dallas County, in the front or east wall of the St. Louis Southwestern Railway station, 1 foot southwest of the northeast corner of the projection in the building, and 5 feet above the platform. A standard disk, stamped "T 11 1932" and set vertically. (82.415 meters or 270.390 feet.)

**Fordyce**, top of west rail opposite the St. Louis Southwestern Railway station. (264.9 feet.)

**RV 205 (St. L. Swn. Ry.).**—At **Fordyce**, Dallas County, at the south edge of the town, on the St. Louis Southwestern Railway, about 1½ poles north of milepost 308, 55 feet east of the track, and in the concrete box 3 feet southwest of the southwest corner of the boiler house of the Wheel Co. A standard Monel-metal rivet. (85.763 meters or 281.374 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 309. (242.7 feet.)

**V 11.**—In Calhoun County, about 2½ miles southwest along the St. Louis Southwestern Railway from **Fordyce**, Dallas County, 28 poles southwest of milepost 309, on a small knoll about midway between a trestle and a grade crossing, 43 feet southwest of the center line of the track, and 73 feet northwest of a pole. A standard disk, stamped "V 11 1932" and set in the top of a concrete post. (83.203 meters or 272.975 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 310. (276.2 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 311. (324.4 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 312. (328.0 feet.)

**W 11.**—At **Thornton**, Calhoun County, 70 feet northeast of the northeast corner of the St. Louis Southwestern Railway station, 156 feet southwest of the center of a grade crossing, and 20 feet northwest of the center line of the main track. A standard disk, stamped "W 11 1932" and set in the top of a concrete post. (95.546 meters or 313.470 feet.)

**RV 206 (St. L. Swn. Ry.).**—At **Thornton**, Calhoun County, in front of the St. Louis Southwestern Railway station, at milepost 313, and in the concrete foundation of the train-order signal. A standard Monel-metal rivet. (95.617 meters or 313.703 feet.)

**Thornton**, top of west rail opposite the St. Louis Southwestern Railway station. (313.7 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 314. (284.7 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 315. (301.7 feet.)

**X 11.**—About 2½ miles southwest along the St. Louis Southwestern Railway from the station at **Thornton**, Calhoun County, at **Little Bay**, 32 feet southwest of the sixteenth pole southwest of milepost 315, about 100 yards south of a large sawdust pile, 43 feet southwest of the center of a grade crossing, and 36 feet southeast of the center line of the track. A standard disk, stamped "X 11 1932" and set in the top of a concrete post. (98.250 meters or 322.342 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 316. (338.8 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 317. (318.8 feet.)

**Y 11.**—About 5 miles southwest along the St. Louis Southwestern Railway from the station at **Thornton**, Calhoun County, about 2¾ poles southwest of milepost 317, 35 feet southwest of the center of a grade crossing, 46 feet northwest of the center line of the track, and 45 feet northeast of a pole. A stand-

ard disk, stamped "Y 11 1932" and set in the top of a concrete post. (83.861 meters or 275.134 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 318. (275.1 feet.)

**270 (U.S.G.S.).**—About 5 miles southwest along the St. Louis Southwestern Railway from the station at **Thornton**, Calhoun County, about 450 feet southwest of the station at **Harlow**, about 320 feet southwest of a grade crossing, and 10 feet southwest of milepost 318. A United States Geological Survey standard cap, stamped "270 H.S." and riveted on the top of a 3½-inch iron pipe. (82.863 meters or 271.860 feet.)

**RV 207 (St. L. Swn. Ry.).**—About 5.4 miles southwest along the St. Louis Southwestern Railway from the station at **Thornton**, Calhoun County, about 10¼ poles southwest of milepost 318, and in the center of the west head wall of a concrete culvert. A standard Monel-metal rivet. (82.478 meters or 270.597 feet.)

**RV 208 (St. L. Swn. Ry.).**—About 5.9 miles southwest along the St. Louis Southwestern Railway from the station at **Thornton**, Calhoun County, about 27½ poles southwest of milepost 318, and in the west head wall of a concrete culvert. A standard Monel-metal rivet. (78.130 meters or 256.332 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 319. (256.6 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 320. (253.2 feet.)

**RV 209 (St. L. Swn. Ry.).**—About ¾ mile northeast along the St. Louis Southwestern Railway from the station at **Bearden**, Ouachita County, about 16 poles southwest of milepost 320, about 165 feet west of the track, and about 1 foot south of the north end of the east concrete curb along United States Highway 167. A standard Monel-metal rivet. (74.836 meters or 245.524 feet.)

**Z 11.**—At **Bearden**, Ouachita County, about 100 yards northeast of the St. Louis Southwestern Railway station, about 110 feet west of the fifth pole southwest of milepost 321, 34 feet northeast of the center of a grade crossing, and 32 feet northwest of the center line of the main track. A standard disk, stamped "Z 11 1932" and set in the top of a concrete post. (73.122 meters or 239.901 feet.)

**RV 210 (St. L. Swn. Ry.).**—At **Bearden**, Ouachita County, in front of the St. Louis Southwestern Railway Station, and in the concrete foundation of the train-order signal. A standard Monel-metal rivet. (72.802 meters or 238.851 feet.)

**Bearden**, top of west rail opposite the St. Louis Southwestern Railway station. (239.2 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 322. (226.9 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 323. (225.9 feet.)

**RV 211 (St. L. Swn. Ry.).**—About 2.6 miles southwest along the St. Louis Southwestern Railway from the station at **Bearden**, Ouachita County, about 26¾ poles southwest of milepost 323, about 100 feet west of the track, and in the south end of an old engine foundation. A standard Monel-metal rivet. (63.358 meters or 207.867 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 324. (213.4 feet.)

**A 12.**—About 3 miles southwest along the St. Louis Southwestern Railway from the station at **Bearden**, Ouachita County, about 5 poles southwest of milepost 324, 27 feet southwest of the center of a grade crossing, 49 feet northwest of the center line of the track, and 5 feet southwest of a pole. A standard disk, stamped "A 12 1932" and set in the top of a concrete post. (65.580 meters or 215.157 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 325. (189.3 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 326. (153.1 feet.)

**RV 212 (St. L. Swn. Ry.).**—About 5½ miles southwest along the St. Louis Southwestern Railway from the station at **Bearden**, Ouachita County, about 26½ poles southwest of milepost 326, and in the center of the west head wall of a concrete culvert. A standard Monel-metal rivet. (44.795 meters or 146.965 feet.)

**Eagle Mills**, top of west rail opposite the St. Louis Southwestern Railway station. (143.3 feet.)

**B 12.**—At Eagle Mills, Ouachita County, about 50 yards southwest of the St. Louis Southwestern Railway station, about 6 feet northeast of the fifteenth pole southwest of milepost 327, at the southwest switch point, 37 feet northeast of the center of a grade crossing, and 53 feet southeast of the center line of the track. A standard disk, stamped "B 12 1932" and set in the top of a concrete post. (43.077 meters or 141.328 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 328. (140.6 feet.)

**129 (U.S.G.S.)**.—About 1½ miles southwest along the St. Louis Southwestern Railway from Eagle Mills, Ouachita County, about 600 feet southwest of the station at Onalaska, and 8 feet south of milepost 329. A United States Geological Survey standard cap, stamped "129 H.S." and riveted on the top of a 3½-inch iron pipe. (39.713 meters or 130.292 feet.)

**RV 213 (St. L. Swn. Ry.)**.—About 2.3 miles southwest along the St. Louis Southwestern Railway from Eagle Mills, Ouachita County, about 23¼ poles southwest of milepost 329, and in the top of the east end of a concrete pipe culvert. A standard Monel-metal rivet. (37.865 meters or 124.229 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 330. (125.7 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 331. (122.1 feet.)

**C 12.**—About 4.2 miles southwest along the St. Louis Southwestern Railway from Eagle Mills, Ouachita County, at Van Duzer, 11 feet southwest of the twenty-first pole southwest of milepost 331, 162 feet northeast of the center of a grade crossing, and 26 feet southeast of the center line of the track. A standard disk, stamped "C 12 1932" and set in the top of a concrete post. (36.532 meters or 119.855 feet.)

**RV 214 (St. L. Swn. Ry.)**.—About 5.8 miles north along the St. Louis Southwestern Railway from the station at Camden, Ouachita County, about 29¾ poles southwest of milepost 331, and in the center of the west head wall of a concrete culvert. A standard Monel-metal rivet. (36.430 meters or 119.521 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 333. (119.1 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 334. (118.8 feet.)

**D 12.**—About 3.0 miles north along the St. Louis Southwestern Railway from the station at Camden, Ouachita County, about 235 feet northwest of the station at Kent, 4 feet southeast of a gate, and 50 feet northeast of the center line of the track. A standard disk, stamped "D 12 1932" and set in the top of a concrete post. (35.104 meters or 115.170 feet.)

**RV 215 (St. L. Swn. Ry.)**.—About 2.9 miles north along the St. Louis Southwestern Railway from the station at Camden, Ouachita County, in front of the station at Kent, and in the concrete foundation of the train-order signal. A standard Monel-metal rivet. (36.365 meters or 119.308 feet.)

Top of east rail opposite St. Louis Southwestern Railway milepost 336. (118.7 feet.)

**Kent**, top of east rail opposite the St. Louis Southwestern Railway station. (119.4 feet.)

**RV 216 (St. L. Swn. Ry.)**.—At Camden, Ouachita County, at the north edge of the town, on the St. Louis Southwestern Railway, about 4 poles south of milepost 337, 13 feet west of the track, and in the north end of the concrete foundation of a coal chute. A standard Monel-metal rivet. (40.677 meters or 133.454 feet.)

**RV 217 (St. L. Swn. Ry.)**.—At Camden, Ouachita County, about 18¾ poles south of milepost 337, 50 feet west of the main track, and in the south concrete abutment of an underpass. A standard Monel-metal rivet. (45.001 meters or 147.641 feet.)

**E 12.**—At Camden, Ouachita County, in the front or east wall of the St. Louis Southwestern Railway station, 1 foot south of the door to the White waiting room, and 4½ feet above the platform. A standard disk, stamped "E 12 1932" and set vertically. (47.195 meters or 154.839 feet.)

**Camden**, top of east rail opposite the St. Louis Southwestern Railway station. (149.9 feet.)

**Meridian Mark (U.S.G.S.).**—At Camden, Ouachita County, at the courthouse square, 104 feet north of the north edge of the sidewalk of Jackson Street, and 24 feet east of the east edge of the sidewalk on Harrison Street. An iron cap, stamped "U.S.G.S. Meridian Mark" and set in the top of a stone post. (60.421 meters or 198.231 feet.)

**199 (U.S.G.S.).**—Destroyed prior to 1932.

For additional bench marks in the vicinity of Camden, see pages 11 and 15.

**LINE 15, CROSSETT TO MONTROSE, ARK.**

[Second-order leveling]

Although this line is called "Crossett to Montrose", it was necessary to extend its extremities in order to obtain ties with adjacent leveling.

This line follows roads, the Union Sawmill Railroad, and State Highway 2 from Jacks Island to Crossett; and the Missouri Pacific Railroad from Crossett to Montrose, from Montrose to Wilmot, and from Montrose to Arkansas City. The major portion of the field work was done, in February 1932, by a party in charge of G. R. Fish, junior hydrographic and geodetic engineer. The remaining portion, in the vicinity of Marie Saline Landing and Jacks Island, was done in October 1932, in February 1933, and in July 1933, by parties in charge of A. L. Wardwell, aid, and J. D. Thurmond, junior hydrographic and geodetic engineer.

For bench marks in the vicinity of Jacks Island, see pages 14.

**83.0 (U.S.G.S.).**—About 15 miles northeast of **Strong**, Union County, about 500 yards south of Jacks Island Landing, about 150 feet east of Jacks Island, and 50 feet south of the river bank, in the root of a 2-foot gum tree marked with white paint. A United States Geological Survey standard copper nail and washer. (25.298 meters or 82.999 feet.)

**87.8 (U.S.G.S.).**—About 14.6 miles northeast of **Strong**, Union County, about 1 mile south of Careyville Landing, about 0.9 mile west of Jacks Island Landing, at a section corner, about 200 yards north of Mr. Ball's farmhouse, and in the base of a 3-foot black gum tree. A United States Geological Survey standard copper nail and washer. (26.809 meters or 87.930 feet.)

**86.9 (U.S.G.S.).**—About 5.0 miles north of **New London**, Union County, about 1.0 mile south of Jacks Island, 30 feet north of a point 16 feet west of a tram railroad crossing, and in a root on the south side of a 12-inch pine tree. A United States Geological Survey standard copper nail and washer, marked "86.9." (26.357 meters or 86.473 feet.)

**89.0 (U.S.G.S.).**—About 5 miles north of **Huttig Mill**, Union County, on the Union Sawmill Railroad, 5½ rails south of switch 9, east of the track, and in the south end of a bridge. A United States Geological Survey standard copper nail and washer. (26.982 meters or 88.523 feet.)

**110.3 (U.S.G.S.).**—About 5.1 miles northwest of **Union Sawmill Camp No. 8**, Union County, on the Union Sawmill Railroad, 35 feet southeast of a switch at a short spur line north, west of the track, and in the southwest end of a 48-inch corrugated-iron culvert. A chiseled square, marked "110.3." (33.484 meters or 109.855 feet.)

About 3.6 miles northwest of **Union Sawmill Camp No. 8**, top of rail on the Union Sawmill Railroad at a road crossing. (174.5 feet.)

**162.3 (U.S.G.S.).**—About 3.3 miles northwest of **Union Sawmill Camp No. 8**, Union County, on the Union Sawmill Railroad, 7 feet southwest of the center of a road crossing, and in the south end of a railroad tie. A railroad spike, marked "162.3." (49.336 meters or 161.863 feet.)

**136.9 (U.S.G.S.).**—About 2.4 miles northwest of **Union Sawmill Camp No. 8**, Union County, on the main line of the Union Sawmill Railroad, 50 feet south of a point 30 feet west of the center of a road crossing, and in a root on the west side of a 6-inch triangular-blazed pine tree. A United States Geological Survey standard copper nail and washer. (41.589 meters or 136.447 feet.)

**TT 7 E (U.S.G.S.).**—About 1 mile north of **Huttig Mill**, Union County, on the Union Sawmill Railroad, at the first grade crossing north of Huttig Mill,

40 feet west of the track, 20 feet north of the road, and 3 feet north of a gum tree painted "173/3." A United States Geological Survey standard disk, set in the top of a concrete post. (41.718 meters or 136.870 feet.)

103.4 (U.S.G.S.).—At Huttig Mill, Union County, on the Union Sawmill Railroad, at the grade crossing of the road leading to Jones Lake, 40 feet west of the track, 20 feet north of the road, and in a root of a tree painted "103/4." A United States Geological Survey standard copper nail and washer. (31.393 meters or 102.965 feet.)

90.7 (U.S.G.S.).—About 1.6 miles south of Huttig Mill, Union County, on the Union Sawmill Railroad, east of the track, and in the south end of a bridge, painted "90/7." A United States Geological Survey standard copper nail and washer. (27.532 meters or 90.328 feet.)

TT 6 E (U.S.G.S.).—About 6 miles east of Strong, Union County, at the grade crossing of State Highway 2 and the Union Sawmill Railroad, 30 feet north of the center line of the highway, and 15 feet east of the track. A United States Geological Survey standard disk, set in the top of a concrete post. (27.589 meters or 90.515 feet.)

86.7 (U.S.G.S.).—About 7 miles east of Strong, Union County, on State Highway 2, about 1 mile east of the Union Sawmill Railroad, about 40 feet west of a Rose Inn Hotel sign, 30 feet south of the center line of the highway, and in the root of a 2-foot post oak tree. A United States Geological Survey standard copper nail and washer. (28.334 meters or 86.397 feet.)

93.3 (U.S.G.S.).—About 8.5 miles east of Strong, Union County, on State Highway 2, on the east end of the first highway bridge on the Ouachita River bridge fill, on the west side of the river, and on the north side of the highway. The raised portion of a chiseled square painted white. (28.317 meters or 92.903 feet.)

93.2 (U.S.G.S.).—About 9.5 miles east of Strong, Union County, on State Highway 2, on the east end of the Big Slough bridge, and on the north side of the highway. The raised portion of a chiseled square painted white. (28.304 meters or 92.861 feet.)

93.1 (U.S.G.S.).—About 11.3 miles east of Strong, Union County, on State Highway 2, on the west end of the Ouachita River Relief bridge, and on the north side of the highway. The raised portion of a chiseled square painted white. (28.260 meters or 92.716 feet.)

F 12.—In Union County, about  $9\frac{1}{2}$  miles west along State Highway 2 from Crossett, Ashley County, at the northwest wing wall of the bridge over Ouachita River, in the middle of the second panel from the west end, and in the top of the concrete hub guard. A standard disk, stamped "F 12 1932." (28.833 meters or 94.596 feet.)

G 12.—About 9 miles west along State Highway 2 from Crossett, Ashley County, at the northeast wing wall of the bridge over Ouachita River, in the middle of the second panel from the east end, and in the top of the concrete hub guard. A standard disk, stamped "G 12 1932." (28.866 meters or 94.705 feet.)

P.R.P. Marie Saline (U.S.E.).—About 9 miles west along State Highway 2 from Crossett, Ashley County, at Marceline Landing, about 270 yards east of the Ouachita River, about 220 yards south of the tollhouse on the highway bridge over the river, and 15 feet north of a woods road leading to the river. A copper bolt leaded in a limestone block, 18 inches square and set about 4 feet under ground, access to which is had through an iron pipe bearing a cap stamped "USEBM." (19.370 meters or 63.550 feet.)

NOTE.—In 1932 it was reported that the cap on the pipe was missing.

H 12.—About  $8\frac{1}{4}$  miles west along State Highway 2 from Crossett, Ashley County, about 0.6 mile east of Ouachita River, and in the north concrete hub guard of the first Ouachita River Relief bridge, 3 feet from the east end. A standard disk, stamped "H 12 1932." (28.335 meters or 92.962 feet.)

100.17 (A.S.H.C.).—About  $6\frac{1}{2}$  miles west along State Highway 2 from Crossett, Ashley County, about 500 feet southeast of the first curve east of Ouachita River, 90 feet south of station 318+80, and in a root on the east side of a 6-inch blazed black gum tree. The highest point of a spike driven through a bottle cap. (30.467 meters or 99.957 feet.)

J 12.—About  $5\frac{1}{4}$  miles west along State Highway 2 from Crossett, Ashley County, about 200 feet east of the east end of a curve, 26 feet west of the center line of a crossroad, 48 feet north of the center line of the highway, and 16 feet west of a fence corner, in the southeast corner of a small cleared field.

A standard disk, stamped "J 12 1932" and set in the top of a concrete post. (35.400 meters or 116.141 feet.)

138.96 (A.S.H.C.).—About 3 miles west along State Highway 2 from Crossett, Ashley County, at station 143+30, 65 feet south of the center line of the highway, and in a root on the north side of an 8-inch white oak tree. The top of a spike. (42.276 meters or 138.701 feet.)

K 12.—About 2 miles west along State Highway 2 from Crossett, Ashley County, on the east edge of the crest of a small rise, 54 feet north of the center line of the highway, and at the right-of-way line. A standard disk, stamped "K 12 1932" and set in the top of a concrete post. (48.243 meters or 158.277 feet.)

L 12.—At Crossett, Ashley County, at the southeast corner of the intersection of First Street and State Highway 2, 42 feet east of the center line of First Street, 34 feet south of the center line of the highway, and 5½ feet southeast of the inside corner of the sidewalks. A standard disk, stamped "L 12 1932" and set in the top of a concrete post. (50.968 meters or 167.218 feet.)

162.49 (A.S.H.C.).—At Crossett, Ashley County, about 450 feet west of the main street of the town, 50 feet south of the center line of State Highway 2, at the northwest corner of the old city jail, and on the top of the corner brick of the first course which extends outward 2 inches from the face of the wall. The top of the brick. (49.492 meters or 162.375 feet.)

N 12.—At Crossett, Ashley County, 54 feet west of the northwest corner of the Missouri Pacific Railroad station, and 20 feet south of the center line of the track. A standard disk, stamped "N 12 1932" and set in the top of a concrete post. (49.202 meters or 161.424 feet.)

Crossett, top of south rail opposite the Missouri Pacific Railroad station. (161.4 feet.)

Milepost 50 (M. P. R.R.).—About ¼ mile east along the Missouri Pacific Railroad from the station at Crossett, Ashley County, at pole 474+7, and in the top of the concrete milepost. A copper bolt. (48.334 meters or 158.576 feet.)

Top of north rail opposite Missouri Pacific Railroad milepost 473. (154.4 feet.)

M 12.—About 3 miles northeast along the Missouri Pacific Railroad from the station at Crossett, Ashley County, 28 feet west of the pole south of pole 471+15, 43 feet west of the center of a grade crossing, and 52 feet south of the center line of the track. A standard disk, stamped "M 12 1932" and set in the top of a concrete post. (49.410 meters or 162.106 feet.)

Top of north rail opposite Missouri Pacific Railroad milepost 470. (165.8 feet.)

Milepost 45 (M. P. R.R.).—About 5¼ miles northeast along the Missouri Pacific Railroad from the station at Crossett, Ashley County, at pole 469+7, and in the top of the concrete milepost. A copper bolt. (54.094 meters or 177.473 feet.)

P 12.—About 6½ miles west along the Missouri Pacific Railroad from the station at Hamburg, Ashley County, at Bovine siding, about 120 feet northeast of the center of the grade crossing of State Highway 2, 27 feet southwest of milepost 469, and 48 feet northwest of the center line of the main track. A standard disk, stamped "P 12 1932" and set in the top of a concrete post. (55.634 meters or 182.526 feet.)

Top of north rail opposite Missouri Pacific Railroad milepost 469. (179.6 feet.)

Top of north rail opposite Missouri Pacific Railroad milepost 468. (182.1 feet.)

Top of north rail opposite Missouri Pacific Railroad milepost 467. (178.2 feet.)

Q 12.—About 2¾ miles west along the Missouri Pacific Railroad from the station at Hamburg, Ashley County, 58 feet northeast of a pole southeast of pole 465+5, 53 feet southeast of the center line of the track, 10 feet south of the center line of a road, and 20 feet east of the northwest corner of a cleared field. A standard disk, stamped "Q 12 1932" and set in the top of a concrete post. (51.918 meters or 170.334 feet.)

Milepost 40 (M. P. R.R.).—About 1¾ miles west along the Missouri Pacific Railroad from the station at Hamburg, Ashley County, at pole 464+7, and in the top of the concrete milepost. A copper bolt. (54.620 meters or 179.199 feet.)

Top of north rail opposite Missouri Pacific Railroad milepost 464. (178.6 feet.)

Top of north rail opposite Missouri Pacific Railroad milepost 463. (164.9 feet.)

**S 12.**—At **Hamburg**, Ashley County, in the top step of the west entrance to the county courthouse, 6 inches east of the last rise, and 5.6 feet south of the center of the door. A standard disk, stamped "S 12 1932." (53.970 meters or 177.067 feet.)

**R 12.**—At **Hamburg**, Ashley County, in the front or north wall of the Missouri Pacific Railroad station, 1.5 feet east of the White waiting-room door, and 4 feet above the platform. A standard disk, stamped "R 12 1932" and set vertically. (53.145 meters or 174.360 feet.)

Top of north rail opposite the Missouri Pacific Railroad milepost 461. (151.9 feet.)

**T 12.**—About  $2\frac{1}{2}$  miles east along the Missouri Pacific Railroad from the station at **Hamburg**, Ashley County, 6 feet east of pole 460+1, 50 feet east of the center of a grade crossing, and 28 feet north of the center line of the track, A standard disk, stamped "T 12 1932" and set in the top of a concrete post. (53.456 meters or 175.380 feet.)

Top of north rail opposite Missouri Pacific Railroad milepost 460. (175.5 feet.)

**Milepost 35 (M. P. R.R.)**.—About  $3\frac{1}{4}$  miles east along the Missouri Pacific Railroad from the station at **Hamburg**, Ashley County, at pole 459+7, and in the top of the concrete milepost. A copper bolt. (51.371 meters or 168.540 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 459. (171.4 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 458. (174.5 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 457. (180.6 feet.)

**U 12.**—About 1 mile west along the Missouri Pacific Railroad from **Mist**, Ashley County, 7 feet east of milepost 457, 29 feet west of the center of a grade crossing, 53 feet south of the center line of State Highway 2, and 27 feet north of the center line of the track. A standard disk, stamped "U 12 1932" and set in the top of a concrete post. (54.876 meters or 180.039 feet.)

**Mist**, top of north rail opposite the Missouri Pacific Railroad station. (178.4 feet.)

**V 12.**—About  $1\frac{1}{2}$  miles east along the Missouri Pacific Railroad from **Mist**, Ashley County, .54 feet east of pole 454+15, 48 feet west of the center of a grade crossing, and 28 feet north of the center line of the track. A standard disk, stamped "V 12 1932" and set in the top of a concrete post. (55.832 meters or 183.175 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 454. (188.7 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 453. (187.1 feet.)

**W 12.**—At **Snyder**, Ashley County, about 70 yards west of the Missouri Pacific Railroad station, near the west end of the siding, about 100 feet west of the center of a grade crossing, 8 feet east of pole 451+17, and 30 feet north of the center line of the main track. A standard disk, stamped "W 12 1932" and set in the top of a concrete post. (53.357 meters or 175.055 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 451. (174.7 feet.)

**Milepost 25 (M. P. R.R.)**.—About  $2\frac{1}{4}$  miles east along the Missouri Pacific Railroad from the station at **Snyder**, Ashley County, at pole 449+7, and in the top of the concrete milepost. A copper bolt. (39.802 meters or 130.584 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 449. (130.6 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 448. (130.2 feet.)

**X 12.**—About  $4\frac{1}{2}$  miles west along the Missouri Pacific Railroad from **Montrose**, Ashley County, about 200 yards west of the point where State Highway 2 leaves the track at **Owens**, 9 feet east of milepost 448, 54 feet south of the center line of the highway, and 27 feet north of the center line of the track. A standard disk, stamped "X 12 1932" and set in the top of a concrete post. (39.628 meters or 130.013 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 447. (125.8 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 446. (128.7 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 445. (128.6 feet.)

**Y 12.**—About  $\frac{5}{8}$  mile west along the Missouri Pacific Railroad from **Montrose**, Ashley County, 25 feet northwest of pole 444+12, 50 feet north of the center line of the track, 37 feet west of an 18-inch pin oak tree in the front yard of a house owned by J. A. Streeter, and 1 foot south of the fence line. A standard disk, stamped "Y 12 1932" and set in the top of a concrete post. (39.244 meters or 128.753 feet.)

**Milepost 20 (M. P. R.R.).**—About  $\frac{1}{2}$  mile west along the Missouri Pacific Railroad from **Montrose**, Ashley County, at pole 444+7, and in the top of the concrete milepost. A copper bolt. (39.055 meters or 128.133 feet.)

**Z 12.**—At **Montrose**, Ashley County, on the Missouri Pacific Railroad, about 200 yards west of the railroad crossing, 94 feet south of pole 443+25, 50 feet east of the west end of a cross-over track, and 38 feet south of the center line of the main track. A standard disk, stamped "Z 12 1932" and set in the top of a concrete post. (38.494 meters or 126.292 feet.)

**Montrose**, top of rail at the crossing of main and branch lines of the Missouri Pacific Railroad. (128.1 feet.)

**A 13.**—At **Montrose**, Ashley County, at the crossing of main and branch lines of the Missouri Pacific Railroad, 68 feet east of pole 443+20, 131 feet east of the center line of the main track, and 28 feet north of the center line of the branch track. A standard disk, stamped "A 13 1932" and set in the top of a concrete post. (38.389 meters or 125.948 feet.)

### Spur line to Wilmot.

**Milepost 435 (M. P. R.R.).**—About 2.9 miles south along the Missouri Pacific Railroad from **Montrose**, Ashley County, and in the top of the concrete milepost. A copper bolt. (39.125 meters or 128.363 feet.)

**K 13.**—About  $\frac{1}{4}$  mile north along the Missouri Pacific Railroad from the station at **Portland**, Ashley County, about  $\frac{1}{2}$  pole south of pole 436+4, 69 feet north of the center of a grade crossing, 50 feet west of the center line of the track, and 10 feet north of a fence corner. A standard disk, stamped "K 13 1932" and set in the top of a concrete post. (38.740 meters or 127.099 feet.)

**Portland**, top of rail opposite the Missouri Pacific Railroad station. (129.0 feet.)

**L 13.**—About  $2\frac{1}{2}$  miles south along the Missouri Pacific Railroad from the station at **Portland**, Ashley County, 12 feet south of pole 438+28, immediately south of a cattle crossing, east of a Negro's shack, 51 feet west of the center line of the track, and 25 feet east of the center line of U.S. Highway 165. A standard disk, stamped "L 13 1932" and set in the top of a concrete post. (35.140 meters or 115.288 feet.)

**Milepost 440 (M. P. R.R.).**—About 3.6 miles south along the Missouri Pacific Railroad from the station at **Portland**, Ashley County, and in the top of the concrete milepost. A copper bolt. (35.710 meters or 117.159 feet.)

**M 13.**—About  $2\frac{1}{2}$  miles north along the Missouri Pacific Railroad from the station at **Parkdale**, Ashley County, about  $\frac{1}{4}$  mile north of a grade crossing, 42 feet north of pole 442+16, 49 feet west of the center line of the track, and 26 feet east of the center line of United States Highway 165. A standard disk, stamped "M 13 1932" and set in the top of a concrete post. (36.114 meters or 118.484 feet.)

**N 13.**—At **Parkdale**, Ashley County, 88 feet northeast of the northeast corner of the Missouri Pacific Railroad station, 72 feet south of the center of a grade crossing, 31 feet east of the center line of the main track, and 8 feet south of pole 444+29. A standard disk, stamped "N 13 1932" and set in the top of a concrete post. (35.797 meters or 117.444 feet.)

**Parkdale**, top of rail opposite the Missouri Pacific Railroad station. (119.2 feet.)

**P 13.**—About  $2\frac{1}{4}$  miles north along the Missouri Pacific Railroad from **Wilmot**, Ashley County, 94 feet north of a pole opposite pole 447+06, 96 feet south of a farm-road crossing, 49 feet west of the center line of the track, and 29 feet east of the center line of United States Highway 165. A standard disk, stamped "P 13 1932" and set in the top of a concrete post. (34.080 meters or 111.811 feet.)

**P.B.M. Hudspeth (U.S.E.).**—See page 15.

### End of spur line.

**Milepost 430 (M. P. R.R.).**—About 2.2 miles north along the Missouri Pacific Railroad from **Montrose**, Ashley County, and in the top of the concrete milepost. A copper bolt. (40.407 meters or 132.569 feet.)

**B 13.**—About  $2\frac{1}{4}$  miles north along the Missouri Pacific Railroad from **Montrose**, Ashley County, about 415 feet north of concrete milepost 430, 46 feet north of the center of a grade crossing, 46 feet west of the center line of the track, and 19 feet north of a fence corner. A standard disk, stamped "B 13 1932" and set in the top of a concrete post. (39.521 meters or 129.662 feet.)

**216.72 (A. S. H. C.).**—About  $1\frac{1}{4}$  miles south of the station at **Boydell**, Ashley County, on United States Highway 165, at station 1342+95, and on the southwest corner of the west head wall of a concrete culvert. A chiseled square. (38.686 meters or 126.922 feet.)

**Traverse Station Boydell (U.S.E.).**—About 700 yards south of the Missouri Pacific Railroad station at **Boydell**, Ashley County, 20 feet east of the center line of the main track, and 50 feet west of United States Highway 165. A Corps of Engineers, United States Army, standard mark. (38.402 meters or 125.991 feet.)

**C 13.**—At **Boydell**, Ashley County, 85 feet south of the southwest corner of the Missouri Pacific Railroad station, 47 feet west of the center line of the main track, and 11 feet northeast of the first pole south of the station. A standard disk, stamped "C 13 1932" and set in the top of a concrete post. (39.945 meters or 131.053 feet.)

**Boydell**, top of rail opposite the Missouri Pacific Railroad station. (133.5 feet.)

**Milepost 425 (M. P. R.R.).**—About 0.2 mile south of the Missouri Pacific Railroad station at **Jerome**, Drew County, and in the top of the concrete milepost. A copper bolt. (40.631 meters or 133.304 feet.)

**D 13.**—At **Jerome**, Drew County, 14 feet north of the fourth pole south of the Missouri Pacific Railroad station, 137 feet south of the south edge of the sidewalk on Mississippi Avenue, 47 feet west of the center line of the track, and 23 feet east of the center line of United States Highway 165. A standard disk, stamped "D 13 1932" and set in the top of a concrete post. (39.674 meters or 130.164 feet.)

**Jerome**, top of rail opposite the Missouri Pacific Railroad station. (133.4 feet.)

**Hudspeth**, top of rail opposite the Missouri Pacific Railroad station. (135.8 feet.)

**E 13.**—About  $\frac{1}{4}$  mile north of the Missouri Pacific Railroad station at **Hudspeth**, Chicot County, 96 feet south of the south end of the section house, 30 feet north of the center of a grade crossing, 49 feet east of the center line of the track, and 12 feet northeast of pole 421+26. A standard disk, stamped "E 13 1932" and set in the top of a concrete post. (40.956 meters or 134.370 feet.)

**P.B.M. Hudspeth (U.S.E.).**—See page 15.

**Milepost 420 (M. P. R.R.).**—About  $4\frac{1}{8}$  miles south along the Missouri Pacific Railroad from the station at **Dermott**, Chicot County, and in the top of the concrete milepost. A copper bolt. (42.538 meters or 139.530 feet.)

**F 13.**—About 3.4 miles south along the Missouri Pacific Railroad from the station at **Dermott**, Chicot County, about  $\frac{3}{4}$  mile south of the Enterprise Plantation barns, 61 feet north of pole 419+3, on the north edge of a slight rise, and 45 feet west of the center line of the track. A standard disk, stamped "F 13 1932" and set in the top of a concrete post. (42.233 meters or 138.559 feet.)

**G 13.**—At **Dermott**, Chicot County, in the east wall of the Missouri Pacific Railroad station, 1 foot north of the door to the colored waiting-room, and 5 feet above the platform. A standard disk, stamped "G 13 1932" and set vertically. (45.227 meters or 148.382 feet.)

**H 13.**—At **Dermott**, Chicot County, in the north face of the Exchange Bank and Trust Company Building, in a brick plaster, 8 inches east of the northwest corner, and 5 feet above the sidewalk. A standard disk, stamped "H 13 1932" and set vertically. (44.617 meters or 146.381 feet.)

**Dermott**, top of rail at the crossing of branch lines of the Missouri Pacific Railroad. (142.7 feet.)

**J 13.**—At **Dermott**, Chicot County, in the front or east wall of the city hall, 5 feet north of the north side of the entrance, and 5 feet above the ground. A standard disk, stamped "J 13 1932" and set vertically. (44.099 meters or 144.081 feet.)

**Milepost 415 (M. P. R.R.).**—About 0.7 mile north along the Missouri Pacific Railroad from the station at **Dermott**, Chicot County, and in the top of the concrete milepost. A copper bolt. (42.744 meters or 140.236 feet.)

**Q 13.**—In **Desha** County, about 3.3 miles north along the Missouri Pacific Railroad from **Dermott**, Chicot County, 21 feet south of pole 412+11, about 50 yards north of a switch point, 35 feet east of the center line of the track, and 43 feet west of the center line of U.S. Highway 165. A standard disk,

stamped "Q 13 1932" and set in the top of a concrete post. (42.003 meters or 138.100 feet.)

**Milepost 410 (M. P. R.R.)**—About 1 mile south along the Missouri Pacific Railroad from **McGehee Junction**, Desha County, and in the top of the concrete milepost. A copper bolt. (43.848 meters or 143.858 feet.)

**R 13.**—At **McGehee Junction**, Desha County, on the Missouri Pacific Railroad, 1 block north of the grade crossing of U.S. Highway 65, 76 feet north of the center line of one street, 42 feet east of the center line of another street, 42 feet northwest of the center line of the northwest or main track at the wye, and 6 feet south of pole 409+1. A standard disk, stamped "R 13 1932" and set in the top of a concrete post. (44.636 meters or 146.443 feet.)

**Milepost 410 (M. P. R.R.)**—About 1.1 miles southeast along the Arkansas City branch of the Missouri Pacific Railroad from **McGehee Junction**, Desha County, and in the top of the concrete milepost. A copper bolt. (44.064 meters or 144.567 feet.)

**S 13.**—About 4 miles east by south along the Missouri Pacific Railroad from **McGehee**, Desha County, at **Trippe Junction**, at a grade crossing at pole 412+22, 112 feet northeast of the center line of U.S. Highway 65, and 48 feet north of the center line of the north track at the wye. A standard disk, stamped "S 13 1932" and set in the top of a concrete post. (43.558 meters or 142.907 feet.)

**Milepost 415 (M. P. R.R.)**—About 5 miles west along the Missouri Pacific Railroad from **Arkansas City**, Desha County, and in the top of the concrete milepost. A copper bolt. (44.321 meters or 145.410 feet.)

**T 13.**—About 2½ miles west along the Missouri Pacific Railroad from **Arkansas City**, Desha County, 63 feet southeast of pole 417+21, 41 feet west of the center of a grade crossing, and 58 feet south of the center line of the track. A standard disk, stamped "T 13 1932" and set in the top of a concrete post. (41.166 meters or 135.059 feet.)

**Milepost 420 (M. P. R.R.)**—At **Arkansas City**, Desha County, at the southwest edge of the town, on the Missouri Pacific Railroad, about 50 yards east of a water tank, about 10 feet south of the main track, and in the top of the concrete milepost. A copper bolt. (42.717 meters or 140.147 feet.)

**F.**—See page 7.

#### LINE 16, GRADY TO HAZEN, ARK.

[Second-order leveling]

Although this line is called "Grady to Hazen, Ark.", it was necessary to extend its extremities in order to obtain a tie with adjacent leveling.

This line follows the Missouri Pacific Railroad from **Noble Lake**, through **Moscow**, **Tamo**, and **Grady**, to **Varner**; roads through **Reydel**, **Bayou**, **Meto**, **Hagler**, and **Dewitt**, to **Stuttgart**; and the **St. Louis Southwestern Railway** through **Slovak** to **Hazen**. The field work was done, during the spring of 1932, by a party in charge of **G. R. Fish**, junior hydrographic and geodetic engineer.

For bench marks in the vicinity of **Noble Lake**, see page 7.

**Milepost 400 (M. P. R.R.)**—About 2½ miles west along the Missouri Pacific Railroad from **Moscow**, Jefferson County, and at milepost 400. The top of the concrete milepost. (61.046 meters or 200.282 feet.)

**Moscow**, top of rail opposite the Missouri Pacific Railroad station. (192.6 feet.)

**N 14.**—At **Moscow**, Jefferson County, 63½ feet east of the southeast corner of the Missouri Pacific Railroad station, about 18½ poles east of milepost 402, 27 feet north of the center line of the track, and 7 feet east of the first pole east of the station. A standard disk, stamped "N 14 1932" and set in the top of a concrete post. (58.348 meters or 191.430 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 404. (189.3 feet.)

**Milepost 405 (M. P. R.R.)**—About 2½ miles east along the Missouri Pacific Railroad from **Moscow**, Jefferson County, and at milepost 405. The top of the concrete milepost. (57.451 meters or 188.487 feet.)

**Tamo**, top of rail opposite the Missouri Pacific Railroad station. (191.6 feet.)

**P 14.**—At **Tamo**, Jefferson County, 66 feet east of the northeast corner of the Missouri Pacific Railroad station, 49 feet east of the twenty-first pole east of milepost 405, and 50 feet north of the center line of the track. A standard disk, stamped "P 14 1932" and set in the top of a concrete post. (57.878 meters or 189.888 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 407. (187.6 feet.)

**Q 14.**—About 1 mile west along the Missouri Pacific Railroad from **Grady**, Lincoln County, about  $20\frac{1}{4}$  poles east of milepost 408, 84 feet west of the center of a grade crossing, 48 feet north of the center line of the main track, 48 feet south of the center line of United States Highway 65, 48 feet west of a fence corner, and 1 foot south of the fence. A standard disk, stamped "Q 14 1932" and set in the top of a concrete post. (56.739 meters or 186.151 feet.)

**40 (A.S.H.C.).**—At **Grady**, Lincoln County, on the Missouri Pacific Railroad, about 18 poles east of milepost 409, and at the northeast corner of the concrete foundation of the railroad signal tower. The top of the flat surface of concrete. (56.184 meters or 184.330 feet.)

**R 14.**—At **Grady**, Lincoln County, about 120 feet northeast of the northeast corner of the Missouri Pacific Railroad station, about  $19\frac{3}{4}$  poles east of milepost 409, about 80 feet west of the center of a grade crossing, 48 feet north of the center line of the track, 41 feet south of the center line of United States Highway 65, and 34 feet west of a 24-inch sycamore tree. A standard disk, stamped "R 14 1932" and set in the top of a concrete post. (56.198 meters or 184.376 feet.)

**Grady**, top of rail opposite the Missouri Pacific Railroad station. (185.1 feet.)

**Milepost 410 (M. P. R.R.).**—About 0.3 mile southeast along the Missouri Pacific Railroad from **Grady**, Lincoln County, and at milepost 410. The top of the concrete milepost. (57.399 meters or 188.317 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 411. (183.3 feet.)

**S 14.**—About 3 miles southeast along the Missouri Pacific Railroad from **Grady**, Lincoln County, about  $22\frac{1}{2}$  poles southeast of milepost 412, 29 feet west of the center of a grade crossing, 48 feet north of the center line of the track, 28 feet south of the center line of United States Highway 65, 4 feet west of a fence corner, and 3 feet south of the fence. A standard disk, stamped "S 14 1932" and set in the top of a concrete post. (54.989 meters or 180.410 feet.)

**Milepost 415 (M. P. R.R.).**—About 0.2 mile northwest along the Missouri Pacific Railroad from **Varner**, Lincoln County, and at milepost 415. The top of the concrete milepost. (55.147 meters or 180.928 feet.)

**Varner**, top of rail opposite the Missouri Pacific Railroad station. (180.6 feet.)

**13 (U.S.E.).**—At **Varner**, Lincoln County, about 125 feet southeast of the intersection of the Missouri Pacific Railroad and United States Highway 65, 12 feet south of the southeast corner of the post office and general store, and 98 feet east of the center line of the road. A Corps of Engineers, United States Army, standard cap, stamped "13 A.R." and fastened on the top of a 3-inch pipe. (54.579 meters or 179.065 feet.)

J.—See page 7.

**173.6 (U.S.G.S.).**—About 1.0 mile north along the road to the Arkansas State Prison Farm from **Varner**, Lincoln County, about 350 feet north of the junction of road forks, at an eastward turn in a gravel road, 65 feet east of the east side of a house, and in the south root of a 30-inch oak tree, painted "173.6." A United States Geological Survey standard copper nail and washer. (52.946 meters or 173.707 feet.)

**T 14.**—About  $2\frac{1}{2}$  miles northeast along the road to the Arkansas State Prison Farm from **Varner**, Lincoln County, at the west curve of a reverse curve in the gravel road, 95 feet southwest of a pole at an angle in the line of poles, 19 feet north of the northwest corner of a Negro's cabin, and 30 feet south of the center line of the road. A standard disk, stamped "T 14 1932" and set in the top of a concrete post. (53.951 meters or 177.004 feet.)

**1 W (U.S.G.S.).**—About  $3\frac{1}{4}$  miles northeast of **Varner**, Lincoln County, at the Arkansas State Prison Farm, at the northeast corner of Neil Shannon's front yard,  $18\frac{1}{2}$  feet south of a point 36 feet west of the center line of a T-road leading west, 18 feet west of a sycamore tree, and 16 feet east of a small

iron flagpole. A United States Geological Survey standard disk, stamped "NO. 1 W 1928" and set in the top of a concrete post. (54.037 meters or 177.286 feet.)

**U 14.**—About 4¾ miles northeast of Varner, Lincoln County, at the north edge of the Arkansas State Prison Farm, about ½ mile north of the State Farm cotton gin, at the south toe of the Arkansas River levee, 80 feet north of the center line of the road parallel to the levee, 16 feet west of the center line of a road over the levee, and 3 feet west of a fence corner. A standard disk, stamped "U 14 1932" and set in the top of a concrete post. (54.297 meters or 178.139 feet.)

**186 (U.S.E.)**.—About 4½ miles south of Reydel, Jefferson County, at the Hannaberry Plantation, near the north landing of the Arkansas River ferry, at the north toe of the river levee, and 20 feet west of a point 65 feet south of a right-angle turn in the road to the ferry. A Corps of Engineers, United States Army, standard cap, fastened on the top of a 3-inch pipe. (56.805 meters or 186.368 feet.)

**M 14.**—About 4½ miles south of Reydel, Jefferson County, at the Hannaberry Plantation, near a landing of the Arkansas River ferry, 53 feet west of the center line of the road to the ferry, 34 feet southeast of the northeast corner of a house owned by F. S. Glover, and 1 foot east of the yard fence. A standard disk, stamped "M 14 1932" and set in the top of a concrete post. (55.739 meters or 182.870 feet.)

**L 14.**—About 2¼ miles south along State Highway 11 from Reydel, Jefferson County, about 300 yards north of two Negro cabins facing the highway, about 200 yards east of the Arkansas River levee, at the intersection of a private road to a Negro cabin, 36 feet west of the center line of the highway, and 25 feet south of the center line of the private road. A standard disk, stamped "L 14 1932" and set in the top of a concrete post. (55.423 meters or 181.834 feet.)

**U 13.**—At Reydel, Jefferson County, 40 yards west of the west end of the bridge over Little Bayou Meto, 50 feet south of the center line of the St. Louis-Southwestern Railway, and in the northeast corner of the Hannaberry plantation storehouse yard, 20 feet northeast of the northeast corner of the house. A standard disk, stamped "U 13 1932" and set in the top of a concrete post. (55.488 meters or 182.047 feet.)

**P.B.M. Reydel (7)**.—At Reydel, Jefferson County, at the southwest corner of the steel highway bridge over Little Bayou Meto. The top of the south anchor bolt. (55.333 meters or 181.538 feet.)

**V 13.**—About 2½ miles northeast along State Highway 11 from Reydel, Jefferson County, about 200 yards north of a curve in the highway, 44 feet northwest of the northwest corner of a cabin owned by Jake Young, 27 feet east of the center line of the highway, and 4 feet south of a fence corner at an offset in the fence in front of the cabin. A standard disk, stamped "V 13 1932" and set in the top of a concrete post. (54.620 meters or 179.199 feet.)

**W 13.**—About ½ mile south of Bayou Meto, Arkansas County, at the northwest corner of the southeast quarter of section 35, T. 5 S., R. 5 W., at the southeast corner of a road intersection about ½ mile north of State Highway 11, 85 feet south of the southwest corner of a house owned by Frank Webster, 28 feet east of the center line of the north-and-south road, and 28 feet south of the center line of the east-and-west road. A standard disk, stamped "W 13 1932" and set in the top of a concrete post. (58.147 meters or 190.771 feet.)

**X 13.**—At Hagler, Arkansas County, at the northwest corner of a T-junction of two county roads, in the southeast corner of W. G. R. Hampton's yard, 67 feet south of the southeast corner of his residence, 40 feet west of the center line of the north-and-south road, 34 feet north of the center line of the east-and-west road, and 9 feet north of a 24-inch oak tree. A standard disk, stamped "X 13 1932" and set in the top of a concrete post. (58.672 meters or 192.493 feet.)

**Y 13.**—About 11 miles west of De Witt, Arkansas County, on State Highway 11, at Lodges Corner, in the southeast corner of W. M. Freeman's yard, 44 feet south of the southeast corner of a porch on his house, 38.5 feet west of the center line of the highway, 36 feet north of the center line of an east-and-west road, and 10 feet northwest of a pole. A standard disk, stamped "Y 13 1932" and set in the top of a concrete post. (58.321 meters or 191.341 feet.)

**191.12 (U.S.G.S.)**.—About 11 miles west of De Witt, Arkansas County, on State Highway 11, at the southeast corner of section 34, T. 4 S., R. 5 W., 12 feet west of a T-road leading north, 30 feet north of the highway, and on the top of a concrete culvert. A chiseled square. (58.319 meters or 191.335 feet.)

**194.63 (U.S.G.S.).**—About  $9\frac{1}{2}$  miles west along State Highway 32 from De Witt, Arkansas County, thence  $2\frac{1}{2}$  miles northeast along State Highway 11, at the southeast corner of section 27, T. 4 S., R. 5 W., 25 feet north of a point 30 feet west of the center of the intersection of the road to a house and a road leading west, 8 feet from a pole, and on the top of a concrete canal culvert. A chiseled square. (59.374 meters or 194.796 feet.)

**31 W (U.S.G.S.).**—About  $12\frac{1}{2}$  miles south along State Highway 11 from Stuttgart, Arkansas County, 93 feet north of a point 25 feet west of the junction of the T-road leading west, 48 feet east of the Stillwell School, District No. 62, and 9 feet west of a small elm tree in the school yard. A United States Geological Survey standard disk, stamped "NO. 31 W 1928" and set in the top of a concrete post. (58.507 meters or 191.952 feet.)

**Z 13.**—About 11 miles south along State Highway 11 from Stuttgart, Arkansas County, about  $1\frac{1}{2}$  miles north of the Stillwell School, at the southwest corner of section 15, T. 4 S., R. 5 W., 31 feet north of the center line of an east-and-west road, and 29 feet east of the center line of the highway. A standard disk, stamped "Z 13 1932" and set in the top of a concrete post. (59.774 meters or 196.109 feet.)

**199.**—About 10 miles south along State Highway 11 from Stuttgart, Arkansas County, at the northwest corner of sec. 15, T. 4 S., R. 5 W., at the southeast corner of a road intersection, 33 feet south of the center line of the road, and 13.7 feet east of the east edge of the pavement. The top of the east one of two lugs projecting from a concrete-enclosed pipe under the highway. (60.710 meters or 199.179 feet.)

**30 W (U.S.G.S.).**—About 9 miles south along State Highway 11 from Stuttgart, Arkansas County, at the southeast quarter corner of section 3, T. 4 S., R. 5 W., 18 feet north of a point 33 feet west of the center of a crossroads, and 4 feet from a fence corner. A United States Geological Survey standard disk, stamped "30 W 1928" and set in the top of a concrete post. (61.328 meters or 201.207 feet.)

**191.52 (U.S.G.S.).**—About  $8\frac{1}{2}$  miles south along State Highway 11 from Stuttgart, Arkansas County, 197 feet west of the northeast quarter corner of section 3, T. 4 S., R. 5 W., 15 feet south of the center line of the highway, and on the southeast wing wall of a concrete culvert with iron banisters. A chiseled square. (58.444 meters or 191.745 feet.)

**194.50 (U.S.G.S.).**—About  $7\frac{1}{2}$  miles south along State Highway 11 from Stuttgart, Arkansas County, at the southeast corner of section 33, T. 3 S., R. 5 W., 15 feet north of the center line of an east-and-west road, 12 feet west of the center line of the highway, and on the top of the only wing wall of a culvert. A chiseled square. (59.354 meters or 194.731 feet.)

**29 W (U.S.G.S.).**—About  $6\frac{1}{2}$  miles south along State Highway 11 from Stuttgart, Arkansas County, at the northwest corner of section 27, T. 3 S., R. 5 W., 30 feet south of a point 33 feet east of the center of a crossroads, and 5 feet from the fence corner. A United States Geological Survey standard disk, stamped "NO. 29 W 1928" and set in the top of a concrete post. (61.417 meters or 201.499 feet.)

**204.73 (U.S.G.S.).**—About  $5\frac{1}{2}$  miles south along State Highway 11 from Stuttgart, Arkansas County, about 600 feet south of the northeast corner of section 23, T. 3 S., R. 5 W., 15 feet west of the center line of the highway, and on the top of the northwest wing wall of a concrete culvert with iron banisters. A chiseled square. (62.468 meters or 204.947 feet.)

**207.79 (U.S.G.S.).**—About  $4\frac{1}{2}$  miles south along State Highway 11 from Stuttgart, Arkansas County, at the southeast corner of section 16, T. 3 S., R. 5 W., 15 feet north of a point 12 feet west of the center of a crossroads, and on the top of a concrete culvert. A chiseled square. (63.397 meters or 207.995 feet.)

**28 W (U.S.G.S.).**—About  $3\frac{1}{2}$  miles south along State Highway 11 from Stuttgart, Arkansas County, at the northwest corner of section 10, T. 3 S., R. 5 W., 33 feet south of a point 36 feet east of the center of a crossroads, and 7 feet from a fence corner. A United States Geological Survey standard disk, stamped "NO. 28 W 1928" and set in the top of a concrete post. (62.553 meters or 205.226 feet.)

**215.56 (U.S.G.S.).**—About  $2\frac{1}{2}$  miles south along State Highway 11 from Stuttgart, Arkansas County, at the southeast corner of section 10, T. 3 S., R. 5 W., at the east entrance of the Stucky School, and on the southwest corner of a large concrete step. A chiseled square. (65.759 meters or 211.744 feet.)

**A 14.**—About 1½ miles south along State Highway 11 from Stuttgart, Arkansas County, at the southwest corner of the intersection of State Highway 30, 43 feet south of the center line of the east-and-west highway, and 41 feet west of the center line of the north-and-south highway. A standard disk, stamped "A 14 1932" and set in the top of a concrete post. (65.556 meters or 215.078 feet.)

**20 W (U.S.G.S.).**—At Stuttgart, Arkansas County, 25 feet north of a point 27 feet west of the center of the intersection of Ninth and Lowe Streets, at the southeast corner of the Stuttgart High School yard, 105 feet southeast of southeast corner of the school building, and 3 feet west of the sidewalk. A the United States Geological Survey standard disk, stamped "NO. 20 W 1928" and set in the top of a concrete post. (63.653 meters or 208.835 feet.)

**B 14.**—At Stuttgart, Arkansas County, in the east wall of the county courthouse, 1 foot south of the northeast corner, and 4 feet above the ground. A standard disk, stamped "B 14 1932" and set vertically. (66.115 meters or 216.912 feet.)

**C 14.**—At Stuttgart, Arkansas County, in the north or front wall of the Chicago, Rock Island & Pacific Railway station, 27 feet east of the northwest corner, and 5 feet above the platform. A standard disk, stamped "C 14 1932" and set vertically. (65.863 meters or 216.083 feet.)

**D 14.**—At Stuttgart, Arkansas County, in the north or front wall of the St. Louis Southwestern Railway station, 2 feet west of the west side of the door of the White waiting room, and 4½ feet above the platform. A standard disk, stamped "D 14 1932" and set vertically. (66.690 meters or 218.799 feet.)

**Stuttgart,** top of rail opposite the St. Louis Southwestern Railway station. (213.4 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 235. (214.8 feet.)

**E 14.**—About 3 miles north along the St. Louis Southwestern Railway from Stuttgart, Arkansas County, about ¼ mile north of the station at Rice Junction, about 300 feet south of the north switch point of the Y-junction, 16 feet northeast of the twelfth pole north of milepost 236, and 49 feet east of the center line of the east track. A standard disk, stamped "E 14 1932" and set in the top of a concrete post. (67.076 meters or 220.065 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 237. (219.4 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 238. (220.6 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 239. (215.4 feet.)

**F 14.**—In Prairie County, about 6 miles north along the St. Louis Southwestern Railway from Stuttgart, Arkansas County, about 8 poles north of milepost 239, 65 feet west of the center line of the track, and 25 feet south of the center line of a section-line road. A standard disk, stamped "F 14 1932" and set in the top of a concrete post. (64.609 meters or 211.971 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 241. (222.8 feet.)

**G 14.**—About 1¼ miles south along the St. Louis Southwestern Railway from Slovac, Prairie County, about 12½ poles north of milepost 242, 25 feet north of the center line of a section-line grade crossing, and 43 feet west of the center line of the track. A standard disk, stamped "G 14 1932" and set in the top of a concrete post. (66.792 meters or 219.133 feet.)

**218.04 (U.S.G.S.).**—About ½ mile south along the St. Louis Southwestern Railway from Slovac, Prairie County, about 250 feet east of the southwest corner of section 5, T. 1 S., R. 5 W., 44.5 feet east of a point 62 feet north of the crossing of State Highway 11, 5 feet south of a pole, and 5 feet west of a fence. The top of a Ford axle driven in the ground. (66.479 meters or 218.107 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 243. (222.0 feet.)

**24 W (U.S.G.S.).**—At Slovac, Prairie County, at the northwest corner of the yard of a white frame church, 45 feet south of a point 30 feet east of the center of a crossroads, and 3 feet from a fence corner. A United States Geological Survey standard disk, stamped "NO. 24 W 1928" and set in the top of a concrete post. (66.949 meters or 219.649 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 244. (216.4 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 245. (217.1 feet.)

**H 14.**—About  $1\frac{1}{2}$  miles north along the St. Louis Southwestern Railway from Slovac, Prairie County, 51 feet north of the fourteenth pole north of milepost 245, 40 feet south of the center of a road crossing, and 48 feet west of the center line of the track. A standard disk, stamped "H 14 1932" and set in the top of a concrete post. (65.476 meters or 214.816 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 246. (213.8 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 248. (215.4 feet.)

**J 14.**—About  $4\frac{1}{2}$  miles south along the St. Louis Southwestern Railway from Hazen, Prairie County, at the siding at Speer, about 100 yards north of a large frame warehouse, 11 feet north of the seventh pole north of milepost 248, 76 feet south of the north switch point, and 44 feet east of the center line of the main track. A standard disk, stamped "J 14 1932" and set in the top of a concrete post. (64.795 meters or 212.582 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 249. (215.9 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 250. (223.4 feet.)

**K 14.**—About 2 miles south along the St. Louis Southwestern Railway from Hazen, Prairie County, about 20 poles north of milepost 250, 30 feet south of the center of a section-line road crossing, 49 feet west of the center line of the track, and 11 feet south of a pole supporting a brace to a power-transmission pole. A standard disk, stamped "K 14 1932" and set in the top of a concrete post. (68.425 meters or 224.491 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 252. (230.4 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 253. (231.8 feet.)

**Hazen.**—See page 152.

#### LINE 17, WHEATLEY TO HELENA, ARK.

[First-order leveling]

This line follows the Missouri & North Arkansas Railway from Wheatley, through Moro and Rondo, to Helena. The line was run as a second-order line in March 1932, by a party in charge of G. R. Fish, junior hydrographic and geodetic engineer, and was rerun in January 1933, by a party in charge of J. D. Thurmond, junior hydrographic and geodetic engineer. The elevations given below are those resulting from a combination of the two runnings.

For additional bench marks in the vicinity of Wheatley, see page 155.

**M 15.**—At Wheatley, St. Francis County, on the Missouri & North Arkansas Railway, 117 feet south of the center line of the main track of the Chicago, Rock Island & Pacific Railway, 11 feet southeast of pole 316+10, and 39 feet northeast of the center line of the main track of the Missouri & North Arkansas Railway. A standard disk, stamped "M 15 1932" and set in the top of a concrete post. (61.858 meters or 202.946 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 317. (202.0 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 318. (193.2 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 319. (208.0 feet.)

**L 15.**—In Lee County, about  $2\frac{3}{4}$  miles southeast along the Missouri & North Arkansas Railway from Wheatley, St. Francis County, at pole 319+02, 59 feet west of the center line of State Highway 78, 45 feet northeast of the center line of the main track, and 39 feet north of the center line of an east-and-west county road. A standard disk, stamped "L 15 1932" and set in the top of a concrete post. (63.858 meters or 209.507 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 320. (207.1 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 321. (198.6 feet.)

**K 15.**—In Lee County, about 5.4 miles southeast along the Missouri & North Arkansas Railway from **Wheatley**, St. Francis County, about  $\frac{1}{4}$  mile southeast of the siding at **Hopper**, 13 feet southeast of pole 321+21, 55 feet north of the center line of an east-and-west county road, and 47 feet northeast of the center line of the track. A standard disk, stamped "K 15 1932" and set in the top of a concrete post. (59.708 meters or 195.892 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 322. (188.8 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 323. (195.5 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 324. (204.8 feet.)

**J 15.**—About 2 miles northwest along the Missouri & North Arkansas Railway from the station at **Moro**, Lee County, at **Little Prairie**, at pole 324+25, 60 feet north of the west end of a railroad culvert, 49 feet southwest of the center line of the track, and 42 feet west of the center line of a north-and-south county road. A standard disk, stamped "J 15 1932" and set in the top of a concrete post. (61.408 meters or 201.469 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 325. (202.0 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 326. (200.2 feet.)

**H 15.**—At **Moro**, Lee County, 43 feet northwest of the north corner of the Missouri & North Arkansas Railway station, about  $\frac{1}{2}$  pole southeast of pole 326+27, about 174 feet northwest of the center of a grade crossing, and 30 feet southwest of the center line of the track. A standard disk, stamped "H 15 1932" and set in the top of a concrete post. (61.603 meters or 202.109 feet.)

**Moro**, top of rail opposite the Missouri & North Arkansas Railway station. (202.2 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 327. (201.0 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 328. (198.3 feet.)

**G 15.**—About 1.9 miles southeast along the Missouri & North Arkansas Railway from the station at **Moro**, Lee County, 7 feet southeast of pole 328+24, about 80 yards northwest of the crossing of State Highway 3, 40 feet northeast of the center line of the track, and 39 feet southwest of the center line of State Highway 78. A standard disk, stamped "G 15 1932" and set in the top of a concrete post. (61.712 meters or 202.467 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 329. (201.3 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 330. (207.0 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 331. (204.6 feet.)

**F 15.**—About  $2\frac{1}{4}$  miles northwest along the Missouri & North Arkansas Railway from the station at **Aubrey**, Lee County, at **Thomasville**, 69 feet southeast of pole 331+23, 62 feet south of the southeast corner of a house owned by **Mattie Vinson**, 33 feet northwest of the center of a road crossing, and 52 feet northeast of the center line of the main track. A standard disk, stamped "F 15 1932" and set in the top of a concrete post. (61.927 meters or 203.172 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 332. (204.1 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 333. (201.0 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 334. (200.2 feet.)

**Aubrey**, top of rail opposite the Missouri & North Arkansas Railway station. (205.7 feet.)

**E 15.**—At **Aubrey**, Lee County, in line with the southwest side of the Missouri & North Arkansas Railway station, 44 feet south of pole 334+13, 53 feet southeast of the south corner of the station, and 29 feet northeast of the center line of

the main track. A standard disk, stamped "E 15 1932" and set in the top of a concrete post. (62.745 meters or 205.856 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 335. (204.2 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 336. (200.4 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 337. (202.8 feet.)

D 15.—About 2.8 miles northwest along the Missouri & North Arkansas Railway from the station at Rondo, Lee County, about  $\frac{1}{2}$  pole southeast of pole 337+14, 59 feet southeast of the center of a grade crossing, 45 feet southwest of the center line of the track, and 6 feet southeast of a fence corner. A standard disk, stamped "D 15 1932" and set in the top of a concrete post. (61.565 meters or 201.985 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 338. (204.2 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 339. (207.5 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 340. (214.3 feet.)

Rondo, top of rail opposite the Missouri & North Arkansas Railway station. (216.4 feet.)

C 15.—At Rondo, Lee County, 96 feet southeast of the southeast corner of the Missouri & North Arkansas Railway station, 7 feet southeast of pole 340+10, 42 feet southeast of the center of a grade crossing, 40 feet northeast of the center line of the track, and  $4\frac{1}{2}$  feet southeast of the southeast edge of a sidewalk. A standard disk, stamped "C 15 1932" and set in the top of a concrete post. (65.845 meters or 216.026 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 341. (216.9 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 342. (218.1 feet.)

B 15.—In Phillips County, about 2.7 miles southeast along the Missouri & North Arkansas Railway from the station at Rondo, Lee County, at Edgewood, at pole 343+00, 57 feet west of the center line of a county road, and 44 feet southwest of the center line of the track. A standard disk, stamped "B 15 1932" and set in the top of a concrete post. (66.602 meters or 218.510 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 343. (218.6 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 344. (204.7 feet.)

T.B.M. 33.—About 2 miles northwest along the Missouri & North Arkansas Railway from Lexa, Phillips County, at the crossing of State Highway 1, in the southeast head wall of a concrete culvert under the highway, about 4 yards northeast of the center line of the track, about 5 yards southeast of the center line of the highway, 5 inches northeast of the southwest end of the head wall, and 3 inches northwest of the southeast edge. A chiseled square. (61.909 meters or 203.113 feet.)

T.B.M. North Lexa.—Destroyed. (61.824 meters or 202.834 feet.)

A 15.—About 1 mile north along the Missouri & North Arkansas Railway from Lexa, Phillips County, at pole 345+06, 57 feet southeast of the center line of the Missouri Pacific Railroad track, and 51 feet southwest of the center line of the Missouri & North Arkansas Railway track. A standard disk, stamped "A 15 1932" and set in the top of a concrete post. (60.861 meters or 199.675 feet.)

Top of rail at the crossing of the Missouri & North Arkansas Railway and the Missouri Pacific Railroad. (203.3 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 346. (199.8 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 348. (210.8 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 349. (225.8 feet.)

Southland, top of rail opposite the Missouri & North Arkansas Railway station. (224.8 feet.)

Z 14.—About  $3\frac{1}{2}$  miles northwest along the Missouri & North Arkansas Railway from West Helena, Phillips County, at Southland, 78 feet south of the

south corner of the station, about  $\frac{1}{2}$  pole southeast of pole 349+15, 76 feet north of the north corner of a cotton-gin building, and 41 feet southwest of the center line of the track. A standard disk, stamped "Z 14 1932" and set in the top of a concrete post. (68.335 meters or 224.196 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 350. (220.3 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 351. (235.7 feet.)

Top of rail opposite Missouri & North Arkansas Railway milepost 352. (241.7 feet.)

**Y 14.**—At West Helena, Phillips County, 49 feet north of the northeast corner of the Missouri & North Arkansas Railway station, about  $\frac{1}{4}$  pole southeast of pole 352+29, and 46 feet east of the center line of the main track. A standard disk, stamped "Y 14 1932" and set in the top of a concrete post. (76.958 meters or 252.486 feet.)

**West Helena,** top of rail opposite the Missouri & North Arkansas Railway station. (254.6 feet.)

**X 14.**—At West Helena, Phillips County, on State Highway 20, about 150 yards southeast of an interurban car-line siding, about 200 feet east of a street running south, 43 feet north of the center line of the highway, 29 feet west of the center line of a private driveway, and 19 feet north of the interurban car track. A standard disk, stamped "X 14 1932" and set in the top of a concrete post. (83.030 meters or 272.408 feet.)

**37 (A.S.H.C.)**—At Helena, Phillips County, at the intersection of Perry and Oakland Streets, and on the south side of Perry Street. The top of the east spout of a fire hydrant. (62.253 meters or 204.242 feet.)

**W 14.**—At Helena, Phillips County, at the southeast corner of Cherry and Perry Streets, in the northwest corner of the county courthouse yard, 23 feet south of the south curb of Perry Street, 23 feet east of the east curb of Cherry Street, and 5 feet northwest of the northwest corner of the courthouse. A standard disk, stamped "W 14 1932" and set in the top of a concrete post. (57.777 meters or 189.557 feet.)

**Helena 1909 (M.R.C.)**—At Helena, Phillips County, at the southwest corner of the intersection of York and Ohio Streets, 25.5 feet west of the west rail of a spur track, 19 feet south of the south curb of York Street, and 2 feet west of the prolongation from the north of the west curb of Ohio Street. The top of a copper bolt leaded in a tile 18 inches square and set about 4 feet under ground. Access to the mark is had through an iron pipe bearing a Mississippi River Commission standard cap. (56.796 meters or 186.338 feet.) (Elevation of cap, 58.008 meters or 190.315 feet.)

**W 1901 (M.R.C.)**—At Helena, Phillips County, at the southeast corner of the intersection of Cherry and York Streets, at a building occupied by the Citizens Building & Loan Association and S. W. Adams & Co., 38 feet east of Cherry Street, 8.5 feet above the walk, and at the extreme east end of the sill of a first-floor window. The under surface of the stone sill. (60.386 meters or 198.116 feet.)

**V 14.**—At Helena, Phillips County, in the front or west wall of the Missouri & North Arkansas Railway station, at the southeast corner of Cherry and Elm Streets, about  $12\frac{1}{2}$  feet south of the south edge of the door to the White waiting room, and 5 feet above the platform. A standard disk, stamped "V 14 1932" and set vertically. (59.658 meters or 195.728 feet.)

**Milepost 0-0 (M. P. R.R.)**—At Helena, Phillips County, on the Missouri Pacific Railroad, about 120 feet southeast of the southeast corner of the Missouri & North Arkansas Railway station, at the southeast corner of Cherry and Elm Streets, on the west slope of the Mississippi River levee, and in the top of the concrete milepost. A copper bolt. (60.153 meters or 197.352 feet.)

**Helena Gauge (M.R.C.)**—At Helena, Phillips County, 58.2 feet southeast of the southeast corner of the Missouri & North Arkansas Railway station, at the southeast corner of Elm and Cherry Streets, on the west slope of the Mississippi River levee, 71 feet northwest of Missouri Pacific Railroad milepost 0-0, 9.8 feet west of the west rail of the second track west of the top of the levee, about  $2\frac{1}{2}$  feet north of the prolongation of the north property line of Phillips Street, and about 2 feet below the surface of the ground. A copper bolt, leaded in the top of a 4- by 6-inch stone post. (58.075 meters or 190.534 feet.)

**Helena Wall No. 1 (U.S.E.)**—At Helena, Phillips County, at the foot of Missouri Street, in the top of a concrete wing wall of the concrete sea wall of Helena levee, and 20.1 feet northeast of a landside angle in the wall. A

United States Engineer Department standard disk. (63.438 meters or 208.130 feet.)

**Helena Wall No. 2 (U.S.E.).**—At Helena, Phillips County, at the south end of Municipal River Terminal, in the land face of the concrete sea wall, 5 feet below the top of the wall, and 3 feet north of an angle in the wall. A United States Engineer Department standard disk, set vertically. (61.958 meters or 203.267 feet.)

**Helena Wall No. 3 (U.S.E.).**—At Helena, Phillips County, about 150 feet south of the bulkhead at the Municipal River Terminal trestle, in the top of the concrete sea wall, at the extreme south end, and 9.4 feet southwest of a landside corner of the wing wall. A United States Engineer Department standard disk. (63.375 meters or 207.923 feet.)

**Triangulation Station North Base (U.S.E.).**—At Helena, Phillips County, about 1¼ miles below the business district, about 80 yards back of the west bank of the Mississippi River at the place where the Corps of Engineers, United States Army, tie up their quarters barges, and on the front slope of an old levee. A copper bolt in the top of a large square stone post, about 1½ feet under ground, and marked by a large iron bar buried immediately west of the mark and projecting about 3 feet above the surface. (56.678 meters or 185.951 feet.)

*NOTE.*—This mark was included in the 1932 leveling. In the 1933 leveling, a mark of the same designation was found to have the same elevation, but it was then described as follows: Triangulation Station North Base (U.S.E.).—At Helena, Phillips County, about 0.5 mile south of the bulkhead at the Municipal River Terminal trestle, about 150 yards east of a point about 150 yards south of a gravel road crossing the levee. A chiseled square on the top of a concrete post. At the time of publication, it was not known whether or not these two descriptions referred to the same mark.

**MLW Helena No. 98 (U.S.E.).**—At Helena, Phillips County, on the water front, directly east of the Missouri Pacific Railroad station, and 40 feet east of a point 30 feet south of a gate in the concrete sea wall. A United States Engineer Department standard cap, riveted on the top of an iron pipe. (56.301 meters or 184.714 feet.)

**P.B.M. Helena I.**—Destroyed.

**P.B.M. Helena II.**—Destroyed.

#### LINE 18. FORREST CITY TO NEWPORT, ARK.

[First-order leveling]

This line follows the Missouri Pacific Railroad from Forrest City through Wynne to Fair Oaks; the St. Louis Southwestern Railway from Fair Oaks to Hickory Ridge; and State highways from Hickory Ridge, through McFadden and Beedeville, to Newport. The line was run as a second-order line, during the spring of 1932, by a party in charge of G. R. Fish, junior hydrographic and geodetic engineer, and was rerun, during the winter of 1932–33, by a party in charge of J. D. Thurmond, junior hydrographic and geodetic engineer. The elevations given below are those resulting from a combination of the two runnings.

For additional bench marks in the vicinity of Forrest City, see pages 19 and 157.

**N 15.**—At Forrest City, St. Francis County, at the northwest corner of Washington and Hill Streets, at the northeast corner of the new post-office yard, 42 feet northeast of the northeast corner of the post office, 20 inches southwest of the northeast corner of the concrete curb around the lot, and about 3 inches under ground. A standard disk, stamped "N 15 1932 275.971" and set in the top of a concrete post. (84.116 meters or 275.971 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 294. (244.1 feet.)

**P 15.**—About 2½ miles north along the Missouri Pacific Railroad from Forrest City, St. Francis County, at pole 293–15, in the northwest corner of the south abutment of trestle 1331, 42 feet north of the center line of State Highway 1, and 9 feet west of the center line of the track. A standard disk, stamped "P 15 1932." (74.720 meters or 245.144 feet.)

**RV 218 (M. P. R.R.).**—About  $2\frac{1}{2}$  miles north along the Missouri Pacific Railroad from **Forrest City**, St. Francis County, at pole 293+14, and in the northeast corner of the north head wall of trestle 1331. A standard Monel-metal rivet. (74.733 meters or 245.187 feet.)

**RV 219 (M. P. R.R.).**—About  $\frac{3}{8}$  mile south along the Missouri Pacific Railroad from **Caldwell**, St. Francis County, at pole 291+15, and in the northwest corner of the south head wall of bridge 1327. A standard Monel-metal rivet. (73.980 meters or 242.716 feet.)

**Caldwell**, top of rail opposite the Missouri Pacific Railroad station. (236.8 feet.)

**Q 15.**—At **Caldwell**, St. Francis County, about 150 feet north of the north end of the Missouri Pacific Railroad station, 41 feet south of pole 290+25, 40 feet north of the center of a road crossing, 44 feet east of the center line of the track, and 17 feet north of a fence corner. A standard disk, stamped "Q 15 1932" and set in the top of a concrete post. (71.307 meters or 233.946 feet.)

**Milepost 290 (M. P. R.R.).**—About 0.9 mile north along the Missouri Pacific Railroad from **Caldwell**, St. Francis County, and about 10 feet west of the center line of the track. A copper bolt in the top of a concrete milepost. (75.528 meters or 247.795 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 289. (240.3 feet.)

**R 15.**—About 2 miles south along the Missouri Pacific Railroad from **Colt**, St. Francis County, opposite pole 288+25, 39 feet north of the center of a road crossing, 49 feet west of the center line of the track, and 16 feet north of a fence corner. A standard disk, stamped "R 15 1932" and set in the top of a concrete post. (71.205 meters or 233.612 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 288. (237.3 feet.)

**Traverse Station M 12 3 (U.S.E.).**—At **Colt**, St. Francis County, on the Missouri Pacific Railroad, at pole 287+2, 20 feet north of a fence, and 18 feet west of the center line of the track. A Corps of Engineers, United States Army, standard disk, stamped "M 12 3" and set in the top of a concrete post. (75.652 meters or 248.202 feet.)

**Reference Mark M 12 3 (U.S.E.).**—At **Colt**, St. Francis County, 183 feet south of the south end of the Missouri Pacific Railroad station, at pole 286+27, 47 feet south of the first pole south of the station, and 47 feet west of the center line of the main track. A Corps of Engineers, United States Army, standard cap, stamped "M 12 3" and fastened on the top of a  $2\frac{1}{2}$ -inch pipe set in concrete. (76.127 meters or 249.760 feet.)

**S 15.**—At **Colt**, St. Francis County, about 40 yards north of the north end of the Missouri Pacific Railroad station, at pole 286+25, 207 feet north of the center of a grade crossing, 50 feet west of the center line of the track, and 8 feet south of the second pole north of the station. A standard disk, stamped "S 15 1932" and set in the top of a concrete post. (76.231 meters or 250.101 feet.)

**Milepost 285 (M. P. R.R.).**—In **Cross County**, about 1.9 miles north along the Missouri Pacific Railroad from **Colt**, St. Francis County, and about 10 feet west of the center line of the track. A copper bolt in the top of the concrete milepost. (77.132 meters or 253.057 feet.)

**RV 220 (M. P. R.R.).**—In **Cross County**, about 2.2 miles north along the Missouri Pacific Railroad from **Colt**, St. Francis County, at pole 284+20, and in the southwest corner of the west head wall of a 4- by 11-foot concrete culvert. A standard Monel-metal rivet. (75.883 meters or 248.959 feet.)

**RV 221 (M. P. R.R.).**—In **Cross County**, about 2.7 miles north along the Missouri Pacific Railroad from **Colt**, St. Francis County, at pole 284+05, and in the southwest corner of the west head wall of a 24-inch cast-iron pipe culvert. A standard Monel-metal rivet. (75.841 meters or 248.822 feet.)

**T 15.**—About  $3\frac{1}{4}$  miles south along the Missouri Pacific Railroad from **Wynne**, **Cross County**, 21 feet south of a pole opposite pole 283+16, 73 feet north of the center of the crossing of State Highway 1, and 48 feet west of the center line of the track. A standard disk, stamped "T 15 1932" and set in the top of a concrete post. (76.378 meters or 250.583 feet.)

**RV 222 (M. P. R.R.).**—About  $1\frac{1}{4}$  miles south along the Missouri Pacific Railroad from **Wynne**, **Cross County**, at pole 281+15, and in the southwest corner of the west head wall of a double 4- by 6-foot concrete culvert. A standard Monel-metal rivet. (77.142 meters or 253.090 feet.)

**RV 223 (M. P. R.R.).**—At **Wynne**, **Cross County**, on the Missouri Pacific Railroad, at pole 280+25, and in the southwest corner of the west head wall

of a double 4- by 4-foot concrete culvert. A standard Monel-metal rivet. (76.809 meters or 251.998 feet.)

V 15.—At Wynne, Cross County, at the north or main entrance to the county courthouse, in the top of the third step from the bottom, 6 inches from the west end of the step, and 6 inches from the north edge. A standard disk, stamped "V 15 1932." (81.044 meters or 265.892 feet.)

U 15.—At Wynne, Cross County, in the west or front wall of the Missouri Pacific Railroad station, 0.7 foot south of the south edge of the door to the White waiting room, and 5 feet above the platform. A standard disk, stamped "U 15 1932" and set vertically. (79.028 meters or 259.273 feet.)

Wynne, top of rail opposite the Missouri Pacific Railroad station. (253.7 feet.)

W 15.—At Wynne, Cross County, about 300 feet west of a point 500 feet south of the crossing of the branch lines of the Missouri Pacific Railroad, in the northeast wall of the Wynne Wholesale Grocery Co. warehouse, 2½ feet northwest of the southeast end of the wall, and 4 feet above the ground. A standard disk, stamped "W 15 1932" and set vertically. (78.126 meters or 256.318 feet.)

RV 224 (M. P. R.R.).—About 1 mile west along the Missouri Pacific Railroad from Wynne, Cross County, at pole 331+10, and in the southeast corner of the concrete foundation of signal 3315. A standard Monel-metal rivet. (72.890 meters or 239.140 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 331. (235.0 feet.)

RV 225 (M. P. R.R.).—About 1.7 miles west along the Missouri Pacific Railroad from Wynne, Cross County, at pole 330+19, and in the northeast corner of the concrete foundation of the battery box. A standard Monel-metal rivet. (71.554 meters or 234.757 feet.)

Milepost 330 (M. P. R.R.).—About 2.4 miles west along the Missouri Pacific Railroad from Wynne, Cross County, and about 10 feet south of the center line of the track. A copper bolt in the top of the concrete milepost. (70.865 meters or 232.496 feet.)

RV 226 (M. P. R.R.).—About 2.4 miles west along the Missouri Pacific Railroad from Wynne, Cross County, at pole 330+00, and in the southeast corner of the concrete foundation of signal 3299. A standard Monel-metal rivet. (71.390 meters or 234.219 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 330. (233.0 feet.)

X 15.—About 2.5 miles west along the Missouri Pacific Railroad from Wynne, Cross County, 20 feet east of pole 329+27, 142 feet east of the center of a road crossing, and 41 feet north of the center line of the track. A standard disk, stamped "X 15 1932" and set in the top of a concrete post. (69.654 meters or 228.523 feet.)

RV 227 (M. P. R.R.).—About 3.3 miles west along the Missouri Pacific Railroad from Wynne, Cross County, at pole 329+02, and in the northeast corner of the concrete foundation of a battery box. A standard Monel-metal rivet. (69.090 meters or 226.673 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 329. (220.6 feet.)

RV 228 (M. P. R.R.).—About 3.9 miles west along the Missouri Pacific Railroad from Wynne, Cross County, at pole 328+15, and in the northeast corner of the concrete foundation of a battery box. A standard Monel-metal rivet. (70.013 meters or 229.701 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 328. (222.4 feet.)

RV 229 (M. P. R.R.).—About 4.4 miles west along the Missouri Pacific Railroad from Wynne, Cross County, at pole 327+29, and in the southeast corner of the concrete foundation of signal 3281. A standard Monel-metal rivet. (68.160 meters or 223.622 feet.)

RV 230 (M. P. R.R.).—About 2.7 miles east along the Missouri Pacific Railroad from Hamlin, Cross County, at pole 327+14, and in the northeast corner of the concrete foundation of a battery box. A standard Monel-metal rivet. (68.295 meters or 224.065 feet.)

RV 231 (M. P. R.R.).—About 2.2 miles east along the Missouri Pacific Railroad from Hamlin, Cross County, at pole 327+00, and in the northeast corner of the concrete foundation of a battery box. A standard Monel-metal rivet. (67.973 meters or 223.008 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 327. (221.6 feet.)

T.B.M. 10.—About 1.7 miles east along the Missouri Pacific Railroad from Hamlin, Cross County, at pole 326+15, and on the southeast corner of the

concrete foundation of signal 326.5. A chiseled square. (67.244 meters or 220.616 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 326. (217.5 feet.)

**RV 232 (M. P. R.R.).**—About 1.1 miles east along the Missouri Pacific Railroad from **Hamlin**, Cross County, at pole 325+28, and in the northeast corner of the concrete foundation of a battery box. A standard Monel-metal rivet. (66.695 meters or 218.815 feet.)

**RV 233 (M. P. R.R.).**—About  $\frac{1}{2}$  mile east along the Missouri Pacific Railroad from **Hamlin**, Cross County, at pole 325+11, and in the southeast corner of the concrete foundation of signal 3253. A standard Monel-metal rivet. (66.741 meters or 218.966 feet.)

Top of rail opposite Missouri Pacific milepost 325. (219.2 feet.)

**Milepost 325 (M. P. R.R.).**—At **Hamlin**, Cross County, on the Missouri Pacific Railroad, and 10 feet south of the center line of the track. A copper bolt in the top of the concrete milepost. (66.747 meters or 218.986 feet.)

**Y 15.**—At **Hamlin**, Cross County, 36 feet west of the second pole east of the Missouri Pacific Railroad station, at pole 324+26, 130 feet northeast of the northeast corner of the store owned by Anna P. Galley, 48 feet south of the center line of the main track, and 12 feet east of a fence corner. A standard disk, stamped "Y 15 1932" and set in the top of a concrete post. (67.008 meters or 219.842 feet.)

**RV 234 (M. P. R.R.).**—At **Hamlin**, Cross County, on the Missouri Pacific Railroad, at pole 324+25, and in the northeast corner of the concrete foundation of a battery box. A standard Monel-metal rivet. (68.038 meters or 223.221 feet.)

**Hamlin**, top of rail opposite the Missouri Pacific Railroad station. (222.5 feet.)

**RV 235 (M. P. R.R.).**—About 0.9 mile west along the Missouri Pacific Railroad from **Hamlin**, Cross County, at pole 323+28, and in the northeast corner of the concrete foundation of a battery box. A standard Monel-metal rivet. (68.458 meters or 224.599 feet.)

**RV 236 (M. P. R.R.).**—About 1.5 miles west along the Missouri Pacific Railroad from **Hamlin**, Cross County, at pole 323+10, and in the southeast corner of the concrete foundation of signal 3233. A standard Monel-metal rivet. (67.740 meters or 222.244 feet.)

**RV 237 (M. P. R.R.).**—About 2.2 miles west along the Missouri Pacific Railroad from **Hamlin**, Cross County, at pole 322+18, and in the northeast corner of the concrete foundation of a battery box. A standard Monel-metal rivet. (67.303 meters or 220.810 feet.)

**RV 238 (M. P. R.R.).**—About 3.2 miles east along the Missouri Pacific Railroad from **Fair Oaks**, Cross County, at pole 321+28, and in the northeast corner of the concrete foundation of a battery box. A standard Monel-metal rivet. (67.188 meters or 220.433 feet.)

**Z 15.**—About 2.6 miles east along the Missouri Pacific Railroad from **Fair Oaks**, Cross County, 60 feet west of pole 321+11, 58 feet east of the east end of bridge 56A, 48 feet north of the center line of the track, and 1 foot north of the right-of-way line. A standard disk, stamped "Z 15 1932" and set in the top of a concrete post. (65.000 meters or 213.254 feet.)

**RV 239 (M. P. R.R.).**—About 2.5 miles east along the Missouri Pacific Railroad from **Fair Oaks**, Cross County, at pole 321+07, and in the southeast corner of the concrete foundation of signal 3213. A standard Monel-metal rivet. (67.401 meters or 221.131 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 321. (219.7 feet.)

**RV 240 (M. P. R.R.).**—About 1.9 miles east along the Missouri Pacific Railroad from **Fair Oaks**, Cross County, at pole 320+17, and in the northeast corner of the concrete foundation of a battery box. A standard Monel-metal rivet. (67.244 meters or 220.616 feet.)

**Milepost 320 (M. P. R.R.).**—About 1.3 miles east along the Missouri Pacific Railroad from **Fair Oaks**, Cross County, and about 10 feet south of the center line of the track. A copper bolt in the top of the concrete milepost. (67.089 meters or 220.108 feet.)

**RV 241 (M. P. R.R.).**—About 1.2 miles east along the Missouri Pacific Railroad from **Fair Oaks**, Cross County, at pole 319+28, and in the southeast corner of the concrete foundation of signal 3201. A standard Monel-metal rivet. (67.438 meters or 221.253 feet.)

**RV 242 (M. P. R.R.).**—About 0.6 mile east along the Missouri Pacific Railroad from **Fair Oaks**, Cross County, at pole 319+12, and in the northeast corner

of the concrete foundation of a battery box. A standard Monel-metal rivet (67.179 meters or 220.403 feet.)

Top of rail opposite Missouri Pacific Railroad milepost 319. (219.9 feet.)  
 RV 243 (M. P. R.R.).—At Fair Oaks, Cross County, on the Missouri Pacific Railroad, at pole 318+21, and in the southeast corner of the concrete foundation of signal 3189. A standard Monel-metal rivet. (67.476 meters or 221.378 feet.)

A 16.—At Fair Oaks, Cross County, on the Missouri Pacific Railroad, at pole 318+20, 173 feet east of the center line of the St. Louis Southwestern Railway track, 31 feet north of the center line of the Missouri Pacific Railroad track, and 9 feet east of the second pole east of the railroad crossing. A standard disk, stamped "A 16 1932" and set in the top of a concrete post. (66.077 meters or 216.788 feet.)

Traverse Station 37 (U.S.E.).—At Fair Oaks, Cross County, at the intersection of the St. Louis Southwestern Railway and the Missouri Pacific Railroad, 79 feet west of the center line of the track of the former, 16 feet north of the center line of the track of the latter, and 4 feet south of a pole. A Corps of Engineers, United States Army, standard disk, stamped "37" and set in the top of a concrete post. (66.748 meters or 218.989 feet.)

Fair Oaks, top of rail at the crossing of the St. Louis Southwestern Railway and the Missouri Pacific Railroad. (220.4 feet.)

RV 244 (St. L. Swn. Ry.).—At Fair Oaks, Cross County, on the St. Louis Southwestern Railway, and in the middle of the west side of the concrete foundation of the signal semaphore. A standard Monel-metal rivet. (67.089 meters or 220.108 feet.)

B 16.—About  $\frac{1}{2}$  mile north along the St. Louis Southwestern Railway from Fair Oaks, Cross County,  $4\frac{3}{4}$  poles south of milepost 172, 69 feet north of United States Highway 64, and 52 feet east of the center line of the track. A standard disk, stamped "B 16 1932" and set in the top of a concrete post. (66.122 meters or 216.935 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 172. (221.0 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 171. (222.0 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 170. (221.6 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 169. (222.2 feet.)

RV 245 (St. L. Swn. Ry.).—At Tilton, Cross County, on the St. Louis Southwestern Railway, in the southeast corner of the concrete foundation of the signal semaphore, and 5 inches from the base of the mast. A standard Monel-metal rivet. (68.422 meters or 224.481 feet.)

Tilton, top of rail opposite the St. Louis Southwestern Railway station. (224.2 feet.)

C 16.—At Tilton, Cross County, 132 feet northeast of the northeast corner of the St. Louis Southwestern Railway station, 70 feet northeast of pole 167+13, 94 feet east of the center line of the main track, in front of the residence of J. D. Slocum, and 2 feet north of the southwest corner of the yard. A standard disk, stamped "C 16 1932" and set in the top of a concrete post. (67.828 meters or 222.532 feet.)

L 11 7 (U.S.E.).—About 0.3 mile north along the St. Louis Southwestern Railway from Tilton, Cross County, at pole 167+04, 66 feet northeast of the northeast corner of the section foreman's residence, 19 feet west of the center line of the track, and 5 feet east of the northeast corner of the section-house yard. A Corps of Engineers, United States Army, standard disk, stamped "L 11 7" and set in the top of a concrete post. (68.469 meters or 224.035 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 167. (224.7 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 166. (225.6 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 165. (226.9 feet.)

D 16.—About 2.8 miles south along the St. Louis Southwestern Railway from Hickory Ridge, Cross County, at the siding at Aberdeen, opposite pole 164+11, 39 feet south of the center of a private-road crossing, and 48 feet west of the center line of the track. A standard disk, stamped "D 16 1932" and set in the top of a concrete post. (68.569 meters or 224.963 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 164. (228.1 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 163. (228.0 feet.)

**E 16.**—At **Hickory Ridge**, Cross County, on the St. Louis Southwestern Railway, opposite pole 161+26, 57 feet north of the center line of State Highway 42, and 62 feet west of the center line of the track. A standard disk, stamped "E 16 1932" and set in the top of a concrete post. (69.727 meters or 228.763 feet.)

**F 16.**—At **Hickory Ridge**, Cross County, 87 feet south of the south end of the St. Louis Southwestern Railway station, 8 feet north of pole 161+17, and 30 feet east of the center line of the main track. A standard disk, stamped "F 16 1932" and set in the top of a concrete post. (72.959 meters or 239.368 feet.)

**RV 246 (St. L. Swn. Ry.).**—At **Hickory Ridge**, Cross County, on the St. Louis Southwestern Railway, in the southwest corner of the concrete foundation of the signal semaphore, and 5 inches from the base of the mast. A standard Monel-metal rivet. (72.763 meters or 238.723 feet.)

**G 16.**—In Jackson County, about 3 miles west along State Highway 42 from **Hickory Ridge**, Cross County, on property of Dewitt Munger, 36 feet southwest of the southwest corner of his residence, about 110 yards north of the center line of the highway, and 1 foot south of a point 2 feet east of a fence corner. A standard disk, stamped "G 16 1932" and set in the top of a concrete post. (67.725 meters or 222.194 feet.)

**H 16.**—At **McFadden**, Jackson County, at the church yard at the east side of the town, 78 feet west of the northwest corner of the church, 80 feet north of the center line of the road, 48 feet north of a fence corner, and 1 foot east of the fence. A standard disk, stamped "H 16 1932" and set in the top of a concrete post. (67.500 meters or 221.456 feet.)

**J 16.**—At **Beedeville**, Jackson County, in the yard of the Beedeville school, 60 feet northeast of the northeast corner of the school, 72 feet west of the center line of the highway, and 1 foot south of a fence. A standard disk, stamped "J 16 1932" and set in the top of a concrete post. (65.416 meters or 214.619 feet.)

**K 16.**—About 3 miles north along State Highway 37 from **Beedeville**, Jackson County, at the intersection of State Highway 145, 65 feet west of the center line of State Highway 37, and 39 feet north of the center line of State Highway 145. A standard disk, stamped "K 16 1932" and set in the top of a concrete post. (67.263 meters or 220.679 feet.)

**L 16.**—About 3 miles north along State Highway 37 from **Beedeville**, Jackson County, thence 3 miles northwest along State Highway 145, on property of P. W. Black, 21 feet north of the center line of a private road, 194 feet west of the center line of State Highway 145, and 1 foot east of a point 6 feet north of the southwest corner of a gin lot. A standard disk, stamped "L 16 1932" and set in the top of a concrete post. (67.512 meters or 221.496 feet.)

**Traverse Station 13 (U.S.E.).**—About 3 miles north along State Highway 37 from **Beedeville**, Jackson County, thence about 6 miles northwest along State Highway 145, about 600 feet south of a cabin owned by Charles Rodgers, 25 feet west of the center line of the highway, and 8 feet south of the prolongation of a fence line. A Corps of Engineers, United States Army, standard disk, stamped "13" and set in the top of a concrete post. (66.950 meters or 219.652 feet.)

**M 16.**—About 3 miles north along State Highway 37 from **Beedeville**, Jackson County, thence about 6½ miles northwest along State Highway 145, on the property of J. M. Koettel, 28 feet northwest of the northwest corner of the house, 29 feet east of the center line of the highway, and 2 feet southeast of the northwest corner of the yard. A standard disk, stamped "M 16 1932" and set in the top of a concrete post. (67.098 meters or 220.187 feet.)

**N 16.**—About 8 miles southeast along State Highway 14 from **Newport**, Jackson County, thence about 1 mile south along State Highway 145, at a turn to the east in the highway, 35 feet east of the center line of a county road, 30 feet south of the center line of the highway, 48 feet southeast of a 48-inch double white oak tree in the middle of the road intersection, and 13 feet east of a fence corner. A standard disk, stamped "N 16 1932" and set in the top of a concrete post. (68.038 meters or 223.221 feet.)

**T.B.M. 34.**—About 8 miles southeast along State Highway 14 from **Newport**, Jackson County, at the Y-intersection of State Highway 145, at a filling station owned by W. W. Swearingner, 45 feet east of the center line of State

Highway 145, 45 feet southwest of the center line of the north leg of the Y on State Highway 14, and on the northeast corner of the concrete foundation of a gasoline pump. A chiseled square. (70.855 meters or 232.463 feet.)

P 16.—About 5½ miles southeast along State Highway 14 from Newport, Jackson County, at a right-angle turn to the south, on property of Grover Lamkins, 31 feet southwest of the southwest corner of the house, 95 feet south of the center line of a county road leading east from the turn, 31 feet east of the center line of the highway, and 6 feet east of the southwest corner of the yard. A standard disk, stamped "P 16 1932" and set in the top of a concrete post. (71.918 meters or 235.951 feet.)

Q 16.—About 4 miles east along State Highway 14 from Newport, Jackson County, at the east end of a ½-mile fill on the highway, at the southeast corner of a T-junction with a county road, 35 feet south of the center line of the highway, 28 feet east of the center line of the county road, and in the northwest corner of a field owned by Pete Holden. A standard disk, stamped "Q 16 1932" and set in the top of a concrete post. (68.516 meters or 224.790 feet.)

228 (U.S.E.).—About 3 miles east along State Highway 14 from Newport, Jackson County, on the south shoulder of the highway, and in the south root of a 48-inch white oak tree. A Corps of Engineers, United States Army, standard copper spike and washer, stamped "U. S. E. B. M." (69.634 meters or 228.458 feet.)

R 16.—About 2 miles east along State Highway 14 from Newport, Jackson County, 36 feet northwest of the northwest corner of a house owned by J. R. Holden, 40 feet south of the center line of the highway, and 1 foot east of the yard fence. A standard disk, stamped "R 16 1932" and set in the top of a concrete post. (68.864 meters or 225.931 feet.)

1 (U.S.E.).—At Newport, Jackson County, at the intersection of Third and Walnut Streets, at the east corner of the jail yard, 16 feet northwest of the northeast curb of Walnut Street, and 8 feet southwest of the southwest curb of Third Street. A Corps of Engineers, United States Army, standard cap, fastened on the top of a 3-inch pipe set in concrete. (68.045 meters or 223.244 feet.)

For additional bench marks in the vicinity of Newport, see pages 48 and 49.

#### LINE 19, MAMMOTH SPRING TO SHIRLEY, ARK.

[First-order leveling]

This line follows State Highway 9 from Mammoth Spring, through Salem, Union, Brockwell, Sylamore, and Mountain View, to Shirley. The line was run as a second-order line, in April 1932, by a party in charge of G. R. Fish, junior hydrographic and geodetic engineer, and was rerun, in February 1933, by a party in charge of J. D. Thurmond, junior hydrographic and geodetic engineer. The elevations given below are those resulting from a combination of the two runnings.

For additional bench marks in the vicinity of Mammoth Spring, see pages 21 and 22.

T.B.M. 2.—At Mammoth Spring, Fulton County, one block west of the Methodist Church on Main Street, at the northeast corner of a street intersection, and on the southwest corner of the concrete foundation of a street light. A chiseled square. (167.280 meters or 548.818 feet.)

T.B.M. 3.—About ½ mile west along State Highway 9 from Mammoth Spring, Fulton County, in the hollow immediately west of the city limits, at a steel-girder bridge with an iron railing, and in the north end of the west concrete head wall. A chiseled square. (171.764 meters or 563.529 feet.)

T.B.M. 6.—About 1½ miles southwest along State Highway 9 from Mammoth Spring, Fulton County, about 75 yards northeast of a graded road leading south, in front of a house owned by C. A. Corner, and on the northeast end of the northwest head wall of a 3- by 4-foot concrete culvert. A chiseled square. (213.404 meters or 700.143 feet.)

S 16.—About 2¾ miles southwest along State Highway 9 from Mammoth Spring, Fulton County, on a small knoll about ¾ mile northeast of J. W.

Baldwin's store, 39 feet east of the center line of the highway, 121 feet southwest of the southwest corner of a brown cobblestone house owned by John Scott, and 43 feet south of the southwest one of four large oak trees in the front yard. A standard disk, stamped "S 16 1932" and set in the top of a concrete post. (226.671 meters or 743.670 feet.)

**T.B.M. 10.**—About  $3\frac{1}{2}$  miles southwest along State Highway 9 from Mammoth Spring, Fulton County, at the crossroads about  $\frac{1}{2}$  mile southwest of J. W. Baldwin's store, about 200 yards southeast of a cobblestone school building on the side road, and on the southwest end of the southeast head wall of a 2- by 2-foot concrete culvert. A chiseled square. (188.965 meters or 619.963 feet.)

**T 16.**—About  $4\frac{3}{4}$  miles southwest along State Highway 9 from Mammoth Spring, Fulton County, at the northeast quarter of the southwest quarter of sec. 15, T. 21 N., R. 6 W., about 200 yards northeast of W. C. Ladd's house, at a concrete bridge over Water Fork of English Creek, and in the top of the northwest end of the northeast abutment. A standard disk, stamped "T 16 1932." (177.213 meters or 581.406 feet.)

**T.B.M. 16.**—About  $5\frac{3}{4}$  miles southwest along State Highway 9 from Mammoth Spring, Fulton County, about  $1\frac{1}{2}$  miles northeast of Fryatt, about  $\frac{1}{4}$  mile northwest of J. C. Whiteside's house, and on the northeast end of the southeast head wall of a 4- by 22-foot concrete bridge. A chiseled square. (204.069 meters or 669.516 feet.)

**U 16.**—About  $6\frac{3}{4}$  miles southwest along State Highway 9 from Mammoth Spring, Fulton County, about  $\frac{1}{2}$  mile northeast of Fryatt, about 200 yards east of a dirt road leading north, at the southeast corner of a small field owned by B. B. McDonald, about 50 yards southwest of his house, 42 feet north of the center line of the highway, and 9 feet west of the center line of the driveway to the house. A standard disk, stamped "U 16 1932" and set in the top of a concrete post. (220.450 meters or 723.260 feet.)

**Fryatt**, top of center line of State Highway 9, in front of the post office. (671.2 feet.)

**T.B.M. 22.**—About 8 miles southwest along State Highway 9 from Mammoth Spring, Fulton County, about  $\frac{7}{8}$  mile southwest of Fryatt, about  $\frac{3}{4}$  mile northeast of the bridge over Myatt Creek, about 150 yards southwest of a bridge with an iron railing, in front of J. C. Campbell's house, and on the northeast end of the southeast head wall of a 3- by 3-foot concrete culvert. A chiseled square. (187.008 meters or 613.542 feet.)

**V 16.**—About 9 miles southwest along State Highway 9 from Mammoth Spring, Fulton County, about  $1\frac{3}{4}$  miles southwest of Fryatt, at the steel truss bridge over Myatt Creek, and in the top of the east end of the north concrete abutment. A standard disk, stamped "V 16 1932." (168.226 meters or 551.921 feet.)

**T.B.M. 27.**—About  $9\frac{1}{2}$  miles northeast along State Highway 9 from Salem, Fulton County, about 150 yards southeast of the Pleasant Ridge schoolhouse (a white frame building situated on the top of a hill northwest of the highway), and on the southwest end of the northwest head wall of an 18-inch galvanized-iron pipe culvert. A chiseled square. (226.021 meters or 741.537 feet.)

**W 16.**—About  $8\frac{1}{2}$  miles northeast along State Highway 9 from Salem, Fulton County, about 2 miles northeast of Camp, at the northwest quarter of the northwest quarter of sec. 2, T. 20 N., R. 7 W., at the store and service station owned by J. M. Bookout, 22 feet west of the west side of the service station, and 44 feet north of the center line of the highway. A standard disk, stamped "W 16 1932" and set in the top of a concrete post. (245.439 meters or 805.244 feet.)

**T.B.M. 31.**—About  $7\frac{1}{4}$  miles northeast along State Highway 9 from Salem, Fulton County, about  $\frac{3}{4}$  mile northeast of Camp, about  $\frac{1}{8}$  mile southeast of a house owned by W. F. Hyslip, and on the southwest end of the northwest head wall of a 3- by 3-foot concrete culvert. A chiseled square. (219.677 meters or 720.724 feet.)

**X 16.**—About  $6\frac{1}{2}$  miles northeast along State Highway 9 from Salem, Fulton County, at Camp, about 110 yards northeast of the northeast end of the bridge over Camp Creek, 73 feet south of the south corner of the porch of a house owned by J. N. Sutherland, 57 feet northwest of the center line of the highway, and at the south corner of a small garden plot. A standard disk, stamped "X 16 1932" and set in the top of a concrete post. (189.962 meters or 623.234 feet.)

**T.B.M. 35.**—About 5 miles northeast along State Highway 9 from Salem, Fulton County, about 1.4 miles southwest of Camp, about 200 yards northeast of a draw, on the top of the southwest wing wall of a 4- by 4-foot concrete culvert, and about 3 feet below the surface of the highway. A chiseled square. (221.035 meters or 725.179 feet.)

**Y 16.**—About 3.6 miles northeast along State Highway 9 from Salem, Fulton County, about  $\frac{1}{2}$  mile northeast of the Hickory Grove schoolhouse, at a curve, 56 feet north of the north corner of a house owned by H. L. Myze, 84 feet north of a 2-foot elm tree, 58 feet east of the center line of the highway, and 1 foot west of a fence. A standard disk, stamped "Y 18 1932" and set in the top of a concrete post. (221.016 meters or 725.117 feet.)

**T.B.M. 41.**—About  $2\frac{1}{2}$  miles northeast along State Highway 9 from Salem, Fulton County, about  $\frac{3}{4}$  mile southwest of the Hickory Grove schoolhouse, about 100 yards northeast of the top of a hill, and on the south end of the west head wall of a 3- by 3-foot concrete culvert. A chiseled square. (224.294 meters or 735.871 feet.)

**Z 16.**—About 1.4 miles northeast along State Highway 9 from Salem, Fulton County, at the bridge over South Fork Creek, and in the northwest end of the northeast abutment. A standard disk, stamped "Z 18 1932." (195.955 meters or 642.896 feet.)

**T.B.M. 45.**—About  $\frac{3}{4}$  mile northeast along State Highway 9 from Salem, Fulton County, about 900 feet northeast of the city limits, about 20 yards south of an old concrete bridge on an abandoned highway, and on the northeast end of the southeast head wall of a culvert on State Highway 9. A chiseled square. (196.964 meters or 646.206 feet.)

**A 17.**—At Salem, Fulton County, in the front or east wall of the county courthouse, 2 feet north of the north edge of the door, and 4 feet above the ground. A standard disk, stamped "A 17 1932" and set vertically. (203.652 meters or 668.148 feet.)

**Salem**, at the northeast corner of the courthouse, top of the highway at the center of the intersection of State Highway 9 and United States Highway 62. (663.5 feet.)

**16 (A.S.H.C.)**.—At the south edge of Salem, Fulton County, on State Highway 9, about 75 yards south of the courthouse, and at the south end of the bridge over the branch. The surface of the concrete pavement at the intersection of the center line of the highway and the south end of the bridge. (201.241 meters or 660.238 feet.)

**NOTE.**—This bench mark was not included in the 1933 leveling.

**B 17.**—About 0.1 mile south of Salem, Fulton County, at the Y-junction of State Highway 9 and United States Highway 62, 92 feet south of the south fork of the Y, 35 feet west of the center line of State Highway 9, in the northeast corner of the front yard of a house owned by Wm. A. Cunningham, and 1 foot south of a point 14 feet west of a fence corner. A standard disk, stamped "B 17 1932" and set in the top of a concrete post. (201.827 meters or 662.161 feet.)

**T.B.M. 49.**—About  $1\frac{1}{4}$  miles southwest along State Highway 9 from Salem, Fulton County, about  $\frac{1}{4}$  mile north of a house owned by W. C. Wilson, at a small creek, and on the northwest wing wall of a concrete bridge with an iron railing. A chiseled square. (219.022 meters or 718.575 feet.)

**C 17.**—About 2 miles south along State Highway 9 from Salem, Fulton County, about 40 yards northwest of a house owned by W. C. Wilson, 188 feet northeast of the center of the northwest end of an 18-inch culvert, 30 feet northwest of the center line of the highway, 7 feet southeast of the east corner of a small tourist cottage, and 1 foot southeast of a fence. A standard disk, stamped "C 17 1932" and set in the top of a concrete post. (225.820 meters or 740.878 feet.)

**T.B.M. 52.**—About  $3\frac{1}{2}$  miles south along State Highway 9 from Salem, Fulton County, about  $\frac{7}{8}$  mile northeast of Wheeling, about 300 yards east of an unpainted house on a hill to the west, about 50 yards north of a curve in the highway from northeast to north, and on the southwest end of the northwest head wall of an 18-inch culvert. A chiseled square. (265.645 meters or 871.537 feet.)

**D 17.**—About  $\frac{3}{4}$  mile southwest along State Highway 9 from Wheeling, Fulton County, at a sharp angle in the highway, at the southeast corner of the front yard at W. Webb's house, 54 feet southeast of the southeast corner of the

house, 44 feet north of the center line of the highway, 37 feet east of a 12-inch hickory tree, and 1 foot west of a point 6 feet north of a fence corner. A standard disk, stamped "D 17 1932" and set in the top of a concrete post. (262.890 meters or 862.498 feet.)

**T.B.M. 58.**—About 2 miles southwest along State Highway 9 from Wheeling, Fulton County, about  $\frac{1}{2}$  mile northeast of the house on the Adolphus Binum farm, on the south side of a small flat, and on the south end of the west head wall of a 3- by 3-foot concrete culvert. A chiseled square. (266.393 meters or 873.991 feet.)

**E 17.**—About  $2\frac{1}{4}$  miles northeast along State Highway 9 from Union, Fulton County, about 1.1 miles north of Strawberry Creek, on the farm owned by Sam Landers and occupied by Lucy Bolton, 39 feet southwest of the southwest corner of the house, 79 feet southeast of the center line of the highway, 9 feet southwest of a 10-inch poplar tree, and 1 foot west of a point 14 feet north of the southwest corner of the yard fence. A standard disk, stamped "E 17 1932" and set in the top of a concrete post. (222.936 meters or 731.416 feet.)

**T.B.M. 62.**—About  $\frac{3}{4}$  mile northeast along State Highway 9 from Union, Fulton County, about 500 yards southwest of the bridge over Strawberry Creek, about 50 yards west of S. T. Caruther's barn, and on the southwest end of the northwest head wall of a 24-inch culvert. A chiseled square. (223.529 meters or 733.361 feet.)

**F 17.**—About  $\frac{1}{2}$  mile south along State Highway 9 from Union, Fulton County, 69 feet northeast of the Fulton-Izard county-line signpost, 57 feet east of the center line of the highway, 55 feet north of the center line of a lane leading west, and 6 feet west of a pole. A standard disk, stamped "F 17 1932" and set in the top of a concrete post. (237.852 meters or 780.353 feet.)

**T.B.M. 67.**—About 1.2 miles north along State Highway 9 from Oxford, Izard County, about 350 yards north of a small creek, and on the north end of the east head wall of a 4- by 4-foot concrete culvert. A chiseled square. (213.736 meters or 701.232 feet.)

**G 17.**—At Oxford, Izard County, 192 feet north of the center line of the road running east, south of a store, in the front yard at W. O. Edmonston's house, 64 feet west of the southwest corner of the house, 42 feet east of the center line of the highway, and 1 foot west of the southwest corner of the yard. A standard disk, stamped "G 17 1932" and set in the top of a concrete post. (247.303 meters or 811.360 feet.)

**T.B.M. 72.**—About 1.4 miles south along State Highway 9 from Oxford, Izard County, about 100 yards north of the summit of the first hill south of Oxford, and on the northwest end of the northeast head wall of a 24-inch culvert. A chiseled square. (241.198 meters or 791.330 feet.)

**H 17.**—About  $2\frac{1}{2}$  miles south along State Highway 9 from Oxford, Izard County, about 100 yards southeast of a curve on the south brow of a hill, in the front yard at W. D. Reynolds' house, 121 feet east of the center line of the highway, 37 feet southwest of the southwest corner of the house, and 1 foot west of a point 4 feet north of the southwest corner of the yard. A standard disk, stamped "H 17 1932" and set in the top of a concrete post. (262.518 meters or 861.278 feet.)

**T.B.M. 77.**—About 3.3 miles south along State Highway 9 from Oxford, Izard County, about 100 yards north of the summit of a hill, about 7 yards northwest of a blazed 8-inch pine tree at the fence line, and on the north end of the east head wall of a 3- by 3-foot concrete culvert, marked "9-0-13; 9-60." A chiseled square. (241.582 meters or 792.590 feet.)

**T.B.M. 82.**—About 1.2 miles north along State Highway 9 from Brockwell, Izard County, about 50 yards southeast of a house owned by Homer E. Jennings, at the north edge of a large grove of pine trees, and on the northwest end of the southwest head wall of a 24-inch culvert. A chiseled square. (225.280 meters or 739.106 feet.)

**Brockwell**, top of highway at the center line of the north leg of the Y formed by State Highways 9 and 56. (620.8 feet.)

**J 17.**—At Brockwell, Izard County, at the Y formed by State Highways 9 and 56, 187 feet west of the center line of State Highway 9, 92 feet south of the center line of State Highway 56, at the northeast corner of G. A. Brockwell's front yard, 30 feet northeast of the northeast corner of his house, and 1 foot east of the yard fence. A standard disk, stamped "J 17 1932" and set in the top of a concrete post. (191.851 meters or 629.431 feet.)

**T.B.M. 87.**—About 1.2 miles south along State Highway 9 from Brockwell, Izard County, about 400 yards south of a grove of pine trees east of the highway, about 200 yards north of W. O. Smith's house, on the center of the top of the east head wall of a 3- by 3-foot concrete culvert marked "9-13; 5-70", and 2 feet lower than the highway. A chiseled square. (213.676 meters or 701.035 feet.)

**T.B.M. 91.**—About 2½ miles south along State Highway 9 from Brockwell, Izard County, about 75 yards north of a rise on the second hill south of Brockwell, and on the south end of the west head wall of a 15-inch culvert, marked "9-13; 4-40." A chiseled square. (205.561 meters or 674.411 feet.)

**K 17.**—About 3¼ miles north along State Highway 9 from Melbourne, Izard County, at the top of a hill, about 100 yards south of a rock outcrop north of the highway, on land owned by Jeff Cook, 33 feet northeast of the northeast corner of the house, 168 feet south of the center line of the highway, 11 feet northwest of an 18-inch post oak tree, and 1 foot north of a point 9 feet west of the northeast corner of the yard. A standard disk, stamped "K 17 1932" and set in the top of a concrete post. (218.432 meters or 716.639 feet.)

**T.B.M. 95.**—About 2½ miles north along State Highway 9 from Melbourne, Izard County, at a curve about ¼ mile south of Mill Creek, at the second culvert south of the creek, and on the east end of the south head wall of the 24-inch culvert, marked "9-13; 2-50." A chiseled square. (180.532 meters or 592.295 feet.)

**T.B.M. 98.**—About 1.2 miles north along State Highway 9 from Melbourne, Izard County, on the south end of the west head wall of a 10- by 10-foot concrete culvert, marked "9-13; 1-20." A chiseled square. (189.153 meters or 620.579 feet.)

**L 17.**—At Melbourne, Izard County, about 200 yards northwest of the courthouse, 34 feet west of a point 210 feet north of the center of the T-junction of State Highways 9 and 69, in the lane at the northeast corner of T. Davidson's garden plot, and 8 feet west of the corner. A standard disk, stamped "L 17 1932" and set in the top of a concrete post. (184.116 meters or 604.054 feet.)

**M 17.**—At Melbourne, Izard County, in the north wall of the county courthouse, 1.5 feet west of the west side of the door, and 4.5 feet above the ground. A standard disk, stamped "M 17 1932" and set vertically. (187.077 meters or 613.768 feet.)

**15 (A.S.H.C.)**—At Melbourne, Izard County, at the county courthouse, and at the west or main entrance. The top of the concrete at the northwest corner of the first step. (186.149 meters or 610.724 feet.)

**NOTE.**—This bench mark was not included in the 1933 leveling.

**T.B.M. 107.**—About 1.4 miles southwest along State Highway 9 from Melbourne, Izard County, about 100 yards southwest of a graded section-line road leading south, and on the northeast end of the southeast head wall of a 3- by 3-foot concrete culvert. A chiseled square. (191.460 meters or 628.148 feet.)

**N 17.**—About 2.6 miles southwest along State Highway 9 from Melbourne, Izard County, about 200 yards west of a road leading south immediately west of a small house, at the northwest corner of the front yard of a farmhouse owned by Steve Watson, 104 feet south of the center line of the highway, 35 feet north of a steel-lined cistern, and 3 feet east of a point 1 foot north of the northwest corner of the yard. A standard disk, stamped "N 17 1932" and set in the top of a concrete post. (220.498 meters or 723.417 feet.)

**T.B.M. 113.**—About 3 miles southwest along State Highway 9 from Melbourne, Izard County, about 30 yards west of a forked woods road leading south, on the southeast end of the southwest head wall of a 15-inch culvert, and about 1½ feet lower than the highway. A chiseled square. (228.828 meters or 750.740 feet.)

**P 17.**—About 4¾ miles southwest along State Highway 9 from Melbourne, Izard County, at a curve leading southeast, at the northeast corner of a small orchard on land owned by Henry Ruoh, 85 feet southeast of the southeast corner of the stone chimney on the house, 58 feet northwest of the center line of the highway, and 1 foot northeast of a fence corner. A standard disk, stamped "P 17 1932" and set in the top of a concrete post. (247.362 meters or 811.553 feet.)

**T.B.M. 120.**—About 5½ miles southwest along State Highway 9 from Melbourne, Izard County, about 0.5 mile south of the road to Melbourne Cave,

about 100 yards north of a cabin on the lower side of the road, and on the center of the west head wall of a 15-inch culvert. A chiseled square. (289.079 meters or 948.420 feet.)

**T.B.M. 124.**—About  $6\frac{1}{2}$  miles southwest along State Highway 9 from Melbourne, Izard County, about  $1\frac{1}{2}$  miles south of the road to Melbourne Cave, about 75 yards northwest of a curve at the top of a hill south of a steep dip in the highway, and on the west head wall of an 18-inch culvert. A chiseled square. (288.531 meters or 946.622 feet.)

**Q 17.**—About  $7\frac{3}{4}$  miles southwest along State Highway 9 from Melbourne, Izard County, at the point where the highway makes a loop to the east, about 50 yards south of the house on George Smith's farm, 208 feet west of the west head wall of a 5- by 5-foot concrete culvert on the east side of the loop, 52 feet north of the center line of the highway, and 1 foot southwest of a point 9 feet northwest of the southwest corner of the garden. A standard disk, stamped "Q 17 1932" and set in the top of a concrete post. (231.216 meters or 758.581 feet.)

**T.B.M. 133.**—About  $9\frac{1}{4}$  miles northeast along State Highway 9 from Sylamore, Izard County, about  $2\frac{1}{2}$  miles northeast of the Upper Twin Creek schoolhouse, about 0.3 mile east of a dirt road leading to the south, at the summit of a hill, and on the north head wall of a 15-inch culvert. A chiseled square. (285.403 meters or 936.360 feet.)

**R 17.**—About  $8\frac{3}{4}$  miles northeast along State Highway 9 from Sylamore, Izard County, about 450 yards west of the east side of a loop to the east in the highway, about 200 yards south of a small house owned by Mrs. Verrila Thompson and situated in a valley, about 100 yards west of a small field and orchard south of the road, 48 feet south of the center line of the highway at a point 12 feet east of a 15-inch culvert, and 11 feet west of a 12-inch pine tree. A standard disk, stamped "R 17 1932" and set in the top of a concrete post. (204.722 meters or 671.659 feet.)

**14 (A.S.H.C.)**—About  $7\frac{1}{2}$  miles northeast along State Highway 9 from Sylamore, Izard County, about 50 yards west of the Upper Twin Creek schoolhouse, 22 yards south of the center line of the highway, and in the root on the west side of an 18-inch white oak tree. A nail. (148.215 meters or 486.269 feet.)

**T.B.M. 141.**—About  $7\frac{1}{2}$  miles northeast along State Highway 9 from Sylamore, Izard County, at the Upper Twin Creek schoolhouse, and on the east corner of the concrete cap of the northeast bent of the concrete piling over the creek. A chiseled square. (144.770 meters or 474.966 feet.)

**T.B.M. 146.**—About  $6\frac{3}{4}$  miles northeast along State Highway 9 from Sylamore, Izard County, about  $\frac{3}{4}$  mile south of the Upper Twin Creek schoolhouse, about two-thirds of the distance up the grade, nearly west of a house in the valley, and on the west head wall of a 24-inch culvert. A chiseled square. (231.455 meters or 759.365 feet.)

**S 17.**—About  $5\frac{1}{4}$  miles northeast along State Highway 9 from Sylamore, Izard County, about  $\frac{1}{4}$  mile south of a hairpin turn, about 200 yards west of a farmhouse owned by Albert Lawrence, at the middle of the east side of a small field, about 145 yards north of a 24-inch culvert, 30 feet west of the center line of the highway, and 35 feet north of a 6-inch oak tree. A standard disk, stamped "S 17 1932" and set in the top of a concrete post. (243.098 meters or 797.564 feet.)

**T.B.M. 155.**—About  $4\frac{1}{4}$  miles northeast along State Highway 9 from Sylamore, Izard County, about 1.1 miles northeast of a schoolhouse, about 110 yards south of a draw on the west slope of a ridge showing traces of an old road, and on the center of the east head wall of a 24-inch culvert. A chiseled square. (235.085 meters or 771.275 feet.)

**T 17.**—About  $3\frac{1}{4}$  miles northeast along State Highway 9 from Sylamore, Izard County, about 0.1 mile east of a schoolhouse, on the east side of a loop in the highway, 66 feet southwest of the southwest corner of C. B. Sutterfield's log house, 55 feet north of the east head wall of a 24-inch culvert, 34 feet east of the center line of the highway, and 1 foot west of a point 14 feet south of the northwest corner of a small garden. A standard disk, stamped "T 17 1932" and set in the top of a concrete post. (209.640 meters or 687.794 feet.)

**T.B.M. 162.**—About  $2\frac{1}{4}$  miles northeast along State Highway 9 from Sylamore, Izard County, at the summit of a hill, and on the center of the north head wall of a 24-inch culvert. A chiseled square. (264.076 meters or 866.389 feet.)

**T.B.M. 167.**—About  $1\frac{1}{4}$  miles northeast along State Highway 9 from Sylamore, Izard County, about 100 yards southwest of a slight dip in the highway, and on the center of the southeast head wall of a 24-inch culvert. A chiseled square. (226.440 meters or 742.912 feet.)

**183 (A.S.H.C.).**—At the northeast edge of Sylamore, Izard County, at station 996+00 on State Highway 9, about 35 yards south of a 4- by 6-foot concrete culvert, and in the west side of a 30-inch white oak tree. A nail. (110.142 meters or 361.358 feet.)

**T.B.M. 174.**—At the northeast edge of Sylamore, Izard County, on State Highway 9, at a small draw, and on the center of the west head wall of a 4- by 6-foot concrete culvert. A chiseled square. (108.055 meters or 354.510 feet.)

**U 17.**—At Sylamore, Izard County, 69 feet north of the north end of the Missouri Pacific Railroad station, about 75 feet south of an old walk, 17 feet east of the center line of the main track, and 28 feet west of a pole. A standard disk, stamped "U 17 1932" and set in the top of a concrete post. (102.410 meters or 335.990 feet.)

**V 17.**—At Sylamore, Izard County, on the Missouri Pacific Railroad, about 1,000 feet south of the station, west of the Standard Oil Co. storage plant, 124 feet south of the center of the grade crossing of the road leading to the ferry, 42 feet east of the center line of the main track, and 5 feet north of a pole. A standard disk, stamped "V 17 1932" and set in the top of a concrete post. (101.669 meters or 333.559 feet.)

**W 17.**—In Stone County, about  $\frac{3}{4}$  mile southwest along State Highway 9 from Sylamore, Izard County, at Allison, about 100 feet northeast of the junction of State Highways 9 and 14, at the southwest corner of W. E. Dobbin's front yard, about 30 yards east of Dobbin's store, 45 feet south of the center line of State Highway 9, 32 feet southwest of the southwest corner of the house, and 9 feet east of a 10-inch oak tree. A standard disk, stamped "W 17 1932" and set in the top of a concrete post. (118.492 meters or 388.752 feet.)

**T.B.M. 184.**—About  $4\frac{1}{2}$  miles northeast along State Highway 9 from Mountain View, Stone County, on the north edge of the top of the first hill south of Allison, about 75 yards northwest of a 24-inch pipe culvert, 12 yards southwest of the center line of the highway, and in a root on the west side of a 24-inch oak tree with a triangular blaze. A spike. (243.108 meters or 797.597 feet.)

**X 17.**—About  $3\frac{1}{2}$  miles northeast along State Highway 9 from Mountain View, Stone County, 93 feet west of the northwest corner of the farmhouse owned by M. G. Hopper, 1 foot south of the northwest corner of the front yard, and 31 feet east of the center line of the highway. A standard disk, stamped "X 17 1932" and set in the top of a concrete post. (206.539 meters or 677.620 feet.)

**Y 17.**—About  $\frac{1}{2}$  mile east along State Highway 9 from Mountain View, Stone County, at the northeast corner of the Y-intersection of State Highways 9, 14, and 66, at the southwest corner of a plot of ground owned by W. M. Brewer, 88 feet southeast of the north end of the Y, 90 feet north of the center line of State Highway 66, 30 feet northeast of the center line of State Highway 14 at a curve, and 1 foot northeast of a fence. A standard disk, stamped "Y 17 1932" and set in the top of a concrete post. (226.013 meters or 741.511 feet.)

**Z 17.**—At Mountain View, Stone County, in the front or south wall of the county courthouse, 4 feet east of the west end, and 3 feet above the ground. A standard disk, stamped "Z 17 1932" and set vertically. (234.008 meters or 767.725 feet.)

**A 18.**—About  $2\frac{1}{2}$  miles south along State Highway 9 from Mountain View, Stone County, on the top of the first ridge south of the town, 150 feet south of the T-junction with a road leading east, in the front yard of the house owned by C. E. Gowens, 76 feet west of the center line of the highway, 50 feet east of the northeast corner of the house, and 3 feet south of a point 1 foot east of the northeast corner of the yard. A standard disk, stamped "A 18 1932" and set in the top of a concrete post. (373.579 meters or 1,225.650 feet.)

**B 18.**—About  $5\frac{1}{2}$  miles southwest along State Highway 9 from Mountain View, Stone County, at a right-angle turn in the highway, at the Richwood store, about 80 yards southwest of a concrete-encased well, 47 feet west of the center line of the highway, and 46 feet south of the southeast corner of the West Richwood schoolhouse. A standard disk, stamped "B 18 1932" and set in the top of a concrete post. (314.487 meters or 1,031.779 feet.)

**C 18.**—About  $8\frac{1}{2}$  miles southwest along State Highway 9 from Mountain View, Stone County, 139 feet north of the middle of a small wooden bridge over a draw, in the front yard of Anna Jacobson's house, 45 feet west of the southwest corner of the house, 22 feet east of the center line of the highway, and 1 foot east of a fence. A standard disk, stamped "C 18 1932" and set in the top of a concrete post. (348.032 meters or 1,141.835 feet.)

**D 18.**—About  $11\frac{1}{4}$  miles southwest along State Highway 9 from Mountain View, Stone County, about  $2\frac{3}{4}$  miles northeast of the Turkey Creek schoolhouse, on L. M. Duncan's farm, 45 feet west of the northwest corner of the house, 44 feet east of the center line of the highway, 40 feet northwest of the northwest corner of a storm cellar, and 5 feet south of a point 1 foot west of the northwest corner of the front yard. A standard disk, stamped "D 18 1932" and set in the top of a concrete post. (305.304 meters or 1,001.652 feet.)

**E 18.**—About  $13\frac{1}{2}$  miles southwest along State Highway 9 from Mountain View, Stone County, about  $\frac{1}{2}$  mile northeast of the Turkey Creek schoolhouse, on R. S. Duncan's farm, 32 feet south of the southeast corner of the house, 85 feet northwest of the center line of the highway, 45 feet east of the east wall of a storm cellar, and 16 feet west of a point 1 foot south of the southeast corner of the yard. A standard disk, stamped "E 18 1932" and set in the top of a concrete post. (287.845 meters or 944.371 feet.)

**F 18.**—In Stone County, about  $8\frac{1}{2}$  miles northeast along State Highway 9 from Shirley, Van Buren County, about 1 mile north of Rushing, about  $\frac{1}{4}$  mile south of a graded dirt road leading east, at J. A. Deckham's farm, 58 feet north of the northeast corner of the log house, 80 feet west of the center line of the highway at the curve, 87 feet north of a storm cellar, and 1 foot east of a rail fence. A standard disk, stamped "F 18 1932" and set in the top of a concrete post. (410.912 meters or 1,348.134 feet.)

**T.B.M. 256.**—In Stone County, about  $5\frac{3}{4}$  miles northeast along State Highway 9 from Shirley, Van Buren County, about 1.4 miles south of Rushing, about 200 yards north of a curve at the top of a hill, 10 yards west of the center line of the highway, and in the root of a blazed 10-inch sweet gum tree. A nail. (410.398 meters or 1,346.447 feet.)

**G 18.**—In Stone County, about  $5\frac{1}{2}$  miles northeast along State Highway 9 from Shirley, Van Buren County, about  $\frac{1}{4}$  mile northeast of the Stone-Van Buren county line, at P. M. Rushing's farm, 55 feet south of the southeast corner of the house, 116 feet north of the center line of the highway, 50 yards southwest of a storm cellar, and 1 foot south of a point 24 feet west of the southeast corner of the front yard. A standard disk, stamped "G 18 1932" and set in the top of a concrete post. (398.428 meters or 1,307.176 feet.)

**H 18.**—About 3 miles northeast along State Highway 9 from Shirley, Van Buren County, on Ray Shelton's farm, in line with the south side of the house, 79 feet east of the east side, 38 feet west of the center line of the highway, and 68 feet south of the southeast corner of a small cultivated field. A standard disk, stamped "H 18 1932" and set in the top of a concrete post. (314.163 meters or 1,030.716 feet.)

**J 18.**—At the northeast edge of Shirley, Van Buren County, on State Highway 9, at the southeast corner of the old school yard (the building was burned in 1931), 52 feet west of the center line of the highway, 52 feet north of the center line of an east-and-west street, and 29 feet east of an 18-inch oak tree. A standard disk, stamped "J 18 1932" and set in the top of a concrete post. (208.658 meters or 684.572 feet.)

**9 (A.S.H.C.)**.—About  $\frac{1}{4}$  mile south of Shirley, Van Buren County, at the highway bridge over North Fork Red River, and at the west end of the south concrete abutment. The top of the concrete abutment. (162.590 meters or 533.431 feet.)

**NOTE.**—This bench mark was not included in the 1932 leveling, and the elevation given was determined by single-run or second-order leveling.

For additional bench marks in the vicinity of Shirley, see page 40.

#### LINE 20, HARRISON TO CLARKSVILLE, ARK.

[Second-order leveling]

This line follows State Highway 7 from Harrison to Deer; State Highway 16 from Deer to Swain; and State Highway 21 from Swain

to Clarksville. The field work was done, during the winter of 1932, by a party in charge of G. R. Fish, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of Harrison, see page 37.

**K 18.**—About 3 miles south along State Highway 7 from Harrison, Boone County, at Baines School, 205 feet south of the center line of an east-and-west road, 39 feet north of the south boundary of the school yard, 39 feet west of the center line of the highway, and 32 feet south of a well. A standard disk, stamped "K 18 1932" and set in the top of a concrete post. (328.780 meters or 1,078.672 feet.)

**L 18.**—About 5½ miles south along State Highway 7 from Harrison, Boone County, 56 feet southeast of the southeast corner of a house owned by G. W. Hancock, 25 feet west of the center line of the highway, and 1 foot east of a point 5 feet north of the southeast corner of the yard. A standard disk, stamped "L 18 1932" and set in the top of a concrete post. (370.498 meters or 1,215.542 feet.)

**T.T. 107 (U.S.G.S.)**—About 7¼ miles south along State Highway 7 from Harrison, Boone County, about ¼ mile east of the Krooked Kreek School, 84 feet southwest of the southwest corner of the house owned by A. N. Campbell, 32 feet south of the center line of the east-and-west road, 18 feet east of the center line of a north-and-south road, and 8 feet north of the southwest corner of the yard. A United States Geological Survey standard disk, stamped "T.T. 107 TX 1931" and set in the top of a concrete post. (372.675 meters or 1,222.685 feet.)

**M 18.**—In Newton County, about 9¼ miles south along State Highway 7 from Harrison, Boone County, 109 feet southwest of the southwest corner of the concrete bridge over Mill Creek, 50 feet north of a road leading west, and 42 feet west of the center line of the highway. A standard disk, stamped "M 18 1932" and set in the top of a concrete post. (303.895 meters or 997.020 feet.)

**N 18.**—About 7¼ miles north along State Highway 7 from Jasper, Newton County, at the concrete bridge over Harp Creek, in the top of the west hub guard, and 3 feet south of the north end of the bridge. A standard disk, stamped "N 18 1932." (257.195 meters or 843.814 feet.)

**846 (?)**—About 7¼ miles north along State Highway 7 from Jasper, Newton County, at the bridge over Harp Creek, and on the north end of the west hub guard. A chiseled cross. (257.187 meters or 843.788 feet.)

**P 18.**—About 5¼ miles north along State Highway 7 from Jasper, Newton County, at the steel bridge over Big Buffalo River, in the top of the east hub guard, and 3 feet north of the south end of the bridge. A standard disk, stamped "P 18 1932." (250.046 meters or 820.359 feet.)

**1134 (A.S.H.C.)**—About 5 miles north along State Highway 7 from Jasper, Newton County, about ¼ mile south of Big Buffalo River, at the entrance to Paradise Camp, about 10 yards east of the highway, and in a 30-inch oak tree. A nail. (344.986 meters or 1,131.842 feet.)

**Q 18.**—About 3¼ miles north along State Highway 7 from Jasper, Newton County, at Roberts Hollow, at a curve, 70 feet southwest of the southwest corner of a log house owned by Charles Watts, 46 feet southeast of the center line of the highway, about 8 yards northwest of the top of the creek bank, 3 feet north of a 3-inch cedar tree, and about 6 feet lower than the surface of the highway. A standard disk, stamped "Q 18 1932" and set in the top of a concrete post. (270.144 meters or 886.297 feet.)

**T.T. 104 (U.S.G.S.)**—About 3 miles north along State Highway 7 from Jasper, Newton County, at a U-turn in the highway, 60 feet northwest of the center line of the highway, and 18 feet north of an 18-inch oak tree with a triangular blaze. A United States Geological Survey standard disk, stamped "T.T. 104 TX 1931" and set in the top of a concrete post. (275.001 meters or 902.232 feet.)

**R 18.**—At Jasper, Newton County, at the north end of the town, on State Highway 7, at the steel highway bridge over Little Buffalo River, and in the top of the east end of the south abutment. A standard disk, stamped "R 18 1932." (254.135 meters or 833.775 feet.)

**857 (U.S.G.S.)**—At Jasper, Newton County, in the north or front side of the county courthouse, in the stone facing, 2 feet east of the entrance, and 2.5

feet above the ground. A United States Geological Survey standard disk, stamped "857 FTVL." (260.247 meters or 853.827 feet.)

S 18.—About  $1\frac{1}{4}$  miles south along State Highway 7 from Jasper, Newton County, at the northwest quarter of the southwest quarter of sec. 35, T. 16 N., R. 21 W., at the top of the first long grade south of Jasper, about 150 yards north of a house owned by J. A. Harrison, 41 feet north of the center line of the highway, 21 feet south of the center line of the old highway, 14 feet west of an 8-inch oak tree, and 8 feet east of another 8-inch oak tree. A standard disk, stamped "S 18 1932" and set in the top of a concrete post. (393.666 meters or 1,291.553 feet.)

T.T. 103 (U.S.G.S.).—About  $2\frac{1}{4}$  miles south along State Highway 7 from Jasper, Newton County, about 42 yards northwest of a lane leading southeast, 42 feet west of the center line of the highway, 39 feet south of a 10-inch oak tree with a triangular blaze, in the top of a slab of rock, 5 feet east of the west edge, and 2 feet north of the south edge. A United States Geological Survey standard disk, stamped "T.T. 103 TX 1931." (493.696 meters or 1,619.794 feet.)

T 18.—About  $4\frac{1}{2}$  miles south along State Highway 7 from Jasper, Newton County, near the top of the first hill south of Jasper, at the southeast quarter of the northwest quarter of sec. 12, T. 15 N., R. 21 W., in line with a lane leading west to a house owned by C. W. Twyman, 49 feet east of the center line of the highway, 39 feet north of a spring, and 4 feet southeast of a fence corner. A standard disk, stamped "T 18 1932" and set in the top of a concrete post. (613.035 meters or 2,011.266 feet.)

U 18.—About  $7\frac{1}{4}$  miles south along State Highway 7 from Jasper, Newton County, about 200 yards east of the Gum Springs Schoolhouse, 97 feet west of the east brow of a hill, 52 feet west of the center line of the highway, and 24 feet north of the road leading to the schoolhouse. A standard disk, stamped "U 18 1932" and set in the top of a concrete post. (639.198 meters or 2,097.102 feet.)

V 18.—About  $8\frac{1}{4}$  miles northeast along State Highways 16 and 7 from Deer, Newton County, at the south side of the northeast quarter of sec. 26, T. 15 N., R. 21 W., on M. W. McElroy's farm, 84 feet south of the southwest corner of the house, 28 feet northwest of the center line of State Highway 7, and 9 feet northeast of an 8-inch scrub oak tree. A standard disk, stamped "V 18 1932" and set in the top of a concrete post. (620.631 meters or 2,036.351 feet.)

W 18.—About 5.1 miles northeast along State Highways 16 and 7 from Deer, Newton County, in sec. 21 of Pleasant Hill Township, at Geo. Ridell's farm, 57 feet north of the center line of the road leading to the farmhouse situated 150 yards west of the highway, 29 feet west of the center line of State Highway 7, and 16 feet south of a 12-inch white oak tree. A standard disk, stamped "W 18 1932" and set in the top of a concrete post. (648.631 meters or 2,128.050 feet.)

X 18.—About 2.8 miles northeast along State Highways 16 and 7 from Deer, Newton County, at the south half of the southwest quarter of sec. 14, T. 14 N., R. 21 W., about 0.6 mile north of the junction of State Highways 16 and 7, at E. R. Mane's farm, 33 feet south of the south corner of the house, 25 feet northwest of the center line of the highway, 61 feet south of an 18-inch walnut tree, and 1 foot southeast of a point 11 feet southwest of the east corner of the garden. A standard disk, stamped "X 18 1932" and set in the top of a concrete post. (671.466 meters or 2,202.968 feet.)

T.T. 80 (U.S.G.S.).—About 2 miles northeast along State Highway 16 from Deer, Newton County, at the junction of State Highways 16 and 7, 25 feet west of a point 140 feet north of a sharp grassy point formed by the junction, 35 feet west of the center line of State Highway 7, and 7 feet east of a point 23 feet north of a dead 12-inch white oak tree with a triangular blaze. A United States Geological Survey standard disk, stamped "T.T. 80 TX 1931" and set in the top of a concrete post. (667.802 meters or 2,190.947 feet.)

2190.20 (U.S.G.S.).—About 2 miles northeast along State Highway 16 from Deer, Newton County, at the junction of State Highways 16 and 7, and in the east root of a blazed, dead, black oak tree. A United States Geological Survey standard copper nail and washer. (667.625 meters or 2,190.366 feet.)

R.M. Deer No. 1.—At Deer, Newton County, on the school grounds, about 150 yards northwest of the brick schoolhouse, about 40 yards southwest of a well, and 8 yards east of the center line of State Highway 16, in a small boulder. A standard reference-mark disk, stamped "DEER NO. 1." (716.860 meters or 2,351.898 feet.)

**Deer.**—At Deer, Newton County, at a curve in State Highway 16, about 100 yards southwest of the brick schoolhouse, 96 feet southeast of the center line of the highway, 77.5 feet northeast of the northeast corner of a stone store building, 66 feet south of a fence corner at the northwest corner of a small field, and about 1 foot below the surface of the ground. A standard triangulation-station disk, stamped "DEER 1928" and set in concrete. (716.647 meters or 2,351.199 feet.)

**R.M. Deer No. 2.**—At Deer, Newton County, about 200 yards west of the brick schoolhouse, 13 yards north of the center line of State Highway 16, and 6 yards southwest of a well, in a boulder. A standard reference-mark disk, stamped "DEER NO. 2." (717.007 meters or 2,352.380 feet.)

**Y 18.**—About 2 miles west along State Highway 16 from Deer, Newton County, at a curve, about 250 yards northeast of a house owned by Olud Oliver, about 300 yards west of a farm road leading south, near the bottom of a slight rise, 66 feet southwest of the center line of the highway, 20 yards northwest of an apple tree, and 1 foot north of a wire fence. A standard disk, stamped "Y 18 1932" and set in the top of a concrete post. (641.948 meters or 2,106.124 feet.)

**T.T. 88' (U.S.G.S.).**—About 2.4 miles west along State Highway 16 from Deer, Newton County, about 150 feet northeast of the home of J. A. Taylor, 50 feet west of a private road, 35 feet south of the center line of the highway, and 3 feet south of a fence corner. A United States Geological Survey standard disk, stamped "T.T. 88 TX 1931" and set in the top of a concrete post. (621.684 meters or 2,039.642 feet.)

**Z 18.**—About  $4\frac{1}{4}$  miles east along State Highway 16 from Swain, Newton County, near the south side of sec. 35, T. 14 N., R. 22 W., at the northeast corner of land owned by Bob Brown, about 150 yards west of John Laughton's home, 43 feet northwest of the center line of a dirt road leading southwest along the side of a hill, 32 feet south of the center line of the highway, and 1 foot north of a point 11 feet west of a fence corner. A standard disk, stamped "Z 18 1932" and set in the top of a concrete post. (655.477 meters or 2,150.511 feet.)

**T.T. 87 (U.S.G.S.).**—At Nail, Newton County, 15 feet north of a point 30 feet east of the northeast corner of Nail Baptist Church, about 50 yards south of State Highway 16, and 1 foot east of a point 2 feet north of the northwest corner of the cemetery plot, in sandstone rock. A United States Geological Survey standard disk, stamped "T.T. 87 TX 1931." (685.803 meters or 2,250.005 feet.)

**T.T. 86 (U.S.G.S.).**—About 1 mile east along State Highway 16 from Swain, Newton County, about 400 feet east of the home of Ralph Swain, 40 feet south of the center line of the highway, and 2 feet east of a point 3 feet north of a fence corner. A United States Geological Survey standard disk, stamped "T.T. 86 TX 1931" and set in the top of a concrete post. (677.241 meters or 2,221.915 feet.)

**A 19.**—At the west edge of Swain, Newton County, on State Highway 16, about 250 yards east of a frame schoolhouse situated on a hill, 61 feet southwest of the southwest corner of J. E. Sam's house, 66 feet north of the center line of the highway, 71 feet east of a point formed by the junction of a lane and the highway, and 1 foot south of a garden fence. A standard disk, stamped "A 19 1932" and set in the top of a concrete post. (630.049 meters or 2,067.086 feet.)

**T.T. 85 (U.S.G.S.).**—About 1.6 miles west along State Highway 16 from Swain, Newton County, 40 feet south of a point 70 feet west of the north point of the triangle formed by the junction of State Highways 16 and 21, 100 feet east of the home of Roy Smith, and 8 feet north of a point 5 feet east of a fence corner. A United States Geological Survey standard disk, stamped "T.T. 85 TX 1931" and set in the top of a concrete post. (677.832 meters or 2,223.854 feet.)

**B 19.**—About  $1\frac{1}{4}$  miles west along State Highway 16 from Swain, Newton County, about  $\frac{1}{8}$  mile west of the junction with State Highway 21, 192 feet west of the first culvert west of the junction, 60 feet west of the center line of the highway, and 1 foot south of a point 25 feet east of the southwest corner of a small field owned by W. E. Smith. A standard disk, stamped "B 19 1932" and set in the top of a concrete post. (677.654 meters or 2,223.270 feet.)

**2105.2 (U.S.G.S.).**—About 4.3 miles northeast along State Highway 21 from Fallsville, Newton County, at Sandy Gap School, 20 feet east of the center line

of the highway, and on the northwest corner of the concrete platform of the well. A chiseled square. (641.703 meters or 2,105.321 feet.)

**C 19.**—About 4.3 miles northeast along State Highway 21 from Fallsville, Newton County, 76 feet south of the south end of the Sandy Gap Schoolhouse, 99 feet south of the well, and 49 feet east of the center line of the highway. A standard disk, stamped "C 19 1932" and set in the top of a concrete post. (640.257 meters or 2,100.576 feet.)

**T.T. 60 (U.S.G.S.).**—About 2.3 miles northeast along State Highway 21 from Fallsville, Newton County, at the northeast quarter of sec. 9, T. 13 N., R. 23 W., 25 feet east of the center line of the highway, and 3 feet north of the corner of a rail fence running south and east. A United States Geological Survey standard disk, stamped "T.T. 60 TX 1931" and set in the top of a concrete post. (679.509 meters or 2,229.356 feet.)

**D 19.**—About 1.2 miles northeast along State Highway 21 from Fallsville, Newton County, near the southwest corner of sec. 9, T. 13 N., R. 23 W., at T. R. Hibbard's home, 79 feet north of the northwest corner of the house, 31 feet south of the center line of the highway, and 1 foot east of a point 8 feet south of the northeast corner of the garden. A standard disk, stamped "D 19 1932" and set in the top of a concrete post. (663.436 meters or 2,176.623 feet.)

**T.T. 58 (U.S.G.S.).**—About  $\frac{1}{2}$  mile southwest along State Highway 21 from Fallsville, Newton County, in the center of the triangle formed by the junction with State Highway 16, about 70 feet southwest of the north point of the triangle, and 15 feet north of a point 85 feet east of the west point. A United States Geological Survey standard disk, stamped "T.T. 58 TX 1931" and set in the top of a concrete post. (692.062 meters or 2,270.540 feet.)

**E 19.**—About 0.7 mile southwest along State Highway 21 from Fallsville, Newton County, about 0.2 mile south of the junction with State Highway 16, on land owned by O. Summers, 92 feet west of the southwest corner of the house, 37 feet east of the center line of the highway, 44 feet south of the southwest corner of the garden, and about 30 yards northwest of the brow of a hill. A standard disk, stamped "E 19 1932" and set in the top of a concrete post. (693.096 meters or 2,273.932 feet.)

**F 19.**—In Newton County, about  $3\frac{1}{4}$  miles northwest along State Highway 21 from Salus, Johnson County, in the southwest corner of sec. 28, T. 13 N., R. 23 W., about 60 yards southeast of a small cabin on the west side of the road, 167 feet south of the lowest point of a swale in a hog-back, 24 feet east of the center line of the highway, and 18 feet northwest of a 2-foot red-oak tree with bark peeled on the north side. A standard disk, stamped "F 19 1932" and set in the top of a concrete post. (646.050 meters or 2,119.582 feet.)

**T.T. 57 (U.S.G.S.).**—In Newton County, about 2.7 miles northwest along State Highway 21 from Salus, Johnson County, about 400 feet north of the home of Joe Barnes, 30 feet west of a point 50 feet north of the junction with a T-road leading north from the highway, 8 feet southwest of a corner of a fence running north and west. A United States Geological Survey standard disk, stamped "T.T. 57 TX 1931" and set in the top of a concrete post. (575.722 meters or 1,888.848 feet.)

**G 19.**—In Newton County, about  $\frac{1}{2}$  mile north along State Highway 21 from Salus, Johnson County, in the southwest quarter of sec. 35, T. 13 N., R. 23 W., 84 feet east of the northeast corner of a house owned by B. F. Saunderson, 49 feet south of the north brow of a hill, 37 feet south of the center line of the highway, and 1 foot north of a point 50 feet east of the northwest corner of a garden. A standard disk, stamped "G 19 1932" and set in the top of a concrete post. (606.593 meters or 1,990.131 feet.)

**T.T. 36 (U.S.G.S.).**—About 1.2 miles south along State Highway 21 from Salus, Johnson County, on the prolongation of the center line of a T-road leading east to Rosetta, and 25 feet west of the center line of the highway. A United States Geological Survey standard disk, stamped "T.T. 36 TX 1931" and set in the top of a concrete post. (580.831 meters or 1,905.610 feet.)

**H 19.**—About  $6\frac{1}{4}$  miles north along State Highway 21 from Ozone, Johnson County, at the southeast quarter of sec. 10, T. 12 N., R. 23 W., at the top of a long grade to the south, 378 feet south of the road leading west to John W. Pugh's house, 113 feet north of a curve at the top of the grade, and 29 feet west of the center line of the highway. A standard disk, stamped "H 19 1932" and set in the top of a concrete post. (574.065 meters or 1,883.412 feet.)

**T.T. 35 (U.S.G.S.).**—About 3.5 miles north along State Highway 21 from Ozone, Johnson County, about 400 feet south of the home of J. M. Warren, 10 feet west of a point 65 feet north of the stone marking the south one-eighth corner of sec. 21, T. 12 N., R. 23 W., 85 feet south of the center line of the highway, and at a fence corner. A United States Geological Survey standard disk, stamped "T.T. 35 TX 1931" and set in the top of a concrete post. (522.440 meters or 1,714.039 feet.)

**J 19.**—About  $1\frac{3}{4}$  miles north along State Highway 21 from Ozone, Johnson County at sec. 9, T. 12 N., R. 23 W., 59 feet southeast of the southeast corner of Fred C. Schwartz's house, 27 feet west of the center line of the highway, 47 feet northeast of a 6-inch pine tree, 19 feet north of a private driveway, and in an angle of a rail fence. A standard disk, stamped "J 19 1932" and set in the top of a concrete post. (557.697 meters or 1,829.711 feet.)

**T.T. 34 (U.S.G.S.).**—At the north edge of Ozone, Johnson County, at the northeast corner of the old Baptist Church yard, on State Highway 21, and 25 feet south of a point 30 feet west of the junction with a T-road leading west. A United States Geological Survey standard disk, stamped "T.T. 34 TX 1931" and set in the top of a concrete post. (595.450 meters or 1,953.572 feet.)

**T.T. 33 (U.S.G.S.).**—About 2.7 miles south along State Highway 21 from Ozone, Johnson County, at sec. 15, T. 11 N., R. 23 W., 30 feet north of a point 10 feet east of the center of the junction with a T-road leading north from the highway, and 3 feet south of a point 12 feet east of a triangular-blazed 30-inch oak tree. A United States Geological Survey standard disk, stamped "T.T. 33 TX 1931" and set in the top of a concrete post. (551.322 meters or 1,808.796 feet.)

**K 19.**—About  $4\frac{1}{2}$  miles south along State Highway 21 from Ozone, Johnson County, at sec. 28, T. 11 N., R. 23 W., about 200 yards north of C. H. Dodge's home, 77 feet south of the point at the junction of the highway and the private road to the house, 139 feet south of an 18-inch oak tree, and 29 feet east of the center line of the highway. A standard disk, stamped "K 19 1932" and set in the top of a concrete post. (502.954 meters or 1,650.108 feet.)

**T.T. 32 (U.S.G.S.).**—About 5.5 miles south along State Highway 21 from Ozone, Johnson County, 30 feet north of a point 40 feet west of a sharp bend at the junction of an old trail leading north, 30 feet south of a triangular-blazed 24-inch pine tree, and 30 feet east of a triangular-blazed 24-inch oak tree, in the top of a rock outcrop. A United States Geological Survey standard disk, stamped "T.T. 32 TX 1931." (455.846 meters or 1,495.555 feet.)

**L 19.**—About  $8\frac{1}{2}$  miles north along State Highway 21 from Clarksville, Johnson County, at the northwest quarter of sec. 35, T. 11 N., R. 23 W., at the north end of a curve, 126 feet west of the center line of the highway, about 100 yards north of a cattle guard, at Mrs. B. Riddle's home, 60 feet east of the northeast corner of the house, and 1 foot east of a point 45 feet north of the southeast corner of the front yard. A standard disk, stamped "L 19 1932" and set in the top of a concrete post. (270.760 meters or 888.318 feet.)

**T.T. 31 (U.S.G.S.).**—About  $7\frac{1}{2}$  miles north along State Highway 21 from Clarksville, Johnson County, at a turn in the highway, about 50 yards north of a small store, 15 feet north of a point 60 feet east of a bridge over a small stream, 160 feet west of an old fence line, and 15 feet north of the prolongation of the center line of a road leading east. A United States Geological Survey standard disk, stamped "T.T. 31 TX 1931" and set in the top of a concrete post. (221.506 meters or 726.724 feet.)

**M 19.**—About  $5\frac{1}{2}$  miles north along State Highway 21 from Clarksville, Johnson County, at the northwest quarter of sec. 15, T. 10 N., R. 23 W., 84 feet north of a dirt road leading west and a lane leading east, 35 feet east of the center line of the highway, at Jack Taylor's home, 39 feet southwest of the southwest corner of the house, and 1 foot west of a point 4 feet south of the northwest corner of the garden. A standard disk, stamped "M 19 1932" and set in the top of a concrete post. (199.788 meters or 655.471 feet.)

**T.T. 30 (U.S.G.S.).**—About 5 miles north along State Highway 21 from Clarksville, Johnson County, at the quarter corner between secs. 15 and 22, T. 10 N., R. 23 W., at the northeast corner of Ludwig School yard, 18 feet south of a T-road leading east, and 40 feet west of the highway. A standard disk, stamped "T.T. 30 TX 1931" and set in the top of a concrete post. (226.946 meters or 744.572 feet.)

**N 19.**—About  $2\frac{1}{4}$  miles northeast along State Highway 21 from Clarksville, Johnson County, about  $\frac{3}{4}$  mile north of the junction with United States Highway 64, at sec. 33, T. 10 N., R. 23 W., about 300 yards east of a house owned by

Jean Park, 36 feet west of the center line of the highway, 14 feet north of the center line of an east-and-west road, and 1 foot east of a point 3 feet north of a fence corner. A standard disk, stamped "N 19 1932" and set in the top of a concrete post. (132.413 meters or 434.425 feet.)

**T. T. 29 (U.S.G.S.).**—About  $\frac{1}{4}$  miles east along State Highway 21 from Clarksville, Johnson County, about  $\frac{1}{2}$  mile north of the junction with United States Highway 64, at the intersection of the road east of Hagarville, about 40 feet north of a point 40 feet east of the center of the intersection, and about 25 feet northeast of a 24-inch oak tree, in a small boulder. A United States Geological Survey standard disk, stamped "T.T. 29 TX 1931." (137.623 meters or 451.518 feet.)

**P 19.**—About  $\frac{3}{4}$  mile northeast along the Missouri Pacific Railroad from Clarksville, Johnson County, at plate-girder bridge 271 over Big Spadra Creek, in the east concrete pier, 1.7 feet south of the pointed north end, 12 feet north of the center line of the track, and about 6 feet lower than the top of the rail. A standard disk, stamped "P 19 1932." (116.216 meters or 379.604 feet.)

**Q 19.**—At Clarksville, Johnson County, in the front or west wall of the Missouri Pacific Railroad station, 1 foot north of the southwest corner of the operating room, and 5 feet above the platform. A standard disk, stamped "Q 19 1932" and set vertically. (115.630 or 379.363 feet.)

For additional bench marks in the vicinity of Clarksville, see page 149.

#### LINE 21, FORT SMITH TO LEWISVILLE, ARK.

[First-order leveling]

This line follows the Missouri Pacific Railroad from Fort Smith to Greenwood; United States Highway 71 from Greenwood, through Abbott and Boles, to Mena; the Kansas City Southern Railway from Mena, through De Queen and Wilton, to Texarkana; and the St. Louis Southwestern Railway from Texarkana, through Garland City, to Lewisville. The field work was done, during the winter of 1931-32, by a party in charge of A. L. Wardwell, aid.

For additional bench marks in the vicinity of Fort Smith, see page 143.

**A 20.**—At Fort Smith, Sebastian County, at the post office, and in the concrete pedestal to the right of the front steps. A standard disk, stamped "A 20 1932" and set vertically. (137.241 meters or 450.265 feet.)

**B 20.**—At Fort Smith, Sebastian County, in the north wall of the Kansas City Southern Railway station, to the right of the main entrance, and about 4 feet above the sidewalk. A standard disk, stamped "B 20 1932" and set vertically. (136.374 meters or 447.420 feet.)

**C 20.**—About 0.7 mile south of the Kansas City Southern Railway station at Fort Smith, Sebastian County, 405 feet east along the Missouri Pacific Railroad from its intersection with the Kansas City Southern Railway and thence, 321 feet south along Wheeler Avenue, at the northeast corner of the concrete bridge over Mill Creek, and in the floor of the bridge. A standard disk, stamped "C 20 1932." (127.424 meters or 418.057 feet.)

**D 20.**—About 3.6 miles south of Fort Smith, Sebastian County, on the Missouri Pacific Railroad, about 14 rails north of railroad bridge 12, 9 feet south of the tracks leading to a sorghum plant, and 6 feet east of the east rail. A standard disk, stamped "D 20 1932" and set in the top of a concrete post. (142.509 meters or 467.548 feet.)

**E 20.**—About 6.1 miles south of Fort Smith, Sebastian County, on the Missouri Pacific Railroad, 17 feet south of the center line of a dirt road, 35.5 feet east of the east edge of United States Highway 71, 38 feet west of the west rail, and about 1 foot lower than the rails. A standard disk, stamped "E 20 1932" and set in the top of a concrete post. (151.945 meters or 498.506 feet.)

**F 20.**—About 9.0 miles south of Fort Smith, Sebastian County, on the Missouri Pacific Railroad, 24 feet south of the center line of a dirt road, 20 feet southeast of a fence corner, 39 feet west of the west rail, and about a

foot lower than the rails. A standard disk, stamped "F 20 1932" and set in the top of a concrete post. (170.116 meters or 558.122 feet.)

**G 20.**—At Jenny Lind, Sebastian County, 105.5 feet east of the southeast corner of the Missouri Pacific Railroad station, 25.6 feet northeast of a switch stand, and 20 feet north of the north rail. A standard disk, stamped "G 20 1932" and set in the top of a concrete post. (135.379 meters or 444.156 feet.)

**H 20.**—About 2½ miles south along the Missouri Pacific Railroad from Jenny Lind, Sebastian County, in bedrock at a cut, 19 feet east of the east rail, and 5.6 feet higher than the rail. A standard disk, stamped "H 20 1932" and set vertically. (178.152 meters or 584.487 feet.)

**J 20.**—At Greenwood, Sebastian County, at Missouri Pacific Railroad bridge 46, at the west end of the town, in the center support, 4.0 feet west of the west rail, and 5.4 feet lower than the tracks. A standard disk, stamped "J 20 1932." (152.066 meters or 498.903 feet.)

**K 20.**—About 2 miles south along United States Highway 71 from Greenwood, Sebastian County, 6.3 feet west of the west edge of the pavement, and in the top of Federal Aid Project marker 187A. A standard disk, stamped "K 20 1932." (158.247 meters or 519.182 feet.)

**L 20.**—About 6¼ miles south along United States Highway 71 from Greenwood, Sebastian County, in the north end of a concrete culvert, and 7 feet east of the east edge of the pavement. A standard disk, stamped "L 20 1932." (198.593 meters or 651.551 feet.)

**M 20.**—About 1.8 miles north along United States Highway 71 from Huntington, Sebastian County, in the southeast abutment of highway bridge 13-308, and 4.0 feet southeast of the south end of the steel guard rail on the east side of the bridge. A standard disk, stamped "M 20 1932." (174.933 meters or 573.942 feet.)

**N 20.**—At Huntington, Sebastian County, on United States Highway 71, 52 feet northeast of the northeast foundation of the city water tank, 50 feet west of the west edge of the pavement, and 40 feet south of a fence corner, in bedrock. A standard disk, stamped "N 20 1932." (200.728 meters or 658.555 feet.)

**P 20.**—At Mansfield, Sebastian County, on United States Highway 71, at the intersection of a side road leading south to a school, and in the north end of concrete culvert 12-12.12. A standard disk, stamped "P 20 1932." (180.069 meters or 590.776 feet.)

**Abbott,** top of rail of the Chicago, Rock Island & Pacific Railway, at the crossing of United States Highway 71. (631.7 feet.)

**Q 20.**—At Abbott, Scott County, about 190 feet southeast of the center of the crossing of United States Highway 71 and the Chicago, Rock Island & Pacific Railway, 148 feet south of the south rail, and 35.5 feet northeast of the center line of the highway. A standard disk, stamped "Q 20 1932" and set in the top of a concrete post. (190.152 meters or 623.857 feet.)

**R 20.**—About 3.7 miles east along United States Highway 71 from Abbott, Scott County, in the southwest corner of 250-foot bridge 12-13.10, about 1.5 feet east of the west end, and in the curbing. A standard disk, stamped "R 20 1932." (162.880 meters or 534.382 feet.)

**S 20.**—About 8.1 miles southeast along United States Highway 71 from Abbott, Scott County, in the northwest corner of bridge 12-8.70 over Old Freedom Creek, and 1.5 feet south of the north end of the bridge, in the curbing. A standard disk, stamped "S 20 1932." (170.643 meters or 559.851 feet.)

**T 20.**—About 4.6 miles north along United States Highway 71 from Waldron, Scott County, at the foot of the hill southward from Square Rock Tourist Park, in the northwest corner of bridge 12-4.60 over Square Rock Creek, about 2 feet south of the north end of the bridge, and in the curbing. A standard disk, stamped "T 20 1932." (214.734 meters or 704.506 feet.)

**U 20.**—About 0.2 mile north along United States Highway 71 from Waldron, Scott County, about 500 yards north of the grade crossing of the Kansas City Southern Railway, at the northwest corner of the highway bridge over Poteau Creek, about 2 feet south of the north end of the bridge, and in the curbing. A standard disk, stamped "U 20 1932." (200.811 meters or 658.827 feet.)

**V 20.**—At the edge of Waldron, Scott County, on United States Highway 71, in the east side of the new Baptist Church, about 2.5 feet north of the southeast corner, and 4 feet above the ground. A standard disk, stamped "V 20 1932" and set vertically. (204.553 meters or 671.104 feet.)

**W 20.**—About 1.2 miles south along United States Highway 71 from **Waldron**, Scott County, at the northeast corner of the junction with a side road leading east to a field, 38 feet north of the center line of the side road, 31 feet east of the center line of the highway, and 3 feet west of a fence line. A standard disk, stamped "W 20 1932" and set in the top of a concrete post. (223.788 meters or 734.211 feet.)

**X 20.**—About 4.2 miles south along United States Highway 71 from **Waldron**, Scott County, at the west side of bridge 11-16.88 over Ross Creek, about 2.5 feet south of the north end of the bridge, and in the curbing. A standard disk, stamped "X 20 1932." (250.905 meters or 823.177 feet.)

**Y 20.**—About 7.4 miles south along United States Highway 71 from **Waldron**, Scott County, about 140 yards north of the intersection of State Highway 28, and in the west end of culvert 11-13.64. A standard disk, stamped "Y 20 1932." (213.820 meters or 701.508 feet.)

**Z 20.**—At **Boles**, Scott County, about 120 yards north of the post office, and in the west end of culvert 11-11.68. A standard disk, stamped "Z 20 1932." (202.658 meters or 664.887 feet.)

**A 21.**—About 4.1 miles south along United States Highway 71 from **Boles**, Scott County, at concrete arch bridge 11-7.53 over Mill Creek, about 2 feet south of the north end of the bridge, and in the east curbing. A standard disk, stamped "A 21 1932." (226.573 meters or 743.348 feet.)

**B 21.**—About 4.3 miles south along United States Highway 71 from **Boles**, Scott County, at the junction with United States Highway 270, at concrete bridge 11-7.30 over Tanna Hill Creek, 2.5 feet north of the south end of the bridge, and in the east curbing. A standard disk, stamped "B 21 1932." (225.856 meters or 740.996 feet.)

**C 21.**—About 4.4 miles south along United States Highway 71 from **Boles**, Scott County, at the junction with United States Highway 270, about 70 yards southeast of the south end of bridge 11-7.30 over Tanna Hill Creek, and in the north head wall of a 3-foot culvert. A standard disk, stamped "C 21 1932." (225.851 meters or 740.979 feet.)

For additional bench marks in this vicinity, see page 125.

**D 21.**—About 8.5 miles south along United States Highway 71 from **Boles**, Scott County, about 4.1 miles south of the junction with United States Highway 270, about 430 feet east of the southeast corner of a frame house on the north side of the highway, and 33 feet south of the center line of the highway. A standard disk, stamped "D 21 1932" and set in the top of a concrete post. (255.359 meters or 837.790 feet.)

**E 21.**—About 13.4 miles north along United States Highway 71 from **Mena**, Polk County, about 0.3 mile north of the Forest Park Inn and Service Station, at a sharp curve, about 28 feet east of the center line of the highway, and 5 feet above the inside edge of the road, in an outcrop of bedrock. A standard disk, stamped "E 21 1932" and set vertically. (352.130 meters or 1,155.280 feet.)

**F 21.**—About 9.8 miles north along United States Highway 71 from **Mena**, Polk County, at a sharp curve to the west, about 2.5 feet above the level of the road, and in a small outcrop of bedrock. A standard disk, stamped "F 21 1932." (382.034 meters or 1,253.390 feet.)

**G 21.**—About 6.3 miles north along United States Highway 71 from **Mena**, Polk County, about 0.5 mile north of the junction with United States Highway 270 leading west into Oklahoma, and in the southeast corner of bridge 10-6.23. A standard disk, stamped "G 21 1932." (334.127 meters or 1,096.215 feet.)

**H 21.**—About 5.8 miles north along United States Highway 71 from **Mena**, Polk County, at the junction with United States Highway 270, directly south of a gasoline filling station at the south corner of the triangular junction, 23 feet west of the center line of United States Highway 71, and 22 feet east of the center line of United States Highway 270. A standard disk, stamped "H 21 1932" and set in the top of a concrete post. (331.810 meters or 1,088.613 feet.)

**J 21.**—About 4.8 miles north along the Kansas City Southern Railway from **Mena**, Polk County, about 300 yards south of the settlement called **Acorn**, about 100 feet south of milepost 375, in the north abutment of bridge A-376, and about 3 feet lower than the track. A standard disk, stamped "J 21 1932." (348.736 meters or 1,144.145 feet.)

**378 (K. C. S. Ry.)**.—About 1.9 miles north along the Kansas City Southern Railway from Mena, Polk County, 50 feet south of the first pole north of milepost 378, and 45 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (345.261 meters or 1,132.744 feet.)

**379A (K. C. S. Ry.)**.—About 0.9 mile north along the Kansas City Southern Railway from Mena, Polk County, 30 feet north of the second pole north of milepost 379, and 40 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (340.257 meters or 1,116.326 feet.)

**379B (K. C. S. Ry.)**.—About 0.5 mile north along the Kansas City Southern Railway from Mena, Polk County, on the north abutment of bridge A-380, and on the east corner of the parapet wall. A chiseled square. (343.647 meters or 1,127.449 feet.)

**K 21.**—At Mena, Polk County, in the east side of the Kansas City Southern Railway passenger station, 2 feet north of the door to the White waiting room, and 4.6 feet above the platform. A standard disk, stamped "K 21 1932" and set vertically. (350.510 meters or 1,149.965 feet.)

**L 21.**—At Mena, Polk County, in the north or front side of the National Guard Armory, 3 feet west of the door, and 5 feet above the sidewalk. A standard disk, stamped "L 21 1932" and set vertically. (354.810 meters or 1,164.072 feet.)

**M 21 (City of Mena).**—At Mena, Polk County, in Janssen Park, and 22 feet south of the clock tower. A standard disk, stamped "M 21 1932 1177.215" and set in the top of a concrete post. (358.816 meters or 1,177.215 feet.)

**379D (K. C. S. Ry.)**.—About 0.7 mile south along the Kansas City Southern Railway from Mena, Polk County, at a water tank, and on the southeast corner of the south pedestal of the east pair of footings. A chiseled square. (351.052 meters or 1,151.743 feet.)

**N 21.**—About 2¼ miles south along the Kansas City Southern Railway from Mena, Polk County, about ¼ mile south of milepost 382, about 18 rails north of a country-road crossing, in the north end of the west head wall of a culvert, and 6 feet lower than the track. A standard disk, stamped "N 21 1932." (324.829 meters or 1,065.710 feet.)

**384 (K. C. S. Ry.)**.—About 2.5 miles north along the Kansas City Southern Railway from Potter, Polk County, just north of milepost 384, and 30 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (299.978 meters or 984.178 feet.)

**385 (K. C. S. Ry.)**.—About 1.6 miles north along the Kansas City Southern Railway from Potter, Polk County, 45 feet north of the third pole north of milepost 385, and 40 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (292.527 meters or 959.732 feet.)

**386 (K. C. S. Ry.)**.—About 0.5 mile north along the Kansas City Southern Railway from Potter, Polk County, 10 feet west of milepost 386, and 45 feet north of the track. The highest point of the ball of a section of rail set vertically in the ground. (286.935 meters or 941.386 feet.)

**P 21.**—At Potter, Polk County, on the Kansas City Southern Railway, about 130 feet south of a road crossing, and 32 feet west of the west rail of the main track. A standard disk, stamped "P 21 1932" and set in the top of a concrete post. (283.652 meters or 930.615 feet.)

**387A (K. C. S. Ry.)**.—About 0.5 mile south along the Kansas City Southern Railway from Potter, Polk County, 25 feet southwest of milepost 387, and 45 feet northwest of the track. The highest point of the flange of a section of rail set vertically in the ground. (277.875 meters or 911.662 feet.)

**388 (K. C. S. Ry.)**.—About 1.5 miles south along the Kansas City Southern Railway from Potter, Polk County, 15 feet west of milepost 388, and 45 feet northwest of the track. The highest point of the ball of a section of rail set vertically in the ground. (280.932 meters or 921.691 feet.)

**Q 21.**—About 2.6 miles north along the Kansas City Southern Railway from Hatfield, Polk County, and in the east side of the south abutment of bridge A-390. A standard disk, stamped "Q 21 1932." (286.094 meters or 938.627 feet.)

**390 (K. C. S. Ry.)**.—About 2.2 miles north along the Kansas City Southern Railway from Hatfield, Polk County, 10 feet north of milepost 390, and 45 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (288.366 meters or 946.081 feet.)

**391½ (K. C. S. Ry.).**—About 0.6 mile north along the Kansas City Southern Railway from **Hatfield**, Polk County, in the north abutment of bridge B-392, and on the east corner of the parapet wall. A chiseled square. (295.828 meters or 970.562 feet.)

**R 21.**—At **Hatfield**, Polk County, about 67 feet south of the Kansas City Southern Railway station, 29 feet east of the east rail of the main track, and about 3 feet higher than the track. A standard disk, stamped "R 21 1932" and set in the top of a concrete post. (296.834 meters or 973.863 feet.)

**393½ (K. C. S. Ry.).**—About 1.5 miles south along the Kansas City Southern Railway from **Hatfield**, Polk County, on the north abutment of bridge B-394, and on the southeast corner of the parapet wall. A chiseled square. (272.067 meters or 892.606 feet.)

**395 (K. C. S. Ry.).**—About 1.9 miles north along the Kansas City Southern Railway from **Cove**, Polk County, 10 feet south of milepost 395, and 30 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (291.830 meters or 957.446 feet.)

**S 21.**—At **Cove**, Polk County, about 200 feet north of the Kansas City Southern Railway station, 43 feet north of road crossing, 8 feet east of the east rail of the main track, and in the concrete base of the mail crane. A standard disk, stamped "S 21 1932." (320.158 meters or 1,050.385 feet.)

**1046 (U.S.G.S.).**—At **Cove**, Polk County, about 30 feet north of the Kansas City Southern Railway station, and 70 feet east of the track. A United States Geological Survey standard cap, stamped "1046 1908" and riveted on the top of a 3½-inch iron pipe. (319.263 meters or 1,047.449 feet.)

**398 (K. C. S. Ry.).**—About 1.3 miles south along the Kansas City Southern Railway from **Cove**, Polk County, on the west side of an undergrade truss bridge, and on the head of the fourth rivet from the north end. A chiseled cross. (300.161 meters or 984.778 feet.)

**399 (K. C. S. Ry.).**—About 2.1 miles south along the Kansas City Southern Railway from **Cove**, Polk County, 12 feet east of milepost 399, and 25 feet south of the track. The highest point of the ball of a section of rail set vertically in the ground. (309.005 meters or 1,013.794 feet.)

**T 21.**—About 1.6 miles north along the Kansas City Southern Railway from **Vandervoort**, Polk County, about 775 feet south of milepost 400, at the crossing of United States Highway 71, 25 feet south of the center line of the highway, and 15 feet west of the west rail. A standard disk, stamped "T 21 1932" and set in the top of a concrete post. (311.224 meters or 1,021.074 feet.)

**401 (K. C. S. Ry.).**—About 0.8 mile north along the Kansas City Southern Railway from **Vandervoort**, Polk County, 10 feet west of the first pole north of milepost 401, and 45 feet southwest of the track. The highest point of the ball of a section of rail set vertically in the ground. (318.740 meters or 1,045.733 feet.)

**U 21.**—At **Vandervoort**, Polk County, about 210 feet north of the Kansas City Southern Railway station, 6 feet east of the east rail of the main track, and in the concrete base of the mail crane. A standard disk, stamped "U 21 1932." (327.445 meters or 1,074.292 feet.)

**1077 (U.S.G.S.).**—At **Vandervoort**, Polk County, about 40 feet south of the Kansas City Southern Railway station, and 50 feet east of the track. A United States Geological Survey standard cap, stamped "1077 1908" and riveted on the top of a 3½-inch iron pipe. (328.424 meters or 1,077.504 feet.)

**403 (K. C. S. Ry.).**—About 1.2 miles south along the Kansas City Southern Railway from **Vandervoort**, Polk County, 10 feet west of milepost 403, and 45 feet south of the track. The highest point of the ball of a section of rail set vertically in the ground. (344.895 meters or 1,131.543 feet.)

**404 (K. C. S. Ry.).**—About 0.1 mile south along the Kansas City Southern Railway from **Hatton**, Polk County, 8 feet north of milepost 404, and 35 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (357.468 meters or 1,172.793 feet.)

**V 21.**—About ¼ mile south along the Kansas City Southern Railway from **Hatton**, Polk County, about 350 feet south of the crossing of United States Highway 71, and in the west side of the north abutment of bridge A-405. A standard disk, stamped "V 21 1932." (357.684 meters or 1,173.502 feet.)

**1135 (U.S.G.S.).**—About 0.7 mile south along the Kansas City Southern Railway from **Hatton**, Polk County, at the southeast corner of a country-road crossing, and 30 feet east of the track. A United States Geological Survey standard cap, stamped "1135 1908" and riveted on the top of a 3½-inch iron pipe. (346.349 meters or 1,136.313 feet.)

405 (K. C. S. Ry.).—About 1.1 miles south along the Kansas City Southern Railway from **Hatton**, Polk County, 6 feet west of milepost 405, and 45 feet south of the track. The highest point of the ball of a section of rail set vertically in the ground. (337.357 meters or 1,106.812 feet.)

407 (K. C. S. Ry.).—About 1.9 miles north along the Kansas City Southern Railway from **Wickes**, Polk County, 15 feet north of milepost 407, and 40 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (314.856 meters or 1,032.990 feet.)

1028 (U.S.G.S.).—At **Wickes**, Polk County, about 100 feet west of the Kansas City Southern Railway station, and at a fence line. A United States Geological Survey standard cap, stamped "1028 1908" and riveted on the top of a 3½-inch iron pipe. (313.412 meters or 1,028.253 feet.)

W 21.—At **Wickes**, Polk County, at the Kansas City Southern Railway station, about 3 feet east of the window of the ticket office, and in the concrete base of the switch signal. A standard disk, stamped "W 21 1932." (312.966 meters or 1,026.789 feet.)

409 (K. C. S. Ry.).—About 0.2 mile south along the Kansas City Southern Railway from **Wickes**, Polk County, 20 feet north of milepost 409, and 35 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (310.786 meters or 1,019.637 feet.)

411 (K. C. S. Ry.).—About 2.1 miles south along the Kansas City Southern Railway from **Wickes**, Polk County, 12 feet north of the second pole north of milepost 411, and 35 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (306.213 meters or 1,004.634 feet.)

X 21.—About 1.5 miles north along the Kansas City Southern Railway from **Grannis**, Polk County, directly east of milepost 412, 74 feet east of the east rail, and 25 feet west of the center line of United States Highway 71. A standard disk, stamped "X 21 1932" and set in the top of a concrete post. (293.745 meters or 963.728 feet.)

412 (K. C. S. Ry.).—About 1.5 miles north along the Kansas City Southern Railway from **Grannis**, Polk County, 8 feet south of the first pole south of milepost 412, and 30 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (293.833 meters or 964.017 feet.)

921 (U.S.G.S.).—At **Grannis**, Polk County, about 100 feet east of a point 50 feet south of the Kansas City Southern Railway station, at the west side of a warehouse, and 1 foot inside a fence. A United States Geological Survey standard cap, stamped "921 1908" and riveted on the top of a 3½-inch iron pipe. (280.978 meters or 921.842 feet.)

415 (K. C. S. Ry.).—About 1.5 miles south along the Kansas City Southern Railway from **Grannis**, Polk County, 10 feet north of milepost 415, and 35 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (260.037 meters or 853.133 feet.)

416 (K. C. S. Ry.).—About 2.4 miles south along the Kansas City Southern Railway from **Grannis**, Polk County, 85 feet north of the third pole north of milepost 416, and 30 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (254.607 meters or 835.323 feet.)

417 (K. C. S. Ry.).—In Polk County, about 2.0 miles north along the Kansas City Southern Railway from **Mineral**, Sevier County, 25 feet southeast of the first pole south of milepost 417, and 25 feet southwest of the track. The highest point of the ball of a section of rail set vertically in the ground. (237.513 meters or 779.241 feet.)

768 (U.S.G.S.).—In Polk County, about 1.5 miles north along the Kansas City Southern Railway from **Mineral**, Sevier County, about 150 feet northeast of a house, about 100 feet north of a road crossing, 50 feet west of the track, and about 9 feet lower than the track. A United States Geological Survey standard cap, stamped "768 1908" and riveted on the top of a 3½-inch iron pipe. (234.234 meters or 768.483 feet.)

418 (K. C. S. Ry.).—In Polk County, about 1.0 mile north along the Kansas City Southern Railway from **Mineral**, Sevier County, 25 feet north of the first pole south of milepost 418, and 40 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (243.984 meters or 800.471 feet.)

419 (K. C. S. Ry.).—At **Mineral**, Sevier County, 20 feet south of milepost 419, and 40 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (247.707 meters or 812.635 feet.)

**Y 21.**—At Mineral, Sevier County, on the Kansas City Southern Railway, 83 feet south of milepost 419, and 21 feet west of the west rail. A standard disk, stamped "Y 21 1932" and set in the top of a concrete post. (247.714 meters or 812.708 feet.)

**751 (U.S.G.S.).**—At Gillham, Sevier County, about 150 feet southeast of the Kansas City Southern Railway station, 80 feet east of the track, and 10 feet northeast of the public well. A United States Geological Survey standard cap, stamped "751 1908" and riveted on the top of a 3½-inch iron pipe. (229.129 meters or 751.734 feet.)

**422½ (K. C. S. Ry.).**—About 1.2 miles south along the Kansas City Southern Railway from Gillham, Sevier County, 40 feet north of milepost 422½, and west of the track. The highest point of the flange of a section of rail set vertically in the ground. (223.268 meters or 732.505 feet.)

**424 (K. C. S. Ry.).**—About 0.6 mile north along the Kansas City Southern Railway from Kings, Sevier County, 30 feet north of the first pole south of milepost 424, and 25 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (204.528 meters or 671.022 feet.)

**633 (U.S.G.S.).**—At Kings, Sevier County, about 600 feet north of the Kansas City Southern Railway station, at a road crossing, and 60 feet east of the track. A United States Geological Survey standard cap, stamped "633 1908" and riveted on the top of a 3½-inch iron pipe. (192.883 meters or 632.817 feet.)

**425 (K. C. S. Ry.).**—About 0.4 mile south along the Kansas City Southern Railway from Kings, Sevier County, 15 feet south of milepost 425, and 35 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (191.210 meters or 627.328 feet.)

**Z 21.**—About 1¼ miles south along the Kansas City Southern Railway from Kings, Sevier County, about 910 feet north of milepost 426, at the overhead crossing of United States Highway 71, in the west face of the east pier of the bridge, 1 foot south of the north side of the pier, and 2.5 feet higher than the track. A standard disk, stamped "Z 21 1932" and set vertically. (189.598 meters or 622.039 feet.)

**426 (K. C. S. Ry.).**—About 1.4 miles south along the Kansas City Southern Railway from Kings, Sevier County, 12 feet north of the second pole north of milepost 426, and 35 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (185.582 meters or 608.864 feet.)

**544 (U.S.G.S.).**—About 6 miles north along the Kansas City Southern Railway from De Queen, Sevier County, at the former location of the station called "Pullman", about halfway between mileposts 427 and 423, and about 60 feet west of the track. A United States Geological Survey standard cap, stamped "544 1908" and riveted on the top of a 3½-inch iron pipe. (165.800 meters or 543.962 feet.)

**429 (K. C. S. Ry.).**—About 4.3 miles north along the Kansas City Southern Railway from De Queen, Sevier County, 25 feet south of milepost 429, and 35 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (162.167 meters or 532.043 feet.)

**A 22.**—About 3.6 miles north along the Kansas City Southern Railway from De Queen, Sevier County, about 1,950 feet north of milepost 430, at a country-road crossing, 67 feet west of the west rail, and 18 feet south of the center line of the road. A standard disk, stamped "A 22 1932" and set in the top of a concrete post. (148.195 meters or 486.203 feet.)

**431 (K. C. S. Ry.).**—About 2.3 miles north along the Kansas City Southern Railway from De Queen, Sevier County, 20 feet northwest of milepost 431, and 40 feet southwest of the track. The highest point of the flange of a section of rail set vertically in the ground. (129.769 meters or 425.750 feet.)

**D 22.**—At De Queen, Sevier County, in the east wall of the Kansas City Southern Railway station, 2.5 feet north of the door to the waiting room, and 4½ feet above the platform. A standard disk, stamped "D 22 1932 386.069" and set vertically. (117.674 meters or 386.069 feet.)

**B 22.**—At De Queen, Sevier County, at the east entrance of the courthouse, 2 feet south of the doorway, and 5 feet above the ground. A standard disk, stamped "B 22 1932 426.597" and set vertically. (130.027 meters or 426.597 feet.)

**C 22 (City of De Queen).**—At De Queen, Sevier County, at the east entrance of the courthouse, 4 feet south of the entrance, 1 foot east of the side of the building, and in the top step. A standard disk, stamped "C 22 1932 431.548." (131.536 meters or 431.548 feet.)

**E 22.**—At **De Queen**, Sevier County, about 0.4 mile south of the Kansas City Southern Railway station, about 560 feet north of the crossing of the De Queen & Eastern Railroad, and 40 feet east of the track. A standard disk, stamped "E 22 1932" and set in the top of a concrete post. (113.205 meters or 371.407 feet.)

**434½ (K. C. S. Ry.)**.—About 1¼ miles south along the Kansas City Southern Railway from **De Queen**, Sevier County, and on the north side of the east end of the north abutment of bridge A-435. A chiseled square. (108.396 meters or 355.629 feet.)

**436 (K. C. S. Ry.)**.—About 2.7 miles south along the Kansas City Southern Railway from **De Queen**, Sevier County, 20 feet west of milepost 436, and 50 feet north of the track. The highest point of the ball of a section of rail set vertically in the ground. (121.271 meters or 397.870 feet.)

**F 22.**—About 2.9 miles north along the Kansas City Southern Railway from **Horatio**, Sevier County, at the siding at **Poco**, 885 feet north of milepost 438, about 500 feet south of the shipping house of the Patterson Orchard Co., and in the west end of a concrete culvert. A standard disk, stamped "F 22 1932." (150.590 meters or 494.061 feet.)

**438 (K. C. S. Ry.)**.—About 2.7 miles north along the Kansas City Southern Railway from **Horatio**, Sevier County, 10 feet west of the first pole south of milepost 438, and 40 feet north of the track. The highest point of the ball of a section of rail set vertically in the ground. (147.603 meters or 484.261 feet.)

**439 (K. C. S. Ry.)**.—About 1.7 miles north along the Kansas City Southern Railway from **Horatio**, Sevier County, 8 feet west of milepost 439, and 40 feet north of the track. The highest point of the flange of a section of rail set vertically in the ground. (127.551 meters or 418.474 feet.)

**G 22.**—At **Horatio**, Sevier County, about 500 feet south of the Kansas City Southern Railway station, and in the east head wall of a concrete culvert. A standard disk, stamped "G 22 1932." (100.744 meters or 330.524 feet.)

**441 (K. C. S. Ry.)**.—About 0.4 mile south along the Kansas City Southern Railway from **Horatio**, Sevier County, 8 feet north of milepost 441, and 50 feet east of the track. The highest point of the ball of a section of rail set vertically in the ground. (97.734 meters or 320.649 feet.)

**H 22.**—About 1.2 miles south along the Kansas City Southern Railway from **Horatio**, Sevier County, at **Neal Springs**, about 575 feet north of the water tank, and 92 feet west of the track. A standard disk, stamped "H 22 1932" and set in the top of a concrete post. (93.244 meters or 305.918 feet.)

**J 22.**—About 3.2 miles north along the Kansas City Southern Railway from **Winthrop**, Little River County, about 400 feet south of milepost 446, in the east end of a concrete culvert, and about 10 feet lower than the track. A standard disk, stamped "J 22 1932." (95.657 meters or 313.835 feet.)

**447 (K. C. S. Ry.)**.—About 2.3 miles north along the Kansas City Southern Railway from **Winthrop**, Little River County, 15 feet northeast of milepost 447, and 25 feet northwest of the track. The highest point of the flange of a section of rail set vertically in the ground. (98.213 meters or 322.220 feet.)

**448 (K. C. S. Ry.)**.—About 1.3 miles north along the Kansas City Southern Railway from **Winthrop**, Little River County, 8 feet north of milepost 448, and 30 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (97.058 meters or 318.431 feet.)

**K 22.**—At **Winthrop**, Little River County, 93 feet south of the Kansas City Southern Railway station, 23 feet west of the west rail of the main track, and 6 feet east of a pole. A standard disk, stamped "K 22 1932" and set in the top of a concrete post. (100.049 meters or 328.244 feet.)

**451 (K. C. S. Ry.)**.—About 1.7 miles south along the Kansas City Southern Railway from **Winthrop**, Little River County, 8 feet north of milepost 451, and 30 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (99.974 meters or 327.998 feet.)

**L 22.**—About 2.5 miles south along the Kansas City Southern Railway from **Winthrop**, Little River County, 890 feet north of milepost 452, and in the east end of a culvert. A standard disk, stamped "L 22 1932." (91.783 meters or 301.125 feet.)

**452 (K. C. S. Ry.)**.—About 2.7 miles south along the Kansas City Southern Railway from **Winthrop**, Little River County, 10 feet southwest of the first pole north of milepost 452, and 35 feet northwest of the track. The highest point of the ball of a section of rail set vertically in the ground. (91.534 meters or 300.308 feet.)

454 (K. C. S. Ry.).—About 2.0 miles north along the Kansas City Southern Railway from Allene, Little River County, 10 feet northeast of milepost 454, and 25 feet northwest of the track. The highest point of the ball of a section of rail set vertically in the ground. (105.903 meters or 347.450 feet.)

455 (K. C. S. Ry.).—About 1.0 mile north along the Kansas City Southern Railway from Allene, Little River County, 8 feet east of milepost 455, and 20 feet south of the track. The highest point of the ball of a section of rail set vertically in the ground. (95.014 meters or 311.725 feet.)

M 22.—At Allene, Little River County, about 1,625 feet north of the Kansas City Southern Railway station, about 1,360 feet north of milepost 456, in the east end of a concrete culvert, and about 7 feet lower than the track. A standard disk, stamped "M 22 1932." (94.909 meters or 311.381 feet.)

458 (K. C. S. Ry.).—About 2.0 miles south along the Kansas City Southern Railway from Allene, Little River County, 10 feet west of milepost 458, and 40 feet south of the track. The highest point of the flange of a section of rail set vertically in the ground. (93.540 meters or 306.889 feet.)

459 (K. C. S. Ry.).—About 3.0 miles south along the Kansas City Southern Railway from Allene, Little River County, 12 feet west of milepost 459, and 40 feet south of the track. The highest point of the flange of a section of rail set vertically in the ground. (89.466 meters or 293.523 feet.)

460 (K. C. S. Ry.).—About 2.9 miles north along the Kansas City Southern Railway from Wilton, Little River County, 10 feet north of milepost 460, and 30 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (95.342 meters or 312.801 feet.)

N 22.—About 2.7 miles north along the Kansas City Southern Railway from Wilton, Little River County, 904 feet south of milepost 460, and in the east end of a concrete culvert. A standard disk, stamped "N 22 1932." (90.190 meters or 295.898 feet.)

461 (K. C. S. Ry.).—About 1.9 miles north along the Kansas City Southern Railway from Wilton, Little River County, 8 feet west of milepost 461, and 35 feet south of the track. The highest point of the ball of a section of rail set vertically in the ground. (92.250 meters or 302.657 feet.)

P 22.—At Wilton, Little River County, about 240 feet south of the Kansas City Southern Railway station, about 280 feet north of milepost 463, 14 feet west of the west rail of the main track, and in the top of one of a group of concrete posts that formerly supported a water tank. A standard disk, stamped "P 22 1932." (97.758 meters or 320.728 feet.)

463 (K. C. S. Ry.).—About 0.1 mile south along the Kansas City Southern Railway from Wilton, Little River County, 60 feet north of milepost 463, and 30 feet west of the track. The highest point of the web of a section of rail set vertically in the ground. (96.906 meters or 317.932 feet.)

464 (K. C. S. Ry.).—About 1.1 miles south along the Kansas City Southern Railway from Wilton, Little River County, 12 feet south of milepost 464, and 30 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (97.298 meters or 319.219 feet.)

Q 22.—About 2.4 miles south along the Kansas City Southern Railway from Wilton, Little River County, about 2,110 feet south of milepost 465, 50 feet north of the grade crossing of United States Highway 71, and 34 feet east of the east rail. A standard disk, stamped "Q 22 1932" and set in the top of a concrete post. (99.736 meters or 327.217 feet.)

466 (K. C. S. Ry.).—About 2.0 miles north along the Kansas City Southern Railway from Ashdown, Little River County, 10 feet west of milepost 466, and 40 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (100.199 meters or 328.736 feet.)

Ashdown Northwest Base.—About 1.5 miles north along the Kansas City Southern Railway from Ashdown, Little River County, about 2,450 feet south of milepost 466, 140 feet west of the west rail, and 53 feet west of the center line of United States Highway 71. A standard triangulation-station disk, stamped "ASHDOWN N.W. BASE 1930" and set in the top of a concrete post. (100.259 meters or 328.933 feet.)

467 (K. C. S. Ry.).—About 1.0 mile north along the Kansas City Southern Railway from Ashdown, Little River County, 9 feet west of milepost 467, and 40 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (100.406 meters or 329.415 feet.)

R 22 (City of Ashdown).—At Ashdown, Little River County, at the southeast corner of the courthouse yard, 15 feet north of the south fence, and 12 feet

west of the east fence. A standard disk, stamped "R 22 1932 328.631" and set in the top of a concrete post. (100.167 meters or 328.631 feet.)

S 22.—At Ashdown, Little River County, south of the Kansas City Southern Railway station, and in the northeast one of the concrete piers supporting the railroad water tower. A standard disk, stamped "S 22 1932." (100.860 meters or 330.905 feet.)

469 (K. C. S. Ry.).—About 1.0 mile south along the Kansas City Southern Railway from Ashdown, Little River County, 7 feet west of milepost 469, and 40 feet west of the track. The highest point of the web of a section of rail set vertically in the ground. (100.262 meters or 328.943 feet.)

470 (K. C. S. Ry.).—About 2.0 miles south along the Kansas City Southern Railway from Ashdown, Little River County, 8 feet west of milepost 470, and 40 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (98.940 meters or 324.608 feet.)

471 (K. C. S. Ry.).—About 3.0 miles south along the Kansas City Southern Railway from Ashdown, Little River County, 10 feet west of milepost 471, and 40 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (96.751 meters or 317.424 feet.)

T 22.—About 3 miles south along the Kansas City Southern Railway from Ashdown, Little River County, at the siding at Hudson, 390 feet south of milepost 471, 12 feet south of a dirt-road crossing, and 38 feet east of the east rail of the main track. A standard disk, stamped "T 22 1932" and set in the top of a concrete post. (96.934 meters or 318.024 feet.)

472 (K. C. S. Ry.).—About 3.5 miles north along the Kansas City Southern Railway from Ogden, Little River County, 10 feet west of milepost 472, and 40 feet west of the track. The highest point of the flange of a section of rail set vertically in the ground. (95.571 meters or 313.553 feet.)

473 (K. C. S. Ry.).—About 2.5 miles north along the Kansas City Southern Railway from Ogden, Little River County, 8 feet west of milepost 473, and 40 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (96.663 meters or 317.135 feet.)

474 (K. C. S. Ry.).—About 1.5 miles north along the Kansas City Southern Railway from Ogden, Little River County, 8 feet west of milepost 474, and 40 feet west of the track. The highest point of the ball of a section of rail set vertically in the ground. (95.914 meters or 314.678 feet.)

Ashdown Southeast Base Offset.—At Ogden, Little River County, about 475 feet southeast of the Kansas City Southern Railway station, and 40 feet east of the east rail of the main track. A standard triangulation-station disk, stamped "ASHDOWN S.E. BASE OFFSET" and set in the top of a concrete post flush with the ground. (90.557 meters or 297.102 feet.)

U 22.—About 2½ miles south along the Kansas City Southern Railway from Ogden, Little River County, at the railroad bridge over Red River, and in the west side of the northernmost pier. A standard disk, stamped "U 22 1932." (87.687 meters or 287.986 feet.)

The line enters Texas and returns into Arkansas.

V 22.—At Texarkana, Miller County, at the Municipal Auditorium on East Third and Walnut Streets, in the top of the west stone banister of the East Third Street entrance, and 4 feet above the sidewalk. A standard disk, stamped "V 22 1932." (97.607 meters or 320.232 feet.)

329 (U.S.G.S.).—At Texarkana, Miller County, on East Fourth Street between Ash and Laurel Avenues, near the south edge of the courthouse lawn, 76 feet south of the south main entrance to the courthouse, 7 feet east of the main sidewalk to East Fourth Street, and 1 foot above the ground. A United States Geological Survey standard disk, stamped "329 REF. MARK ADJ. 1903" and set in the top of a stone post. (100.334 meters or 329.179 feet.)

RV 500 (St. L. Swn. Ry.).—At Texarkana, Miller County, on the St. Louis Southwestern Railway, about ¼ pole from milepost 419, north of the track, and in the concrete base of a semaphore. A standard Monel-metal rivet. (86.190 meters or 282.775 feet.)

RV 501 (St. L. Swn. Ry.).—At Texarkana, Miller County, on the St. Louis Southwestern Railway, about 15¼ poles west of milepost 418, 50 feet north of the track, and in a concrete manhole. A standard Monel-metal rivet. (87.424 meters or 286.824 feet.)

RV 502 (St. L. Swn. Ry.).—About 1 mile east along the St. Louis Southwestern Railway from Texarkana, Miller County, about 25¼ poles west of

milepost 417, 35 feet south of the track, and in the concrete curbing at the west side of a street. A standard Monel-metal rivet. (89.967 meters or 295.167 feet.)

**RV 503 (St. L. Swn. Ry.).**—About 1.5 miles east along the St. Louis Southwestern Railway from **Texarkana**, Miller County, about  $9\frac{1}{4}$  poles west of milepost 417, at the station of the St. Louis Southwestern Railway hospital, and in the east end of the third step. A standard Monel-metal rivet. (90.928 meters or 326.863 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 417 (338.7 feet.)

**W 22.**—About 1.9 miles east along the St. Louis Southwestern Railway from **Texarkana**, Miller County, about  $23\frac{3}{4}$  poles northwest of milepost 416, 27 feet west of the center line of a graveled road which crosses the track diagonally, and 40 feet northeast of the northeast rail. A standard disk, stamped "W 22 1932" and set in the top of a concrete post. (105.456 meters or 345.984 feet.)

**RV 504 (St. L. Swn. Ry.).**—About 2.1 miles east along the St. Louis Southwestern Railway from **Texarkana**, Miller County, about 18 poles northwest of milepost 416, and in the south end of a concrete culvert. A standard Monel-metal rivet. (101.268 meters or 332.243 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 416. (374.1 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 415. (360.2 feet.)

**RV 505 (St. L. Swn. Ry.).**—About 4.8 miles west along the St. Louis Southwestern Railway from **Genoa**, Miller County, about  $27\frac{3}{4}$  poles west of milepost 414, and in the north head wall of a concrete culvert. A standard Monel-metal rivet. (107.532 meters or 352.795 feet.)

**X 22.**—About 4.5 miles west along the St. Louis Southwestern Railway from **Genoa**, Miller County, about  $18\frac{1}{2}$  poles northwest of milepost 414, 15 feet northeast of the northeast rail of the main track, and in the southeast corner of the northeast head wall of a concrete culvert. A standard disk, stamped "X 22 1932." (106.980 meters or 350.984 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 414. (374.1 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 413. (408.7 feet.)

**RV 506 (St. L. Swn. Ry.).**—About 2.2 miles west along the St. Louis Southwestern Railway from **Genoa**, Miller County, about  $9\frac{3}{4}$  miles west of milepost 412, and in the north head wall of a pipe culvert. A standard Monel-metal rivet. (114.278 meters or 374.927 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 412. (360.0 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 411. (350.6 feet.)

**Y 22.**—At **Genoa**, Miller County, 386 feet west of the St. Louis Southwestern Railway station,  $6\frac{3}{4}$  poles west of milepost 410, 48 feet west of the center of a road crossing, 27 feet north of the north rail of the main track, and 23 feet south of the center line of an east-and-west highway. A standard disk, stamped "Y 22 1932" and set in the top of a concrete post. (111.831 meters or 366.899 feet.)

**Genoa**, top of rail opposite the St. Louis Southwestern Railway station. (367.3 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 410. (365.6 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 409. (374.1 feet.)

**Z 22.**—About 1.3 miles east along the St. Louis Southwestern Railway from **Genoa**, Miller County, about  $24\frac{3}{4}$  poles west of milepost 408, 15 feet east of the center line of an improved road, and 75 feet north of the north rail. A standard disk, stamped "Z 22 1932" and set in the top of a concrete post. (114.829 meters or 376.735 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 408. (374.2 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 407. (353.5 feet.)

**RV 507 (St. L. Swn. Ry.).**—About 1.3 miles west along the St. Louis Southwestern Railway from **Artex**, Miller County, about  $22\frac{3}{4}$  poles west of milepost

406, and in the north head wall of a pipe culvert. A standard Monel-metal rivet. (101.901 meters or 334.320 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 406. (301.1 feet.)

**A 23.**—At **Artex**, Miller County, on the St. Louis Southwestern Railway, about 14½ poles west of milepost 405, about 260 feet south of the south rail of the main track, and in the concrete foundation of a demolished building. A standard disk, stamped "A 23 1932" (83.020 meters or 272.375 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 405. (255.1 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 404. (239.4 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 400. (237.0 feet.)

**RV 508 (St. L. Swn. Ry.)**.—About 1.8 miles west along the St. Louis Southwestern Railway from **Garland City**, Miller County, about 14 poles west of milepost 399, about 200 feet north of the track, and in the head wall of a concrete highway culvert. A standard Monel-metal rivet. (70.559 meters or 231.492 feet.)

**B 23.**—About 1.7 miles west along the St. Louis Southwestern Railway from **Garland City**, Miller County, ¼ mile east of the siding at **Mayton**, about 12 poles west of milepost 399, at the place where State Highway 2 turns away from the railroad, 48 feet north of the north rail, and 36 feet south of the center line of the highway. A standard disk, stamped "B 23 1932" and set in the top of a concrete post. (70.268 meters or 230.538 feet.)

Top of rail opposite St. Louis Southwestern Railway milepost 399. (237.4 feet.)

**RV 509 (St. L. Swn. Ry.)**.—About 0.6 mile west along the St. Louis Southwestern Railway from **Garland City**, Miller County, about 7½ poles west of milepost 398, and in the north side of the east abutment of an undergrade crossing. A standard Monel-metal rivet. (74.363 meters or 243.973 feet.)

**RV 510 (St. L. Swn. Ry.)**.—At **Garland City**, Miller County, on the St. Louis Southwestern Railway, about 21½ poles west of milepost 397, and in the concrete runway to the freight room. A standard Monel-metal rivet. (75.074 meters or 246.305 feet.)

**C 23.**—At **Garland City**, Miller County, 57 feet north of the St. Louis Southwestern Railway station, 12 feet east of the prolongation of the west end of the station, 11 feet east of a large tree, and 10 feet lower than the track. A standard disk, stamped "C 23 1932" and set in the top of a concrete post. (71.563 meters or 234.786 feet.)

For bench marks in this vicinity, see page 16.

The elevations listed below were determined by a single-run line, which was run to determine the stability of bench marks B.M. 4 (Red River Survey) and P.B.M. Stamp.

**RV 511 (St. L. Swn. Ry.)**.—At **Garland City**, Miller County, on the St. Louis Southwestern Railway, about 9¼ poles west of milepost 397, and in the north side of the west abutment of the railroad bridge over Red River. A standard Monel-metal rivet. (74.927 meters or 245.823 feet.)

**RV 512 (St. L. Swn. Ry.)**.—In **Lafayette County**, about 0.6 mile east along the St. Louis Southwestern Railway from **Garland City**, Miller County, about 3½ poles west of milepost 397, and in the south side of the east pier of the railroad bridge over Red River. A standard Monel-metal rivet. (72.564 meters or 238.070 feet.)

**RV 513 (St. L. Swn. Ry.)**.—At **Joella**, **Lafayette County**, on the St. Louis Southwestern Railway, about 13½ poles west of milepost 396, 68 feet south of the track, and in the head wall of a highway culvert. A standard Monel-metal rivet. (69.844 meters or 229.147 feet.)

**RV 514 (St. L. Swn. Ry.)**.—About 1 mile east along the St. Louis Southwestern Railway from **Joella**, **Lafayette County**, about 12¼ poles west of milepost 395, 68 feet north of the track, and in the head wall of a highway culvert. A standard Monel-metal rivet. (69.369 meters or 227.588 feet.)

**RV 515 (St. L. Swn. Ry.)**.—About 2 miles east along the St. Louis Southwestern Railway from **Joella**, **Lafayette County**, about 14¼ poles west of milepost 394, 65 feet south of the track, and in the head wall of a highway culvert. A standard Monel-metal rivet. (70.234 meters or 230.426 feet.)

RV 516 (St. L. Swn. Ry.).—About 2.5 miles east along the St. Louis Southwestern Railway from Joella, Lafayette County, about  $\frac{1}{4}$  pole west of milepost 394, 75 feet north of the track, and in the head wall of a highway culvert. A standard Monel-metal rivet. (69.802 meters or 229.009 feet.)

RV 517 (St. L. Swn. Ry.).—About 3.7 miles west along the St. Louis Southwestern Railway from Lewisville, Lafayette County, about  $10\frac{1}{2}$  poles west of milepost 393, north of the track, and in the south head wall of a highway culvert. A standard Monel-metal rivet. (69.149 meters or 226.866 feet.)

RV 518 (St. L. Swn. Ry.).—About 2.7 miles west along the St. Louis Southwestern Railway from Lewisville, Lafayette County, about  $11\frac{3}{4}$  poles west of milepost 392, north of the track, and in the south head wall of a highway culvert. A standard Monel-metal rivet. (78.848 meters or 258.687 feet.)

RV 519 (St. L. Swn. Ry.).—About 2.0 miles west along the St. Louis Southwestern Railway from Lewisville, Lafayette County, about  $21\frac{1}{4}$  poles west of milepost 391, north of the track, and in the south head wall of a highway culvert. A standard Monel-metal rivet. (81.459 meters or 267.253 feet.)

RV 520 (St. L. Swn. Ry.).—About 0.7 mile west along the main line of the St. Louis Southwestern Railway from Lewisville, Lafayette County, at the junction of the Shreveport Branch, about  $10\frac{1}{2}$  poles west of milepost 390, 40 feet south of the track, and in the concrete foundation of a water tank. A standard Monel-metal rivet. (84.184 meters or 276.194 feet.)

RV 521 (St. L. Swn. Ry.).—At Lewisville, Lafayette County, at the St. Louis Southwestern Railway station, and in the northeast corner of the portico on the east side of the passenger station. A standard Monel-metal rivet. (81.546 meters or 267.539 feet.)

For additional bench marks in the vicinity of Lewisville, see page 16.

#### LINE 22, GURDON TO BOLES, ARK.

[Second-order leveling]

This line follows the Missouri Pacific Railroad from Gurdon through Amity and Rosboro to Norman; State Highway 8 from Norman to Mount Ida; and United States Highway 270 from Mount Ida to Boles. The field work was done, during the spring of 1932, by a party in charge of A. L. Wardwell, aid.

For additional bench marks in the vicinity of Whelen Springs, see page 10.

247 (U.S.G.S.).—At Whelen Springs, Clark County, about 450 feet west of the Missouri Pacific Railroad station, at the southwest corner of the intersection of the road to the station and the main highway through the town, and near a pole. A United States Geological Survey standard cap, stamped "H S 247" and riveted on the top of a  $3\frac{1}{2}$ -inch iron pipe. (75.590 meters or 247.998 feet.)

Milepost 430 (M. P. R.R.).—About  $2\frac{1}{2}$  miles north along the Missouri Pacific Railroad from Whelen Springs, Clark County, and at milepost 430. The top of the concrete milepost. (80.044 meters or 262.611 feet.)

D 23.—At Gurdon, Clark County, at the Missouri Pacific Railroad yards, under the south edge of the concrete coaling bin, nearly in line with the west piers supporting the bin, and in the concrete base of a signal tower marked 24-66. A standard disk, stamped "D 23 1932." (65.128 meters or 213.674 feet.)

E 23.—At Gurdon, Clark County, at the Missouri Pacific Railroad passenger station, in the west side, 2 feet south of the door to the waiting room, and about  $4\frac{1}{2}$  feet above the platform. A standard disk, stamped "E 23 1932" and set vertically. (65.246 meters or 214.061 feet.)

RV 522 (M. P. R.R.).—At Gurdon, Clark County, on the Missouri Pacific Railroad, near pole 426-10, at the water tank, and in the east corner of the northeast concrete pedestal stool. A standard Monel-metal rivet. (63.545 meters or 208.481 feet.)

Spur line to Smithton.

F 23.—At Smithton, Clark County, directly southeast of the colored waiting room of the Missouri Pacific Railroad station, about  $12\frac{3}{4}$  poles southwest of

milepost 424, 125 feet southwest of the center of a railroad crossing, and 30 feet southeast of the southeast rail. A standard disk, stamped "F 23 1932" and set in the top of a concrete post. (63.386 meters or 207.959 feet.)

#### End of spur line.

**G 23.**—About 1.5 miles northeast along United States Highway 67 from **Gurdon**, Clark County, at the crossing of the branch line of the Missouri Pacific Railroad, in the north side of the east head wall of a concrete highway culvert, 16 feet north of the north rail, and 16 feet east of the center line of the highway. A standard disk, stamped "G 23 1932." (66.494 meters or 218.156 feet.)

**RV 523 (M. P. R.R.).**—About 1.5 miles northeast along United States Highway 67 from **Gurdon**, Clark County, at pole 425+10 on the Missouri Pacific Railroad, 16 feet south of the center line of the track, and in the center line of the east concrete head wall of a 24-inch highway culvert. A standard Monel-metal rivet. (66.468 meters or 218.070 feet.)

**RV 524 (M. P. R.R.).**—About 4.7 miles northwest along the Missouri Pacific Railroad from **Gurdon**, Clark County, at pole 428+31, and in the center line of the south head wall of a double 4- by 5-foot concrete culvert. A standard Monel-metal rivet. (70.754 meters or 232.132 feet.)

**RV 525 (M. P. R.R.).**—About 5.7 miles northwest along the Missouri Pacific Railroad from **Gurdon**, Clark County, at pole 429+29, and in the center line of the south head wall of a 3- by 5-foot concrete culvert. A standard Monel-metal rivet. (88.657 meters or 290.869 feet.)

**RV 526 (M. P. R.R.).**—About 3.3 miles east along the Missouri Pacific Railroad from the station at **Burtsell**, Clark County, at pole 430+21, and in the center line of the south head wall of a 2- by 3-foot concrete culvert. A standard Monel-metal rivet. (95.676 meters or 313.897 feet.)

**RV 527 (M. P. R.R.).**—About 1.9 miles east along the Missouri Pacific Railroad from the station at **Burtsell**, Clark County, at pole 432+01, and in the center line of the south head wall of an 8- by 8-foot concrete culvert. A standard Monel-metal rivet. (79.427 meters or 260.587 feet.)

**H 23.**—About 1.9 miles east along the Missouri Pacific Railroad from the station at **Burtsell**, Clark County, at pole 432+01, 15 feet north of the north rail, and in the center of the top of the north head wall of a 2- by 3-foot concrete culvert. A standard disk, stamped "H 23 1932." (79.316 meters or 260.223 feet.)

**RV 528 (M. P. R.R.).**—About 0.5 mile east along the Missouri Pacific Railroad from the station at **Burtsell**, Clark County, at pole 433+17, and in the center line of the south head wall of a 4- by 6-foot concrete culvert. A standard Monel-metal rivet. (78.509 meters or 257.575 feet.)

**J 23.**—At **Burtsell**, Clark County, 32 feet west of the west face of the Missouri Pacific Railroad station, 33¼ poles west of milepost 433, 25 feet east of the center of a road crossing, 21 feet south of the south rail of the main track, and 2 feet south of a line of poles. A standard disk, stamped "J 23 1932" and set in the top of a concrete post. (80.236 meters or 263.241 feet.)

**RV 529 (M. P. R.R.).**—At **Burtsell**, Clark County, on the Missouri Pacific Railroad, at pole 433+34, and in the center line of the south head wall of a double 5- by 6-foot concrete culvert. A standard Monel-metal rivet. (80.296 meters or 263.433 feet.)

**RV 530 (M. P. R.R.).**—About 1.4 miles northwest along the Missouri Pacific Railroad from the station at **Burtsell**, Clark County, at pole 435+12, and in the center line of the south head wall of a 3½- by 4-foot concrete culvert. A standard Monel-metal rivet. (86.272 meters or 283.044 feet.)

**RV 531 (M. P. R.R.).**—About 1.7 miles northwest along the Missouri Pacific Railroad from the station at **Burtsell**, Clark County, at pole 435+25, and in the center line of the south head wall of a 2½- by 4-foot concrete culvert. A standard Monel-metal rivet. (86.748 meters or 284.606 feet.)

**RV 532 (M. P. R.R.).**—About 1.7 miles southeast along the Missouri Pacific Railroad from the station at **Okolona**, Clark County, at pole 436+23, and in the center line of the south head wall of a 2- by 3-foot concrete culvert. A standard Monel-metal rivet. (95.555 meters or 313.500 feet.)

**RV 533 (M. P. R.R.).**—About 0.6 mile southeast along the Missouri Pacific Railroad from the station at **Okolona**, Clark County, at pole 437+26, and in the center line of the south head wall of a 3- by 3½-foot concrete culvert. A standard Monel-metal rivet. (106.415 meters or 349.130 feet.)

**RV 534 (M. P. R.R.).**—At Okolona, Clark County, on the Missouri Pacific Railroad, at pole 438+09, and in the center line of the south bell end of a 33-inch concrete pipe culvert. A standard Monel-metal rivet. (113.201 meters or 371.394 feet.)

**K 23.**—At Okolona, Clark County, 50 feet north of the north face of the Missouri Pacific Railroad station, at pole 438+13, 58 feet west of the west rail of the main track, 27 feet west of a row of poles, and in line with the west edge of the loading platform. A standard disk, stamped "K 23 1932" and set in the top of a concrete post. (114.372 meters or 375.235 feet.)

**RV 535 (M. P. R.R.).**—About 0.5 mile northwest along the Missouri Pacific Railroad from the station at Okolona, Clark County, at pole 438+29, west of the overhead crossing, and in the northwest concrete foundation of a low clearance alarm. A standard Monel-metal rivet. (117.186 meters or 384.468 feet.)

**RV 536 (M. P. R.R.).**—About 1.3 miles northwest along the Missouri Pacific Railroad from the station at Okolona, Clark County, at pole 439+22, and in the center line of the south head wall of a 3- by 3-foot concrete culvert. A standard Monel-metal rivet. (100.570 meters or 329.953 feet.)

**L 23.**—About 2.3 miles northwest along the Missouri Pacific Railroad from the station at Okolona, Clark County, at pole 440+22, and in the center line of the south head wall of a 4- by 6-foot concrete culvert. A standard disk, stamped "L 23 1932." (97.897 meters or 321.184 feet.)

**RV 537 (M. P. R.R.).**—About 2.3 miles northwest along the Missouri Pacific Railroad from the station at Okolona, Clark County, at pole 440+22, and in the center line of the south head wall of a 4- by 6-foot concrete culvert. A standard Monel-metal rivet. (97.900 meters or 321.194 feet.)

**RV 538 (M. P. R.R.).**—About 3.1 miles northwest along the Missouri Pacific Railroad from the station at Okolona, Clark County, at pole 441+16, and in the center line of the south head wall of a 4- by 4-foot concrete culvert. A standard Monel-metal rivet. (93.576 meters or 307.007 feet.)

**RV 539 (M. P. R.R.).**—About 2.2 miles southeast along the Missouri Pacific Railroad from Pike City Junction, Clark County, at pole 442+02, and in the center line of the south head wall of a 3- by 3-foot concrete culvert. A standard Monel-metal rivet. (86.232 meters or 282.913 feet.)

**RV 540 (M. P. R.R.).**—About 1.3 miles southeast along the Missouri Pacific Railroad from Pike City Junction, Clark County, at pole 422+33, and in the center line of the south head wall of a 4- by 7-foot concrete culvert. A standard Monel-metal rivet. (83.124 meters or 272.716 feet.)

**M 23.**—At Pike City Junction, Clark County, on the Missouri Pacific Railroad, 33 $\frac{3}{4}$  poles northwest of milepost 443, 17 feet northeast of the northeast rail of the main track, and 28 feet southwest of a fence line. A standard disk, stamped "M 23 1932" and set in the top of a concrete post. (81.066 meters or 265.964 feet.)

**RV 541 (M. P. R.R.).**—At Pike City Junction, Clark County, on the Missouri Pacific Railroad, at pole 444+07, and in the northwest corner of the center concrete pier of a steel water tank. A standard Monel-metal rivet. (81.490 meters or 267.355 feet.)

**RV 542 (M. P. R.R.).**—About 0.7 mile north along the Missouri Pacific Railroad from Pike City Junction, Clark County, at pole 444+27, and in the center line of the west head wall of a double 4- by 4-foot concrete culvert. A standard Monel-metal rivet. (76.201 meters or 250.003 feet.)

**RV 543 (M. P. R.R.).**—About 1.3 miles north along the Missouri Pacific Railroad from Pike City Junction, Clark County, at pole 445+12, and in the center line of the west head wall of a 2- by 3-foot concrete culvert. A standard Monel-metal rivet. (83.635 meters or 274.392 feet.)

**N 23.**—About 1.8 miles north along the Missouri Pacific Railroad from Pike City Junction, Clark County, at pole 445+28, and in the east side of the south abutment of a two-span plate-girder bridge. A standard disk, stamped "N 23 1932." (86.392 meters or 283.438 feet.)

**RV 544 (M. P. R.R.).**—About 1.8 miles north along the Missouri Pacific Railroad from Pike City Junction, Clark County, at pole 445+29, on the east side of the track, and in the center line of the north concrete back wall of bridge 21.8. A standard Monel-metal rivet. (86.460 meters or 283.661 feet.)

**RV 545 (M. P. R.R.).**—About 2.3 miles north along the Missouri Pacific Railroad from Pike City Junction, Clark County, at pole 446+14, and in the center line of the west head wall of an 18-inch concrete culvert. A standard Monel-metal rivet. (83.624 meters or 274.356 feet.)

**RV 546 (M. P. R.R.).**—About 3.1 miles north along the Missouri Pacific Railroad from **Pike City Junction**, Clark County, at pole 447+08, and in the center line of the east head wall of a double 4- by 4-foot concrete culvert. A standard Monel-metal rivet. (86.391 meters or 283.434 feet.)

**RV 547 (M. P. R.R.).**—About 3.3 miles south along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, at pole 448+02, and in the center line of the west head wall of a 4- by 4-foot concrete culvert. A standard Monel-metal rivet. (88.740 meters or 291.141 feet.)

**RV 548 (M. P. R.R.).**—About 2.7 miles south along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, at pole 448+20, and in the center line of the west head wall of a double 4- by 5-foot concrete culvert. A standard Monel-metal rivet. (88.161 meters or 289.242 feet.)

**RV 549 (M. P. R.R.).**—About 2.0 miles south along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, at pole 449+09, and in the center line of the west head wall of a 3-foot concrete culvert. A standard Monel-metal rivet. (92.383 meters or 303.093 feet.)

**P 23.**—About 1.9 miles south along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, 11½ poles north of milepost 449, 27 feet east of the track, 15 feet west of the fence line, and in a large outcrop of rock about level with the track. A standard disk, stamped "P 23 1932." (95.036 meters or 311.797 feet.)

**RV 550 (M. P. R.R.).**—About 1.0 mile south along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, at pole 450+08, and in the center line of the east head wall of a 4-foot concrete pipe culvert. A standard Monel-metal rivet. (100.155 meters or 328.592 feet.)

**Q 23.**—At **Graysonia**, Clark County, 78 feet east of the Missouri Pacific Railroad station, 52 feet east of the east rail, and 38 feet north of the north rail of a logging road that crosses just south of the station. A standard disk, stamped "Q 23 1932" and set in the top of a concrete post. (107.235 meters or 351.820 feet.)

**RV 551 (M. P. R.R.).**—About 1.3 miles north along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, at pole 452+17, on the west side of the track, and in the center line of the south concrete back wall of bridge 28.4. A standard Monel-metal rivet. (113.248 meters or 371.548 feet.)

**RV 552 (M. P. R.R.).**—In Pike County, about 1.8 miles north along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, at pole 453+02, and in the northwest concrete pedestal of a foundation formerly supporting a water tank. A standard Monel-metal rivet. (114.804 meters or 378.653 feet.)

**RV 553 (M. P. R.R.).**—In Pike County, about 2.9 miles north along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, at pole 454+06, on the west side of the track, and in the north back wall of bridge 30.0. A standard Monel-metal rivet. (117.076 meters or 384.107 feet.)

**RV 554 (M. P. R.R.).**—In Pike County, about 4.2 miles north along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, at pole 455+15, on the east side of the track, and in the south concrete back wall of bridge 31.3. A standard Monel-metal rivet. (119.162 meters or 390.918 feet.)

**R 23.**—In Pike County, about 4.5 miles north along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, about 22½ poles north of milepost 455, and in the east side of the south abutment of bridge 31.5 over the Antoinette River. A standard disk, stamped "R 23 1932." (119.536 meters or 392.178 feet.)

**RV 555 (M. P. R.R.).**—About 4.5 miles north along the Missouri Pacific Railroad from the station at **Graysonia**, Clark County, at pole 455+23, and in the west side of the northeast concrete pedestal of bridge 31.5. A standard Monel-metal rivet. (119.352 meters or 391.574 feet.)

**S 23.**—About 4.8 miles south along the Missouri Pacific Railroad from the station at **Amity**, Clark County, at pole 457+25, and in the west side of the south abutment of bridge 33.6. A standard disk, stamped "S 23 1932." (126.531 meters or 415.127 feet.)

**RV 556 (M. P. R.R.).**—About 4.1 miles south along the Missouri Pacific Railroad from the station at **Amity**, Clark County, at pole 458+15, and in the east head wall of a 4-foot concrete pipe culvert. A standard Monel-metal rivet. (125.704 meters or 412.414 feet.)

**T 23.**—About 3.4 miles south along the Missouri Pacific Railroad from the station at **Amity**, Clark County, at **Majors**, 100 feet east of the track, 45 feet

west of the northwest corner of the highway bridge over the Antoine River, and about 15 feet lower than the track. A standard disk, stamped "T 23 1932" and set in top of a concrete post. (121.988 meters or 400.222 feet.)

RV 557 (M. P. R.R.).—About 2.8 miles south along the Missouri Pacific Railroad from the station at Amity, Clark County, at pole 459+26, and in the west head wall of a 3-foot concrete pipe culvert. A standard Monel-metal rivet. (124.175 meters or 407.397 feet.)

RV 558 (M. P. R.R.).—About 2.3 miles south along the Missouri Pacific Railroad from the station at Amity, Clark County, at pole 460+11, and in the west head wall of a 4-foot concrete pipe culvert. A standard Monel-metal rivet. (127.186 meters or 417.276 feet.)

RV 559 (M. P. R.R.).—About 1.5 miles south along the Missouri Pacific Railroad from the station at Amity, Clark County, at pole 461+02, and in the east head wall of a 2-foot concrete culvert. A standard Monel-metal rivet. (131.381 meters or 431.039 feet.)

RV 560 (M. P. R.R.).—About 0.9 mile south along the Missouri Pacific Railroad from the station at Amity, Clark County, at pole 461+25, and in the west head wall of a 3-foot concrete culvert. A standard Monel-metal rivet. (134.342 meters or 440.754 feet.)

U 23.—At Amity, Clark County, 141 feet south of the southwest corner of the Missouri Pacific Railroad station, and 8 feet east of the east rail of the main track. A standard disk, stamped "U 23 1932" and set in the top of a concrete post. (144.852 meters or 475.235 feet.)

RV 561 (M. P. R.R.).—At Amity, Clark County, on the Missouri Pacific Railroad, at pole 462+20, and in the west head wall of a 2-foot concrete culvert. A standard Monel-metal rivet. (143.665 meters or 471.341 feet.)

RV 562 (M. P. R.R.).—About 0.6 mile north along the Missouri Pacific Railroad from the station at Amity, Clark County, at pole 463+06, 50 feet north of the track, and in the southeast corner of the west concrete abutment of a highway bridge. A standard Monel-metal rivet. (149.327 meters or 489.917 feet.)

RV 563 (M. P. R.R.).—About 1.4 miles north along the Missouri Pacific Railroad from the station at Amity, Clark County, at milepost 464, and in the east head wall of a 2-foot concrete culvert. A standard Monel-metal rivet. (154.597 meters or 507.207 feet.)

RV 564 (M. P. R.R.).—In Pike County, about 2.7 miles north along the Missouri Pacific Railroad from the station at Amity, Clark County, at pole 465+10, and in the west head wall of an 18-inch concrete culvert. A standard Monel-metal rivet. (165.751 meters or 543.801 feet.)

RV 565 (M. P. R.R.).—About 1.2 miles south along the Missouri Pacific Railroad from the station at Rosboro, Pike County, at pole 465+24, and in the west head wall of a 3-foot concrete culvert. A standard Monel-metal rivet. (168.550 meters or 552.984 feet.)

RV 566 (M. P. R.R.).—About 0.7 mile south along the Missouri Pacific Railroad from the station at Rosboro, Pike County, at pole 466+09, and in the west head wall of a 2-foot concrete culvert. A standard Monel-metal rivet. (171.038 meters or 561.147 feet.)

RV 567 (M. P. R.R.).—At Rosboro, Pike County, on the Missouri Pacific Railroad, at milepost 467, and in the east head wall of an 18-inch concrete culvert. A standard Monel-metal rivet. (179.942 meters or 590.360 feet.)

V 23.—At Rosboro, Pike County, 76 feet east of the east wall of the Missouri Pacific Railroad station, 25 feet south of the south wall, at pole 467+01, directly east of the crossing of an east-and-west road, and 57 feet east of the east rail of the main track. A standard disk, stamped "V 23 1932" and set in the top of a concrete post. (181.482 meters or 595.412 feet.)

RV 568 (M. P. R.R.).—About 0.5 mile north along the Missouri Pacific Railroad from the station at Rosboro, Pike County, at pole 467+15, and in the west head wall of a 2-foot concrete culvert. A standard Monel-metal rivet. (182.690 meters or 599.375 feet.)

RV 569 (M. P. R.R.).—About 1.0 mile north along the Missouri Pacific Railroad from the station at Rosboro, Pike County, at pole 468+01, and in the west head wall of an 18-inch concrete culvert. A standard Monel-metal rivet. (185.700 meters or 609.251 feet.)

RV 570 (M. P. R.R.).—About 2.0 miles north along the Missouri Pacific Railroad from the station at Rosboro, Pike County, at milepost 469, and in the west head wall of a 3-foot concrete culvert. A standard Monel-metal rivet. (177.447 meters or 582.174 feet.)

**RV 571 (M. P. R.R.).**—About 1.2 miles southeast along the Missouri Pacific Railroad from the station at **Glenwood**, Pike County, at pole 469+17, and in the east head wall of a 2-foot concrete culvert. A standard Monel-metal rivet. (172,300 meters or 565,288 feet.)

**RV 572 (M. P. R.R.).**—About 0.7 mile southeast along the Missouri Pacific Railroad from the station at **Glenwood**, Pike County, at pole 470+04, on the east side of the track, and in the south concrete back wall of bridge 46.0. A standard Monel-metal rivet. (168,703 meters or 553,486 feet.)

**W 23.**—At **Glenwood**, Pike County, 183 feet east of the east end of the Missouri Pacific Railroad station, at pole 470+22, 38 feet north of the north rail of the main track, and 83 feet south of the center line of a graveled street. A standard disk, stamped "W 23 1932" and set in the top of a concrete post. (167,509 meters or 549,589 feet.)

**RV 573 (M. P. R.R.).**—At **Glenwood**, Pike County, on the Missouri Pacific Railroad, at pole 471+01, and in the east head wall of a 3- by 3-foot concrete culvert. A standard Monel-metal rivet. (166,792 meters or 547,217 feet.)

**RV 574 (M. P. R.R.).**—About ½ mile north along the Missouri Pacific Railroad from the station at **Glenwood**, Pike County, at pole 471+08, and in the east head wall of a 4-foot concrete culvert. A standard Monel-metal rivet. (167,161 meters or 548,427 feet.)

**RV 575 (M. P. R.R.).**—About 2.0 miles north along the Missouri Pacific Railroad from the station at **Glenwood**, Pike County, at pole 472+23, and in the east head wall of a 3-foot concrete culvert. A standard Monel-metal rivet. (167,675 meters or 550,114 feet.)

**RV 576 (M. P. R.R.).**—In Montgomery County, about 3.1 miles north along the Missouri Pacific Railroad from the station at **Glenwood**, Pike County, at pole 473+26, and in the west head wall of a 4-foot concrete culvert. A standard Monel-metal rivet. (171,775 meters or 563,565 feet.)

**RV 577 (M. P. R.R.).**—In Montgomery County, about 3.4 miles north along the Missouri Pacific Railroad from the station at **Glenwood**, Pike County, at pole 474+04, and in the west head wall of a 4-foot concrete culvert. A standard Monel-metal rivet. (172,988 meters or 567,545 feet.)

**X 23.**—About 3.0 miles south along the Missouri Pacific Railroad from the station at **Caddo Gap**, Montgomery County, at pole 475+03, and in the west head wall of a concrete culvert. A standard disk, stamped "X 23 1932." (176,598 meters or 579,389 feet.)

**RV 578 (M. P. R.R.).**—About 3.0 miles south along the Missouri Pacific Railroad from the station at **Caddo Gap**, Montgomery County, at pole 475+03, and in the west head wall of a 3-foot concrete pipe culvert. A standard Monel-metal rivet. (176,606 meters or 579,415 feet.)

**RV 579 (M. P. R.R.).**—About 2.1 miles southeast along the Missouri Pacific Railroad from the station at **Caddo Gap**, Montgomery County, at pole 475+26, and in the east head wall of a 3-foot concrete pipe culvert. A standard Monel-metal rivet. (176,568 meters or 579,290 feet.)

**RV 580 (M. P. R.R.).**—About 1.5 miles southeast along the Missouri Pacific Railroad from the station at **Caddo Gap**, Montgomery County, at pole 476+14, and in the west head wall of a 4-foot concrete pipe culvert. A standard Monel-metal rivet. (181,557 meters or 595,658 feet.)

**RV 581 (M. P. R.R.).**—About 1.1 miles southeast along the Missouri Pacific Railroad from the station at **Caddo Gap**, Montgomery County, at pole 476+25, and in the west head wall of a 3- by 3-foot concrete culvert. A standard Monel-metal rivet. (181,578 meters or 595,727 feet.)

**RV 582 (M. P. R.R.).**—About 0.8 mile southeast along the Missouri Pacific Railroad from the station at **Caddo Gap**, Montgomery County, at pole 477+08, near railroad bridge 52.1, and in the north panel of the west parapet of a bridge on State Highway 8. A standard Monel-metal rivet. (185,462 meters or 608,470 feet.)

**RV 583 (M. P. R.R.).**—At **Caddo Gap**, Montgomery County, on the Missouri Pacific Railroad, at pole 477+29, and in the east head wall of a 3- by 4-foot concrete culvert. A standard Monel-metal rivet. (187,771 meters or 616,045 feet.)

**Y 23.**—At **Caddo Gap**, Montgomery County, about 480 feet northwest of the Missouri Pacific Railroad station, 6½ poles northwest of milepost 478, and in the west end of a concrete culvert. A standard disk, stamped "Y 23 1932." (187,657 meters or 615,671 feet.)

**Z 23.**—About 1.1 miles northwest along the Missouri Pacific Railroad from the station at **Caddo Gap**, Montgomery County, in the west side of the north

abutment of the railroad bridge over Collier Creek. A standard disk, stamped "Z 23 1932." (193.734 meters or 635.609 feet.)

**RV 584 (M. P. R.R.).**—About 1.2 miles northwest along the Missouri Pacific Railroad from the station at **Caddo Gap**, Montgomery County, at pole 479+09, on the west side of the track, and in the south concrete abutment of bridge 55.1. A standard Monel-metal rivet. (193.758 meters or 635.688 feet.)

**RV 585 (M. P. R.R.).**—About 1.7 miles northwest along the Missouri Pacific Railroad from the station at **Caddo Gap**, Montgomery County, at pole 479+22, and in the west stone head wall of a 24-inch iron pipe culvert under State Highway 8. A standard Monel-metal rivet. (193.460 meters or 634.710 feet.)

**RV 586 (M. P. R.R.).**—About 2.2 miles north along the Missouri Pacific Railroad from the station at **Caddo Gap**, Montgomery County, at pole 480+08, and in the west head wall of a 2-foot concrete pipe culvert. A standard Monel-metal rivet. (195.676 meters or 641.980 feet.)

**RV 587 (M. P. R.R.).**—About 2.5 miles south along the Missouri Pacific Railroad from the station at **Norman**, Montgomery County, at pole 480+22, and in the east head wall of a 2- by 3-foot concrete culvert. A standard Monel-metal rivet. (190.371 meters or 624.103 feet.)

**RV 588 (M. P. R.R.).**—About 2.0 miles south along the Missouri Pacific Railroad from the station at **Norman**, Montgomery County, at pole 481+07, and in the west head wall of a 2- by 3-foot concrete culvert. A standard Monel-metal rivet. (200.549 meters or 657.968 feet.)

**RV 589 (M. P. R.R.).**—About 1.5 miles south along the Missouri Pacific Railroad from the station at **Norman**, Montgomery County, at pole 481+21, and in the west head wall of a 3-foot concrete pipe culvert. A standard Monel-metal rivet. (200.851 meters or 658.959 feet.)

**RV 590 (M. P. R.R.).**—About 0.7 mile south along the Missouri Pacific Railroad from the station at **Norman**, Montgomery County, at pole 482+15, and in the west head wall of a 4-foot concrete pipe culvert. A standard Monel-metal rivet. (203.050 meters or 666.173 feet.)

**A 24.**—At **Norman**, Montgomery County, 116 feet southeast of the Missouri Pacific Railroad station, at pole 483+06, and in the east head wall of a concrete culvert. A standard disk, stamped "A 24 1932." (206.748 meters or 678.306 feet.)

**RV 591 (M. P. R.R.).**—At **Norman**, Montgomery County, on the Missouri Pacific Railroad, at pole 483+06, and in the west head wall of a 4- by 5-foot concrete culvert. A standard Monel-metal rivet. (206.440 meters or 677.295 feet.)

**B 24.**—At **Norman**, Montgomery County, at the northeastern edge of the town, on State Highway 8, about 260 feet east of the path leading up the hill to the school overlooking the town from the north, and 23 feet south of the center line of the highway. A standard disk, stamped "B 24 1932" and set in the top of a concrete post. (215.577 meters or 707.272 feet.)

**C 24.**—About 3.7 miles north along State Highway 8 from **Norman**, Montgomery County, near the foot of a long hill sloping to the north, and in the east head wall of a concrete culvert. A standard disk, stamped "C 24 1932." (259.614 meters or 851.750 feet.)

**D 24.**—About 2¼ miles south along State Highway 8 from **Mount Ida**, Montgomery County, and in the west head wall of a concrete culvert. A standard disk, stamped "D 24 1932." (225.039 meters or 738.315 feet.)

**45 (A.S.H.C.).**—At **Mount Ida**, Montgomery County, and on the southwest corner of the lower courthouse step. The high point on the corner of the step. (202.223 meters or 663.460 feet.)

**E 24.**—At **Mount Ida**, Montgomery County, at the east part of the county courthouse yard, 62 feet east of the east wall of the courthouse, and 6 feet north of a magnetic station. A standard disk, stamped "E 24 1932" and set in the top of a concrete post. (202.140 meters or 663.188 feet.)

**N 24.**—About 0.4 mile north along United States Highway 270 from **Mount Ida**, Montgomery County, about 250 feet north of the intersection of State Highway 27, 102 feet west of a 2½-foot oak tree, and 23 feet northwest of the center line of State Highway 27. A standard disk, stamped "N 24 1932" and set in the top of a concrete post. (190.032 meters or 623.463 feet.)

**F 24.**—About 3.1 miles northwest along United States Highway 270 from **Mount Ida**, Montgomery County, 0.2 mile southeast of a filling station, in the northeast curb of a double 4- by 8-foot concrete culvert, and 6 feet northwest of the southeast side of the culvert. A standard disk, stamped "F 24 1932." (218.022 meters or 715.294 feet.)

**G 24.**—About 6.6 miles northwest along United States Highway 270 from **Mount Ida**, Montgomery County, in the north curb of the bridge over Ouachita River, 25 feet west of the east end, and 8 feet east of a bronze memorial tablet. A standard disk, stamped "G 24 1932." (211.642 meters or 694.362 feet.)

**H 24.**—About 11.0 miles northwest along United States Highway 270 from **Mount Ida**, Montgomery County, at a 6- by 30-foot concrete bridge over Allen Creek, in the east curb, and 4 feet north of the south end of the bridge. A standard disk, stamped "H 24 1932." (241.418 meters or 792.052 feet.)

**J 24.**—About 15.7 miles northwest along United States Highway 270 from **Mount Ida**, Montgomery County, about 0.3 mile west of a 10- by 24-foot concrete bridge, at a small clearing near a crossroad, 50 feet west of the center line of the crossroad, and 52 feet south of the center line of the highway. A standard disk, stamped "J 24 1932" and set in the top of a concrete post. (283.426 meters or 929.873 feet.)

**K 24.**—About 21.0 miles west along United States Highway 270 from **Mount Ida**, Montgomery County, about 0.6 mile east of the post marking the Montgomery-Scott county line, and in the north head wall of a double 5- by 5-foot concrete culvert. A standard disk, stamped "K 24 1932." (363.231 meters or 1,191.700 feet.)

**L 24.**—In Scott County, about 24.7 miles west along United States Highway 270 from **Mount Ida**, Montgomery County, about 3.1 miles west of the post marking the Montgomery-Scott county line, and in the south head wall of a double 5- by 5-foot concrete culvert. A standard disk, stamped "L 24 1932." (309.691 meters or 1,016.045 feet.)

**M 24.**—In Scott County, about 26.1 miles west along United States Highway 270 from **Mount Ida**, Montgomery County, about 4.2 miles east of the junction of United States Highways 270 and 71, 135 feet southeast of a 20-foot concrete bridge, and 51 feet south of the center line of the highway. A standard disk, stamped "M 24 1932" and set in the top of a concrete post. (261.137 meters or 856.747 feet.)

For additional bench marks in this vicinity, see page 108.

#### LINE 23, MOUNT IDA TO RUSSELLVILLE, ARK.

[Second-order leveling]

This line follows State Highway 27 from **Mount Ida** to Plainview; State Highway 28 from Plainview to Ola; the Fort Smith, Subiaco & Rock Island Railroad from Ola to Dardanelle; and the Dardanelle & Russellville Railroad from Dardanelle to Russellville. The field work was done, during the spring of 1932, by a party in charge of A. L. Wardwell, aid.

For additional bench marks in the vicinity of **Mount Ida**, see above.

**P 24.**—About 3.9 miles north along State Highway 27 from **Mount Ida**, Montgomery County, about 650 feet north of a 20- by 30-foot house west of the road, about 110 feet north of a fence line at the south boundary of a large grove of 10- to 12-inch pine trees, and 23 feet east of the center line of the highway. A standard disk, stamped "P 24 1932" and set in the top of a concrete post. (202.041 meters or 662.863 feet.)

**Q 24.**—About 8.0 miles northeast along State Highway 27 from **Mount Ida**, Montgomery County, at the bridge over Ouachita River, in the east end of the south pier, and 1½ feet below the roadway. A standard disk, stamped "Q 24 1932." (175.107 meters or 574.497 feet.)

**R 24.**—About 11.8 miles northeast along State Highway 27 from **Mount Ida**, Montgomery County, about 500 feet south of a 16- by 30-foot house on the east side of the road, at an open field, 24 feet east of the center line of the highway, and 3 feet west of a fence. A standard disk, stamped "R 24 1932" and set in the top of a concrete post. (214.385 meters or 703.361 feet.)

**S 24.**—In Montgomery County, about 6.7 miles south along State Highway 27 from **Aly**, Yell County, about 0.8 mile south of a cemetery on the east side of the highway, at the southeast corner of a 5-acre clearing on a side hill west of the highway, 113 feet south of a small draw, and 20 feet west of the center

line of the highway. A standard disk, stamped "S 24 1932" and set in the top of a concrete post. (218.569 meters or 717.088 feet.)

767 (?).—About 5.9 miles south along State Highway 27 from Aly, Yell County, 30 feet north of the entrance to the cemetery, and 3 feet west of the cemetery fence. The top of the cap on a 5-inch iron pipe. (233.755 meters or 766.911 feet.)

T 24.—About 3.5 miles south along State Highway 27 from Aly, Yell County, about 1.4 miles north of the south line of a part of the Ouachita National Forest, part way up a long steep hill that slopes down to the south, and 22 feet south of the center line of the highway. A standard disk, stamped "T 24 1932" and set in the top of a concrete post. (282.379 meters or 926.438 feet.)

U 24.—At Aly, Yell County, 42 feet east of the northwest corner of the fence around the cemetery, and 2 feet north of the fence. A standard disk, stamped "U 24 1932" and set in the top of a concrete post. (260.332 meters or 854.106 feet.)

V 24.—About 3.7 miles south along State Highway 27 from Onyx, Yell County, in a group of large pines, and 23 feet north of the center line of the road. A standard disk, stamped "V 24 1932" and set in the top of a concrete post. (266.202 meters or 873.364 feet.)

W 24.—At Onyx, Yell County, 620 feet south of the post office, and 25 feet west of the center line of State Highway 27. A standard disk, stamped "W 24 1932" and set in the top of a concrete post. (219.937 meters or 721.577 feet.)

X 24.—About 3.9 miles north along State Highway 27 from Onyx, Yell County, on the divide near the fire warden's house, 85 feet west of the front lawn fence, and 17 feet north of the prolongation of the north wall of the house. A standard disk, stamped "X 24 1932" and set in the top of a concrete post. (338.467 meters or 1,110.454 feet.)

Y 24.—About 2.1 miles south along State Highway 27 from Rover, Yell County, near the east approach of the Fourche La Fare River bridge, 75 feet north of the center line of the north truss of the bridge, and 25 feet west of the prolongation of the center line of the highway. A standard disk, stamped "Y 24 1932" and set in the top of a concrete post. (110.090 meters or 361.187 feet.)

Z 24.—About 1.0 mile north along State Highway 27 from Rover, Yell County, in the center of the top of the west handrail of a 4- by 5-foot concrete culvert. A standard disk, stamped "Z 24 1932." (123.053 meters or 403.716 feet.)

A 25.—About 2.2 miles west along State Highway 28 from Plainview, Yell County, in the top of the south handrail of a 4- by 4-foot concrete culvert. A standard disk, stamped "A 25 1932." (112.150 meters or 367.945 feet.)

B 25.—About 0.5 mile north along State Highway 28 from the station at Plainview, Yell County, in the northwest head wall of the first 4- by 5-foot concrete highway culvert north of Plainview. A standard disk, stamped "B 25 1932." (130.832 meters or 429.238 feet.)

C 25.—About 4.2 miles north along State Highway 28 from Plainview, Yell County, about 0.2 mile south of the south bridge over Keeland Creek, and in the south head wall of a 4- by 9-foot concrete culvert. A standard disk, stamped "C 25 1932." (124.961 meters or 409.976 feet.)

M 25.—At Ola, Yell County, 515 feet east of the east end of the Fort Smith, Subiaco & Rock Island Railroad station, 15 feet west of the center line of a graded road, and 78 feet north of the north rail of the main track. A standard disk, stamped "M 25 1932" and set in the top of a concrete post. (106.194 meters or 348.405 feet.)

D 25.—At Ola, Yell County, 260 feet east of the east end of the Fort Smith, Subiaco & Rock Island Railroad station, 9 feet south of the south rail of the main track, and in the southeast corner of the base of a water crane. A standard disk, stamped "D 25 1932." (108.601 meters or 356.302 feet.)

E 25.—About 2.9 miles south along the Fort Smith, Subiaco & Rock Island Railroad from Centerville, Yell County, about 0.5 mile north of the Petit Jean River, and in the north head wall of a 5- by 9-foot concrete culvert. A standard disk, stamped "E 25 1932." (95.720 meters or 314.041 feet.)

F 25.—At Centerville, Yell County, 68 feet south of the south face of the Fort Smith, Subiaco & Rock Island Railroad station, and 20 feet east of the east rail of the main track. A standard disk, stamped "F 25 1932" and set in the top of a concrete post. (105.596 meters or 346.443 feet.)

G 25.—About 2.5 miles south along the Fort Smith, Subiaco & Rock Island Railroad from Dardanelle, Yell County, about 0.1 mile west of State Highway 7,

33 feet south of the center line of a graded road, and 15 feet west of the west rail of the main track. A standard disk, stamped "G 25 1932" and set in the top of a concrete post. (102.851 meters or 337.437 feet.)

H 25.—At Dardanelle, Yell County, 114 feet north of the north face of the Fort Smith, Subiaco & Rock Island Railroad station, directly south of the entrance of the Citizens Ice Co., and 53 feet east of the east rail of the main track. A standard disk, stamped "H 25 1932" and set in the top of a concrete post. (100.648 meters or 330.209 feet.)

J 25.—In Pope County, opposite Dardanelle, Yell County, 3 feet from the north end of the highway bridge over the Arkansas River, and in the west curb, near a bronze tablet. A standard disk, stamped "J 25 1932." (100.843 meters or 330.849 feet.)

322.1 (U.S.W.B.)=5 (A.S.H.D.).—At North Dardanelle, Pope County, near the north end of the highway bridge over Arkansas River, and across the pavement from the Dardanelle & Russellville Railroad cotton platform. A United States Weather Bureau standard disk, stamped "U.S.W.B. B.M. 322.1" and set in the top of a stone post. (98.956 meters or 324.658 feet.)

RV 592 (D. & R. R.R.).—At North Dardanelle, Pope County, about 8 $\frac{1}{3}$  poles west of the Dardanelle & Russellville Railroad station, between the main track and a siding, and 4 feet north of the north rail of the main track. An iron rivet in the top of a concrete post. (99.333 meters or 325.895 feet.)

RV 593 (D. & R. R.R.).—About 1.7 miles northeast along the Dardanelle & Russellville Railroad from North Dardanelle, Pope County, between poles 50 and 51, and in the southeast abutment of the bridge over Whig Creek. A standard Monel-metal rivet. (97.312 meters or 319.264 feet.)

RV 594 (D. & R. R.R.).—About 2.6 miles south along the Dardanelle & Russellville Railroad from Russellville, Pope County, between poles 70 and 71, at the crossing of a narrow-gage railroad, and 40 feet northeast of the center line of the track. An iron rivet set in the top of a concrete post. (104.610 meters or 343.208 feet.)

T.B.M. 157.—About 2.3 miles south along the Dardanelle & Russellville Railroad from Russellville, Pope County, between poles 83 and 84, and on the west end wall of a concrete culvert. The high point at the southwest corner of the wall. (108.336 meters or 355.432 feet.)

RV 595 (D. & R. R.R.).—At Russellville, Pope County, on the Dardanelle & Russellville Railroad, 50 feet south of the center line of the Washington Street pavement, and 48 feet east of the center line of the main-line track. A standard Monel-metal rivet, set in the top of a concrete post. (111.943 meters or 367.266 feet.)

K 25.—At Russellville, Pope County, 132 feet east of the east wall of the Missouri Pacific Railroad station, and 33 feet south of the south rail of the main track. A standard disk, stamped "K 25 1932" and set in the top of a concrete post. (107.212 meters or 351.745 feet.)

L 25.—At Russellville, Pope County, at the intersection of West Main Street and Arkansas Avenue, at the south entrance to the courthouse, and in the east banister of the front steps. A standard disk, stamped "L 25 1932." (107.844 meters or 353.818 feet.)

G 4 (U.S.G.S.).—At Russellville, Pope County, at the intersection of Denver Avenue and Second Street, and 5 feet north of the door at the main entrance to the post office. A United States Geological Survey standard disk, stamped "G 4 1931." (109.574 meters or 359.494 feet.)

G 5 (U.S.G.S.).—At Russellville, Pope County, at the intersection of West Second Street and South Commerce Avenue, at the Masonic Temple, and in the north banister of the front entrance. A United States Geological Survey standard disk, stamped "G 5 1931." (109.506 meters or 359.271 feet.)

For additional bench marks in this vicinity, see pages 8, 151, and 152.

LINE 24, CAPE GIRARDEAU, MO., TO HOXIE, ARK. (PART)

[First-order leveling]

This line enters Arkansas in the vicinity of Pittman, and follows the St. Louis-San Francisco Railway, through Success, Pocahontas, and Walnut Ridge, to Hoxie. The field work was done, during the

fall of 1932, by a party in charge of J. D. Thurmond, junior hydrographic and geodetic engineer.

**M 25.**—In Clay County, Arkansas, about 0.9 mile south along the St. Louis-San Francisco Railway from the station at Sinsabaugh, Ripley County, Missouri,  $\frac{1}{2}$  pole south of milepost 221, at a grade crossing, 22 feet west of the track, and about 50 feet south of the road. A standard disk, stamped "M 25 1932" and set in the top of a concrete post. (88.001 meters or 288.717 feet.)

**Pittman**, top of rail opposite the St. Louis-San Francisco Railway station signboard. (291.5 feet.)

About  $1\frac{1}{2}$  miles north of **Success**, top of rail opposite St. Louis-San Francisco Railway milepost 222. (291.3 feet.)

About  $\frac{1}{2}$  mile north of the station at **Success**, top of rail opposite St. Louis-San Francisco Railway milepost 223. (291.6 feet.)

**N 25.**—About 0.5 mile north along the St. Louis-San Francisco Railway from the station at **Success**, Clay County,  $1\frac{1}{2}$  poles south of milepost 223, at a grade crossing, 48 feet west of the track, and about 60 feet southwest of the crossing. A standard disk, stamped "N 25 1932" and set in the top of a concrete post. (87.954 meters or 288.562 feet.)

**Success**, top of rail opposite St. Louis-San Francisco Railway station. (294.5 feet.)

About  $\frac{1}{2}$  mile south of the station at **Success**, top of rail opposite St. Louis-San Francisco Railway milepost 224. (292.4 feet.)

About  $1\frac{1}{2}$  miles south of the station at **Success**, top of rail opposite St. Louis-San Francisco Railway milepost 225. (286.6 feet.)

**P 25.**—About 1.6 miles south along the St. Louis-San Francisco Railway from the station at **Success**, Clay County,  $7\frac{1}{2}$  poles south of milepost 225, 48 feet west of the track, and 2 feet east of a fence. A standard disk, stamped "P 25 1932" and set in the top of a concrete post. (86.453 meters or 283.638 feet.)

About  $2\frac{1}{2}$  miles south of the station at **Success**, top of rail opposite St. Louis-San Francisco Railway milepost 226. (287.3 feet.)

About 1.0 mile north of the station at **Datto**, top of rail opposite St. Louis-San Francisco Railway milepost 227. (292.3 feet.)

**Q 25.**—About 0.9 mile north along the St. Louis-San Francisco Railway from **Datto**, Clay County,  $3\frac{1}{2}$  poles south of milepost 227, at a grade crossing, 29 feet west of the track, and 15 feet south of the road. A standard disk, stamped "Q 25 1932" and set in the top of a concrete post. (89.595 meters or 293.946 feet.)

**Datto**, top of rail opposite St. Louis-San Francisco Railway milepost 228. (287.5 feet.)

**Datto**, top of rail opposite the St. Louis-San Francisco Railway station. (287.2 feet.)

About 1.0 mile southwest of the station at **Datto**, top of rail opposite St. Louis-San Francisco Railway milepost 229. (284.9 feet.)

**R 25.**—About 1.1 miles southwest along the St. Louis-San Francisco Railway from the station at **Datto**, Clay County, 3 poles southwest of milepost 229, at a grade crossing, and about 60 feet east of United States Highway 67. A standard disk, stamped "R 25 1932" and set in the top of a concrete post. (86.322 meters or 283.208 feet.)

About  $\frac{1}{2}$  mile northeast of the station at **Reyno**, top of rail opposite St. Louis-San Francisco Railway milepost 230. (285.5 feet.)

**Reyno**, top of rail opposite the St. Louis-San Francisco Railway station. (283.7 feet.)

**S 25.**—At **Reyno**, Randolph County, about  $\frac{1}{4}$  mile south of the St. Louis-San Francisco Railway station, about 150 feet west of the track, at the southeast corner of the Reyno school grounds, about 200 feet southeast of the school building, and about 60 feet west of the center line of United States Highway 67. A standard disk, stamped "S 25 1932" and set in the top of a concrete post. (85.401 meters or 280.186 feet.)

About  $\frac{1}{4}$  mile south of the station at **Reyno**, top of rail opposite St. Louis-San Francisco Railway milepost 231. (279.4 feet.)

About  $1\frac{1}{4}$  miles south of the station at **Reyno**, top of rail opposite St. Louis-San Francisco Railway milepost 232. (280.5 feet.)

**T 25.**—About 1.5 miles northeast along the St. Louis-San Francisco Railway from the station at **Biggers**, Randolph County, at milepost 233, 48 feet west of

the track, about 50 feet northwest of a grade crossing, and about 50 feet from the center line of United States Highway 67. A standard disk, stamped "T 25 1932" and set in the top of a concrete post. (87.667 meters or 287.621 feet.)

About 1½ miles northeast of the station at **Biggers**, top of rail opposite St. Louis-San Francisco Railway milepost 233. (286.2 feet.)

About ¼ mile northeast of the station at **Biggers**, top of rail opposite St. Louis-San Francisco Railway milepost 234. (286.0 feet.)

**U 25.**—At **Biggers**, Randolph County, about 100 yards south of the St. Louis-San Francisco Railway station, about 125 feet west of the track, 10 feet west of United States Highway 67, on Main Street, and in the concrete sill under the south window of Tom's Pool Hall. A standard disk, stamped "U 25 1932." (87.678 meters or 287.657 feet.)

**Biggers**, top of rail opposite the St. Louis-San Francisco Railway station. (286.6 feet.)

About ½ mile southwest of the station at **Biggers**, top of rail opposite St. Louis-San Francisco Railway milepost 235. (287.1 feet.)

About 1½ miles southwest of the station at **Biggers**, top of rail opposite St. Louis-San Francisco Railway milepost 236. (283.2 feet.)

**V 25.**—About 1.6 miles southwest along the St. Louis-San Francisco Railway from **Biggers**, Randolph County, 3½ poles south of milepost 236, 4 rails northeast of the grade crossing of United States Highway 67, 35 feet east of the track, and about 75 feet west of the fence around the gas compressor station of the Mississippi Fuel Co. A standard disk, stamped "V 25 1932" and set in the top of a concrete post. (86.762 meters or 284.652 feet.)

About 2½ miles southwest of the station at **Biggers**, top of rail opposite St. Louis-San Francisco Railway milepost 237. (280.5 feet.)

**Keller**, top of rail opposite St. Louis-San Francisco Railway milepost 238. (271.6 feet.)

**Keller**, top of rail opposite the St. Louis-San Francisco Railway station signboard. (271.8 feet.)

**W 25.**—About 6.9 miles northeast along the St. Louis-San Francisco Railway from the station at **Pocahontas**, Randolph County, 3½ poles south of milepost 238, about 3 rails south of the station signboard at **Keller**, 52 feet east of the track, and in a fence corner. A standard disk, stamped "W 25 1932" and set in the top of a concrete post. (81.532 meters or 267.493 feet.)

About 1 mile southwest of the station at **Keller**, top of rail opposite St. Louis-San Francisco Railway milepost 239. (270.8 feet.)

**Running Lake**, top of rail opposite the St. Louis-San Francisco Railway station signboard. (270.1 feet.)

**X 25.**—About 5.3 miles northeast along the St. Louis-San Francisco Railway from the station at **Pocahontas**, Randolph County, about 325 yards south of the station signboard at **Running Lake**, about 9 poles northeast of milepost E 240, and about 100 feet west of the track. A standard disk, stamped "X 25 1932" and set in the top of a concrete post. (81.436 meters or 267.178 feet.)

About 1 mile northeast of the station at **Poluca**, top of rail opposite St. Louis-San Francisco Railway milepost 240. (272.1 feet.)

**Poluca**, top of rail opposite the St. Louis-San Francisco Railway station signboard. (269.6 feet.)

**Poluca**, top of rail opposite St. Louis-San Francisco Railway milepost 241. (269.4 feet.)

**Y 25.**—About 3.7 miles northeast along the St. Louis-San Francisco Railway from **Pocahontas**, Randolph County, about ¼ mile south of the station at **Poluca**, about 5 poles south of milepost 241, at a grade crossing, 48 feet east of the track, and 40 feet south of the road. A standard disk, stamped "Y 25 1932" and set in the top of a concrete post. (80.636 meters or 264.553 feet.)

About 3 miles northeast of the station at **Pocahontas**, top of rail opposite St. Louis-San Francisco Railway milepost 242. (271.8 feet.)

**Z 25.**—About 2.4 miles northeast along the St. Louis-San Francisco Railway from **Pocahontas**, Randolph County, at the grade crossing of United States Highway 67, about 70 feet west of the track, and in the east end of the south side of a concrete bridge. A standard disk, stamped "Z 25 1932." (82.637 meters or 271.118 feet.)

About 2 miles northeast of the station at **Pocahontas**, top of rail opposite St. Louis-San Francisco Railway milepost 243. (268.3 feet.)

**A 26.**—About 1.3 miles northeast along the St. Louis-San Francisco Railway from the station at **Pocahontas**, Randolph County, about 0.3 mile northeast of milepost 244, 35 feet southeast of the track, and 15 feet northeast of the gate

to a field. A standard disk, stamped "A 26 1932" and set in the top of a concrete post. (81.526 meters or 267.473 feet.)

About 1 mile northeast of the station at **Pocahontas**, top of rail opposite St. Louis-San Francisco Railway milepost 244. (269.6 feet.)

**B 26.**—At **Pocahontas**, Randolph County, on the St. Louis-San Francisco Railway, about 150 feet north of milepost 245, about 150 feet northeast of the northeast face of the station, about 200 feet west along a switch track from the railroad water tank, 40 feet northwest of the main-line track, 6 feet northwest of the switch track, and in the top of a rock outcrop. A standard disk, stamped "B 26 1932." (85.005 meters or 278.887 feet.)

**M 7-8 (U.S.E.).**—At **Pocahontas**, Randolph County, on the St. Louis-San Francisco Railway, about 100 feet northwest of milepost 245, about 100 feet northwest of the north corner of the station, on the slope of a hill, and about 20 feet northwest of a switch track. A Corps of Engineers, United States Army, standard disk, stamped "M 7-8" and set in a cylinder of concrete. (85.398 meters or 280.177 feet.)

**Pocahontas**, top of rail opposite the St. Louis-San Francisco Railway station. (277.3 feet.)

**Little Rock (U.S.E.).**—At **Pocahontas**, Randolph County, in the southeast corner of the courthouse lawn. A Corps of Engineers, United States Army, standard cap, stamped "LITTLE ROCK" and riveted on the top of a 3½-inch iron pipe. (94.506 meters or 310.058 feet.)

**270.6 (U.S.E.).**—At **Pocahontas**, Randolph County, on the St. Louis-San Francisco Railway, at mileage 245.1, and in the top of the east end of the north pier of the railroad bridge over Black River. A Corps of Engineers, United States Army, standard disk. (82.474 meters or 270.583 feet.)

About 1 mile south of the station at **Pocahontas**, top of rail opposite St. Louis-San Francisco Railway milepost 246. (268.3 feet.)

About 2 miles south of the station at **Pocahontas**, top of rail opposite St. Louis-San Francisco Railway milepost 247. (271.3 feet.)

**C 26.**—About 2.0 miles south along the St. Louis-San Francisco Railway from the station at **Pocahontas**, Randolph County, about 3 rails south of milepost 247, about 40 feet west of the track, about 100 feet west of United States Highway 67, and 10 feet south of a gate to a field road. A standard disk, stamped "C 26 1932" and set in the top of a concrete post. (82.424 meters or 270.419 feet.)

About 3 miles south of the station at **Pocahontas**, top of rail opposite St. Louis-San Francisco Railway milepost 248. (266.1 feet.)

**Shannon**, top of rail opposite the St. Louis-San Francisco Railway station signboard. (267.0 feet.)

About 4 miles south of the station at **Pocahontas**, top of rail opposite St. Louis-San Francisco Railway milepost 249. (266.2 feet.)

**D 26.**—About 4.0 miles south along the St. Louis-San Francisco Railway from the station at **Pocahontas**, Randolph County, about 150 feet southeast of milepost 249, 50 feet east of the track, about 100 feet south of State Highway 90, 75 feet southwest of the southwest corner of a store, and 5 feet north of a pole. A standard disk, stamped "D 26 1932" and set in the top of a concrete post. (81.749 meters or 268.205 feet.)

About 5 miles south of the station at **Pocahontas**, top of rail opposite St. Louis-San Francisco Railway milepost 250. (266.8 feet.)

**Manson**, top of rail opposite the St. Louis-San Francisco Railway station signboard. (267.1 feet.)

About 1 mile south of the station at **Manson**, top of rail opposite St. Louis-San Francisco Railway milepost 251. (263.4 feet.)

**E 26.**—About 6.0 miles south along the St. Louis-San Francisco Railway from the station at **Pocahontas**, Randolph County, about 3 rails south of milepost 251, 30 feet east of the track, 30 feet west of United States Highway 67, 30 feet south of a dirt road intersecting the highway, and about 70 feet northwest of an unpainted house on the east side of the highway. A standard disk, stamped "E 26 1932" and set in the top of a concrete post. (79.734 meters or 261.594 feet.)

About 2 miles south of the station at **Manson**, top of rail opposite St. Louis-San Francisco Railway milepost 252. (262.7 feet.)

**F 26.**—About 8.0 miles south along the St. Louis-San Francisco Railway from the station at **Pocahontas**, Randolph County, at **Lesterville**, 9 rails north of milepost 253, 20 feet west of the track, about 75 feet west of United States Highway 67, and about 150 feet west of a two-story white house on the east

side of the track. A standard disk, stamped "F 26 1932" and set in the top of a concrete post. (80.819 meters or 265.154 feet.)

Lesterville, top of rail opposite St. Louis-San Francisco Railway milepost 253. (264.1 feet.)

About 1 mile south of Lesterville, top of rail opposite St. Louis-San Francisco Railway milepost 254. (261.2 feet.)

G 26.—In Randolph County, about 4.0 miles north along the St. Louis-San Francisco Railway from Walnut Ridge, Lawrence County, about 0.2 mile north of milepost 255, 1 rail north of a grade crossing, 40 feet west of the track, 12 feet east of a dirt road, and at the southwest corner of a fenced area. A standard disk, stamped "G 26 1932" and set in the top of a concrete post. (82.572 meters or 270.905 feet.)

About  $3\frac{1}{4}$  miles north of Walnut Ridge, top of rail opposite St. Louis-San Francisco Railway milepost 255. (268.9 feet.)

About  $2\frac{1}{4}$  miles north of Walnut Ridge, top of rail opposite St. Louis-San Francisco Railway milepost 256. (270.2 feet.)

About  $1\frac{1}{4}$  miles north of Walnut Ridge, top of rail opposite St. Louis-San Francisco Railway milepost 257. (264.3 feet.)

H 26.—About 1.5 miles north along the St. Louis-San Francisco Railway from Walnut Ridge, Lawrence County, about  $\frac{1}{4}$  mile south of milepost 257, 1 rail south of a grade crossing, about 30 feet west of the track, and 10 feet east of a wire fence. A standard disk, stamped "H 26 1932" and set in the top of a concrete post. (81.694 meters or 268.024 feet.)

About  $\frac{3}{4}$  mile north of Walnut Ridge, top of rail opposite St. Louis-San Francisco Railway milepost 258. (263.2 feet.)

WALNUT RIDGE.—At Walnut Ridge, Lawrence County, on the St. Louis-San Francisco Railway, about 15 feet south of the southwest corner of the city pumping station, and in the top of the northwest foundation of the water tank. A standard disk, stamped "WALNUT RIDGE 1932." (81.806 meters or 268.392 feet.)

269.9 (U.S.E.).—At Walnut Ridge, Lawrence County, at the corner of Main and South Third Streets, and at the northeast corner of the courthouse grounds. A Corps of Engineers, United States Army, standard cap, riveted on the top of a  $3\frac{1}{2}$ -inch iron pipe. (82.260 meters or 269.881 feet.)

About  $\frac{1}{4}$  mile south of Walnut Ridge, top of rail opposite St. Louis-San Francisco Railway milepost 259. (269.3 feet.)

For additional bench marks in this vicinity, see pages 25 and 53.

About  $\frac{1}{2}$  mile north of Hoxie, top of rail opposite St. Louis-San Francisco Railway milepost 260. (266.8 feet.)

Hoxie, top of rail opposite the St. Louis-San Francisco Railway station. (270.2 feet.)

#### LINE 25, SELIGMAN, MO., TO FORT SMITH, ARK. (PART)

[First-order leveling]

This line enters Arkansas in the vicinity of Osborne, and follows the St. Louis-San Francisco Railway through Garfield, Rogers, Fayetteville, and Van Buren, to Fort Smith. The original field work was done, during the fall of 1893-94, by a party in charge of Isaac Winston, assistant. The line was rerun, during the winter of 1932-33, by a party in charge of J. D. Thurmond, junior hydrographic and geodetic engineer. The elevations given below are based on the later leveling.

J 26.—In Benton County, Arkansas, about 2.6 miles southeast along the St. Louis-San Francisco Railway from Seligman, Barry County, Missouri, about 12 poles south of milepost 315, about 0.6 mile north of Osborne siding, about 330 yards south of the point where United States Highway 62 turns east toward Eureka Springs, and 42 feet east of the track. A standard disk, stamped "J 26 1932" and set in the top of a concrete post. (474.525 meters or 1,556.837 feet.)

About  $3\frac{1}{4}$  miles south of Seligman, top of rail opposite St. Louis-San Francisco Railway milepost 316. (1,599.7 feet.)

**Osborne**, top of rail opposite the St. Louis-San Francisco Railway station. (1,596.4 feet.)

About 2.7 miles north of **Garfield**, top of rail opposite St. Louis-San Francisco Railway milepost 317. (1,630.6 feet.)

**RV 2 (S. L.-S. F. Ry.)**.—About 2.4 miles north along the St. Louis-San Francisco Railway from **Garfield**, Benton County, about 9 poles south of milepost 317, 4 feet west of the track, and in the top of the west head wall of a concrete culvert. A standard Monel-metal rivet. (493.132 meters or 1,617.884 feet.)

**K 26**.—About 2 miles north along the St. Louis-San Francisco Railway from **Garfield**, Benton County, about 25 poles south of milepost 317, at a grade crossing, about 30 feet west of the track, and about 15 feet north of the road. A standard disk, stamped "K 26 1932" and set in the top of a concrete post. (486.293 meters or 1,595.446 feet.)

About 1.7 miles north of **Garfield**, top of rail opposite St. Louis-San Francisco Railway milepost 318. (1,578.4 feet.)

About 0.7 mile north of **Garfield**, top of rail opposite St. Louis-San Francisco Railway milepost 319. (1,527.8 feet.)

**L 26**.—At **Garfield**, Benton County, about 15 rails north of the St. Louis-San Francisco Railway station, about 15 feet northeast of pole 319+25, about 5 feet east of the track, in the top of a flat ledge of rock, and about 2 feet higher than the ground. A standard disk, stamped "L 26 1932." (462.802 meters or 1,518.376 feet.)

**Garfield**, top of rail opposite the St. Louis-San Francisco Railway station. (1,521.4 feet.)

**CXIV**.—At **Garfield**, Benton County, about 15 rails south of the St. Louis-San Francisco Railway station, about 90 feet west of the track, inside a yard fence, and 5 feet north of a 3-foot locust tree. The bottom of a chisled square in the top of a limestone post. (462.902 meters or 1,518.704 feet.)

**NOTE**.—Reports received in 1930 and 1932 state that the square is badly weathered.

**Garfield**, top of rail opposite St. Louis-San Francisco Railway milepost 320. (1,533.4 feet.)

About 1 mile south of **Garfield**, top of rail opposite St. Louis-San Francisco Railway milepost 321. (1,491.6 feet.)

**RV 3 (S. L.-S. F. Ry.)**.—About 1.9 miles south along the St. Louis-San Francisco Railway from **Garfield**, Benton County, about 23½ poles south of milepost 321, on the west side of the track, and in the top of the west head wall of a stone culvert. A standard Monel-metal rivet. (444.079 meters or 1,456.949 feet.)

**M 26**.—About 2 miles south along the St. Louis-San Francisco Railway from **Garfield**, Benton County, about 23¼ poles south of milepost 321, at a grade crossing, 18 feet west of the track, and 5 feet north of the road. A standard disk, stamped "M 26 1932" and set in the top of a concrete post. (443.310 meters or 1,454.426 feet.)

About 2 miles south of **Garfield**, top of rail opposite St. Louis-San Francisco Railway milepost 322. (1,435.0 feet.)

About 3 miles south of **Garfield**, top of rail opposite St. Louis-San Francisco Railway milepost 323. (1,378.8 feet.)

About 4 miles south of **Garfield**, top of rail opposite St. Louis-San Francisco Railway milepost 324. (1,322.0 feet.)

**N 26**.—About 1.2 miles north along the St. Louis-San Francisco Railway from **Bestwater**, Benton County, about 16¼ poles south of milepost 324, about 5 feet west of the track, in a ledge of rock, and about 2 feet above the ground. A standard disk, stamped "N 26 1932." (396.266 meters or 1,300.083 feet.)

About ½ mile north of **Bestwater**, top of rail opposite St. Louis-San Francisco Railway milepost 325. (1,268.4 feet.)

**RV 4 (S. L.-S. F. Ry.)**.—About 0.3 mile north along the St. Louis-San Francisco Railway from **Bestwater**, Benton County, about 5½ poles south of milepost 325, on the west side of the track, at the bridge over Sugar Creek, and in the top of the north abutment. A standard Monel-metal rivet. (386.190 meters or 1,267.025 feet.)

**CXV**.—Destroyed.

About 1.2 miles north of **Avoca**, top of rail opposite St. Louis-San Francisco Railway milepost 326. (1,304.5 feet.)

About 0.2 mile north of **Avoca**, top of rail opposite St. Louis-San Francisco Railway milepost 327. (1,360.1 feet.)

**Avoca**, top of rail opposite the St. Louis-San Francisco Railway station. (1,357.8 feet.)

**P 26.**—At **Avoca**, Benton County, about 50 feet south of the St. Louis-San Francisco Railway station, about 6 poles south of milepost 327, about 60 feet north of a grade crossing, and about 40 feet east of the track. A standard disk, stamped "P 26 1932" and set in the top of a concrete post. (413.825 meters or 1,357.691 feet.)

**CXVI.**—Destroyed.

**RV 5 (S. L.-S. F. Ry.).**—At **Avoca**, Benton County, about 440 yards south of the St. Louis-San Francisco Railway station, about 16¾ poles south of milepost 327, about 30 feet west of the main track, about 40 feet east of U.S. Highway 62, and in the top of the west head wall of a concrete culvert. A standard Monel-metal rivet. (410.327 meters or 1,346.214 feet.)

About 0.8 mile south of **Avoca**, top of rail opposite St. Louis-San Francisco Railway milepost 328. (1,354.9 feet.)

**Q 26.**—About 2.2 miles south along the St. Louis-San Francisco Railway from **Avoca**, Benton County, about 14½ poles south of milepost 329, about 440 yards northwest of a white-painted schoolhouse, about 35 feet east of the track, and about 60 feet west of a road paralleling the track. A standard disk, stamped "Q 26 1932" and set in the top of a concrete post. (408.691 meters or 1,340.847 feet.)

About 2.8 miles south of **Avoca**, top of rail opposite St. Louis-San Francisco Railway milepost 330. (1,365.3 feet.)

About 1.7 miles north of **Rogers**, top of rail opposite St. Louis-San Francisco Railway milepost 331. (1,358.9 feet.)

**R 26.**—About 1.5 miles north along the St. Louis-San Francisco Railway from **Rogers**, Benton County, about 5¼ poles south of milepost 331, at a grade crossing, about 45 feet east of the track, and about 10 feet west of the north-and-south road paralleling the railroad. A standard disk, stamped "R 26 1932" and set in the top of a concrete post. (414.531 meters or 1,360.007 feet.)

About 0.7 mile north of **Rogers**, top of rail opposite St. Louis-San Francisco Railway milepost 332. (1,356.7 feet.)

**CXVII.**—At **Rogers**, Benton County, at 116 North First Street, at the building occupied by Bell's Cash Store, south of the entrance to the stairs, about 3 feet above the ground, and in the first brick from the southeast corner. The center of a cross in the end of a copper bolt leaded in the brick. (420.781 meters or 1,380.512 feet.)

**ROGERS.**—At **Rogers**, Benton County, in the face of the white marble cornerstone of the city hall, 6 feet east of the entrance to the Police Department, and 5 feet above the ground. A standard disk, stamped "ROGERS 1932" and set vertically. (417.749 meters or 1,370.565 feet.)

**1385.37 (City of Rogers).**—At **Rogers**, Benton County, at the northwest corner of the intersection of East Walnut and South First Streets, in the city park which parallels the St. Louis-San Francisco Railway, and about 70 feet west of the track. The top of a 1-inch raised copper square on a city engineer department standard disk, stamped "1385.37" and set in the top of a concrete post. (421.316 meters or 1,382.268 feet.)

**RV 6 (S. L.-S. F. Ry.).**—At **Rogers**, Benton County, about 2 rails north of the St. Louis-San Francisco Railway station at the Cherry Street crossing, 4 feet west of the track, and in the top of the concrete curb of the platform. A standard Monel-metal rivet. (422.990 meters or 1,387.760 feet.)

**Rogers**, top of rail opposite the St. Louis-San Francisco Railway station. (1,387.8 feet.)

**S 26.**—At **Rogers**, Benton County, on the St. Louis-San Francisco Railway, in the face of the brick wall of the station, facing the track, 1 foot north of the waiting room door, and 3 feet above the ground. A standard disk, stamped "S 26 1932" and set vertically. (424.393 meters or 1,392.363 feet.)

**Rogers**, top of rail opposite St. Louis-San Francisco Railway milepost 333. (1,389.5 feet.)

About 1 mile south of **Rogers**, top of rail opposite St. Louis-San Francisco Railway milepost 334. (1,336.0 feet.)

**T 26.**—About 1.9 miles south along the St. Louis-San Francisco Railway from **Rogers**, Benton County, about 27½ poles south of milepost 334, at a grade crossing, 35 feet east of the track, and about 50 feet south of the road. A standard disk, stamped "T 26 1932" and set in the top of a concrete post. (410.957 meters or 1,348.281 feet.)

About 2 miles south of **Rogers**, top of rail opposite St. Louis-San Francisco Railway milepost 335. (1,337.4 feet.)

About 3 miles south of **Rogers**, top of rail opposite St. Louis-San Francisco Railway milepost 336. (1,328.4 feet.)

U 26.—About 1.4 miles north along the St. Louis-San Francisco Railway from **Lowell**, Benton County, about  $26\frac{1}{2}$  poles south of milepost 336, 48 feet west of the track, and 50 feet east of the center line of United States Highway 71. A standard disk, stamped "U 26 1932" and set in the top of a concrete post. (407.100 meters or 1,335.627 feet.)

About 1.2 miles north of **Lowell**, top of rail opposite St. Louis-San Francisco Railway milepost 337. (1,317.7 feet.)

About 0.2 mile north of **Lowell**, top of rail opposite St. Louis-San Francisco Railway milepost 338. (1,342.2 feet.)

**Lowell**, top of rail opposite the St. Louis-San Francisco Railway station. (1,343.1 feet.)

V 26.—At **Lowell**, Benton County, about 13 rails south of the St. Louis-San Francisco Railway station, about 6 poles south of milepost 338, 40 feet east of the track, and in the park alongside the railroad. A standard disk, stamped "V 26 1932" and set in the top of a concrete post. (409.195 meters or 1,342.501 feet.)

CXVIII.—Destroyed.

About 0.8 mile south of **Lowell**, top of rail opposite St. Louis-San Francisco Railway milepost 339. (1,333.9 feet.)

**Vogel**, top of rail opposite St. Louis-San Francisco Railway milepost 340. (1,374.2 feet.)

W 26.—About 2.3 miles south along the St. Louis-San Francisco Railway from **Lowell**, Benton County, about 15 poles south of milepost 340, about 9 rails north of the **Vogel** station signboard, at a grade crossing, 38 feet east of the track, and 30 feet north of the road. A standard disk, stamped "W 26 1932" and set in the top of a concrete post. (418.270 meters or 1,372.274 feet.)

**Vogel**, top of rail opposite the St. Louis-San Francisco Railway station. (1,371.7 feet.)

About 1 mile south of **Vogel**, top of rail opposite St. Louis-San Francisco Railway milepost 341. (1,373.7 feet.)

About 2 miles south of **Vogel**, top of rail opposite St. Louis-San Francisco Railway milepost 342. (1,345.1 feet.)

X 26.—At **Springdale**, Washington County, about 450 yards north of the St. Louis-San Francisco Railway station, about  $34\frac{1}{2}$  poles south of milepost 342, 40 feet west of the track, and 30 feet south of the northeast corner of the property of the Welch Grape Juice Co. A standard disk, stamped "X 26 1932" and set in the top of a concrete post. (404.763 meters or 1,327.960 feet.)

CXIX.—At **Springdale**, Washington County, about 330 yards north of the St. Louis-San Francisco Railway station, under the loading platform of the Springdale Packing and Ice Co. plant, 1 foot south of the south end of the new annex, and about 3 feet above the ground. The center of a cross in the end of a copper bolt leaded in the brick. (404.394 meters or 1,326.749 feet.)

About 0.2 mile north of the station at **Springdale**, top of rail opposite St. Louis-San Francisco Railway milepost 343. (1,326.7 feet.)

**Springdale**, top of rail opposite the St. Louis-San Francisco Railway station. (1,325.2 feet.)

**SPRINGDALE**.—At **Springdale**, Washington County, at the St. Louis-San Francisco Railway station in the face of the brick wall facing the track, between the two windows of the agent's office, and 3 feet above the ground. A standard disk, stamped "SPRINGDALE 1932" and set vertically. (405.130 meters or 1,329.164 feet.)

RV 7 (S. L.-S. F. Ry.).—At **Springdale**, Washington County, on the St. Louis-San Francisco Railway, at a street crossing, and in the southwest corner of the passenger-station platform. A standard Monel-metal rivet. (403.700 meters or 1,324.472 feet.)

About 0.8 mile south of the station at **Springdale**, top of rail opposite St. Louis-San Francisco Railway milepost 344. (1,352.1 feet.)

Y 26.—At **Springdale**, Washington County, about 1 mile south of the St. Louis-San Francisco Railway station, about  $8\frac{3}{4}$  poles south of milepost 344, 15 feet east of the track, and 20 feet west of a road. A standard disk, stamped "Y 26 1932" and set in the top of a concrete post. (413.407 meters or 1,356.319 feet.)

About 1.8 miles south of **Springdale**, top of rail opposite St. Louis-San Francisco Railway milepost 345. (1,328.0 feet.)

**RV 8 (S. L.-S. F. Ry.)**.—About 2 miles south along the St. Louis-San Francisco Railway from **Springdale**, Washington County, about  $6\frac{1}{2}$  poles south of milepost 345, on the west side of the track, and in the top of the head wall of a concrete culvert. A standard Monel-metal rivet. (401.197 meters or 1,316.260 feet.)

About 2.8 miles south of **Springdale**, top of rail opposite St. Louis-San Francisco Railway milepost 346. (1,269.3 feet.)

**RV 9 (S. L.-S. F. Ry.)**.—About 3 miles south along the St. Louis-San Francisco Railway from **Springdale**, Washington County, about  $6\frac{1}{2}$  poles south of milepost 346, on the west side of the track, and in the top of the northwest corner of the head wall of a concrete culvert. A standard Monel-metal rivet. (383.435 meters or 1,257.986 feet.)

**Z 26**.—About 3.4 miles south along the St. Louis-San Francisco Railway from **Springdale**, Washington County, about 1.2 miles north of **Johnsons**, about  $10\frac{3}{4}$  poles south of milepost 348, at a grade crossing, 30 feet west of the track, and 40 feet north of the road. A standard disk, stamped "Z 26 1932" and set in the top of a concrete post. (378.626 meters or 1,242.209 feet.)

About 0.7 mile north of **Johnsons**, top of rail opposite St. Louis-San Francisco Railway milepost 347. (1,214.3 feet.)

**Johnsons**, top of rail opposite the St. Louis-San Francisco Railway station. (1,192.2 feet.)

**CXX**.—At **Johnsons**, Washington County, about 10 rails south of the St. Louis-San Francisco Railway station, 60 feet west of the track, and in the yard of a white-painted house. The bottom of a chiseled square in the top of a limestone post. (363.228 meters or 1,191.691 feet.)

About 0.3 mile south of **Johnsons**, top of rail opposite St. Louis-San Francisco Railway milepost 348. (1,177.5 feet.)

**RV 10 (S. L.-S. F. Ry.)**.—About 0.4 mile south along the St. Louis-San Francisco Railway from **Johnsons**, Washington County, about  $1\frac{1}{2}$  poles south of milepost 348, at railroad bridge 348.0, on the west side of the track, and in the top of the north abutment. A standard Monel-metal rivet. (357.934 meters or 1,174.322 feet.)

**Gulley**, top of rail opposite the St. Louis-San Francisco Railway station. (1,176.9 feet.)

**A 27**.—About 1.2 miles south along the St. Louis-San Francisco Railway from **Johnsons**, Washington County, about  $37\frac{1}{2}$  poles south of milepost 348, at a grade crossing, 18 feet west of the track, and 15 feet north of the road. A standard disk, stamped "A 27 1932" and set in the top of a concrete post. (365.226 meters or 1,198.246 feet.)

About 2.3 miles south of **Johnsons**, top of rail opposite St. Louis-San Francisco Railway milepost 350. (1,226.7 feet.)

**B 27**.—About 2 miles north along the St. Louis-San Francisco Railway from **Fayetteville**, Washington County, about  $18\frac{1}{2}$  poles south of milepost 350, at a grade crossing, 35 feet east of the track, and 40 feet south of the road. A standard disk, stamped "B 27 1932" and set in the top of a concrete post. (382.007 meters or 1,253.301 feet.)

**Barbara**, top of rail opposite the St. Louis-San Francisco Railway station. (1,236.7 feet.)

About  $1\frac{1}{2}$  miles north of **Fayetteville**, top of rail opposite St. Louis-San Francisco Railway milepost 351. (1,283.6 feet.)

**C 27**.—At **Fayetteville**, Washington County, about 0.7 mile north of the St. Louis-San Francisco Railway station, about  $28\frac{1}{2}$  poles south of milepost 351, on the west side of the track, and in the top of the south end of a concrete culvert. A standard disk, stamped "C 27 1932." (402.041 meters or 1,319.030 feet.)

About  $\frac{1}{2}$  mile north of **Fayetteville**, top of rail opposite St. Louis-San Francisco Railway milepost 352. (1,331.2 feet.)

**D 27**.—At **Fayetteville**, Washington County, about 660 yards north of the St. Louis-San Francisco Railway station, about  $4\frac{1}{2}$  poles south of milepost 352, on the east property line of the Sinclair Oil Co.'s storage tanks, 50 feet west of the track, 70 feet north of a road, and 5 feet west of a 1-foot oak tree. A standard disk, stamped "D 27 1932" and set in the top of a concrete post. (407.897 meters or 1,338.242 feet.)

East Fayetteville, top of rail opposite the St. Louis-San Francisco Railway station signboard. (1,324.9 feet.)

F 27.—At Fayetteville, Washington County, on the St. Louis-San Francisco Railway, in the face of the brick wall of the station, and north of the waiting-room door. A standard disk, stamped "F 27 1932" and set vertically. (408.016 meters or 1,338.632 feet.)

RV 11 (S. L.-S. F. Ry.).—At Fayetteville, Washington County, at the St. Louis-San Francisco Railway station, on the south side of Dixon Street, and in the top of the northwest corner of the brick platform. A standard Monel-metal rivet. (406.496 meters or 1,333.646 feet.)

Fayetteville, top of rail opposite the St. Louis-San Francisco Railway station. (1,335.2 feet.)

E 27.—At Fayetteville, Washington County, at the intersection of Arkansas Avenue and Dixon Street, at the southeast corner of the university grounds, in the parkway strip on Arkansas Avenue, and 4 feet inside the concrete curb. A standard disk, stamped "E 27 1932 1370.250" and set in the top of a concrete post. (417.653 meters or 1,370.250 feet.)

FAYETTEVILLE.—At Fayetteville, Washington County, on the north side of the engineering building of the university campus, on the west side of the entrance, and in the top of the balustrade, close to the building. A standard disk, stamped "FAYETTEVILLE 1932 1427.199." (435.011 meters or 1,427.199 feet.)

CXXI.—At Fayetteville, Washington County, on the south side of the main entrance to the Arkansas State University building, and on the dressed surface of a large limestone, about 2 feet above the ground. A chiseled cross, surrounded by the letters "U.S.C. & G.S.B.M." (442.354 meters or 1,451.290 feet.)

G 27.—About  $\frac{1}{4}$  mile south along the St. Louis-San Francisco Railway from the station at Fayetteville, Washington County, at mileage 352.8, at the bridge over Center Street, on the east side of the track, and in the top of a concrete pier. A standard disk, stamped "G 27 1932." (400.449 meters or 1,313.806 feet.)

About  $\frac{1}{2}$  mile south of Fayetteville, top of rail opposite St. Louis-San Francisco Railway milepost 353. (1,305.7 feet.)

H 27.—About 0.9 mile south along the St. Louis-San Francisco Railway from Fayetteville, Washington County, about 8 rails north of pole 353+20, 15 feet west of the track, and in the top of a ledge of rock. A standard disk, stamped "H 27 1932." (391.196 meters or 1,283.449 feet.)

About  $1\frac{1}{2}$  miles south of Fayetteville, top of rail opposite St. Louis-San Francisco Railway milepost 354. (1,254.7 feet.)

J 27.—About 1.8 miles south along the St. Louis-San Francisco Railway from Fayetteville, Washington County, about 15 poles south of milepost 354, at the Fayette Junction yards, about 50 feet north of the water tank, and 15 feet east of the main track. A standard disk, stamped "J 27 1932" and set in the top of a concrete post. (377.224 meters or 1,237.609 feet.)

About  $2\frac{1}{2}$  miles south of Fayetteville, top of rail opposite St. Louis-San Francisco Railway milepost 355. (1,249.9 feet.)

About 2 miles north of Greenland, top of rail opposite St. Louis-San Francisco Railway milepost 356. (1,260.8 feet.)

K 27.—About 1.4 miles north along the St. Louis-San Francisco Railway from Greenland, Washington County, between poles 356+13 and 356+19, about 30 feet south of a dirt road, 20 feet east of the track, and 20 feet west of a wire fence. A standard disk, stamped "K 27 1932" and set in the top of a concrete post. (381.801 meters or 1,252.625 feet.)

About 1 mile north of Greenland, top of rail opposite St. Louis-San Francisco Railway milepost 357. (1,260.3 feet.)

CXXII.—At Greenland, Washington County, about 100 feet southeast of the St. Louis-San Francisco Railway station, 50 feet west of United States Highway 71, 20 feet south of a dirt road, in the northeast corner of the front yard of a house, and about 30 feet north of the front of the house. The bottom of a square, surrounded by the letters "U.S.B.M." cut in the top of a limestone post. (379.854 meters or 1,246.238 feet.)

Greenland, top of rail opposite the St. Louis-San Francisco Railway station. (1,248.4 feet.)

Greenland, top of rail opposite St. Louis-San Francisco Railway milepost 358. (1,244.4 feet.)

L 27.—About 0.5 mile south along the St. Louis-San Francisco Railway from Greenland, Washington County, between poles 358+19 and 358+20, 40 feet

east of the track, and 15 feet west of United States Highway 71. A standard disk, stamped "L 27 1932" and set in the top of a concrete post. (380.680 meters or 1,248.948 feet.)

About 1 mile south of **Greenland**, top of rail opposite St. Louis-San Francisco Railway milepost 359. (1,248.3 feet.)

About 2 miles south of **Greenland**, top of rail opposite St. Louis-San Francisco Railway milepost 360. (1,265.4 feet.)

**M 27**.—About 2.2 miles north along the St. Louis-San Francisco Railway from **West Fork**, Washington County, at pole 360+30, 15 feet west of the track, 10 feet north of a drainage ditch, and in the top of a ledge of rock. A standard disk, stamped "M 27 1932." (393.636 meters or 1,291.454 feet.)

About 2 miles north of **West Fork**, top of rail opposite St. Louis-San Francisco Railway milepost 361. (1,297.3 feet.)

**RV 12 (S. L.-S. F. Ry.)**.—About 1 mile north along the St. Louis-San Francisco Railway from **West Fork**, Washington County, at milepost 362, and in the top of the west side of the north concrete abutment of a bridge. A standard Monel-metal rivet. (395.531 meters or 1,297.671 feet.)

About 1 mile north of **West Fork**, top of rail opposite St. Louis-San Francisco Railway milepost 362. (1,302.5 feet.)

**West Fork**, top of rail opposite the St. Louis-San Francisco Railway station. (1,339.9 feet.)

**N 27**.—At **West Fork**, Washington County, about 150 feet southeast of the St. Louis-San Francisco Railway station, about 70 feet east of the main track, 20 feet south of a street, formerly United States Highway 71, and 2 feet south of the sidewalk. A standard disk, stamped "N 27 1932" and set in the top of a concrete post. (407.995 meters or 1,338.564 feet.)

**CXXIII**.—At **West Fork**, Washington County, in the north brick wall of the **West Fork Hardware & Lumber Co.** building, 4 feet west of the northeast corner, and in the third course of brick above the stone foundation. The center of a cross in the end of a copper bolt leaded in the brick. (411.038 meters or 1,348.547 feet.)

About 1 mile south of **West Fork**, top of rail opposite St. Louis-San Francisco Railway milepost 364. (1,335.0 feet.)

About 1 mile north of **Woolsey**, top of rail opposite St. Louis-San Francisco Railway milepost 365. (1,353.8 feet.)

**P 27**.—About 0.8 mile north along the St. Louis-San Francisco Railway from **Woolsey**, Washington County, just east of pole 365+3, 25 feet north of a farm road, and 20 feet east of the track. A standard disk, stamped "P 27 1932" and set in the top of a concrete post. (411.643 meters or 1,350.532 feet.)

**RV 13 (S. L.-S. F. Ry.)**.—About  $\frac{1}{4}$  mile north along the St. Louis-San Francisco Railway from **Woolsey**, Washington County, at pole 365+26, and in the top of the northeast head wall of a culvert. A standard Monel-metal rivet. (419.059 meters or 1,374.863 feet.)

**Woolsey**, top of rail opposite the St. Louis-San Francisco Railway station. (1,380.2 feet.)

**Woolsey**, top of rail opposite St. Louis-San Francisco Railway milepost 366. (1,381.5 feet.)

**CXXIV**.—About 0.2 mile south along the St. Louis-San Francisco Railway from **Woolsey**, Washington County, at mileage 366.2, at the bridge over a branch of **West Fork of White River**, and in the top of the east side of the north abutment. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." (419.786 meters or 1,377.243 feet.)

About 1 mile south of **Woolsey**, top of rail opposite St. Louis-San Francisco Railway milepost 367. (1,398.9 feet.)

**Q 27**.—About 1.2 miles south along the St. Louis-San Francisco Railway from **Woolsey**, Washington County, between poles 367+8 and 367+9, about 150 feet southeast of a farm road, 50 feet northeast of the track, and 2 feet south of a wire fence. A standard disk, stamped "Q 27 1932" and set in the top of a concrete post. (426.479 meters or 1,399.207 feet.)

**RV 14 (S. L.-S. F. Ry.)**.—About 1.5 miles south along the St. Louis-San Francisco Railway from **Woolsey**, Washington County, about  $18\frac{1}{2}$  poles south of milepost 367, and in the top of the northeast head wall of a culvert. A standard Monel-metal rivet. (428.340 meters or 1,405.312 feet.)

About 2 miles south of **Woolsey**, top of rail opposite St. Louis-San Francisco Railway milepost 368. (1,425.9 feet.)

About 1 mile north of **Brentwood**, top of rail opposite St. Louis-San Francisco Railway milepost 369. (1,473.8 feet.)

**R 27.**—About 1.0 mile north along the St. Louis-San Francisco Railway from **Brentwood**, Washington County, between poles 369+4 and 369+5, about 35 feet northwest of a farm road, and 40 feet northeast of the track. A standard disk, stamped "R 27 1932" and set in the top of a concrete post. (449.997 meters or 1,476.365 feet.)

**Brentwood**, top of rail opposite St. Louis-San Francisco Railway milepost 370. (1,482.5 feet.)

**RV 15 (S. L.-S. F. Ry.)**.—At **Brentwood**, Washington County, about 75 feet northwest of the St. Louis-San Francisco Railway station, about 2½ poles south of milepost 370, and in the top of the northwest concrete head wall of a culvert. A standard Monel-metal rivet. (451.868 meters or 1,482.504 feet.)

**CXXV.**—Destroyed.

**S 27.**—About 0.9 mile south along the St. Louis-San Francisco Railway from **Brentwood**, Washington County, at pole 370+36, 50 feet northwest of the track, and in the top of a boulder. A standard disk, stamped "S 27 1932." (462.093 meters or 1,516.050 feet.)

**RV 16 (S. L.-S. F. Ry.)**.—About 1.0 mile south along the St. Louis-San Francisco Railway from **Brentwood**, Washington County, at milepost 371, and in the top of the west side of the south abutment of a bridge. A standard Monel-metal rivet. (463.649 meters or 1,521.155 feet.)

About 1 mile south of **Brentwood**, top of rail opposite St. Louis-San Francisco Railway milepost 371. (1,521.7 feet.)

**RV 17 (S. L.-S. F. Ry.)**.—About 1.7 miles south along the St. Louis-San Francisco Railway from **Brentwood**, Washington County, between poles 371+27 and 371+28, and in the top of the northeast concrete head wall of a culvert. A standard Monel-metal rivet. (473.725 meters or 1,554.213 feet.)

About 2 miles south of **Brentwood**, top of rail opposite St. Louis-San Francisco Railway milepost 372. (1,575.6 feet.)

About 1¾ miles north of **Winslow**, top of rail opposite St. Louis-San Francisco Railway milepost 373. (1,632.5 feet.)

**T 27.**—About 1.0 mile north along the St. Louis-San Francisco Railway from **Winslow**, Washington County, at pole 373+25, 35 feet west of the track, and 12 feet east of a wire fence. A standard disk, stamped "T 27 1932" and set in the top of a concrete post. (508.944 meters or 1,669.760 feet.)

About ¾ mile north of **Winslow**, top of rail opposite St. Louis-San Francisco Railway milepost 374. (1,690.9 feet.)

**Winslow**, top of rail opposite the St. Louis-San Francisco Railway station. (1,731.6 feet.)

**RV 18 (S. L.-S. F. Ry.)**.—At **Winslow**, Washington County, about 5 poles south of the St. Louis-San Francisco Railway station, at pole 374+32, and in the top of a concrete slab. A standard Monel-metal rivet. (528.298 meters or 1,733.258 feet.)

**U 27.**—At **Winslow**, Washington County, about 5 poles south of the St. Louis-San Francisco Railway station, at pole 374+32, and in the top of a ledge of rock. A standard disk, stamped "U 27 1932." (528.604 meters or 1,734.262 feet.)

**CXXVI.**—Destroyed.

**CXXVII.**—About ½ mile south of **Winslow**, Washington County, on the top of Boston Mountain, in the front yard of the Summit Hotel, near the front fence, and on the left of the gate when entering. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a stone post. (572.187 meters or 1,877.250 feet.)

**RV 19 (S. L.-S. F. Ry.)**.—About ½ mile south along the St. Louis-San Francisco Railway from **Winslow**, Washington County, about 3½ poles south of the south end of a tunnel, about 16½ poles south of milepost 375, on the east side of the track, and in the top of an old concrete signal foundation. A standard Monel-metal rivet. (521.632 meters or 1,711.388 feet.)

About 1¼ miles south of **Winslow**, top of rail opposite St. Louis-San Francisco Railway milepost 376. (1,644.5 feet.)

**RV 20 (S. L.-S. F. Ry.)**.—About 1.7 miles south along the St. Louis-San Francisco Railway from **Winslow**, Washington County, at mileage 376.5, at the north end of railroad bridge 1, and in the top of the west side of a concrete U-wall. A standard Monel-metal rivet. (484.713 meters or 1,590.263 feet.)

**V 27.**—About 1.8 miles south along the St. Louis-San Francisco Railway from **Winslow**, Washington County, about 24½ poles south of milepost 376, and in the top of the east side of the south concrete abutment of railroad bridge 1. A standard disk, stamped "V 27 1932." (478.730 meters or 1,570.633 feet.)

About  $2\frac{1}{4}$  miles south of Winslow, top of rail opposite St. Louis-San Francisco Railway milepost 377. (1,530.6 feet.)

**RV 21 (S. L.-S. F. Ry.).**—About  $2\frac{1}{2}$  miles south along the St. Louis-San Francisco Railway from Winslow, Washington County, at mileage 377.3, at the north end of railroad bridge 2, and in the top of the west side of a concrete U-wall. A standard Monel-metal rivet. (457.173 meters or 1,499.908 feet.)

About 3 miles north of Schaberg, top of rail opposite St. Louis-San Francisco Railway milepost 378. (1,418.0 feet.)

**RV 22 (S. L.-S. F. Ry.).**—In Washington County, about 2.8 miles north along the St. Louis-San Francisco Railway from Schaberg, Crawford County, at mileage 378.2, and in the top of the east side of the north concrete abutment of a bridge. A standard Monel-metal rivet. (425.875 meters or 1,397.225 feet.)

About 2 miles north of Schaberg, top of rail opposite St. Louis-San Francisco Railway milepost 379. (1,298.7 feet.)

**W 27.**—About 1.7 miles north along the St. Louis-San Francisco Railway from Schaberg, Crawford County, about  $12\frac{1}{2}$  poles south of milepost 379, 10 feet west of the track, and in the top of a ledge of rock. A standard disk stamped "W 27 1932." (401.612 meters or 1,317.622 feet.)

**X 27.**—About 1.4 miles north along the St. Louis-San Francisco Railway from Schaberg, Crawford County, about  $26\frac{1}{2}$  poles south of milepost 379, on the west side of the track, and in the top of a concrete culvert. A standard disk, stamped "X 27 1932." (371.330 meters or 1,218.272 feet.)

**RV 22-A (S. L.-S. F. Ry.).**—About  $\frac{1}{2}$  mile north along the St. Louis-San Francisco Railway from Schaberg, Crawford County, and in the top of the east side of the north abutment of railroad bridge 380.5. A standard Monel-metal rivet. (340.703 meters or 1,117.790 feet.)

Schaberg, top of rail opposite St. Louis-San Francisco Railway milepost 381. (1,089.0 feet.)

**RV 23 (S. L.-S. F. Ry.).**—At Schaberg, Crawford County, on the St. Louis-San Francisco Railway, at pole 381+5, 40 feet northwest of the track, and in the top of a rock culvert. A standard Monel-metal rivet. (329.643 meters or 1,081.504 feet.)

**Y 27.**—At Schaberg, Crawford County, on the St. Louis-San Francisco Railway, about  $5\frac{1}{2}$  poles south of milepost 381, 50 feet northwest of the main track, and in the southwest corner of the school yard. A standard disk, stamped "Y 27 1932" and set in the top of a concrete post. (331.213 meters or 1,086.655 feet.)

**CXXVIII.**—Probably destroyed.

About 1 mile south of Schaberg, top of rail opposite St. Louis-San Francisco Railway milepost 382. (1,036.4 feet.)

**RV 24 (S. L.-S. F. Ry.).**—About  $\frac{1}{8}$  mile northeast along the St. Louis-San Francisco Railway from Armada, Crawford County, about  $32\frac{3}{4}$  poles southwest of milepost 382, and in the top of the northeast end of the southeast head wall of a concrete culvert. A standard Monel-metal rivet. (300.928 meters or 987.295 feet.)

**Z 27.**—About  $\frac{1}{8}$  mile northeast along the St. Louis-San Francisco Railway from Armada, Crawford County, about  $32\frac{3}{4}$  poles southwest of milepost 382, northwest of the track, and in the top of the southwest end of a concrete culvert. A standard disk, stamped "Z 27 1932." (300.664 meters or 986.428 feet.)

Armada, top of rail opposite St. Louis-San Francisco Railway milepost 383. (977.8 feet.)

About 1 mile south of Armada, top of rail opposite St. Louis-San Francisco Railway milepost 384. (940.0 feet.)

**A 28.**—About 1.3 miles northeast along the St. Louis-San Francisco Railway from Chester, Crawford County, at pole 384+28, 40 feet east of the track, and 1 foot west of a wire fence. A standard disk, stamped "A 28 1932" and set in the top of a concrete post. (275.459 meters or 903.735 feet.)

About 1 mile northeast of Chester, top of rail opposite St. Louis-San Francisco Railway milepost 385. (895.7 feet.)

**RV 25 (S. L.-S. F. Ry.).**—About  $\frac{1}{4}$  mile northeast along the St. Louis-San Francisco Railway from Chester, Crawford County, about  $35\frac{1}{2}$  poles southwest of milepost 385, east of the track, and in the top of the concrete H-wall. A standard Monel-metal rivet. (260.543 meters or 854.808 feet.)

**B 28.**—At Chester, Crawford County, on the St. Louis-San Francisco Railway, at pole 386+4, at the southeast corner of a section house, about 100 feet northwest of the water tank, and 40 feet west of the main track. A standard disk,

stamped "B 28 1932" and set in the top of a concrete post. (257.389 meters or 844.450 feet.)

**XLIX.**—At Chester, Crawford County, at the northwest corner of the post office, and 15 feet south of a large brick building (formerly the Chester Hotel) housing a few stores. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a limestone post. (256.522 meters or 841.606 feet.)

**XLVIII.**—At Chester, Crawford County, near the post office, in the west wall of a large brick building (formerly the Chester Hotel) housing a few stores, in the fourteenth course above the ground, and in the second brick from the southwest corner. The center of a cross in the end of a copper bolt leaded in the brick. (257.655 meters or 845.323 feet.)

About 1 mile south of Chester, top of rail opposite St. Louis-San Francisco Railway milepost 387. (824.4 feet.)

**RV 26 (S. L.-S. F. Ry.)**.—About 1.0 mile south along the St. Louis-San Francisco Railway from Chester, Crawford County, at railroad bridge 387.1, and in the top of the west side of the south concrete pier. A standard Monel-metal rivet. (248.651 meters or 815.782 feet.)

**XLVII.**—Destroyed.

**RV 27 (S. L.-S. F. Ry.)**.—About 1.9 miles south along the St. Louis-San Francisco Railway from Chester, Crawford County, at railroad bridge 388.0, and in the top of the west side of the north concrete pier. A standard Monel-metal rivet. (235.380 meters or 772.243 feet.)

**C 28.**—About 2.0 miles north along the St. Louis-San Francisco Railway from Mountainburg, Crawford County, at pole 388+14, 40 feet east of the track, and 15 feet north of a farm road. A standard disk, stamped "C 28 1932" and set in the top of a concrete post. (229.149 meters or 751.800 feet.)

**RV 28 (S. L.-S. F. Ry.)**.—About 1.4 miles north along the St. Louis-San Francisco Railway from Mountainburg, Crawford county, at bridge 388.8, and in the top of the west side of the north pier. A standard Monel-metal rivet. (225.720 meters or 740.550 feet.)

About 1¼ miles north of Mountainburg, top of rail opposite St. Louis-San Francisco Railway milepost 389. (738.6 feet.)

**RV 29 (S. L.-S. F. Ry.)**.—About ½ mile north along the St. Louis-San Francisco Railway from Mountainburg, Crawford County, at pole 389+29, and in the top of the east concrete head wall of a culvert. A standard Monel-metal rivet. (224.594 meters or 736.855 feet.)

About ¼ mile north of the station at Mountainburg, top of rail opposite St. Louis-San Francisco Railway milepost 390. (727.2 feet.)

**Mountainburg**, top of rail opposite the St. Louis-San Francisco Railway station. (716.2 feet.)

**D 28.**—At Mountainburg, Crawford County, about ¼ mile south of the St. Louis-San Francisco Railway station, about 15½ poles south of milepost 390, and about 20 feet west of a dirt road. A standard disk, stamped "D 28 1932" and set in the top of a concrete post. (216.124 meters or 709.067 feet.)

**XLVI.**—Destroyed.

About ¾ mile south of Mountainburg, top of rail opposite St. Louis-San Francisco Railway milepost 391. (700.7 feet.)

**RV 30 (S. L.-S. F. Ry.)**.—About 1.0 mile south along the St. Louis-San Francisco Railway from Mountainburg, Crawford County, at pole 391+5, at the south end of a bridge, and in the top of the west side of the concrete head wall. A standard Monel-metal rivet. (212.879 meters or 698.421 feet.)

**E 28.**—About 1.6 miles south along the St. Louis-San Francisco Railway from Mountainburg, Crawford County, at bridge 391.9, and in the top of the west side of the south concrete pier. A standard disk, stamped "E 28 1932." (210.517 meters or 690.671 feet.)

About 1¾ miles south of Mountainburg, top of rail opposite St. Louis-San Francisco Railway milepost 392. (693.6 feet.)

About 2¾ miles south of Mountainburg, top of rail opposite St. Louis-San Francisco Railway milepost 393. (665.0 feet.)

**RV 31 (S. L.-S. F. Ry.)**.—About 3.0 miles south along the St. Louis-San Francisco Railway from Mountainburg, Crawford County, at bridge 393.3, southeast of the track, and in the top of the southwest concrete head wall. A standard Monel-metal rivet. (202.449 meters or 664.201 feet.)

**F 28.**—About 3.6 miles south along the St. Louis-San Francisco Railway from Mountainburg, Crawford County, at pole 393+35, 10 feet northwest of the

track, and in the top of a ledge of rock. A standard disk, stamped "F 28 1932." (200.018 meters or 656.226 feet.)

About 2 miles north of Lancaster, top of rail opposite St. Louis-San Francisco Railway milepost 394. (656.0 feet.)

RV 32 (S. L.-S. F. Ry.).—About 1.6 miles north along the St. Louis-San Francisco Railway from Lancaster, Crawford County, about 12½ poles south of milepost 394, and in the top of the northeast end of the southeast concrete head wall of a culvert. A standard Monel-metal rivet. (198.939 meters or 652.686 feet.)

About ¼ mile north of Lancaster, top of rail opposite St. Louis-San Francisco Railway milepost 395. (635.5 feet.)

RV 33 (S. L.-S. F. Ry.).—About 0.6 mile north along the St. Louis-San Francisco Railway from Lancaster, Crawford County, at the north end of bridge 395.2, and in the top of the west concrete head wall. A standard Monel-metal rivet. (192.472 meters or 631.469 feet.)

RV 34 (S. L.-S. F. Ry.).—About ¼ mile north along the St. Louis-San Francisco Railway from Lancaster, Crawford County, at pole 395+22, at the southeast end of a bridge, and in the top of the northeast concrete head wall. A standard Monel-metal rivet. (189.281 meters or 620.999 feet.)

G 28.—At Lancaster, Crawford County, 50 feet northwest of the St. Louis-San Francisco Railway station, about 33½ poles south of milepost 395, and 30 feet west of the track. A standard disk, stamped "G 28 1932" and set in the top of a concrete post. (189.721 meters or 622.443 feet.)

Lancaster, top of rail opposite the St. Louis-San Francisco Railway station. (622.1 feet.)

Lancaster, top of rail opposite St. Louis-San Francisco Railway milepost 396. (622.7 feet.)

RV 35 (S. L.-S. F. Ry.).—About 0.4 mile south along the St. Louis-San Francisco Railway from Lancaster, Crawford County, at pole 396+10, about 3 rails northwest of a grade crossing, on the northeast side of the track, and in the top of the northwest end of a concrete retaining wall. A standard Monel-metal rivet. (189.372 meters or 621.298 feet.)

XLV.—Probably destroyed.

About 1 mile south of Lancaster, top of rail opposite St. Louis-San Francisco Railway milepost 397. (593.2 feet.)

H 28.—About 1.5 miles south along the St. Louis-San Francisco Railway from Lancaster, Crawford County, about 12½ poles south of milepost 397, about 4 rails south of a grade crossing, 40 feet west of the track, and inside a fence. A standard disk, stamped "H 28 1932" and set in the top of a concrete post. (177.139 meters or 581.164 feet.)

RV 36 (S. L.-S. F. Ry.).—About 2.6 miles northeast along the St. Louis-San Francisco Railway from Rudy, Crawford County, at the south end of bridge 398.5, on the west side, and in the top of the concrete head wall. A standard Monel-metal rivet. (170.887 meters or 560.652 feet.)

About 2 miles northeast of Rudy, top of rail opposite St. Louis-San Francisco Railway milepost 399. (543.1 feet.)

RV 37 (S. L.-S. F. Ry.).—About 2.0 miles northeast along the St. Louis-San Francisco Railway from Rudy, Crawford County, at the north end of bridge 399.1, on the west side, and in the top of the concrete head wall. A standard Monel-metal rivet. (165.340 meters or 542.453 feet.)

J 28.—About 2.0 miles northeast along the St. Louis-San Francisco Railway from Rudy, Crawford County, at mileage 399.1, and in the top of the east side of the north pier of an iron bridge. A standard disk, stamped "J 28 1932." (164.792 meters or 540.655 feet.)

XLIV.—Probably destroyed.

RV 38 (S. L.-S. F. Ry.).—About 1.3 miles northeast along the St. Louis-San Francisco Railway from Rudy, Crawford County, about 32½ poles southwest of milepost 399, on the northwest side of the track, and in the top of a concrete culvert. A standard Monel-metal rivet. (162.843 meters or 534.261 feet.)

About 1 mile northeast of Rudy, top of rail opposite St. Louis-San Francisco Railway milepost 400. (527.7 feet.)

K 28.—At Rudy, Crawford County, 75 feet west of the St. Louis-San Francisco Railway station, at pole 401+4, 50 feet west of the main track, and 20 feet south of a road to a bridge over a creek. A standard disk, stamped "K 28 1932" and set in the top of a concrete post. (150.758 meters or 494.612 feet.)

Rudy, top of rail opposite the St. Louis-San Francisco Railway station. (495.7 feet.)

**RV 39 (S. L.-S. F. Ry.)**.—About  $\frac{1}{4}$  mile south along the St. Louis-San Francisco Railway from the station at **Rudy**, Crawford County, at bridge 401.3, on the west side of the track, and in the top of the north rock head wall. A standard Monel-metal rivet. (149.003 meters or 488.854 feet.)

About 2 miles southwest of **Rudy**, top of rail opposite St. Louis-San Francisco Railway milepost 403. (463.8 feet.)

**M 28**.—About 2.1 miles southwest along the St. Louis-San Francisco Railway from **Rudy**, Crawford County, at pole 403+7, on the east side of the track, and in the top of a ledge of rock. A standard disk, stamped "M 28 1932." (141.531 meters or 464.340 feet.)

**RV 40 (S. L.-S. F. Ry.)**.—About 3.0 miles southwest along the St. Louis-San Francisco Railway from **Rudy**, Crawford County, at milepost 404, on the northwest side of the track, and in the top of the northeast concrete head wall of a culvert. A standard Monel-metal rivet. (141.807 meters or 465.245 feet.)

About 3 miles southwest of **Rudy**, top of rail opposite St. Louis-San Francisco Railway milepost 404. (466.1 feet.)

**XLIII**.—Probably destroyed.

**N 28**.—About 4.0 miles southwest along the St. Louis-San Francisco Railway from **Rudy**, Crawford County, at pole 404+39, and 40 feet northwest of the track. A standard disk, stamped "N 28 1932" and set in the top of a concrete post. (147.904 meters or 485.248 feet.)

About 4 miles southwest of **Rudy**, top of rail opposite St. Louis-San Francisco Railway milepost 405. (485.9 feet.)

**RV 41 (S. L.-S. F. Ry.)**.—About 4.1 miles southwest along the St. Louis-San Francisco Railway from **Rudy**, Crawford County, at mileage 405.1, on the northwest side of the track, and in the top of the northeast concrete head wall of a culvert. A standard Monel-metal rivet. (148.259 meters or 486.413 feet.)

About 4 miles northeast of **Van Buren**, top of rail opposite St. Louis-San Francisco Railway milepost 406. (526.8 feet.)

**RV 42 (S. L.-S. F. Ry.)**.—About 3.8 miles northeast along the St. Louis-San Francisco Railway from **Van Buren**, Crawford County, at pole 406+10, on the northwest side of the track, and in the top of a concrete culvert. A standard Monel-metal rivet. (157.819 meters or 517.778 feet.)

About 3 miles northeast of **Van Buren**, top of rail opposite St. Louis-San Francisco Railway milepost 407. (487.9 feet.)

**RV 43 (S. L.-S. F. Ry.)**.—About 3.0 miles northeast along the St. Louis-San Francisco Railway from **Van Buren**, Crawford County, at mileage 407.2, and in the top of the northwest side of the center concrete pier of the bridge over Flat Rock Creek. A standard Monel-metal rivet. (144.677 meters or 474.661 feet.)

**P 28**.—About 2.8 miles northeast along the St. Louis-San Francisco Railway from **Van Buren**, Crawford County, about  $9\frac{1}{2}$  poles southwest of milepost 407, and 40 feet northwest of the track. A standard disk, stamped "P 28 1932" and set in the top of a concrete post. (145.624 meters or 477.768 feet.)

About 2 miles northeast of **Van Buren**, top of rail opposite St. Louis-San Francisco Railway milepost 408. (483.5 feet.)

**Smeltzer**, top of rail opposite the St. Louis-San Francisco Railway station. (482.2 feet.)

**RV 44 (S. L.-S. F. Ry.)**.—About 1.6 miles north along the St. Louis-San Francisco Railway from the station at **Van Buren**, Crawford County, about 16 poles south of milepost 408, on the west side of the track, and in the top of the north end of a concrete culvert. A standard Monel-metal rivet. (144.171 meters or 473.001 feet.)

**Q 28**.—About 1 mile north along the St. Louis-San Francisco Railway from the station at **Van Buren**, Crawford County, at milepost 409, at the Alma Boulevard crossing, 50 feet east of the track, and 20 feet south of the road. A standard disk, stamped "Q 28 1932" and set in the top of a concrete post. (140.162 meters or 459.848 feet.)

**RV 45 (S. L.-S. F. Ry.)**.—About 0.9 mile east along the St. Louis-San Francisco Railway from the station at **Van Buren**, Crawford County, at pole 409+3, about 6 rails east of a grade crossing, and in the top of the southeast concrete head wall of a culvert. A standard Monel-metal rivet. (138.301 meters or 453.743 feet.)

**R 28**.—At **Van Buren**, Crawford County, in the face of the brick wall of the St. Louis-San Francisco Railway station, between the two windows of the agent's office, and 3 feet above the ground. A standard disk, stamped "R 28 1932" and set vertically. (135.038 meters or 443.037 feet.)

**Van Buren**, top of rail opposite St. Louis-San Francisco Railway milepost 410. (439.9 feet.)

**RV 48 (S. L.-S. F. Ry.)**.—At **Van Buren**, Crawford County, on the St. Louis-San Francisco Railway, at the southeast corner of the Missouri Pacific Railroad crossing, and in the top of a concrete block supporting signal pipes. A standard Monel-metal rivet. (127.589 meters or 418.598 feet.)

**T 28**.—At **Van Buren**, Crawford County, on the St. Louis-San Francisco Railway, at bridge 410.6 over Arkansas River, on the north side of the river, west of the track, and in the top of a concrete abutment. A standard disk, stamped "T 28 1932." (127.943 meters or 419.760 feet.)

**XXXIX**.—At **Van Buren**, Crawford County, on the St. Louis-San Francisco Railway, at bridge 410.6 over Arkansas River, on the north side of the river, east of the track, and in the top of the abutment. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." (126.301 meters or 414.373 feet.)

**XL**.—Probably destroyed.

For additional bench marks in this vicinity, see page 144.

About 1 mile south of **Van Buren**, top of rail opposite St. Louis-San Francisco Railway milepost 411. (414.1 feet.)

**U 28**.—In Sebastian County, about 1.6 miles south along the St. Louis-San Francisco Railway from **Van Buren**, Crawford County, about 21½ poles south of milepost 411, at a grade crossing, 35 feet north of the track, 50 feet north of the road, and about 150 feet west of the property line of a cemetery. A standard disk, stamped "U 28 1932" and set in the top of a concrete post. (133.157 meters or 436.866 feet.)

**V 28**.—In Sebastian County, about 3 miles south along the St. Louis-San Francisco Railway from **Van Buren**, Crawford County, about 39 poles south of milepost 412, about 275 yards east of a large brick school, at a grade crossing, about 100 feet west of the track, about 30 feet west of the Missouri Pacific Railroad track, and about 70 feet south of the southeast corner of the Radeant Glass Co. plant. A standard disk, stamped "V 28 1932" and set in the top of a concrete post. (133.711 meters or 455.088 feet.)

About 3 miles south of **Van Buren**, top of rail opposite St. Louis-San Francisco Railway milepost 413. (454.6 feet.)

**RV 50 (S. L.-S. F. Ry.)**.—About 3 miles north along the St. Louis-San Francisco Railway from the station at **Fort Smith**, Sebastian County, about 14½ poles south of milepost 413, on the north side of the track, and in the top of a concrete culvert. A standard Monel-metal rivet. (134.545 meters or 441.420 feet.)

About 2½ miles northeast of **Fort Smith**, top of rail opposite St. Louis-San Francisco Railway milepost 414. (435.3 feet.)

**W 28**.—At **Fort Smith**, Sebastian County, about 1.8 miles east of the St. Louis-San Francisco Railway station, about 25½ poles south of milepost 414, at the siding of the Ward Manufacturing Co., about 40 feet east of the transformers of the company, and 10 feet north of the track. A standard disk, stamped "W 28 1932" and set in the top of a concrete post. (126.354 meters or 414.546 feet.)

About 1½ miles east of the station at **Fort Smith**, top of rail opposite St. Louis-San Francisco Railway milepost 415. (420.5 feet.)

**X 28**.—At **Fort Smith**, Sebastian County, at Arkansas River bridge, on Garrison Street, in the face of the building occupied by the general offices of the St. Louis-San Francisco Railway, 3 feet from the southwest corner, and in the second course of stone. A standard disk, stamped "X 28 1932 429.235" and set vertically. (130.831 meters or 429.235 feet.)

**XLI**.—At **Fort Smith**, Sebastian County, at the corner of Rogers and Second Avenues, in the west wall of the Fort Smith Federated Welfare Association building, in the fifth brick from the jamb formed by the side of the building and the brick ventilator, and about 3 feet above the ground. The center of a cross in the end of a copper bolt leaded in the brick. (136.444 meters or 447.650 feet.)

**XLII**.—Destroyed.

For additional bench marks in this vicinity, see page 106.

## LINE 26, VAN BUREN TO RUSSELLVILLE, ARK.

[First-order leveling]

This line follows the Missouri Pacific Railroad from Van Buren, through Ozark, Hartman, Montana, and Clarksville, to Russellville. The original field work was done, during the fall of 1888-89, by a party in charge of Isaac Winston, assistant. The line was rerun during the winter of 1932-33 by a party in charge of J. D. Thurmond, junior hydrographic and geodetic engineer. The elevations given below are based on the later leveling.

For additional bench marks in the vicinity of Van Buren, see page 143.

**VAN BUREN.**—At Van Buren, Crawford County, at the corner of North Third and Main Streets, at the courthouse lawn, 6 feet east of Main Street, and 8 feet west of the steps leading from the sidewalk up to the courthouse. A standard disk, stamped "VAN BUREN 1932" and set in the top of a concrete post. (125.352 meters or 411.259 feet.)

**XXXVIII.**—At Van Buren, Crawford County, at the corner of North Third and Main Streets, in the west wall of the brick courthouse, in the second course from the foundation, and in the second brick from the south corner of the building. The center of a cross in the end of a copper bolt leaded in the brick. (126.292 meters or 414.343 feet.)

**XXXVII.**—Destroyed.

**S 28.**—At Van Buren, Crawford County, in the south face of the Missouri Pacific Railroad station, 4 feet west of the waiting-room door, and 4 feet above the ground. A standard disk, stamped "S 28 1932" and set vertically. (125.577 meters or 411.997 feet.)

**418 (U.S.G.S.)**—At Van Buren, Crawford County, on the north side of the highway bridge over Arkansas River, and in the top of the abutment on the west side of the road. A United States Geological Survey standard gaging-station reference-mark disk. (127.350 meters or 417.814 feet.)

About 1 mile east of Van Buren, top of rail opposite Missouri Pacific Railroad milepost 497. (409.5 feet.)

About 2 miles east of Van Buren, top of rail opposite Missouri Pacific Railroad milepost 496. (416.9 feet.)

About 3 miles east of Van Buren, top of inside rail of curve opposite Missouri Pacific Railroad milepost 495. (436.0 feet.)

**L 28.**—About 3.9 miles east along the Missouri Pacific Railroad from Van Buren, Crawford County, at Box Springs siding, 6 poles west of milepost 494, about 15 rails west of a road crossing, and 40 feet south of the track. A standard disk, stamped "L 28 1932" and set in the top of a concrete post. (139.368 meters or 457.243 feet.)

**Box Springs siding**, top of rail opposite Missouri Pacific Railroad milepost 494. (464.2 feet.)

About 3½ miles west of Alma, top of rail opposite Missouri Pacific Railroad milepost 493. (490.8 feet.)

**Y 28.**—About 3 miles west along the Missouri Pacific Railroad from Alma, Crawford County, 17 poles west of milepost 492, and 48 feet south of the track. A standard disk, stamped "Y 28 1932" and set in the top of a concrete post. (148.168 meters or 486.115 feet.)

About 1½ miles west of Alma, top of rail opposite Missouri Pacific Railroad milepost 491. (442.6 feet.)

**Z 28.**—About 1.2 miles west along the Missouri Pacific Railroad from Alma, Crawford County, 20 poles west of milepost 490, at bridge 400, on the north side of the track, and in the top of the east end of the concrete abutment. A standard disk, stamped "Z 28 1932." (131.762 meters or 432.289 feet.)

About ½ mile west of the station at Alma, top of rail opposite Missouri Pacific Railroad milepost 490. (426.6 feet.)

**A 29.**—At Alma, Crawford County, about 100 feet north of the west end of the Missouri Pacific Railroad station, and about 50 feet east of a grade crossing. A standard disk, stamped "A 29 1932" and set in the top of a concrete post. (131.741 meters or 432.220 feet.)

**Alma**, top of rail opposite the Missouri Pacific Railroad station. (432.9 feet.)

**XXXVI.**—At **Alma**, Crawford County, directly south of the Missouri Pacific Railroad station, in the north wall of a brick store owned in 1893 by L. C. Locke, in the seventeenth course from the foundation, and in the fifth brick from the northeast corner. The center of a hole in the brick, formerly holding a copper bolt. (132.681 meters or 435.304 feet.)

About  $\frac{1}{2}$  mile east of **Alma**, top of rail opposite Missouri Pacific Railroad milepost 489. (425.6 feet.)

About  $1\frac{1}{2}$  miles east of **Alma**, top of rail opposite Missouri Pacific Railroad milepost 488. (426.3 feet.)

**B 29.**—About 2 miles east along the Missouri Pacific Railroad from **Alma**, Crawford County, about  $12\frac{1}{2}$  poles west of milepost 487, at a grade crossing, 35 feet south of the track, 30 feet north of the road paralleling the track, and 20 feet east of the crossroad. A standard disk, stamped "B 29 1932" and set in the top of a concrete post. (129.542 meters or 425.006 feet.)

About  $2\frac{1}{2}$  miles east of **Alma**, top of rail opposite Missouri Pacific Railroad milepost 487. (429.6 feet.)

About  $1\frac{1}{2}$  miles west of **Dyer**, top of rail opposite Missouri Pacific Railroad milepost 486. (441.6 feet.)

**C 29.**—About 0.7 mile west along the Missouri Pacific Railroad from **Dyer**, Crawford County, about 14 poles west of milepost 485, 25 feet south of the track, and 20 feet north of the road paralleling the track. A standard disk, stamped "C 29 1932" and set in the top of a concrete post. (129.476 meters or 424.789 feet.)

About  $\frac{1}{4}$  mile west of **Dyer**, top of rail opposite Missouri Pacific Railroad milepost 485. (420.8 feet.)

**46 (U.S.E.).**—At **Dyer**, Crawford County, on Main Street, across from the post office, about 125 feet north of the Missouri Pacific Railroad station, at the southeast corner of a brick store, and 1 foot west of the sidewalk. A Corps of Engineers, United States Army, standard disk, stamped "46" and set in the top of a circular concrete block. (130.255 meters or 427.345 feet.)

**Dyer**, top of rail opposite the Missouri Pacific Railroad station. (425.4 feet.)

**D 29.**—At **Dyer**, Crawford County, about 125 feet east of the Missouri Pacific Railroad station, about  $22\frac{1}{2}$  poles west of milepost 484, about 30 feet south of the track, and at the mail-sack holder. A standard disk, stamped "D 29 1932" and set in the top of a concrete post. (129.206 meters or 423.903 feet.)

**XXXV.**—Destroyed.

About  $\frac{3}{4}$  mile east of **Dyer**, top of rail opposite Missouri Pacific Railroad milepost 484. (410.6 feet.)

About  $1\frac{1}{4}$  miles east of **Dyer**, top of rail opposite Missouri Pacific Railroad milepost 483. (414.9 feet.)

**E 29.**—About 2 miles east along the Missouri Pacific Railroad from **Dyer**, Crawford County, about 23 poles west of milepost 482, at a grade crossing, 38 feet south of the track, and 25 feet north of the road paralleling the track. A standard disk, stamped "E 29 1932" and set in the top of a concrete post. (127.926 meters or 419.704 feet.)

About  $2\frac{3}{4}$  miles east of **Dyer**, top of rail opposite Missouri Pacific Railroad milepost 482. (406.9 feet.)

About  $1\frac{1}{4}$  miles west of **Mulberry**, top of rail opposite Missouri Pacific Railroad milepost 481. (413.1 feet.)

**F 29.**—About 0.8 mile west along the Missouri Pacific Railroad from **Mulberry**, Crawford County, about  $19\frac{3}{4}$  poles west of milepost 480, at a grade crossing, about 160 feet north of a white house on a hill, at the point where the track enters a cut, about 50 feet north of a road paralleling the track, and 30 feet south of the track. A standard disk, stamped "F 29 1932" and set in the top of a concrete post. (122.916 meters or 403.267 feet.)

**393 (U.S.E.).**—About 0.3 mile west along the Missouri Pacific Railroad from **Mulberry**, Crawford County, about 3 poles west of milepost 480, at bridge 374, on the north side of the track, and in the top of the west end of the bridge. A chiseled square, surrounded by the letters "U.S.B.M." (119.849 meters or 393.205 feet.)

**XXXIV.**—Destroyed.

**Mulberry**, top of rail opposite the Missouri Pacific Railroad station. (394.1 feet.)

**G 29.**—At **Mulberry**, Crawford County, about 110 yards east of the Missouri Pacific Railroad station, 50 feet west of a section tool house, 40 feet northeast

of a grade crossing, and 30 feet north of the track. A standard disk, stamped "G 29 1932" and set in the top of a concrete post. (120.211 meters or 394.392 feet.)

**Milepost 480 (M. P. R.R.).**—At Mulberry, Crawford County, about 220 yards west of the Missouri Pacific Railroad station, 4 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (120.309 meters or 394.714 feet.)

**Mulberry,** top of rail opposite Missouri Pacific Railroad milepost 480. (393.6 feet.)

About  $1\frac{3}{4}$  miles east of **Mulberry**, top of rail opposite Missouri Pacific Railroad milepost 478. (408.1 feet.)

**H 29.**—In Franklin County, about 2 miles east along the Missouri Pacific Railroad from **Mulberry**, Crawford County, about 26 poles west of milepost 477, at a grade crossing, 49 feet north of the track, and 20 feet east of the road. A standard disk, stamped "H 29 1932" and set in the top of a concrete post. (124.776 meters or 409.369 feet.)

About  $2\frac{3}{4}$  miles east of **Mulberry**, top of rail opposite Missouri Pacific Railroad milepost 477. (417.7 feet.)

About 1 mile west of **White Oak**, top of rail opposite Missouri Pacific Railroad milepost 476. (398.8 feet.)

**K. D. siding,** top of rail opposite the Missouri Pacific Railroad station signboard. (407.3 feet.)

**XXXIII.**—At **White Oak**, Franklin County, a short distance west of the Missouri Pacific Railroad station sign, about 20 yards north of the track, on the east end of Dr. W. W. Rambo's house, in the stone foundation of the stone chimney, and only a few inches above the ground. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." (120.943 meters or 396.794 feet.)

**White Oak**, top of rail opposite the Missouri Pacific Railroad station and milepost 475. (395.6 feet.)

**Milepost 475 (M. P. R.R.).**—At **White Oak**, Franklin County, about 15 rails east of the Missouri Pacific Railroad station, 4 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (120.823 meters or 396.400 feet.)

**J 29.**—At **White Oak**, Franklin County, about 25 rails east of the Missouri Pacific Railroad station, at the end of a cut, 5 feet south of the track, and in the top of a ledge of rock painted "U.S.B.M." A standard disk, stamped "J 29 1932." (119.212 meters or 391.115 feet.)

**384 (U.S.E.).**—About 0.4 mile east along the Missouri Pacific Railroad from **White Oak**, Franklin County, about 18 poles west of milepost 474, at bridge 360, on the south side of the track, and in the top of the parapet of the west abutment. A chiseled square, surrounded by the letters "U.S.B.M." (117.116 meters or 384.238 feet.)

**K 29.**—About 0.8 mile east along the Missouri Pacific Railroad from **White Oak**, Franklin County, about  $7\frac{1}{4}$  poles west of milepost 474, at the beginning of the rock ledges, 4 feet north of the track, and in a flat rock ledge in the ditch. A standard disk, stamped "K 29 1932." (117.278 meters or 384.770 feet.)

About 1 mile east of **White Oak**, top of rail opposite Missouri Pacific Railroad milepost 474. (386.1 feet.)

**L 29.**—About 2.1 miles east along the Missouri Pacific Railroad from **White Oak**, Franklin County, about  $32\frac{1}{4}$  poles west of milepost 472, about 6 rails west of bridge 356, 25 feet north of the track, and 20 feet east of a grade crossing. A standard disk, stamped "L 29 1932" and set in the top of a concrete post. (116.762 meters or 383.077 feet.)

About 3 miles east of **White Oak**, top of rail opposite Missouri Pacific Railroad milepost 472. (386.8 feet.)

About 1 mile west of **Poping**, top of rail opposite Missouri Pacific Railroad milepost 471. (386.0 feet.)

**Milepost 470 (M. P. R.R.).**—About 5.1 miles west along the Missouri Pacific Railroad from **Ozark**, Franklin County, about 0.2 mile west of the **Poping** station signboard, 4 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (115.636 meters or 379.382 feet.)

**Poping**, top of inside rail of curve opposite Missouri Pacific Railroad milepost 470. (379.5 feet.)

**Poping**, top of rail opposite the Missouri Pacific Railroad station signboard. (384.8 feet.)

**XXXII.**—Probably destroyed.

**M 29.**—About 4.7 miles west along the Missouri Pacific Railroad from **Ozark**, Franklin County, about 20 poles west of milepost 469, about 60 feet east of the east end of the siding at **Poping**, at a grade crossing, 30 feet north of the track, and 10 feet west of the road. A standard disk, stamped "M 29 1932" and set in the top of a concrete post. (117.468 meters or 385.393 feet.)

About ½ mile east of **Poping**, top of rail opposite Missouri Pacific Railroad milepost 469. (386.3 feet.)

**N 29.**—About 3.5 miles west along the Missouri Pacific Railroad from **Ozark**, Franklin County, about 13½ poles west of milepost 468, about 1.2 miles east of the siding at **Poping**, at a stone culvert, 25 feet north of the track, and in a flat rock outcrop about 6 feet high. A standard disk, stamped "N 29 1932." (117.572 meters or 385.734 feet.)

About 3 miles west of **Ozark**, top of rail opposite Missouri Pacific Railroad milepost 468. (386.5 feet.)

About 2 miles west of **Ozark**, top of inside rail of curve opposite Missouri Pacific Railroad milepost 467. (382.9 feet.)

**P 29.**—About 1.4 miles west along the Missouri Pacific Railroad from **Ozark**, Franklin County, about 10 poles west of milepost 466, 10 feet north of the track, and in a triangular-shaped rock outcrop. A standard disk, stamped "P 29 1932." (118.543 meters or 388.920 feet.)

About 1 mile west of **Ozark**, top of rail opposite Missouri Pacific Railroad milepost 466. (379.8 feet.)

**Ozark**, top of rail opposite Missouri Pacific Railroad milepost 465. (380.5 feet.)

**Milepost 465 (M. P. R.R.).**—At **Ozark**, Franklin County, about 275 yards west of the Missouri Pacific Railroad station, 4 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (116.209 meters or 381.558 feet.)

**Q 29.**—At **Ozark**, Franklin County, in the face of the wall of the Missouri Pacific Railroad station, on the track side, between the windows of the agent's office, and 3 feet above the ground. A standard disk, stamped "Q 29 1932" and set vertically. (117.415 meters or 385.219 feet.)

**51 (U.S.E.).**—At **Ozark**, Franklin County, at the Missouri Pacific Railroad station, 8 feet west of the waiting-room door, and in the corner formed by a set-back in the building. A Corps of Engineers, U.S. Army, standard disk, stamped "51" and set in the top of a circular concrete block. (116.166 meters or 381.121 feet.)

**R 29.**—At **Ozark**, Franklin County, and in the southeast corner of the court-house lawn. A standard disk, stamped "R 29 1932" and set in the top of a concrete post. (121.066 meters or 397.197 feet.)

**XXXI.**—Destroyed.

**S 29.**—About 1 mile east along the Missouri Pacific Railroad from the station at **Ozark**, Franklin County, at **Ozark Junction**, 20 feet southeast of a telephone booth, 30 feet south of the track, and in the top of a large rock. A standard disk, stamped "S 29 1932." (117.411 meters or 385.206 feet.)

**T 29.**—About 2.3 miles east along the Missouri Pacific Railroad from **Ozark**, Franklin County, about 20 poles west of milepost 460, about 4 rails north of bridge 333, and 50 feet west of the track. A standard disk, stamped "T 29 1932" and set in the top of a concrete post. (128.604 meters or 421.928 feet.)

**Milepost 460 (M. P. R.R.).**—About 2 miles west along the Missouri Pacific Railroad from **Altus**, Franklin County, 4 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (138.898 meters or 455.701 feet.)

About 2 miles west of **Altus**, top of rail opposite Missouri Pacific Railroad milepost 460. (454.7 feet.)

About 1 mile west of **Altus**, top of rail opposite Missouri Pacific Railroad milepost 459. (509.9 feet.)

**XXX.**—Destroyed.

**U 29.**—At **Altus**, Franklin County, about 120 feet south of the Missouri Pacific Railroad station, and in the city park. A standard disk, stamped "U 29 1932" and set in the top of a concrete post. (163.836 meters or 537.519 feet.)

**Altus**, top of rail opposite the Missouri Pacific Railroad station. (537.7 feet.)

About 1 mile east of **Altus**, top of inside rail of curve opposite Missouri Pacific Railroad milepost 457. (533.7 feet.)

About 2 miles east of Altus, top of rail opposite Missouri Pacific Railroad milepost 456. (522.9 feet.)

V 29.—About 2 miles east along the Missouri Pacific Railroad from Altus, Franklin County, 1 pole east of milepost 456, about 10 rails east of a grade crossing, 40 feet north of the track, and about 70 feet south of United States Highway 64. A standard disk, stamped "V 29 1932" and set in the top of a concrete post. (158.667 meters or 520.560 feet.)

Milepost 455 (M. P. R.R.).—About 2.3 miles west along the Missouri Pacific Railroad from Coal Hill, Johnson County, 4 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (156.521 meters or 513.519 feet.)

About 2.3 miles west of Coal Hill, top of inside rail of curve opposite Missouri Pacific Railroad milepost 455. (513.1 feet.)

W 29.—About 1.4 miles west along the Missouri Pacific Railroad from Coal Hill, Johnson County, about 2½ poles east of milepost 454, about 60 feet west of a grade crossing, and about 40 feet north of the track. A standard disk, stamped "W 29 1932" and set in the top of a concrete post. (152.370 meters or 499.901 feet.)

X 29.—At Coal Hill, Johnson County, about 120 feet east of the Missouri Pacific Railroad station, and 19 feet north of the track. A standard disk, stamped "X 29 1932" and set in the top of a concrete post. (143.431 meters or 470.573 feet.)

XXIX.—Destroyed.

Coal Hill, top of rail opposite the Missouri Pacific Railroad station. (470.8 feet.)

About ½ mile east of Coal Hill, top of rail opposite Missouri Pacific Railroad milepost 452. (466.9 feet.)

About 1½ miles east of Coal Hill, top of rail opposite Missouri Pacific Railroad milepost 451. (422.0 feet.)

Y 29.—About 1.2 miles west along the northern branch of the Missouri Pacific Railroad from Hartman, Johnson County, about 18 poles west of milepost 450, at a curve in the track, about 15 rails west of bridge 303, and 45 feet south of the track. A standard disk, stamped "Y 29 1932" and set in the top of a concrete post. (126.252 meters or 414.212 feet.)

Milepost 450 (M. P. R.R.).—About 0.7 mile west along the northern branch of the Missouri Pacific Railroad from Hartman, Johnson County, 4 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (120.501 meters or 395.344 feet.)

XXVIII.—Destroyed.

Hartman, top of rail opposite the Missouri Pacific Railroad station. (369.6 feet.)

55 (U.S.E.).—At Hartman, Johnson County, across from the Missouri Pacific Railroad station, at a grade crossing, 50 feet south of the track, 40 feet west of the road, and at the northeast corner of the brick office building occupied by the Alexander Gin Co. A Corps of Engineers, United States Army, standard disk, stamped "55" and set in the top of a circular concrete block. (110.224 meters or 361.627 feet.)

Z 29.—At Hartman, Johnson County, about 165 yards east of the Missouri Pacific Railroad station, 60 feet south of the track, and at the northeast corner of the 1-room stone jail. A standard disk, stamped "Z 29 1932" and set in the top of a concrete post. (111.510 meters or 365.846 feet.)

About 1¼ miles east of Hartman, top of rail opposite Missouri Pacific Railroad milepost 448. (361.2 feet.)

About 2¼ miles east of Hartman, top of rail opposite Missouri Pacific Railroad milepost 447. (368.5 feet.)

A 30.—About 2.8 miles east along the Missouri Pacific Railroad from Hartman, Johnson County, about 12¼ poles west of milepost 446, about 10 rails east of the no. 2 siding at Fernwood, 48 feet north of the track, and 10 feet south of the road paralleling the track. A standard disk, stamped "A 30 1932" and set in the top of a concrete post. (116.736 meters or 382.991 feet.)

Montana, top of rail opposite the Missouri Pacific Railroad station. (394.2 feet.)

Milepost 445 (M. P. R.R.).—At Montana, Johnson County, about 20 rails east of the Missouri Pacific Railroad station, 4 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (120.410 meters or 395.045 feet.)

**Montana**, top of rail opposite Missouri Pacific Railroad milepost 445. (393.6 feet.)

**B 30**.—About 1 mile east along the Missouri Pacific Railroad from Montana, Johnson County, about 5 poles west of milepost 444, about 5 rails west of a grade crossing, and 25 feet south of the track. A standard disk, stamped "B 30 1932" and set in the top of a concrete post. (117.842 meters or 386.620 feet.)

**Spadra**, top of rail opposite the Missouri Pacific Railroad station. (372.1 feet.)

**XXVII**.—Destroyed.

**C 30**.—About 0.3 mile east along the Missouri Pacific Railroad from the station at Spadra, Johnson County, at Spadra Junction, 8 feet south of the track, and 2 feet east of the northeast corner of the fence around the section foreman's house. A standard disk, stamped "C 30 1932" and set in the top of a concrete post. (109.117 meters or 357.995 feet.)

**K 30**.—About 1 mile south along the Missouri Pacific Railroad from Clarksville, Johnson County, at the "Clarksville 1 Mile" signboard, about 33 poles south of milepost 443, 18 feet east of the track, and 10 feet south of a private-road crossing. A standard disk, stamped "K 30 1932" and set in the top of a concrete post. (106.062 meters or 347.972 feet.)

**XXV (A.S.G.S.)**.—At Clarksville, Johnson County, at the northeast corner of the courthouse square, 52 feet northeast of the northeast corner of the courthouse, 84.6 feet west of the west curb on Craven Street, 50.4 feet south of the south curb on Main Street, and 4.3 feet north of the diagonal sidewalk across the lawn. The highest point on a 6- by 6-inch stone post with a lead-filled hole in the top and buried about  $\frac{1}{2}$  foot below the surface of the ground. (112.834 meters or 370.190 feet.)

**XXVI (A.S.G.S.)**.—At Clarksville, Johnson County, in the southeast corner of the courthouse square, 56 feet southeast of the southeast corner of the courthouse, 82.6 feet west of the west curb on Craven Street, and 58.6 feet north of the north curb on Sevier Street. The highest point on a 6- by 6-inch stone post with a lead-filled hole in the top. (112.454 meters or 368.943 feet.)

For additional bench marks in this vicinity, see pages 105 and 106.

**L 30**.—At Clarksville, Johnson County, at the courthouse lawn, 4 feet south of the north curb, and half way between the sidewalk to the entrance and the northwest corner of the square. A standard disk, stamped "L 30 1932" and set in the top of a concrete post. (112.915 meters or 370.455 feet.)

**XXIV**.—Destroyed.

**D 30**.—About 1.5 miles east along the Missouri Pacific Railroad from Clarksville, Johnson County, about  $\frac{1}{4}$  mile east of the crossing of United States Highway 64, about 8 poles west of milepost 442, and 32 feet north of the track. A standard disk, stamped "D 30 1932" and set in the top of a concrete post. (127.782 meters or 419.231 feet.)

**Milepost 440 (M. P. R.R.)**.—About 1.5 miles west along the Missouri Pacific Railroad from Lamar, Johnson County, 4 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (132.522 meters or 434.783 feet.)

About  $1\frac{1}{2}$  miles west of Lamar, top of rail opposite Missouri Pacific Railroad milepost 440. (434.5 feet.)

**E 30**.—About 1 mile west along the Missouri Pacific Railroad from Lamar, Johnson County, about 18 poles west of milepost 439, and 30 feet north of the track, at a fence line. A standard disk, stamped "E 30 1932" and set in the top of a concrete post. (129.907 meters or 426.203 feet.)

**F 30**.—At Lamar, Johnson County, at the west end of the Missouri Pacific Railroad station platform, about  $14\frac{1}{2}$  poles west of milepost 438, and 15 feet south of the track. A standard disk, stamped "F 30 1932" and set in the top of a concrete post. (123.929 meters or 406.590 feet.)

**Lamar**, top of rail opposite the Missouri Pacific Railroad station. (405.5 feet.)

**XXIII**.—Destroyed.

About  $\frac{1}{4}$  mile south of Lamar, top of rail opposite Missouri Pacific Railroad milepost 438. (383.7 feet.)

About  $1\frac{1}{4}$  miles south of Lamar, top of rail opposite Missouri Pacific Railroad milepost 437. (347.6 feet.)

**G 30.**—About 1.5 miles south along the Missouri Pacific Railroad from Lamar, Johnson County, about 30 poles north of milepost 436, about 400 feet south of a highway crossing, 45 feet north of the "1 Mile to Junction" signboard, and 45 feet west of the track, at the fence line. A standard disk, stamped "G 30 1932" and set in the top of a concrete post. (103.737 meters or 340.344 feet.)

About 2½ miles northwest of Knoxville, top of rail opposite Missouri Pacific Railroad milepost 436. (375.8 feet.)

**H 30.**—About 2.3 miles northwest along the Missouri Pacific Railroad from Knoxville, Johnson County, about 30 poles northwest of milepost 435, 60 feet east of the station at Knoxville Junction, 40 feet west of a highway crossing, 40 feet south of the track, and in the top of a rock ledge. A standard disk, stamped "H 30 1932." (117.602 meters or 385.833 feet.)

**59 (U.S.E.).**—About 2.3 miles northwest along the Missouri Pacific Railroad from Knoxville, Johnson County, about 30 poles northwest of milepost 435, 40 feet west of a highway crossing, and 25 feet south of the track. A Corps of Engineers, United States Army, standard disk, stamped "59" and set in the top of a concrete block. (116.803 meters or 383.211 feet.)

**Milepost 435 (M. P. R.R.).**—About 1½ miles northwest along the Missouri Pacific Railroad from Knoxville, Johnson County, 1 mile east of Knoxville Junction, about 300 feet west of a highway crossing, 4 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (125.729 meters or 412.496 feet.)

About 1½ miles northwest of Knoxville, top of rail opposite Missouri Pacific Railroad milepost 435. (411.8 feet.)

About ½ mile-northwest of Knoxville, top of rail opposite Missouri Pacific Railroad milepost 434. (399.7 feet.)

**J 30.**—At Knoxville, Johnson County, about 180 feet west of the Missouri Pacific Railroad station, about 22 poles northwest of milepost 433, and 30 feet north of the track. A standard disk, stamped "J 30 1932" and set in the top of a concrete post. (119.087 meters or 390.705 feet.)

Knoxville, top of rail opposite the Missouri Pacific Railroad station. (392.1 feet.)

**XXII.**—At Knoxville, Johnson County, about 40 yards northwest of the Missouri Pacific Railroad station, on the west side of C. L. Stille's residence, in one of the stones forming the foundation to the chimney, 22 inches above the ground, and 10 inches from the outside face of the chimney. The center of a chiseled cross, surrounded by the letters "U.S.B.M." (120.698 meters or 395.990 feet.)

About ½ mile southeast of Knoxville, top of rail opposite Missouri Pacific Railroad milepost 433. (378.2 feet.)

About 1½ miles southeast of Knoxville, top of rail opposite Missouri Pacific Railroad milepost 432. (353.7 feet.)

**M 30.**—About 1.5 miles west along the Missouri Pacific Railroad from Piney, Johnson County, about 16 poles west of milepost 431, 30 feet west of a cross-road, and 42 feet north of the track. A standard disk, stamped "M 30 1932" and set in the top of a concrete post. (104.670 meters or 343.405 feet.)

About 1 mile west of Piney, top of rail opposite Missouri Pacific Railroad milepost 431. (345.1 feet.)

Piney, top of rail opposite the Missouri Pacific Railroad station. (347.4 feet.)

**XXI.**—Destroyed.

**Milepost 430 (M. P. R.R.).**—At Piney, Johnson County, about 450 feet east of the Missouri Pacific Railroad station, 18 feet north of the main track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (106.986 meters or 351.003 feet.)

Piney, top of rail opposite Missouri Pacific Railroad milepost 430. (350.4 feet.)

**N 30.**—In Pope County, about 0.7 mile east along the Missouri Pacific Railroad from Piney, Johnson County, about 16½ poles west of milepost 429, and 25 feet north of the track. A standard disk, stamped "N 30 1932" and set in the top of a concrete post. (109.814 meters or 360.231 feet.)

About 1 mile east of Piney, top of rail opposite Missouri Pacific Railroad milepost 429. (360.6 feet.)

About 2 miles east of Piney, top of rail opposite Missouri Pacific Railroad milepost 428. (343.6 feet.)

**P 30.**—About 1.7 miles west along the Missouri Pacific Railroad from London, Pope County, about 5 poles west of milepost 427, 15 feet west of a cross-

road, and 25 feet south of the track. A standard disk, stamped "P 30 1932" and set in the top of a concrete post. (104.737 meters or 343.625 feet.)

About  $1\frac{1}{2}$  miles west of London, top of rail opposite Missouri Pacific Railroad milepost 427. (347.1 feet.)

**345 (U.S.E.).**—About 0.9 mile west along the Missouri Pacific Railroad from London, Pope County, about  $12\frac{1}{2}$  poles west of milepost 426, at bridge 214, 4 feet south of the track, and in the top of the concrete bridge seat of the east abutment. A chiseled square, surrounded by the letters "U.S.B.M." (105.017 meters or 344.543 feet.)

About  $\frac{1}{2}$  mile west of London, top of rail opposite Missouri Pacific Railroad milepost 426. (356.6 feet.)

**Q 30.**—At London, Pope County, 50 feet east of the Missouri Pacific Railroad station, about 16 poles west of milepost 425, 30 feet south of the track, and at the northwest corner of a section-house fence. A standard disk, stamped "Q 30 1932" and set in the top of a concrete post. (112.866 meters or 370.295 feet.)

**XX.**—At London, Pope County, in the northeast corner of the yard at Mrs. Sarah Battenfield's house. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a stone post. (116.065 meters or 380.790 feet.)

**62 (U.S.E.).**—At London, Pope County, about  $21\frac{1}{2}$  poles west of Missouri Pacific Railroad milepost 425, 110 feet north of the main track, and in the sidewalk at the west edge of the east cement-block building. A Corps of Engineers, U.S. Army, standard disk, stamped "62." (112.718 meters or 369.809 feet.)

**Milepost 425 (M. P. R.R.).**—About 0.5 mile east along the Missouri Pacific Railroad from London, Pope County, 10 feet north of the track, and in the top of the 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (116.550 meters or 382.381 feet.)

About  $\frac{1}{2}$  mile east of London, top of rail opposite Missouri Pacific Railroad milepost 425. (382.0 feet.)

About  $1\frac{1}{2}$  miles east of London, top of rail opposite Missouri Pacific Railroad milepost 424. (371.0 feet.)

**R 30.**—About 2.3 miles east along the Missouri Pacific Railroad from London, Pope County, about 6 poles west of milepost 423, 35 feet east of a highway crossing, and 35 feet north of the track, at a fence line. A standard disk, stamped "R 30 1932" and set in the top of a concrete post. (106.000 meters or 347.768 feet.)

About  $2\frac{1}{2}$  miles east of London, top of rail opposite Missouri Pacific Railroad milepost 423. (345.9 feet.)

**343 (U.S.E.).**—About 2.6 miles east along the Missouri Pacific Railroad from London, Pope County, about 32 poles west of milepost 422, 4 feet north of the track, and in the top of the west retaining wall of bridge 203. A chiseled square, surrounded by the letters "U.S.B.M." (104.461 meters or 342.719 feet.)

**XIX.**—Destroyed.

About  $3\frac{1}{2}$  miles east of London, top of rail opposite Missouri Pacific Railroad milepost 422. (338.8 feet.)

**335 (?).**—About 4.0 miles west along the Missouri Pacific Railroad from Russellville, Pope County, 29 poles west of milepost 421, at bridge 197 over Illinois Creek, 4 feet north of the track, and in the top of the retaining wall of the west abutment. A chiseled cross, surrounded by the letters "U.S.B.M." (102.108 meters or 334.999 feet.)

**NOTE.**—Earlier in the year a mark in the same location and having the same elevation was leveled upon, but it was described as a chiseled square. It is uncertain whether there are two bench marks on this abutment or whether an error has been made in one of the descriptions.

**XVIII.**—Destroyed.

About  $3\frac{1}{4}$  miles west of Russellville, top of rail opposite Missouri Pacific Railroad milepost 421. (340.3 feet.)

**S 30.**—About 3.1 miles west along the Missouri Pacific Railroad from Russellville, Pope County, about 31 poles west of milepost 420, 75 feet west of a switch track to a coal mine, 45 feet west of a crossroad, and 30 feet north of the track. A standard disk, stamped "S 30 1932" and set in the top of a concrete post. (104.552 meters or 343.018 feet.)

**XVII.**—About  $2\frac{1}{2}$  miles northwest along the Missouri Pacific Railroad from Russellville, Pope County, about  $17\frac{1}{2}$  poles northwest of milepost 420, about

400 feet west of a crossroad, about 250 feet north of the track, about 200 feet west of a house, and under a thorn tree in a farmyard. The bottom of a chiseled square, surrounded by the letters "U.S.B.M." cut in the top of a stone post. (108.751 meters or 356.794 feet.)

**Milepost 420 (M. P. R.R.).**—About 2.3 miles west along the Missouri Pacific Railroad from Russellville, Pope County, 4 feet north of the track, and in the top of a 6- by 6-inch concrete milepost projecting 3 feet above ground. A copper bolt. (106.894 meters or 350.701 feet.)

**64 (U.S.E.).**—About 1.6 miles west along the Missouri Pacific Railroad from Russellville, Pope County, about 12½ poles west of milepost 419, 35 feet east of the grade-crossing road, 48 feet south of the track, and at a pole painted "343/2" A Corps of Engineers, United States Army, standard disk, stamped "64" and set in the top of a concrete post. (104.497 meters or 342.837 feet.)

**T 30.**—About 1.1 miles west along the Missouri Pacific Railroad from Russellville, Pope County, about 30¼ poles west of milepost 418, at a grade crossing, 60 feet west of the road, and 40 feet north of the track. A standard disk, stamped "T 30 1932" and set in the top of a concrete post. (106.690 meters or 350.032 feet.)

**Russellville,** top of rail opposite the Missouri Pacific Railroad station. (351.8 feet.)

**XVI.**—Destroyed.

For additional bench marks in this vicinity, see pages 8 and 127.

#### LINE 27, HAZEN TO FORREST CITY, ARK.

[First-order leveling]

This line follows the Chicago, Rock Island & Pacific Railway from Hazen through Wheatley to Forrest City. The original field work was done, during the fall of 1916, by a party in charge of E. H. Pagenhart, assistant. The line was rerun, during the winter of 1932-33, by a party in charge of J. D. Thurmond, junior hydrographic and geodetic engineer. The elevations given below are based on the later leveling.

For additional bench marks in the vicinity of Hazen, see pages 19 and 83.

**Hazen.**—About 1 mile west along the Chicago, Rock Island & Pacific Railway from Hazen, Prairie County, about 70 feet west of the twelfth pole west of milepost 94, and about 16.6 feet north of the north rail of the main track. A standard triangulation-station disk, stamped "HAZEN 1916 B.M. 1920" and set in the top of a concrete post. (70.686 meters or 231.909 feet.)

**R.M. Hazen.**—About 1 mile west along the Chicago, Rock Island & Pacific Railway from Hazen, Prairie County, about 69 feet west of the twelfth pole west of milepost 94, and about 31 feet north of Hazen, described above. A standard reference-mark disk, stamped "HAZEN 1916 B.M. 1920" and set in the top of a concrete post. (70.398 meters or 230.964 feet.)

**S.**—At Hazen, Prairie County, on the Chicago, Rock Island & Pacific Railway, in the railroad park, about 325 feet west of a semaphore, 108 feet west of the west sidewalk on Main Street, and 83 feet south of the main track. A standard disk, stamped "S" and set in the top of a concrete post. (70.588 meters or 231.587 feet.)

**T.**—About 1½ miles east along the Chicago, Rock Island & Pacific Railway from Hazen, Prairie County, at pole 91+31, and 4 inches from the southwest corner of a concrete culvert. An outlined square. (68.934 meters or 226.161 feet.)

**Weckerle.**—About 2½ miles west along the Chicago, Rock Island & Pacific Railway from Mesa, Prairie County, about 150 feet west of a public road which crosses the track at a curve, 110 feet from the southwest corner of a concrete abutment of a cattle guard, and 24 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "WECKERLE 1916 B.M. 1920" and set in the top of a concrete post. (70.050 meters or 229.822 feet.)

**R.M. Weckerle.**—Destroyed prior to 1933.

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 90. (230.0 feet.)

**Mesa**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (223.9 feet.)

**Mesa**.—About  $\frac{1}{2}$  mile east along the Chicago, Rock Island & Pacific Railway from the station at **Mesa**, Prairie County, about 800 feet east of the beginning of the first curve east, 475 feet east of a switch stand at the extreme east end of the railroad yard, and 62 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "MESA 1916 B.M. 1920" and set in the top of a concrete post. (67.990 meters or 223.064 feet.)

**R.M. Mesa**.—Destroyed prior to 1933.

**Bluff**.—About 0.6 mile west along the Chicago, Rock Island & Pacific Railway from the station at **De Valls Bluff**, Prairie County, about 260 feet east of a culvert under a fill, on the top of a hill, about 50 feet south of the south rail of the main track, 15 feet south of the edge of a cut, and about 11 feet higher than the rail. A standard triangulation-station disk, stamped "BLUFF 1916 B.M. 1920" and set in the top of a concrete post. (64.698 meters or 212.263 feet.)

**R.M. Bluff**.—Destroyed prior to 1933.

**De Vall**.—Destroyed prior to 1933.

**De Valls Bluff**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (191.9 feet.)

**R.M. De Vall**.—Destroyed prior to 1933.

**White**.—About  $\frac{3}{4}$  mile east along the Chicago, Rock Island & Pacific Railway from the station at **De Valls Bluff**, Prairie County, on the eastern slope of the last small hill north of the track before the White River flats, 55 feet north of the north rail of the main track, 4 feet north of the right-of-way fence, and about 4 feet higher than the rail. A standard triangulation-station disk, stamped "WHITE 1916 B.M. 1920" and set in the top of a concrete post. (58.251 meters or 191.112 feet.)

**R.M. White**.—Destroyed prior to 1933.

**182.6 (C. R. I. & P. Ry.)**.—Destroyed prior to 1933.

**Tank**.—About  $1\frac{1}{2}$  miles east along the Chicago, Rock Island & Pacific Railway from **De Valls Bluff**, Prairie County, about 15 rails east of the bridge over White River, about 33 poles west of milepost 84, and 118.4 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "TANK 1916 B.M. 1920" and set in the top of a concrete post. (55.983 meters or 183.671 feet.)

**Odum**.—About 2 miles west along the Chicago, Rock Island & Pacific Railway from **Biscoe**, Prairie County, near the west end of the first curve west of the station, about 1 mile east of the White River tank, 525 feet east of bridge 842, 247 feet south of a tenant house belonging to Dr. Odum, 26 feet north of the north rail of the main track, and about 20 feet south of the fence. A standard triangulation-station disk, stamped "ODUM 1916 B.M. 1920" and set in the top of a concrete post. (56.273 meters or 184.622 feet.)

**23 F (?)**.—About 1 mile west along the Chicago, Rock Island & Pacific Railway from **Biscoe**, Prairie County, about 22 poles west of milepost 83, on the northeast corner of a 6-inch offset on a cable box, and 4 feet north of the track. A white paint mark. (58.412 meters or 191.640 feet.)

**Biscoe**.—Destroyed prior to 1933.

**Biscoe**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (189.5 feet.)

**D 31**.—At **Biscoe**, Prairie County, 10 rails west of the Chicago, Rock Island & Pacific Railway station, in the east end of a concrete culvert, and 5 feet north of the track. A standard disk, stamped "D 31 1933." (57.315 meters or 188.041 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 81. (193.5 feet.)

**Brasfield**.—About  $\frac{1}{4}$  mile west along the Chicago, Rock Island & Pacific Railway from the station at **Brasfield**, Prairie County, about 427 feet west of the east point of tangency of the first curve, about 75 feet west of the seventh pole north of the track from the station, 23 feet south of the north fence line of the right-of-way, and 21.6 feet north of the north rail of the main track. A standard triangulation-station disk, stamped "BRASFIELD B.M. 1916 1920" and set in the top of a concrete post. (57.946 meters or 190.111 feet.)

**Brasfield**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (190.5 feet.)

**21 F (?)**.—At **Brasfield**, Prairie County, about 450 feet east of the Chicago, Rock Island & Pacific Railway station, about 15 poles west of milepost 80, on

the top of the east pier of bridge 80.5 over Cache River, and 8 feet north of the track. A chiseled cross within a chiseled square. (55.905 meters or 183.415 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 80. (183.3 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 79. (183.8 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 78. (183.8 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 76. (182.8 feet.)

U.—Destroyed prior to 1933.

A 31.—About  $6\frac{1}{2}$  miles west along the Chicago, Rock Island & Pacific Railway from Brinkley, Monroe County, at Dagmar, about  $30\frac{1}{2}$  poles west of milepost 75, about 150 feet east of a highway crossing, 75 feet north of the track, and at a gate to a 2-story frame building behind the railroad station. A standard disk, stamped "A 31 1933" and set in the top of a concrete post. (53.366 meters or 175.085 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 75. (184.0 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 74. (183.4 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 73. (184.2 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 72. (184.3 feet.)

Eden.—About 2 miles west along the Chicago, Rock Island & Pacific Railway from Brinkley, Monroe County, 338 feet west of bridge 719, about 790 feet east of the road crossing at Alfred Hunt's residence, and 14 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "EDEN 1916 1920" and set in the top of a concrete post.

NOTE.—In 1933 it was reported that this bench mark was probably covered by a hand-set-off.

R.M. Eden.—About 2 miles west along the Chicago, Rock Island & Pacific Railway from Brinkley, Monroe County, about  $21\frac{1}{2}$  poles west of milepost 71, and about 63 feet northwest of Eden, described above. A standard reference-mark disk, stamped "EDEN B.M. 1916 1920" and set in the top of a concrete post. (57.042 meters or 187.145 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 71. (190.4 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 70. (195.9 feet.)

Brinkley.—At Brinkley, Monroe County, about 650 feet west of the Chicago, Rock Island & Pacific Railway station, at the corner of Main and Cypress Streets, 13 feet east of the east edge of the east sidewalk on Main Street, and 17 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "BRINKLEY B.M. 1916 1920" and set in the top of a concrete post. (63.257 meters or 207.536 feet.)

R.M. Brinkley.—Destroyed prior to 1933.

Z 30.—At Brinkley, Monroe County, at the northwest corner of a park, in the post office, 25 feet north of the Main Street entrance, 12 feet northeast of the northeast corner of the building, 6 feet west of a sidewalk, and 2 feet south of a driveway. A standard disk, stamped "Z 30 1933" and set in the top of a concrete post. (62.894 meters or 206.345 feet.)

209 (?).—At Brinkley, Monroe County, in the northeast corner of the concrete platform at Union Station, 6 feet southwest of the intersection of the main tracks of the Chicago, Rock Island & Pacific Railway and the St. Louis Southwestern Railway, and 2 feet south of the main track of the former. A chiseled cross. (63.657 meters or 208.848 feet.)

Y 30.—At Brinkley, Monroe County, in the front wall of Union Station, between the sills of the two front windows of the White waiting room, 10 feet northwest of the waiting-room door, and 4 feet above the platform. A standard disk, stamped "Y 30 1933 212.942" and set vertically. (64.905 meters or 212.942 feet.)

207.4 (C. R. I. & P. Ry.).—Destroyed prior to 1933.

**V.**—At Brinkley, Monroe County, about 165 feet southeast of the Chicago, Rock Island & Pacific Railway station, about 100 feet south of the track, 138 feet east of the main-line track of the St. Louis Southwestern Railway, and 23 feet southeast of the center line of a wye track, in the northeast corner of a lot belonging to James Gunn. A stone post, marked "V."

**NOTE.**—In 1933, this bench mark was reported to be very loose in the ground and was therefore not included in the leveling.

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 68. (190.7 feet.)

**Junction.**—About 2 miles east along the Chicago, Rock Island & Pacific Railway from Brinkley, Monroe County, 17 feet southwest of the second pole west of milepost 67, about 600 feet east of a private-road crossing at Carol Bledsoe's property, and about 27 feet north of the north rail of the track. A standard triangulation-station disk, stamped "JUNCTION B.M. 1916 1920" and set in the top of a concrete post. (58.358 meters or 191.463 feet.)

**R.M. Junction.**—Destroyed prior to 1933.

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 67. (193.5 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 66. (194.8 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 65. (198.5 feet.)

**204.6 (C. R. I. & P. Ry.)**.—At Wheatley, St. Francis County, on the southeast corner of the concrete base of the Chicago, Rock Island & Pacific Railway semaphore. An outlined square. (62.386 meters or 204.678 feet.)

For additional bench marks in this vicinity, see pages 83 and 84.

**W.**—At Wheatley, St. Francis County, about 360 feet east of Union Station, about 100 feet north of the Chicago, Rock Island & Pacific Railway track, at the southeast corner of a lot belonging to the Wheatley Rice Milling Co., and 1½ feet from the property line. A stone post, marked "W." (62.888 meters or 206.325 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 64. (210.1 feet.)

**Wheatley.**—About 1½ miles east along the Chicago, Rock Island & Pacific Railway from Wheatley, St. Francis County, about 130 feet east of a private-road crossing at William Fisher's property, 82 feet southwest of milepost 63, and 19 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "WHEATLEY B.M. 1916 1920" and set in the top of a concrete post. (63.725 meters or 209.071 feet.)

**NOTE.**—In 1933, it was reported that this bench mark was loose in the ground and had probably been disturbed.

**R.M. Wheatley.**—About 1½ miles east along the Chicago, Rock Island & Pacific Railway from Wheatley, St. Francis County, 180 feet southwest of milepost 63, 35 feet east of the center of a grade crossing, and 87 feet south of the center line of the track. A standard reference-mark disk, stamped "WHEATLEY B.M. 1916 1920" and set in the top of a concrete post. (63.519 meters or 208.395 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 63. (210.4 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 62. (207.5 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 61. (205.9 feet.)

**Blossom.**—At Blossom, St. Francis County, near the Chicago, Rock Island & Pacific Railway station, about 17½ poles west of milepost 60, 215 feet west of the switch stand at the east end of the side track, about 130 feet east of a public-road crossing, 38 feet west of the signboard, and 27 feet north of the north rail of the main track. A standard triangulation-station disk, stamped "BLOSSOM B.M. 1916 1920" and set in the top of a concrete post. (63.270 meters or 207.578 feet.)

**R.M. Blossom.**—Destroyed prior to 1933.

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 60. (209.1 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 59. (207.3 feet.)

**Goodwin**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (207.1 feet.)

**X.**—At **Goodwin**, St. Francis County, 39 feet east of the semaphore, and 157 feet north of the main track of the Chicago, Rock Island & Pacific Railway, in the southeast corner of a house lot belonging to J. R. Thompson. A stone post marked "X." (62.898 meters or 206.358 feet.)

**X 30.**—About 1.6 miles east along the Chicago, Rock Island & Pacific Railway from **Goodwin**, St. Francis County, about 16 poles west of milepost 57, 30 feet east of a grade crossing, about 100 feet south of the track, and 30 feet north of the center line of United States Highway 70. A standard disk, stamped "X 30 1933" and set in the top of a concrete post (63.762 meters or 209.192 feet.)

**Goodwin.**—About 1.6 miles east along the Chicago, Rock Island & Pacific Railway from **Goodwin**, St. Francis County, 89 feet southeast of the fifteenth pole west of milepost 57, 230 feet east of a road crossing, and 23 feet south of the south rail of the main track. The top of the remaining portion of the shank of a standard triangulation-station disk, set in the top of a concrete post. (63.692 meters or 208.963 feet.)

**R.M. Goodwin.**—Destroyed prior to 1933.

**Moon.**—About 4 miles east along the Chicago, Rock Island & Pacific Railway from **Goodwin**, St. Francis County, 72 feet east of milepost 55, 300 feet west of a private road leading to J. H. Steven's residence, 30.9 feet north of the north rail of the main track, and 10 feet south of the fence line. A standard triangulation-station disk, stamped "MOON 1916 B.M. 1920" and set in the top of a concrete post. (64.305 meters or 210.974 feet.)

**R.M. Moon.**—Destroyed prior to 1933.

**Y (?)**.—About 4 miles west along the Chicago, Rock Island & Pacific Railway from **Palestine**, St. Francis County, about 31½ poles west of milepost 54, 4 feet west of a grade crossing, and 8 feet north of the track. The top of a cap, stamped "Y" and fastened on the top of an iron pipe. (64.159 meters or 210.495 feet.)

**Palestine.**—Destroyed prior to 1933.

**R.M. Palestine.**—Destroyed prior to 1933.

**W 30.**—At **Palestine**, St. Francis County, about 0.5 mile west of the Chicago, Rock Island & Pacific Railway station, about 12 poles west of milepost 52, 50 feet south of the track, and 10 feet north of an old highway. A standard disk, stamped "W 30 1933" and set in the top of a concrete post. (64.542 meters or 211.752 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 50. (216.9 feet.)

**Becks.**—About ¾ mile west along the Chicago, Rock Island & Pacific Railway from the station at **Becks**, St. Francis County, about 21 poles west of milepost 49, about 400 feet west of a road crossing, 28 feet north of the north rail of the main track, and north of a deep ditch. A standard triangulation-station disk, stamped "BECKS 1916 B.M. 1920" and set in the top of a concrete post. (67.031 meters or 219.918 feet.)

**R.M. Becks.**—Destroyed prior to 1933.

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 49. (218.6 feet.)

**Becks**, top of rail opposite the Chicago, Rock Island & Pacific Railway station. (218.6 feet.)

Top of rail opposite Chicago, Rock Island & Pacific Railway milepost 48. (218.5 feet.)

**Y.**—About 3 miles west along the Chicago, Rock Island & Pacific Railway from **Forrest City**, St. Francis County, near the station at **Redfern**, about 32 poles west of milepost 47, east of a public-road crossing, 43 feet south of the track, and at the south right-of-way fence line. The top of the remaining portion of the shank of a standard disk, set in the top of a stone post. (65.772 meters or 215.787 feet.)

**V 30.**—About 3 miles west along the Chicago, Rock Island & Pacific Railway from **Forrest City**, St. Francis County, at **Redfern**, about 28 poles west of milepost 47, 30 feet west of a grade crossing, and 45 feet south of the track. A standard disk, stamped "V 30 1933" and set in the top of a concrete post. (65.798 meters or 215.872 feet.)

**U 30.**—About 0.8 mile west along the Chicago, Rock Island & Pacific Railway from **Forrest City**, St. Francis County, in bridge 456, which is an underpass for U.S. Highway 70, north of the track, and 12 feet from the east end of the bridge. A standard disk, stamped "U 30 1933." (74.518 meters or 244.481 feet.)

**"5"** (C. R. I. & P. Ry.).—At **Forrest City**, St. Francis County, at the Chicago, Rock Island & Pacific Railway station, on the sill of the White waiting-room door, on a casting, 18 inches east of a point 4 inches south of the edge of the casting. The "5" in 1885. (84.961 meters or 278.743 feet.)

For additional bench marks in this vicinity, see pages 19, 87, and 88.

**Forrest.**—At **Forrest City**, St. Francis County, about 0.2 mile north of the Chicago, Rock Island & Pacific Railway right-of-way, on **Crawley's Ridge**, in a pasture, about 200 feet southeast of the residence of Dr. H. P. Dooley, and 69 feet south of the north-fence line of the pasture. A standard triangulation-station disk, stamped "FORREST 1916 B.M. 1920" and set in the top of a concrete post. (113.622 meters or 372.775 feet.)

**NOTE.**—This bench mark was not included in the leveling of 1933. The elevation given is based on leveling in 1916.

**R.M. Forrest.**—At **Forrest City**, St. Francis County, about 66.2 feet northwest of **Forrest**, described above. A standard reference-mark disk, stamped "FORREST 1916 1920" and set in the top of a concrete post. (114.409 meters or 375.357 feet.)

**NOTE.**—This bench mark was searched for but not recovered in 1933. The elevation given is based on leveling in 1916.

**Little.**—About 1 mile east along the Chicago, Rock Island & Pacific Railway from **Forrest City**, St. Francis County, about 650 feet east of the east switch stand, 4 feet west of the twenty-fifth pole west of milepost 43, at a curve, and 29 feet south of the south rail of the main track. A standard triangulation-station disk, stamped "LITTLE 1916 B.M. 1920" and set in the top of a concrete post. (92.079 meters or 302.096 feet.)

**R.M. Little.**—Destroyed prior to 1933.



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