U. S. DEPARTMENT OF COMMERCE

Luther H. Hodges, Secretary

U. S.

COAST AND GEODETIC SURVEY

Rear Admiral H. Arnold Karo, Director

SELECTED CIVIL WAR MAPS

Reproduced from originals made by the U. S. Coast Survey, 1861-65

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1961

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

SELECTED CIVIL WAR MAPS

REPRODUCED FROM ORIGINALS MADE BY THE
U.S. COAST SURVEY, 1861-65

PLATE 1, MAP INDEX AND HISTORICAL SKETCHES

①=LOCATION OF FOLIO MAPS

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ABOUT THIS FOLIO OF MAPS

At the outbreak of the Civil War, the Coast and Geodetic Survey (then known as the Coast Survey) was the only technical agency outside of the Armed Forces in the Government with an organized and effective field mapping force and a map-making plant. Although many of this Bureau's skilled personnel were called into the armed services on both sides, many remained directly in the service of the Coast Survey, which, under the Superintendency of Professor A. D. Bache, became virtually a technical arm of the Union forces.

Throughout the war, the Coast Survey plant in Washington printed most of the maps used by the Union forces. Many original field surveys and manuscript maps were prepared in the field by Coast Survey Assistants who were attached as civilian technicians to various militant arms of the Union forces. The maps contained in this folio are black and white reproductions of a few such maps which have been in the Coast and Geodetic Survey files now for a century and have seldom been in public view. Some of these have been reduced in scale to conform to folio specifications.

This folio was produced by the Coast and Geodetic Survey Civil War Centennial Committee, listed below. Without the continuous efforts of the Chairman, Capt. Ricketts, and the effective liaison with the National Civil War Centennial Committee by the Executive Secretary, Mr. Stanley, this work would not have been possible. Nor would the work have been produced if it had not been for the research work on the part of members Wraight, Bear, Lynn, and Cook; and the text preparation by Wraight, Bear and Lynn. Others too numerous to mention here also helped in the preparation of this folio. Their contributions, however small, are nontheless appreciated and are herewith acknowledged.

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COAST AND GEODETIC SURVEY CIVIL WAR CENTENNIAL COMMITTEE

Capt. Max G. Ricketts, Chairman
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PLATE 1: HISTORICAL SKETCH OF THE CIVIL WAR (and index)

This map was prepared in the Washington offices of the Coast Survey, presumably sometime late in 1864 or early 1865. It shows the limits of Federal states in 1861, as well as the limits of territory controlled by Union forces in July 1863, and the limits of territory gained by those forces between that time and June 1864. In addition, the 1860 population figures for both Union and Confederate states are given. No record could be found that wide public distribution was made of this map, but it was employed in military circles.

In this folio it is used as an index map. The site location of each of the other maps in this folio has been indicated by the superimposition of its number on this historical sketch. Explanations of each of the maps are on the reverse side of this map as well as on the individual maps. Hence this sketch serves a dual purpose in this folio.

PLATE 2: MANASSAS JUNCTION AND VICINITY, APRIL 1862

Manassas Junction gained prominence at the outset of the war when Union forces, hoping to move on to Richmond, engaged the Confederate Army at Bull Run near Washington on July 21, 1861. This important switching point on the Orange and Alexandria Railroad opened the way along the Manassas Gap Railroad into northwestern Virginia and the Shenandoah Valley. The Federals withdrew following the battle and the site was occupied intermittently by fragments of the Confederate Army.

Prior to the Second Battle at Bull Run in August 1862, Mr. H. L. Whiting, an Assistant in the U. S. Coast Survey, and his party of surveyors moved to the Manassas Rail Junction and compiled the detail planetable map of the area.

PLATE 3: CHARLESTON HARBOR, 1865

The opening artillery engagement of the Civil War took place in Charleston Harbor when on April 12, 1861 Confederate shore batteries, under the direction of General Beauregard, bombarded Fort Sumter.

Throughout the war, Charleston remained in Confederate hands with the harbor approaches heavily mined or otherwise obstructed. Shore batteries and fortifications flanking the harbor approaches deterred Union vessels attempting to enter this strategic port.

The Confederates evacuated Charleston on February 17, 1865 in the face of Sherman's advance on the city. In 1865, Coast Survey Assistant C. O. Boutelle compiled this Charleston Harbor plan, showing in detail obstructions which were later to be removed to facilitate the resumption of commerce.

PLATE 4: SOUTH CAROLINA-GEORGIA COAST AND SKETCHES OF FORTS 1861-1862

In November 1861 a powerful Union fleet under the command of Flag Officer Samuel F. DuPont captured Forts Beauregard and Walker, and took possession of Port Royal, South Carolina, one of the best strategic harbors of that period. Here the Union established its principal base for the blockade of the southeastern states, which blockade eventually strangled the Confederacy's waterborne supply line.

Coast Survey Assistant C. O. Boutelle prepared a map of this base area, as well as of adjacent areas of the South Carolina-Georgia coast, for the Union staff, showing strategic points and water passages. Under Assistant Boutelle's direction, plans of Forts Beauregard, Walker, and others were prepared.

PLATE 5: MILITARY MAP OF SOUTHEAST VIRGINIA 1864

Although Fort Monroe on Hampton Roads was held by the Union throughout the war, the southern neck (better known as the Peninsula) of Virginia, commanding the James River as well as Richmond, was defended valiantly by the Confederacy. In 1862, Union Forces under General George B. McClellan tried to advance on Richmond via this route, and the famous "Peninsula Campaign" ensued. Here, General Robert E. Lee succeeded the wounded General Joseph E. Johnston as Commander of the Confederate Forces and distinguished himself brilliantly.

In 1864, by request of the Union forces and by order of Superintendent Bache, Assistant Adolph Lindenkohl, one of the Coast Survey's best artists and cartographers, compiled in a short time the military map of southeastern Virginia. In 1864, the vicinity of Petersburg and Richmond was the scene of bitter fighting in the bloody "Siege".

PLATE 6: CITY OF RICHMOND, 1864

Even though the capital of the Confederacy was not evacuated until 1865, Richmond was the target of some extremely violent fighting in 1864. Notable among this was General Butler's advance, which was halted far south of the city.

Late in 1864, with the city still in Confederate hands, the Union armies wanted a good map of this city that they hoped eventually to take. Superintendent Bache was away from the Washington office of the Coast Survey at the time, so the request was received by the second in charge, Assistant Julius Hilgard.

Under Hilgard's direction, Assistant Adolph Lindenkohl, assisted by others, compiled this map from the sources named thereon and whatever intelligence information they had at the time. This map was in use by the Union army when Richmond was evacuated the next year.

PLATE 7: RECONNAISSANCE OF MISSISSIPPI RIVER 1862

Before Admiral Farragut could penetrate the lower Mississippi and take New Orleans, Forts Jackson and St. Phillips, guarding the river well below the city, had to be taken. These were formidable fortifications, well hidden, so exact directions and distances in the area would have to be known to render mortar fire effective. The Coast Survey vessel, SACHEM, under the command of Assistant F. H. Gerdes, made this survey under difficult conditions early in 1862. Owing to high water, the masts of the SACHEM, which was basically a sailing vessel, had to be camouflaged with branches to avoid being detected above the trees by the enemy at the forts.

On April 18, 1862, Union mortar vessels began to fire on the two forts. The accuracy was deadly, owing to the control established by the SACHEM. Even with this, it took six days of bombardment before Admiral Farragut could run his fleet past the forts and take New Orleans on April 25, 1862. Without the control laid by the SACHEM, the crippling of these forts might have been an almost impossible task.

PLATE 8: FORT JACKSON, 1862

After Admiral Farragut's fleet moved past the crippled Forts Jackson and St. Phillips, the Union mortar flotilla, under Rear Admiral D. D. Porter of the Union Navy, took possession of the forts, accompanied by Coast Survey Assistant F. H. Gerdes with the Coast Survey vessel SACHEM.

While at Fort Jackson, Assistant Gerdes and his crew made an exact survey of the fort, showing all the damage from the six-day mortar bombardment between April 18 and April 24, 1862. The map demonstrated the effectiveness of bombardment that is properly controlled by a previous reconnaissance survey.

So much is usually pointed out about ineptness and blunders during the Civil War. Here is a case where the campaign proceeded correctly, owing largely to a good survey.

PLATE 9: FORT HINDMAN, ARKANSAS, 1863

Early in 1863, the Confederate stronghold on the lower Arkansas River, Fort Hindman (Arkansas Post), was taken by troops under the command of General J. A. McClernand, and gunboats under Rear Admiral David D. Porter. Little Rock, farther up the river, was taken by Union General Frederick Steele later the same year.

On January 12, 1863, the day after the capture of the Fort, Admiral Porter ordered Coast Survey Sub-Assistant Clarence Fendall, attached to the Union's Mississippi Squadron, to make a map and sketch of Fort Hindman, showing the positions of the gunboats on the previous day. By using a planetable, Mr. Fendall made this map on January 12, together with the sketch on the upper left showing the gunboats in attack. Mr. Alexander Strausz, also of the Coast Survey, helped in this work and in work on the Vicksburg campaigns.

PLATE 10: APPROACHES TO VICKSBURG, 1863

On July 4, 1863, Confederate forces surrended at Vicksburg, Mississippi, after a six-week seige by Union General Ulysses S. Grant and Union Rear Admiral David D. Porter. Many historians believe that the fall of Vicksburg broke the back of the Confederacy in the Mississippi valley and ultimately led to the total breaking of the Confederacy.

Prior to and after the passing of the Vicksburg batteries by Admiral Porter on the night of April 16, 1863, Sub-Assistant Clarence Pendall of the Coast Survey, made the accompanying map of the approaches to Vicksburg by planetable surveying. Assistant Pendall's report states that they were fired upon often by the enemy.

The map was prepared at the request of Admiral Porter under the general direction of Assistant F. H. Gerdes of the Coast Survey. The positions of the fleet during the main assault were put on several months later under Admiral Porter's direction.

PLATE 11: APPROACH TO GRAND GULF, 1864

To make an effective assault on Vicksburg, it was necessary that General Grant's troops be ferried from the west to the east shore of the Mississippi River south of Vicksburg. For this reason, after running the Confederate batteries at Vicksburg, Union Rear Admiral David D. Porter, shelled the Confederate fortification at Grand Gulf, Mississippi, on April 29, 1863. On May 2, his flotilla transported Grant's troops just south of Grand Gulf.

Even after the fall of Vicksburg, Confederate guerrilla parties continued raiding in the area. Accordingly, Coast Survey Assistant F. H. Gerdes was assigned, by Rear Admiral David D. Porter, the Union armed steamer CURLEW and her crew, to map the vicinity in detail. This sheet, completed early in 1864, not only shows the soundings carefully made in the bend of the river, but also the shore topography and vegetation, together with all the cultural features in the vicinity of the town of Grand Gulf, and the Confederate and Union lines of fortifications.

PLATE 12: POSITION OF GUN BOATS AT GRAND GULF, 1863

From intelligence information supplied by Union Rear Admiral David D. Porter and others, this detailed map of the shelling of the Confederate fortifications at Grand Gulf in April 1863 was prepared in the Washington office of the Coast Survey later in 1863. Although others had a hand in the compilation, Sub-Assistant J. H. Logan completed the map in July 1863, and it was sent to Admiral Porter soon thereafter.

The map is remarkable in its topographic and cultural detail and accuracy, considering that it was prepared from only scanty information obtained during times of stress. A field map prepared later by Coast Survey Assistant F. H. Gerdes was not then available. The depiction of the shore batteries and field pieces is laudable, but even more remarkable are the location and indicated deployment of the attacking gunboats.

PLATE 13: BATTLE GROUND OF SABINE CROSS ROADS AND PLEASANT HILL, 1864

In March 1864, Union General N. P. Banks and Major General W. B. Franklin left Alexandria, Louisiana, which was taken in the famous Red River campaign, with armies intent on moving northwestward into Texas. With Rear Admiral David D. Porter's fleet on the Red River to protect their flank, they moved confidently against the retreating Confederate army of General Richard Taylor.

On April 8, 1864, at Sabine Cross Roads, near the Texas border and south of Shreveport, Louisiana, the unexpected happened. The outnumbered army of General Taylor suddenly turned and gave fierce battle. The surprised Union forces were routed and Shreveport was saved and that invasion thwarted. The Confederate re-advance was checked the next day, April 9, at Pleasant Hill, but the Union invasion was not resumed.

Assistant J. G. Oltmanns of the Coast Survey was attached as a Captain to the army of General Franklin in this campaign. During and after these two battles, he drew these battle plans, showing in accurate detail, characteristic of Coast Survey work, the terrain and the deployment of forces.

PLATE 14: CHATTANOOGA AND ITS APPROACHES

After defeating a Union army in northern Georgia in September 1863, the Confederates drove the remnants of that army into Chattanooga, Tennessee, where they held them at bay from strategic positions on Lookout Mountain and Missionary Ridge. In a three-day battle, November 23-25, 1863, Union forces under General Grant drove the Confederates off of these mountains.

Before, during, and after this battle, Coast Survey Sub-Assistant F. W. Dorr, under the direction of the Union's Engineering Brigadier General William F. Smith, made a detailed field survey of the area and produced this accurate tactical map. The accuracy of the terrain representation and the correctness of the location of the cultured features are excellent attributes of this map, which was useful to the Union forces; but the clarity and correctness of the location of both Union and Confederate fortifications, entrenchments, and troop deployment gives it a unique place among military maps of the period.

PLATE 15: BATTLE FIELD OF CHICKAMAUGA

When Confederate General Bragg was maneuvered out of Chattanooga in September 1863, he moved south into Georgia where he halted for regrouping near LaFayette, not far within the border. The pursuing Union General Rosecrans thought that Bragg was in full retreat, and split his forces. Whereupon, General Bragg turned and attacked General Rosecrans at Chickamauga Creek, just inside the Georgia line, in a two-day battle, September 19-20, 1863. General Bragg's army was reinforced by General Longstreet and his troops from Richmond. The Union army was driven back to Chattanooga, and would have been in complete rout had not there been some reinforcements on its side as well. Several months later the Confederates were driven from the area.

Early the next year, the territory now in Union hands again, Major General G. H. Thomas ordered that a detailed map be made of the Chickamauga battlefield. Captain C. H. Boyd, Sub-Assistant of the Coast Survey, was assigned the task. Assistant Boyd conducted the field surveys, assisted by personnel of the Army Topographic Engineers, and made this battle field map. The map depicts the terrain and cultural features in accurate detail, but does not show the actual battle conditions.

TO ATLANTA

PLATE 16: MAP SHOWING THE OPERATIONS OF THE NATIONAL FORCES UNDER THE COMMAND OF MAJOR GENERAL W. T. SHERMAN DURING THE CAMPAIGN RESULTING IN THE CAPTURE OF ATLANTA, GEORGIA, SEPTEMBER 1, 1864

When General Sherman started his drive on Atlanta from the vicinity of Chattanooga on May 7, 1864, he was met by General Joseph Johnston leading a rejuvenated Confederate army which had wintered near Dalton, Georgia, after unsuccessfully trying to recapture Chattanooga from the Federals. The dogged fighting all the way to the burning of Atlanta in September, 1864, is well known. This map shows that blood-drenched corridor.

This map was prepared in the Washington office of the Coast Survey from intelligence information sent in while the campaign was in progress. It was completed by the time Atlanta was taken. Those who have read about the campaign will recognize the familiar place names and landmarks. The accuracy and detail of the topography and cultural features is remarkable, and is a credit to the field men and the compilers. According to the Coast Survey Annual Report for that year, the final preparation of this map was the work of Assistant Adolph Lindenkohl, one of the best artists and cartographers of the day.

PLATE 17: PLAN OF FINAL ATTACK ON FORT FISHER AND ADJOINING REBEL WORKS, MADE JANUARY 15TH 1865

By 1865, Wilmington, North Carolina, was the only Confederate seaport of any importance still in operation. This port was protected by the formidable Fort Fisher at the mouth of the Cape Fear River. On January 15, 1865, a powerful land and sea attack by Federal forces subdued the Fort, and Wilmington was evacuated by the Confederates soon thereafter. Commanding the Federal sea attack by the North Atlantic Squadron was Rear Admiral David D. Porter.

Attached to Admiral Porter's North Atlantic Squadron was the Coast Survey's J. S. Bradford. This attack plan was prepared by Assistant Bradford under the direction of Admiral Porter prior to the engagement, and it was used during the attack. Note the details of the fortifications indicated, the depths of water shown, and the name and deployment of each ship. Many of the soundings shown, as well as shoreline and fortifications detail, were obtained by field work on the part of Assistant Bradford, frequently under fire.

PLATE 18: SKETCHES -

(a) POSITION OF IRON CLADS, FORT FISHER, JANUARY 15, 1865

(b) FINAL ATTACK ON FORT FISHER, JANUARY 15, 1865

When the various Assistants and "Draughtsmen" began returning from the war to their posts in the Washington office of the Coast Survey, some of them were put to making sketches of recent memorable events of the war, of which they had adequate record and first-hand account.

One such event was the assault by Admiral Porter's North Atlantic Squadron on Fort Fisher near Wilmington, North Carolina, on January 15, 1865. Assistant J. S. Bradford had made the attack plans for this event, and he had participated in the action. Two "draughtsmen", who were also excellent sketch artists, had returned, namely Eugene Willenbucher and W. B. McMurtrie. Accordingly, Messrs. Willenbucher and McMurtrie made these sketches from Assistant Bradford's attack plan and his first-hand descriptions, together with other supporting information, such as ship designs.

This is one of the authentic action sketches to emerge from the Civil War, and it is particularly valuable in supplementing the attack plan on Fort Fisher. It had remained in the Coast and Geodetic Survey files a century, seldom until now in public view.

PLATE 19: RECONNAISSANCE OF WILMINGTON RIVER AND ST. AUGUSTINE CREEK FROM WAUSAU SOUND TO SAVANNAH RIVER, GEORGIA

As General Sherman's "March to the Sea" approached Savannah in December 1864, a reconnaissance of some of the seaward forts near that city became necessary. Although capture and maps had already been made of Fort Pulaski, the main one guarding the city, maps of the smaller forts had not been made. It seemed advisable, if seaward assault on the city became necessary to support Sherman's land approach, that good maps and plans should be made of the smaller forts.

On orders from Rear Admiral David D. Porter, of the Federal North Atlantic Squadron, Coast Survey Assistant C. O. Boutelle directed Coast Survey Draftsman Eugene Willenbucher to reconnoiter and make plans of Confederate Fort Thunderbolt and the fortifications at Causten's Bluff and Turner's Rocks. Soundings in Wilmington River and adjacent estuaries, as well as shore detail mapping, were done by a hydrographic party under Assistant Boutelle's direction.

The Confederates abandoned Savannah in December 1864, and these maps and sketches were not used for tactical purposes. They represented excellent pieces of war field mapping, however, and were kept in the Coast and Geodetic Survey files for a century, seldom until now seen by the public.

PLATE 20: NORTHERN PART OF FLORIDA (OLUSTEE (OCEAN POND) AND RAIDS ON JACKSONVILLE)

Sectional maps, such as this one, were prepared for all parts of the South by the Coast Survey during the Civil War. They were used for military planning and strategic purposes, and this one figured in the major Civil War encounters taking place in northern Florida.

During most of the war, Jacksonville was a base for Confederate blockade runners. It was taken and occupied by Federal troops four different times, the last in 1864. Widespread devastation, accomplished during the 1863 occupation, left the city relatively ineffective for the remainder of the hostilities.

Federal troops, however, occupied Jacksonville again in 1864 to implement an order by the President to make a loyal Federal state out of Florida. The troops under General Truman Seymour left Jacksonville to penetrate inland, via the Florida and Gulf Central Railroad, late in February 1864. Florida citizens had different ideas from those of Mr. Lincoln, and an emergency group of Confederate troops under General Joseph Finnegan, assembled at Olustee to oppose the Federal troops.

On February 20, 1864, this ragged and outnumbered Confederate band fought the Federal troops to a stand-still in an all-day battle. They were reinforced late in the afternoon by a reserve batallion of the Second Florida Cavalry, and the Federal troops were put to rout. Although this Confederate victory is usually called the Battle of Olustee, some refer to it as the Battle of Ocean Pond.

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MANASSAS JUNCTION

AND VICINITY

Surveyed by Party of U.S. Coast Survey
assigned by A.D. Bache Supdt
to act under orders of
Lt. Col. J.N. Macomb Chf. Topl Engr
Army of the Potomac
Field work under direction of
H.L. Whiting Asst. U.S.C.S.
April 1862

Statute Mile

The contours are drawn every 10 ft.
:: - represents Ruins

PLATE 2: MANASSAS JUNCTION AND VICINITY, APRIL 1862

Manassas Junction gained prominence at the outset of the war when Union forces, hoping to move on to Richmond, engaged the Confederate Army at Bull Run near Washington on July 21, 1861. This important switching point on the Orange and Alexandria Railroad opened the way along the Manassas Gap Railroad into northwestern Virginia and the Shenandoah Valley. The Federals withdrew following the battle and the site was occupied intermittently by fragments of the Confederate Army.

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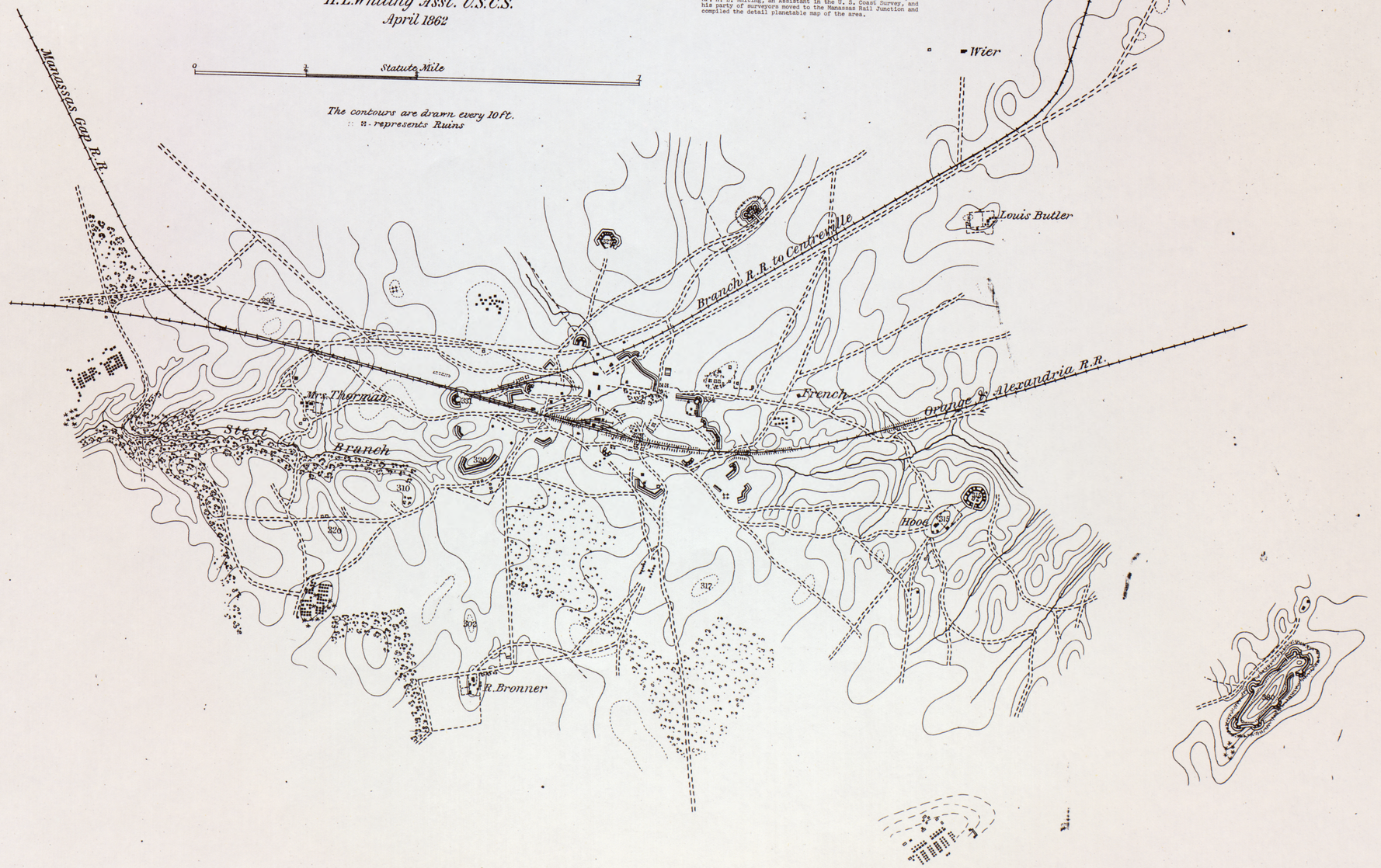

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GENERAL MAP
OF
CHARLESTON HARBOR
SOUTH CAROLINA
Showing Rebel Defences and Obstructions

Shore Line, channels, fortifications & armaments
are from surveys and data of U.S. Coast Survey.

Positions of obstructions & torpedoes from information
furnished by persons who removed them.

Prepared
by direction of Rear Admiral J.A. Dahlgren U.S.N.
commanding South Atlantic Blockading Squadron
by C.O. Boutelle Asst. U.S. Coast Survey
1865.

Drawn by E. Willenbücher, U.S. Coast Survey.

ARMAMENT OF REBEL FORTS

Forts & Batteries	Dahlgren	Columbiads smooth.	Columbiads rifled.	Brooks Rifles	Blakeley's Rifles.	Other Rifles	Smooth.	10 inch Mortars.	Field Pieces	Total.
Sullivan's Island										
Fort Marshall		2 8"		1 7"		1 42" 1 19"			4	14
Fort Beauregard		1 10"	1 8	1 7"		1 32	3 8		2	13
Battery Rutledge		3 10"				2 6"	2 24		8	12
Fort Moultrie		4 10"		2 8		1 10"		5	2	16
Battery Marion		3 10"		2 8		3 6				8
Battery Bee	1 8	4 7" 1 6"	1 6"			3 7				7
New Battery		1 8							2	3
Detached Batteries							4 24			8
Sumter		2 10"		2 7		1 6			5	10
James Island										
Fort Johnson		5 8"		1 8 2 7"		1 6		2	8	20
Sand Battery A				1 7						1
,, ,, *B*								1		1
,, ,, *C*								2		2
,, ,, *D*							2 8			2
Battery Cheves		2 8								2
Battery Wampler		2 10								2
Battery Glover			3 8							3
Mount Pleasant										
Batty on Haddrell's Pt.				2 8						2
Castle Pinckney		3 10		1 7						4
City Batteries										
Waring		2 8								2
King Street		1 8		1 8						2
White Point	1 8	2 8				1 8				4
Vanderhorst Wharf		1 10		1 7						2
Frazier's Wharf						1 32				1
Laurens Street		1 10								1
Calhoun Street				1 6						1
City Intrenchment									6	6
	2	40	5	19	2	13	21	10	37	149

Batteries not here enumerated have no guns.

NOTES.

The shading of water *shows depth at 6, 12, & 18 ft.*
Lightest shading indicates deepest water.
Large boiler iron torpedoes, *to be exploded by galvanic batteries.*
Frame Torpedoes
Barrel Torpedoes
Rope Obstructions
Boom *across Hog Island Channel.*
Union Batteries *in Black.*
Rebel Batteries *in Red.*

The survey of the channels, fortifications etc. was made after the occupation of the Harbor by the U.S. Naval forces.

PLATE 3: CHARLESTON HARBOR, 1865

The opening artillery engagement of the Civil War took place in Charleston Harbor when on April 12, 1861 Confederate shore batteries, under the direction of General Beauregard, bombarded Fort Sumter.

Throughout the war, Charleston remained in Confederate hands with the harbor approaches heavily mined or otherwise obstructed. Shore batteries and fortifications flanking the harbor approaches deterred Union vessels attempting to enter this strategic port.

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Scale 30.000.

Statute Miles.

Nautical Miles.

Chas. G. Krebs. Lith

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PLATE 4: SOUTH CAROLINA-GEORGIA COAST AND SKETCHES OF FORTS 1861-1862

In November 1861 a powerful Union fleet under the command of Flag Officer Samuel F. DuPont captured Forts Beauregard and Walker, and took possession of Port Royal, South Carolina, one of the best strategic harbors of that period. Here the Union established its principal base for the blockade of the southeastern states, which blockade eventually strangled the Confederacy's waterborne supply line.

Coast Survey Assistant C. O. Boutelle prepared a map of this base area, as well as of adjacent areas of the South Carolina-Georgia coast, for the Union staff, showing strategic points and water passages. Under Assistant Boutelle's direction, plans of Forts Beauregard, Walker, and others were prepared.

U.S. COAST SURVEY
Section V
Map of Portions of Sea Coast
OF
SOUTH CAROLINA AND GEORGIA
in possession of The United States Dec. 12th 1861.

Scale 1:80,000

Prepared by C. O. Boutelle
Asst. U. S. Coast Survey

References.

Forts Walker and Beauregard, Port Royal, taken in Naval Action, Nov 7th 1861
Battery at Braddocks Pt. Hilton Head I, seized by the Army, Nov. 8th 1861.
Battery at Tybee I. seized by the Navy, Nov. 24th 1861.
Fort at Otter Island, St Helena Sound, seized by the Navy, Nov. 25th 1861.
Fort at Saxis Point, Coosaw River ..... "
Fort at Pennick's I. Ashepoo River ..... 26th "
Battery at Great Wassaw I, Wassa Sound ..... Dec. 5th "
Rebel Fort at "Red House" Wilmington R. reconnoitred ..... 5th "
Beaufort and Port Royal I. occupied by Gen. Stevens Brigade U.S.A. ... 7th "
Ossabaw Sound entered and Rebel Fort on Vernon R. reconnoitred by the Navy Dec. 11th 1861

Eugene Willenbücher Draughtsman

U.S. COAST SURVEY

A.D.BACHE Supt.

PLANS & VIEWS of REBEL DEFENCES

COAST of SOUTH CAROLINA.

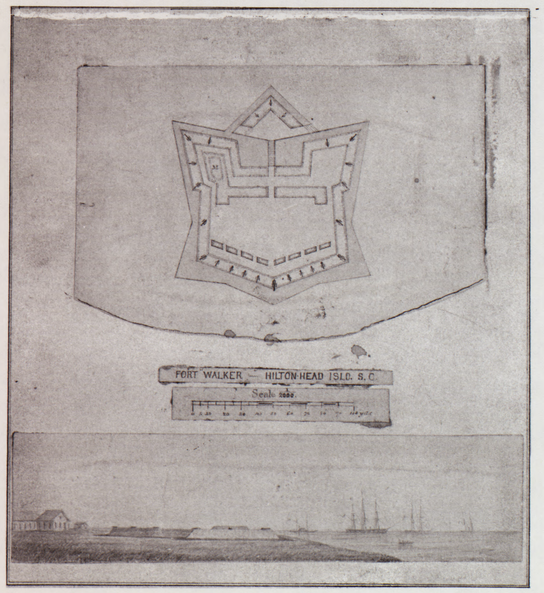
DRAWN BY E. WILLENBUCHER

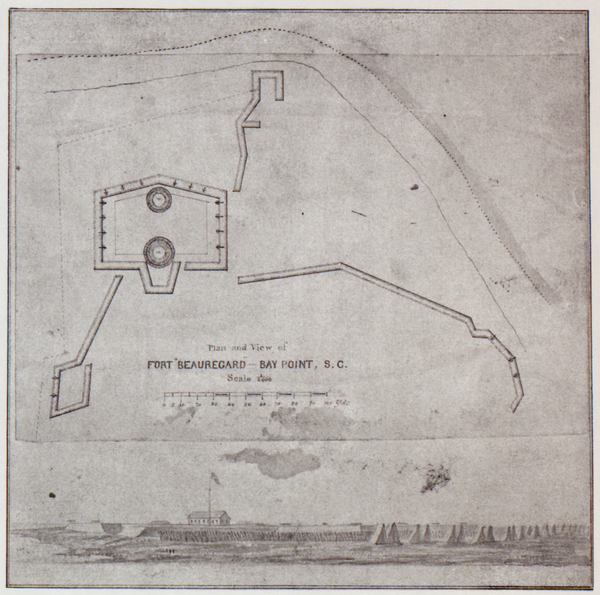
under the direction of C.O.BOUTELLE Assist U.S.Coast Survey.

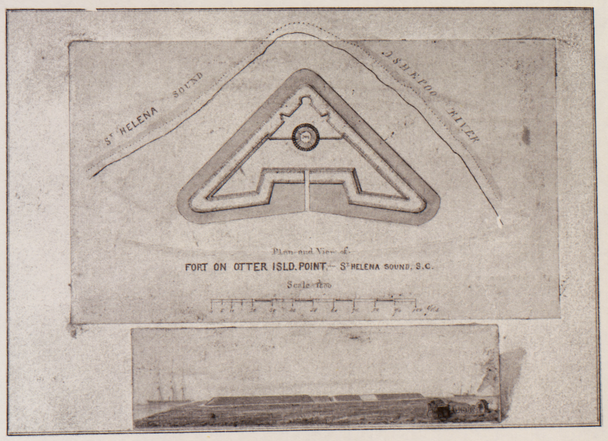
Section V. 1862
31.

Rec'd Nov. 18, Sec. 5
Rec'd Dec. 18/62.

No. 2979 ×







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No.3010 *PRICE* 30 cents,

MILITARY MAP OF SOUTH-EASTERN VIRGINIA.

PLATE 5: MILITARY MAP OF SOUTHEAST VIRGINIA
1864

Although Fort Monroe on Hampton Roads was held by the Union throughout the war, the southern neck (better known as the Peninsula) of Virginia, commanding the James River as well as Richmond, was defended valiantly by the Confederacy. In 1862, Union Forces under General George B. McClellan tried to advance on Richmond via this route, and the famous 'Peninsula Campaign' ensued. Here, General Robert E. Lee succeeded the wounded General Joseph E. Johnston as Commander of the Confederate Forces and distinguished himself brilliantly.

In 1864, by request of the Union forces and by order of Superintendent Bache, Assistant Adolph Lindenkohl, one of the Coast Survey's best artists and cartographers, compiled in a short time the military map of southeastern Virginia. In 1864, the vicinity of Petersburg and Richmond was the scene of bitter fighting in the bloody "Siege".

SCALE 1:200.000.

Compiled at the U.S.Coast Survey Office from the following authorities.

Maps of the U.S.Coast Survey, A.D.Bache, Supt.
Campaign Maps of the Army of the Potomac, by Gen. A.A.Humphreys. 1862.
Plan of the siege of Yorktown, by Gen. J.W.Barnard. 1862.
Map of a part of Eastern Virginia, Dept. of Maj Gen. J.A.Dix, by Capt. W.Heine.
Map of Henrico County, by J.Keily & T.M.Ladd. 1853.
Map of the State of Virginia, by H.Böye, corrected by Lt.v.Buchholtz. 1839.
Map of the State of North Carolina, by W.D.Cooke. 1857.
Map of a part of the Peninsula, Dept. of Maj Gen. J.A.Dix, by Capt. W.Heine.
Campaign Maps, Army of the Potomac by Genl. C.Wetzel. 1864.
Information received from Engineer Department.

Drawn by A.Lindenkohl.

Statute Miles.

MAP DIVISION
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1961-USCOMM-CGS-DC-A-4730

MAP OF THE
CITY OF RICHMOND
VIRGINIA

From a Survey by I.H.Adams, Assist. U.S.Coast Survey, 1858.
with additions from
Smith's Map of Henrico County, 1853.

Prepared at the U.S. Coast Survey Office
A.D.Bache Supt.
1864.

PLATE 6: CITY OF RICHMOND, 1864

Even though the capital of the Confederacy was not evacuated until 1865, Richmond was the target of some extremely violent fighting in 1864. Notable among this was General Butler's advance, which was halted far south of the city.

Late in 1864, with the city still in Confederate hands, the Union armies wanted a good map of this city that they hoped eventually to take. Superintendent Bache was away from the Washington office of the Coast Survey at the time, so the request was received by the second in charge, Assistant Julius Hilgard.

Under Hilgard's direction, Assistant Adolph Lindenkohl, assisted by others, compiled this map from the sources named thereon and whatever intelligence information they had at the time. This map was in use by the Union army when Richmond was evacuated the next year.

1500 Yards
One Mile

A. Lindenkohl & Chas. G. Krebs, Lith.

MAP DIVISION
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PLATE 7: RECONNAISSANCE OF MISSISSIPPI RIVER
1862

Before Admiral Farragut could penetrate the lower Mississippi and take New Orleans, Forts Jackson and St. Phillips, guarding the river well below the city, had to be taken. These were formidable fortifications, well hidden, so exact directions and distances in the area would have to be known to render mortar fire effective. The Coast Survey vessel, SACHEM, under the command of Assistant F. H. Gerdes, made this survey under difficult conditions early in 1862. Owing to high water, the masts of the SACHEM, which was basically a sailing vessel, had to be camouflaged with branches to avoid being detected above the trees by the enemy at the forts.

On April 18, 1862, Union mortar vessels began to fire on the two forts. The accuracy was deadly, owing to the control established by the SACHEM. Even with this, it took six days of bombardment before Admiral Farragut could run his fleet past the forts and take New Orleans on April 25, 1862. Without the control laid by the SACHEM, the crippling of these forts might have been an almost impossible task.

Fort St. Philip

Fort Jackson

Woods cut away

Steamboat & Smoke Stack

Note. The position of the mortar fleet on the 18th the first day of the bombardment was as follows.
9 mortars on the east bank between 9 & 1. distances to Fort Jackson 3900 yards to 4500 yards — 14 mortars on the west bank from ⊕ No 1 to ⊕ No 15 · distances to Fort Jackson 2830 to 3490 yards, On the 19th the 2d day of the bombardment they were all on the west bank and 20 mortars were placed distant from Fort Jackson 3010 to 4100 yards.
They remained on the 3 or 4 days in nearly the same position.
All the large ~~guns~~ steamers & Gunboats were posted from ¼ to 1¼ miles below the lowest mortar vessel.
On the ~~first day~~ small steam sloops & the Gunboats went up ~~the first day~~ & abreast of the Smoke stack where they engaged the forts & the enemy's steamers.

Scale of Miles

Section VIII.
23.

Reg. No. 1 on Sec. VIII Misc.
Reg. June 20th. 1862.
No 1.

U. S. Coast Survey.
Prof. A.D. Bache Supt.
Reconnaissance of the Mississippi River.
By the party under command of F.H. Gerdes Asst U.S.C.S
April 18th/19th 1862.
U.S. Coast Survey Steamer, Sachem.

Note. The forts and their immediate vicinity were taken from data furnished by Major Barnard U.S.E. excepting the trigonometrical determinations of the forts and the mile.

F.H. Gerdes Asst U.S.C.S. in charge of Party.
Joseph S. Harris Acting Master U.S.N. assistant
D.G. Abmadens Sub Asst C.S. & Executive Officer
R.E. Halter Sub Asst U.S. Coast Survey.
Thos C. Bowie Asst U.S. Coast Survey

89·27·
89·26
89·25
89·24
89·23
89·22

MAP DIVISION
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1961-USCOMM-CGS-DC-A-4730

The Mississippi River.

Low ground, overflowed.

Levee

Low ground, overflowed

Overflowed

The Citadel

Cistern

Court

entirely consumed by fire

burned

Drawbridge entirely demolished

Parapet entirely broken up

Overflowed

Overflowed Levee

Water Battery

Low ground overflowed.

Hospital building struck by 2 shot and 5 round shot

U.S. Coast Survey.
A.D. Bache Supt.

PLAN

of Fort Jackson, Lr

showing the effect of the bombardment by the Flotilla commanded by D.D. Porter, Comdr U.S. Navy, between the 18th and 24th of April 1862.

Executed under the direction of F.H. Gerdes, Assistant in charge of the Coast Survey Party, Steamer Sachem by Jos. S. Harris, Asst

Scale 50 feet to 1 inch (1/600)

Register No 870

F.H. Gerdes, Asst in charge of Party
Ralph Stanton, Asst. in charge of this Survey
D.S. Hutchins, Sailing Coast Survey
Fred. A. Davis, Aid Coast Survey

PLATE 8: FORT JACKSON, 1862

After Admiral Farragut's fleet moved past the crippled Forts Jackson and St. Phillips, the Union mortar flotilla, under Rear Admiral D. D. Porter of the Union Navy, took possession of the forts, accompanied by Coast Survey Assistant F. H. Gerdes with the Coast Survey vessel SACHEM.

While at Fort Jackson, Assistant Gerdes and his crew made an exact survey of the fort, showing all the damage from the six-day mortar bombardment between April 18 and April 24, 1862. The map demonstrated the effectiveness of bombardment that is properly controlled by a previous reconnaissance survey.

So much is usually pointed out about ineptness and blunders during the Civil War. Here is a case where the campaign proceeded correctly, owing largely to a good survey.

Remarks.

The holes, made by the bombs, are shaded with Lamp black and shot holes are marked black.
The moat, ditch and the low overflowed ground are shaded with light blue, the Citadel, Quarters and Outworks, which have been burned are shaded with light red; the principal injuries to the Fort, which have been repaired by Sandbags are shaded with straw colour.

Effects of the bombardment.

All the scows and boats near the Fort were sunk, except 3 small ones the drawbridge was completely destroyed, the hot shot furnaces were destroyed; the cisterns were demolished; all casemates and passages were filled with water, the levee having been cut; all the platforms for tents were destroyed by fire or shell; all the casemates are cracked from end to end; in some places the roof is completely broken, and frequently masses of brick have been dislodged. 4 guns were dismounted, 11 carriages and 30 beds and traverses injured. The outer walls of the Fort are cracked from the top to the bottom in several places, admitting daylight freely. 3339 shells computed to have been thrown in the ditches and overflowed parts of the Fort; 1080 shells exploded in the air over the Fort. 1113 mortar shell were counted on the solid ground of the Fort & Levees, and 17 round shot. 7500 shells were fired altogether.

MAP DIVISION
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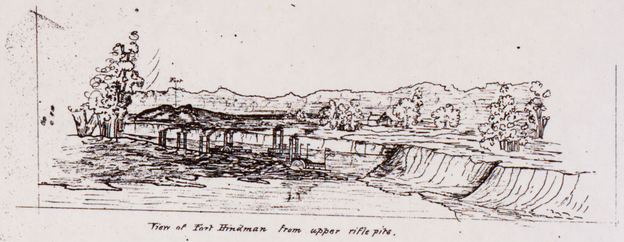

View of Fort Hindman from upper rifle pits.

Arkansas Post.

Breastworks of Logs & Earth

Rifle Pits

Passing the Fort

Targets

Piles

Cotton wood

Position of the Battle while clearing rifle pits

Blackhawk clearing rifle pits

Cotton wood

Cotton wood

Cotton wood

Rifle Pits

Cotton wood

Notribes' Plantation

Yards

1 Mile.

Survey of the approaches to Post Hindman. Arkansas Post. captured by the U. S. Mississippi Squadron January 11th 1863. — Showing the position of the Gun boats during the attack. — Scale 1/5000

Executed January 12th 1863. by order of Acting Rear Admiral David D. Porter. U. S. Navy by C. Pendall. U. S. Coast Survey. —

Reg No. 27, Sec. 8. Misc'l Regd Mar. 28/63.

M. Section VIII. 26.

PLATE 9: FORT HINDMAN, ARKANSAS, 1863

Early in 1863, the Confederate stronghold on the lower Arkansas River, Fort Hindman (Arkansas Post), was taken by troops under the command of General J. A. McClernand, and gunboats under Rear Admiral David D. Porter. Little Rock, farther up the river, was taken by Union General Frederick Steele later the same year.

On January 12, 1863, the day after the capture of the Fort, Admiral Porter ordered Coast Survey Sub-Assistant Clarence Pendall, attached to the Union's Mississippi Squadron, to make a map and sketch of Fort Hindman, showing the positions of the gunboats on the previous day. By using a planetable, Mr. Pendall made this map on January 12, together with the sketch on the upper left showing the gunboats in attack. Mr. Alexander Strauss, also of the Coast Survey, helped in this work and in work on the Vicksburg campaigns.

MAP DIVISION
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PLATE 10: APPROACHES TO VICKSBURG, 1863

On July 4, 1863, Confederate forces surrended at Vicksburg, Mississippi, after a six-week seige by Union General Ulysses S. Grant and Union Rear Admiral David D. Porter. Many historians believe that the fall of Vicksburg broke the back of the Confederacy in the Mississippi valley and ultimately led to the total breaking of the Confederacy.

Prior to and after the passing of the Vicksburg batteries by Admiral Porter on the night of April 16, 1863, Sub-Assistant Clarence Fendall of the Coast Survey, made the accompanying map of the approaches to Vicksburg by planetable surveying. Assistant Fendall's report states that they were fired upon often by the enemy.

The map was prepared at the request of Admiral Porter under the general direction of Assistant F. H. Gerdes of the Coast Survey. The positions of the fleet during the main assault were put on several months later under Admiral Porter's direction.

Note: The blank space within the Fortifications is not yet surveyed.

U.S.COAST SURVEY
A.D.Bache Supdt.

APPROACHES TO

VICKSBURG

MISS.

AND REBEL DEFENCES

Surveyed by C.Fendall Sub Assist.
under direction of F.H.Gerdes Asst.U.S.C.S.
attached to
Mississippi Squadron under command of
Rear Admiral D.D.Porter
U.S.Navy

1863

M.
Section VIII.
50½

874 W
1863

Copy returned by Admrl. Porter
with positions of fleet.
Dec 1863.
No. 39 Sec. VIII
Rec'd & Reg Feby 8, 1864

MAP DIVISION
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1961-USCOMM-CGS-DC-A-4730

PLATE 11: APPROACH TO GRAND GULF, 1864

To make an effective assault on Vicksburg, it was necessary that General Grant's troops be ferried from the west to the east shore of the Mississippi River south of Vicksburg. For this reason, after running the Confederate batteries at Vicksburg, Union Rear Admiral David D. Porter, shelled the Confederate fortification at Grand Gulf, Mississippi, on April 29, 1863. On May 2, his flotilla transported Grant's troops just south of Grand Gulf.

Even after the fall of Vicksburg, Confederate guerrilla parties continued raiding in the area. Accordingly, Coast Survey Assistant F. H. Gerdes was assigned, by Rear Admiral David D. Porter, the Union armed steamer CURLEW and her crew, to map the vicinity in detail. This sheet, completed early in 1864, not only shows the soundings carefully made in the bend of the river, but also the shore topography and vegetation, together with all the cultural features in the vicinity of the town of Grand Gulf, and the Confederate and Union lines of fortifications.

APPROACHES TO GRAND GULF

From a Topographical & Hydrographical Survey

by F. H. GERDES Assistant,

assigned by

A. D. BACHE Supdt. U.S. Coast Survey

to act under orders of

Rear Admiral D. D. PORTER U.S. Navy

Commanding Mississippi Squadron.

Scale 10:560

1864

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1961-USCOMM-CGS-DC-A-4730

BIG BLACK RIVER

Rafts

Line of Rifle Pits

Covered Ways

Silenced in 3 hours

Field pce.

Silenced (with the exception of one gun) in 3 hours and 35 minutes.

Did not change Position during the Action except to move 10 minutes when the wheel of the Pocahontas was disabled.

Pittsburg

Mound City

Carondelet

OLD STREETS of GRAND GULF

RAIL ROAD TO PORT GIBSON

Grand Gulf

Louisville

Petersburg

Carondelet

Natchez

Vicksburg

Strong Bayou

Current 3 miles per hour

MISSISSIPPI RIVER

N.
Section VIII.
44½

PLATE 12: POSITION OF GUN BOATS AT GRAND GULF, 1863

From intelligence information supplied by Union Rear Admiral David D. Porter and others, this detailed map of the shelling of the Confederate fortifications at Grand Gulf in April 1863 was prepared in the Washington office of the Coast Survey later in 1863. Although others had a hand in the compilation, Sub-Assistant J. H. Logan completed the map in July 1863, and it was sent to Admiral Porter soon thereafter.

The map is remarkable in its topographic and cultural detail and accuracy, considering that it was prepared from only scanty information obtained during times of stress. A field map prepared later by Coast Survey Assistant F. H. Gerdes was not then available. The depiction of the shore batteries and field pieces is laudable, but even more remarkable are the location and indicated deployment of the attacking gunboats.

Traced by James H. Logan,
July 24, 1863

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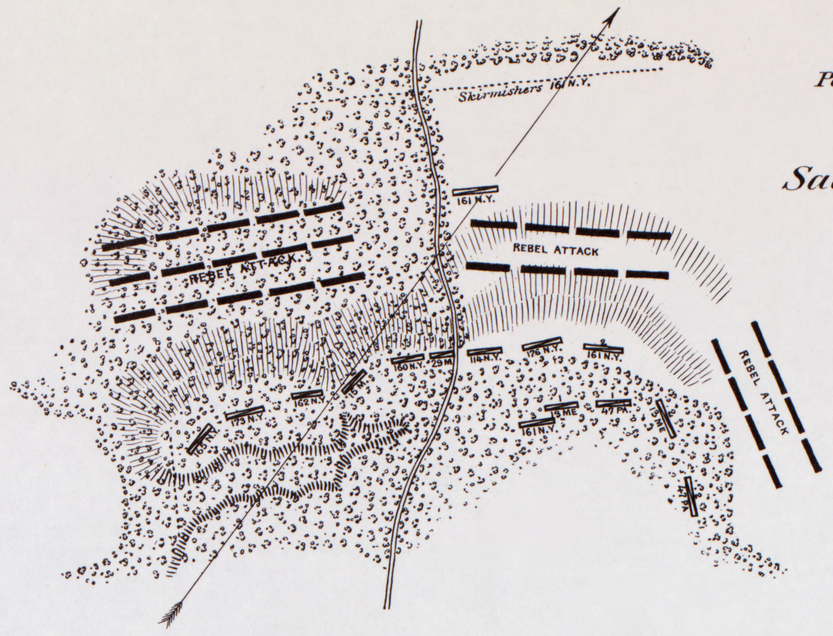

Position of 1st Division
19th Army Corps
at the battle near

Sabine Cross Roads

Louisiana
April 8th 1864

By Capt J. G. Oltmanns
U.S.C.S.

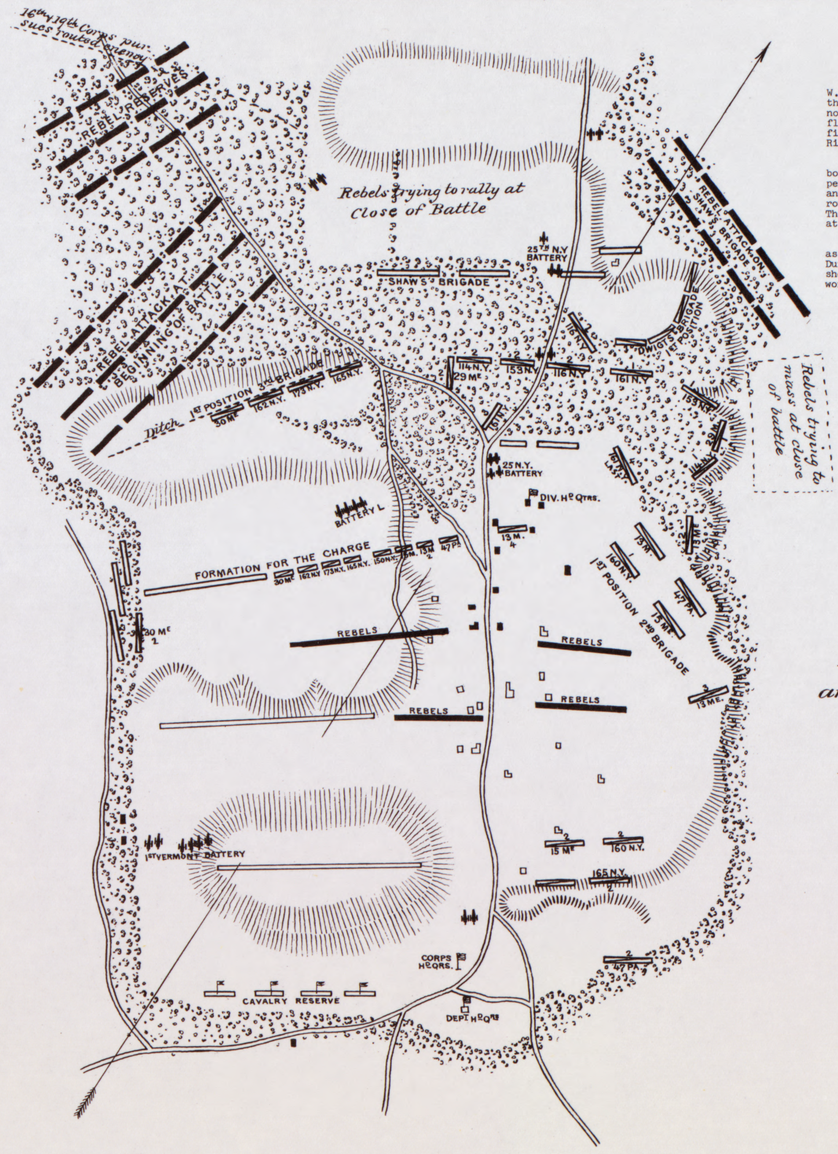

PLATE 13: BATTLE GROUND OF SABINE CROSS ROADS AND PLEASANT HILL, 1864

In March 1864, Union General N. P. Banks and Major General W. B. Franklin left Alexandria, Louisiana, which was taken in the famous Red River campaign, with armies intent on moving northwestward into Texas. With Rear Admiral David D. Porter's fleet on the Red River to protect their flank, they moved confidently against the retreating Confederate army of General Richard Taylor.

On April 8, 1864, at Sabine Cross Roads, near the Texas border and south of Shreveport, Louisiana, the unexpected happened. The outnumbered army of General Taylor suddenly turned and gave fierce battle. The surprised Union forces were routed and Shreveport was saved and that invasion thwarted. The Confederate re-advance was checked the next day, April 9, at Pleasant Hill, but the Union invasion was not resumed.

Assistant J. G. Oltmanns of the Coast Survey was attached as a Captain to the army of General Franklin in this campaign. During and after these two battles, he drew these battle plans, showing in accurate detail, characteristic of Coast Survey work, the terrain and the deployment of forces.

Battle Ground of PLEASANT HILL

and disposition of troops
April 9th/64

By Capt J. G. Oltmanns
U.S. Coast Survey
attached to
Staff of Gen W.B. Franklin

16th Corps represented
19th " "
Rebels " "

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BATTLE FIELD
OF
CHICKAMAUGA
GEORGIA

Surveyed by command of Major Genl G.H.Thomas
Commanding Department of the Cumberland
By Capt C.H.Boyd Sub-Asst U.S.Coast Survey
April and May 1864
Scale 2 0.000

Assisted in levelling by
Lieut Kuntze & Sergeant Wilson
Topl Engineers 2nd Division 14th Army Corps

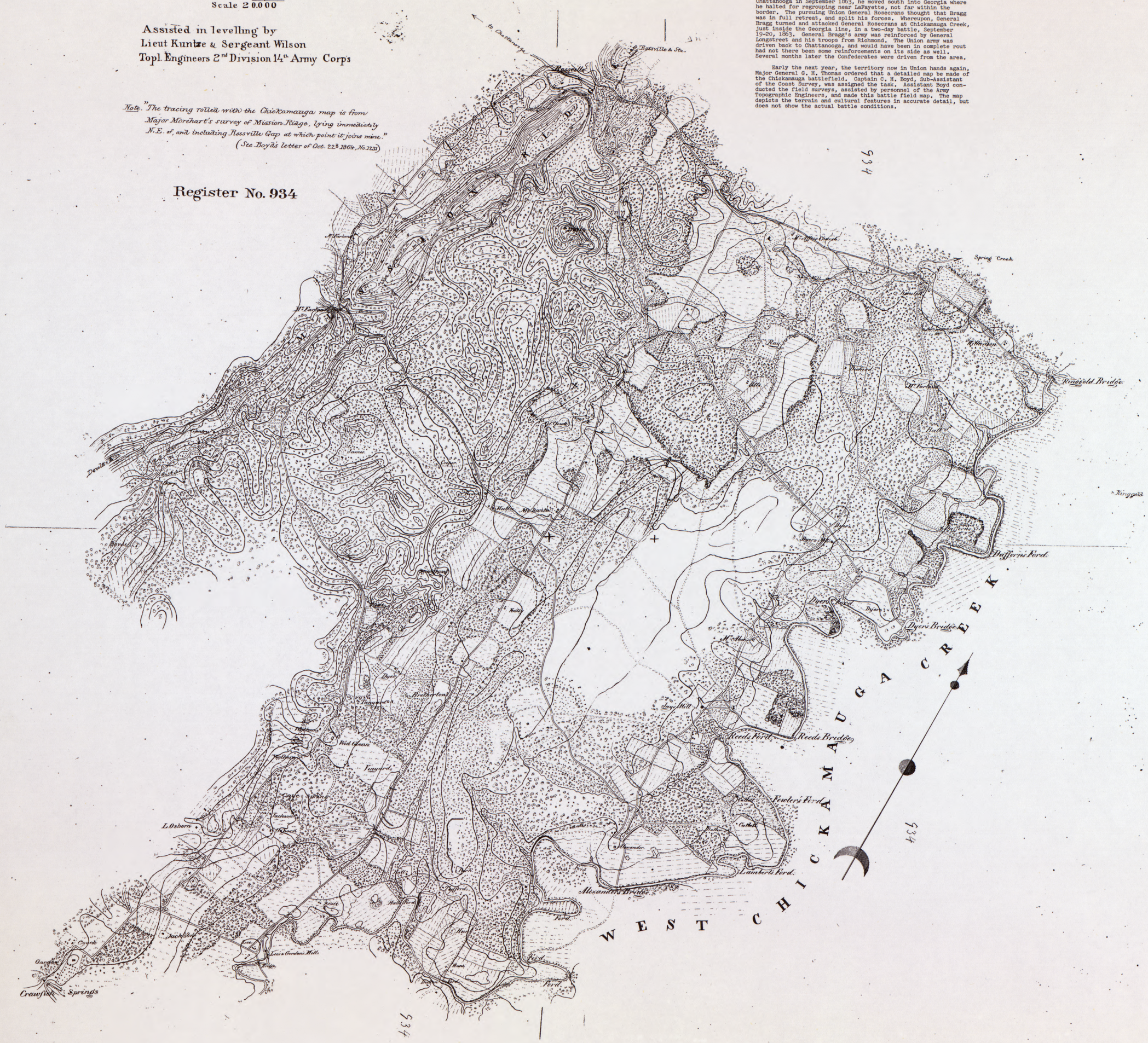
Note. "The tracing rolled with the Chickamauga map is from Major Morchart's survey of Mission Ridge, lying immediately N.E. of, and including Rossville Gap at which point it joins mine."
(See Boyd's letter of Oct. 22d 1864, No.1231)

Register No. 934

PLATE 15: BATTLE FIELD OF CHICKAMAUGA

When Confederate General Bragg was maneuvered out of Chattanooga in September 1863, he moved south into Georgia where he halted for regrouping near LaFayette, not far within the border. The pursuing Union General Rosecrans thought that Bragg was in full retreat, and split his forces. Whereupon, General Bragg turned and attacked General Rosecrans at Chickamauga Creek, just inside the Georgia line, in a two-day battle, September 19-20, 1863. General Bragg's army was reinforced by General Longstreet and his troops from Richmond. The Union army was driven back to Chattanooga, and would have been in complete rout had not there been some reinforcements on its side as well. Several months later the Confederates were driven from the area.

Early the next year, the territory now in Union hands again, Major General G. H. Thomas ordered that a detailed map be made of the Chickamauga battlefield. Captain C. H. Boyd, Sub-Assistant of the Coast Survey, was assigned the task. Assistant Boyd conducted the field surveys, assisted by personnel of the Army Topographic Engineers, and made this battle field map. The map depicts the terrain and cultural features in accurate detail, but does not show the actual battle conditions.



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MAP

Showing the operations of the national forces
under the Command of

MAJ. GEN. W. T. SHERMAN

During the Campaign resulting in the capture of

ATLANTA

GEORGIA

Sept. 1, 1864.

Scale 6 miles to 1 inch

Miles

Prepared at the Coast Survey Office Washington D.C.
from information furnished by Capt. O.M. Poe, Chief Engr
Genl. Sherman's staff, and from Genl. Sherman's published
report.

TO ATLANTA

PLATE 16: MAP SHOWING THE OPERATIONS OF THE NATIONAL FORCES UNDER THE COMMAND OF MAJOR GENERAL W. T. SHERMAN DURING THE CAMPAIGN RESULTING IN THE CAPTURE OF ATLANTA, GEORGIA, SEPTEMBER 1, 1864

When General Sherman started his drive on Atlanta from the vicinity of Chattanooga on May 7, 1864, he was met by General Joseph Johnston leading a rejuvenated Confederate army which had wintered near Dalton, Georgia, after unsuccessfully trying to recapture Chattanooga from the Federals. The dogged fighting all the way to the burning of Atlanta in September, 1864, is well known. This map shows that blood-drenched corridor.

This map was prepared in the Washington office of the Coast Survey from intelligence information sent in while the campaign was in progress. It was completed by the time Atlanta was taken. Those who have read about the campaign will recognize the familiar place names and landmarks. The accuracy and detail of the topography and cultural features is remarkable, and is a credit to the field men and the compilers. According to the Coast Survey Annual Report for that year, the final preparation of this map was the work of Assistant Adolph Lindenkohl, one of the best artists and cartographers of the day.

The National forces under the command of Maj. Gen. W.T. Sherman consisted of;
The Army of the Cumberland commanded by Maj. Genl. Geo. H. Thomas
" " " Ohio " " " J.M. Schofield
" " " Tennessee " " " J.B. McPherson until his death July 22d when he was succeeded " " " O.O. Howard
The Rebel forces were commanded by Genl. Jos. E. Johnstone until he was relieved at Atlanta by Genl. J.B. Hood.
The National armies moved from Ringgold, Gordons Mill, and the Georgia line north of Dalton from the 6th to the 9th of May, and occupied Atlanta Sept. 2nd 1864.

Drawn by E. Hergesheimer.

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Section IV.
20.

North Atlantic Squadron
Rear Admiral D. D. Porter Comdg.

Plan of
Final Attack on Fort Fisher
and adjoining rebel works
Made January 15th 1865

Scale 5000

Approved
David D. Porter
Rear Admiral

N

FEDERAL POINT

NEW INLET

ZEKES I.

Battery Buchanan

Battery

Mound or Battery Lamb

Fort Fisher

Position of Powder Boat Louisiana Exploded Dec. 24th 1864

Line No 1.

Line No 2.

Line No 3.

Line No 4.

Reserves. Used as occasion required.

1st Division

2d Division

3d Division

4th Division

5th Division

Monadnock
Saugus
Canonicus
Mahopac

Scale of Yards

PLATE 17: PLAN OF FINAL ATTACK ON FORT FISHER AND ADJOINING REBEL WORKS, MADE JANUARY 15TH 1865

By 1865, Wilmington, North Carolina, was the only Confederate seaport of any importance still in operation. This port was protected by the formidable Fort Fisher at the mouth of the Cape Fear River. On January 15, 1865, a powerful land and sea attack by Federal forces subdued the Fort, and Wilmington was evacuated by the Confederates soon thereafter. Commanding the Federal sea attack by the North Atlantic Squadron was Rear Admiral David D. Porter.

Attached to Admiral Porter's North Atlantic Squadron was the Coast Survey's J. S. Bradford. This attack plan was prepared by Assistant Bradford under the direction of Admiral Porter prior to the engagement, and it was used during the attack. Note the details of the fortifications indicated, the depths of water shown, and the name and deployment of each ship. Many of the soundings shown, as well as shoreline and fortifications detail, were obtained by field work on the part of Assistant Bradford, frequently under fire.

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Sec. IV.
20A.

Minnesota Wabash Iron Sides Malvern, Flag Ship Brooklyn

Position of Iron Clads, Fort Fisher
Janv. 15th 1865

W.B. McMurtrie,
Draughtsman, U.S.C.S.

PLATE 18: SKETCHES -

(a) POSITION OF IRON CLADS, FORT FISHER, JANUARY 15, 1865

(b) FINAL ATTACK ON FORT FISHER, JANUARY 15, 1865

When the various Assistants and "Draughtsmen" began returning from the war to their posts in the Washington office of the Coast Survey, some of them were put to making sketches of recent memorable events of the war, of which they had adequate record and first-hand account.

One such event was the assault by Admiral Porter's North Atlantic Squadron on Fort Fisher near Wilmington, North Carolina, on January 15, 1865. Assistant J. S. Bradford had made the attack plans for this event, and he had participated in the action. Two "draughtsmen", who were also excellent sketch artists, had returned, namely Eugene Willenbucher and W. B. McMurtrie. Accordingly, Messrs. Willenbucher and McMurtrie made these sketches from Assistant Bradford's attack plan and his first-hand descriptions, together with other supporting information, such as ship designs.

This is one of the authentic action sketches to emerge from the Civil War, and it is particularly valuable in supplementing the attack plan on Fort Fisher. It had remained in the Coast and Geodetic Survey files a century, seldom until now in public view.

M.
Section IV.
20B

Minnesota Susquehanna Wabash Malvern Canonicus Iron Sides Monadnock Malvern, Flag Ship Sangus Powhatan

Final attack on Fort Fisher
Janv. 15th 1865

E. Willenbucher,
Draughtsman, U.S.C.S.

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No 2.

No. Section V. 38.

U.S. COAST SURVEY

Section V.

RECONNAISSANCE OF WILMINGTON RIVER AND ST. AUGUSTINE CREEK

From Wassaw Sound to Savannah River, Georgia

By the Hyd. Party under direction of C. O. Boutelle, Asst. C.S.
December 1864
Scale 1:40,000

1 Stat. Mile
1 Nautc. Mile

Eugene Willenbücher

Savannah R.
Fort Jackson
Telegraph
Fort on Causten's Bluff
Bridge
Sunken Vessels
St Augustine Ck.
Bonaventure
Battery
Bridge
Whitmarsh Island
Wassaw Sd.
Fort Inside
Herd River
Red Buoy
Battery on Turner Rocks
Skiddaway River
Skiddaway Isd.
Wilmington R.
The Sisters
From S.B. to Red Buoy
DAY MARK
Wilmington Island
Cabbage Island
Romerly Marshes Cr.
Longfellows Point
Red Buoy
Great Wassaw Island
WASSAW SOUND
Tybee R.
Little Tybee Island
Petit Chou
81°00
59'
58'
57'
56'
32°00
58'
56'
55'

Fort Thunderbolt.

From a reconnaissance made under direction of C.O. Boutelle, Asst. U.S.C.S. by Eugene Willenbücher. December 1864
Scale 1:600

100 90 80 70 60 50 40 30 20 10 0 100 Yards

MAGAZINE
BOMBPROOF
Wilmington River

Battery on Turner's Rocks

From a reconnaissance, made under direction of C.O. Boutelle, Asst. U.S.C.S. by Eugene Willenbücher. December 1864. Scale 1:2000.

200 90 80 70 60 50 40 30 20 10 0 200 Yards

MAGAZINE
Creek
Wilmington River

No. Section V. 38.

FORT on Causten's Bluff

From a reconnaissance made under direction of C.O. Boutelle, Asst. U.S.C.S. by Eugene Willenbücher December 1864. Scale 1:2000

200 90 80 70 60 50 40 30 20 10 0 200 Yards

BOMBPROOF
MAGAZINE
Road
Wharf
Bridge
St. Augustine Creek

PLATE 19: RECONNAISSANCE OF WILMINGTON RIVER AND ST. AUGUSTINE CREEK FROM WAUSAU SOUND TO SAVANNAH RIVER, GEORGIA

As General Sherman's "March to the Sea" approached Savannah in December 1864, a reconnaissance of some of the seaward forts near that city became necessary. Although capture and maps had already been made of Fort Pulaski, the main one guarding the city, maps of the smaller forts had not been made. It seemed advisable, if seaward assault on the city became necessary to support Sherman's land approach, that good maps and plans should be made of the smaller forts.

On orders from Rear Admiral David D. Porter, of the Federal North Atlantic Squadron, Coast Survey Assistant C. O. Boutelle directed Coast Survey Draftsman Eugene Willenbucher to reconnoiter and make plans of Confederate Fort Thunderbolt and the fortifications at Causten's Bluff and Turner's Rocks. Soundings in Wilmington River and adjacent estuaries, as well as shore detail mapping, were done by a hydrographic party under Assistant Boutelle's direction.

The Confederates abandoned Savannah in December 1864, and these maps and sketches were not used for tactical purposes. They represented excellent pieces of war field mapping, however, and were kept in the Coast and Geodetic Survey files for a century, seldom until now seen by the public.

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PLATE 20: NORTHERN PART OF FLORIDA
(OLUSTEE [OCEAN POND] AND RAIDS ON JACKSONVILLE)

Sectional maps, such as this one, were prepared for all parts of the South by the Coast Survey during the Civil War. They were used for military planning and strategic purposes, and this one figured in the major Civil War encounters taking place in northern Florida.

During most of the war, Jacksonville was a base for Confederate blockade runners. It was taken and occupied by Federal troops four different times, the last in 1864. Widespread devastation, accomplished during the 1863 occupation, left the city relatively ineffective for the remainder of the hostilities.

Federal troops, however, occupied Jacksonville again in 1864 to implement an order by the President to make a loyal Federal state out of Florida. The troops under General Truman Seymour left Jacksonville to penetrate inland, via the Florida and Gulf Central Railroad, late in February 1864. Florida citizens had different ideas from those of Mr. Lincoln, and an emergency group of Confederate troops under General Joseph Finnegan, assembled at Olustee to oppose the Federal troops.

On February 20, 1864, this ragged and outnumbered Confederate band fought the Federal troops to a stand-still in an all-day battle. They were reinforced late in the afternoon by a reserve batallion of the Second Florida Cavalry, and the Federal troops were put to rout. Although this Confederate victory is usually called the Battle of Olustee, some refer to it as the Battle of Ocean Pond.

NORTHERN PART OF FLORIDA

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AUTHORITIES

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