

5529

U. S. COAST & GEODETIC SURVEY
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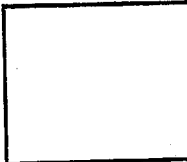
OCT 18 1934

Acc. No. _____

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

..... Director



State: GEORGIA

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 10 5529
Hydrographic }

LOCALITY

Ossabaw Sound, GA. NORTH

Ogeechee River, GA. SOUTH

1934

CHIEF OF PARTY

C. A. EGNER

5529

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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OCT 19 1934

Acc. No. _____

REG. NO. 5529

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 10

REGISTER NO. 5529

State Georgia

General locality Ogeechee Sound

Locality Ogeechee River

Scale 1/10,000 Date of survey May 1934

Vessel Field Party #23, Launch Owanee

Chief of Party C. A. Egner

Surveyed by M. G. Elliott

Protracted by F. W. Kiley

Soundings penciled by V. F. Simmons

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by

Inked by *M. S. Lunn*

Verified by *M. S. Lunn*

Instructions dated Dec. 5, 1933, 19

Remarks: Control and shoreline largely dependent upon
aerial photographs.

DESCRIPTIVE REPORT TO
ACCOMPANY HYDROGRAPHIC
SHEET--FIELD #10

INSTRUCTIONS:

This sheet was executed under Instructions dated December 5, 1933, covering work by Party #23 for Combined operations along the Inside Passage and approaches of the Georgia Coast from Savannah to Brunswick. ✓

LOCALITY:

The Instructions called for the survey of the Ogeechee River to the Seaboard Air-line R. R. Bridge, the latter being the line of Traverse and therefore the upper limits of satisfactory control for aerial Photographs of the general coast. ✓

This sheet takes in that part of this river above Fort McAllister, near which it joins sheet #7.

PURPOSE:

The work was done to provide a comprehensive survey of the river for navigational purposes, no such survey existing at this time. ✓

METHODS:

A very fortunate circumstance enabled this survey to be carried on in a special manner, it being, so far as Party #23 is concerned, the first attempted in this way. When undertaken, it was therefore considered an experiment; the plotting of the smooth sheet seems to justify the method. ✓

No shoreline on a scale of 1/10000 was available, but photographs with 5-lens camera on a scale of approximately 1/21400 had reached the stage of reduction where the celluloid tracing was complete. As this scale is too small for satisfactory hydrography in such areas it was decided to pantograph the river to double the scale, or about 1/10700. This was some 8% smaller than

the smooth sheet was to be. The boat-sheet, projection and all, was constructed by a simple 2 to 1 pantograph.

This area is covered with rice paddies, the dykes and canals of which are quite regular in shape and correspondingly definite on the photographs. It seemed, therefore, that this sheet offered an excellent opportunity for control by building signals on these dykes or at junctions of the canals and the river which could be easily spotted on the photos. So, in addition to the river itself this layout of rice paddies was also pantographed to the boat-sheet and the signals placed on it by simple spotting or measurement from the photographs.

Since the river is very crooked and has a length of 14 miles from Ft. McAllister to the S. A. L. Bridge, this method provided a great saving in signal building and location, and without serious loss of accuracy. Particularly is this true when it is remembered that though some signals may be very slightly in error there is no accumulation as in the case of planetable traverse. A triangulation scheme up this river would have been a larger job than is justified.

The smooth sheet was built on a true 1/10000 scale, and the shoreline and signals taken after and respotted on the true 1/10000 celluloid sheets when they came back from the office. The smooth hydrography proved to be fully as good as could have been done under more conventional methods.

CONTROL:--HORIZONTAL.

As noted in the previous paragraph above Ft. McAllister, but depending upon conventional topographic locations of signals in the lower (S.E.) end of the work. Here, as has become customary on sheets of this character comprising rivers and channels through extensive marshy open areas, the topographic signals have been built in straight lines, facilitating building, economy in number, accuracy of location, and providing at all times rigid fixes even though at times the sextant angles be small. They are, of course larger to be seen across the marsh.

CONTROL CONTINUED: VERTICAL.

There is some uncertainty in regard to tidal reductions.

Though the tide extends its influence well above the limits of the hydrography, the river is much influenced by freshet conditions. A portable automatic gauge was maintained throughout the sounding near Ford Farms, 1 mile west of Ft. McAllister. There is a mean range here of some six feet. Though no gauge was maintained simultaneously at the upper end of the work, a short time later a similar gauge was installed at the Highway bridge (Route 17) about 2 miles above the S. A. L. bridge and 4 days of a simultaneous comparison obtained with Fort Screven. This provided a time range, and height comparison with Ft. McAllister, but as the range (at the time taken, at any rate) was but one foot at the bridge, and the time 3 hours later it became a problem to distribute this variation over the sounded area. Furthermore, it seems evident that this is a highly variable matter due to the stage of the river due to wind and rain in the general locality.

After trial, the area was divided into 5 sections using Ft. McAllister, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and Bridge tides, by proportion between the two ends. The results, though necessarily approximate, seem fairly accurate as indicated by the crossings in the sounding lines.

It is suggested, however, that in charting this river a note should be made in regard to the fluctuation due to meteorological conditions, and especially rain in the upper parts of the river valley.

COMPARISON WITH PREVIOUS SURVEYS:

This is not possible, for the reason that no satisfactory previous survey exists. The nearest thing to it is a U. S. Engineers Controlled Reconnaissance sheet, which gives nothing more than a sketchy general idea of the locality. Coast Survey charts reach only to Ft. McAllister.

Information originating from H 867 (1865)

DANGERS:

Snags present the greatest menace. Bars and mud banks are shifting continually, so that the present survey cannot be considered adequate for a long time. ✓

ANCHORAGES:

Nearly any spot can be used as the bottom is in general soft.

PROSPECTIVE CHANGES IN SHORELINE:

These are taking place continually. One very radical change is now only a matter of a comparatively short time. The river is gradually eating its way into both sides of the narrow high ground near Triangulation Station NECK, about $1\frac{1}{2}$ miles west of Ft. McAllister. A junction, here, which is inevitable, will rapidly break down the high ground just south of the opening and very likely isolate the area nearly surrounded by the large bend in the river to the north of it. When that occurs it is also likely that new banks will be formed and, as has happened in several other similar cases, this large loop will become stagnant, silt up, and eventually become solid ground. The river will no doubt be swifter thereafter in the vicinity of Ft. McAllister and existing shoals and bars cut through and new ones formed. ✓

The U. S. Engineers, alive to the importance of flood control in the valley of this important river, are already laying plans, and doing preliminary survey work looking to this extensive project. ✓

The Ogeechee River is an important fishing ground. The Ogeechee Shad is well known far beyond the immediate vicinity of this river. Its black water, indicating a high content of vegetable life, provides abundant nourishment for these fine fish.

GEOGRAPHIC NAMES:

*Only a few names sufficient for
indentification will be placed on this sheet.
All names will be considered on Top sheet.*

Local names have been given to prominent *H. Bacon* localities along this river. The acquisition of many square miles along the west bank by Henry Ford is to be noted at one particular prominent point marked by a high bluff and plantation as Ford Farms, Inc., which is, by the way, all strictly private and is entered only by permission. There is much local speculation as to the developemnt of this locality. ✓

ADJACENT RIVERS AND CHANNELS:

To the eastward sheet #15 takes in the survey of Rock Fish Creak though its shoreline also is found on this sheet. This creek, it was discovered, has no resemblance to the charted layout. Also it is to be noted that Rock Fish Creek may be reached from the Ogeechee River by way of one of the canals, at high tide in small boats. In fact, this passage is frequently used by fishermen and is well known locally, though a line of soundings through it would indicate no water at low tide. ✓

The small creek at the S. E. limit of the sheet is an extension of Red Bird Creek (see sheets 6 & 7) and has no importance as far as this sheet is concerned.

GREEN SYMBOLS ON SMOOTH SHEET:

Since those signals depending upon Aerial Photo spotting for their location are neither topographic nor hydrographic signals, they have been given a distinctive green color on the smooth sheet. While comparatively accurate, they have not been scaled for d m's and d p's. In future work, they are not considered valuable enough for permanent marking, as there is no reason why similar ones cannot be spotted in exactly the same way with equal accuracy. ✓


The accompanying list, therefore, contains only those marked and located by topography. *Signal CY although in list does not appear on graphic Control T-6144* ✓

COAST PILOT INFORMATION:

There are no aids to navigation on this sheet to assist boatmen in following the channels. Shoals and bars are of typical river formation, and the best water is, in general, to be found along the outside of the large bends. While the tide has considerable effect at the lower part of the sheet and to some extent near the upper end also, the greatest effect is from the volume of fresh river water which comes down from upstream. The controlling depth is largely dependent upon the stage of the river level, so that soundings, particularly in the upper part of the sheet, are somewhat relative.

The greatest danger is from stumps, snags and floating logs. Near shores which have been eroding rapidly these stumps are numerous.

Respectfully submitted,


C. A. Egner, Lieut.,
Chief of Party #23.

LIST OF SIGNALS USED ON SHEET #10

TRIANGULATION:

ROCK 1934
SHAD 1932
McALLISTER 1932
NECK 1932

TOPOGRAPHIC:

JO
GUN
SOB
CRAB
LAT
GEO
FRER
BAKE
EASY
FOR
JACK
GO
MIKE
YOKE
TOPO
CY
SAID
ZEB

PHOTO-LOCATION:

TREE	RAB	BOX
PINE	GET	LAG
GAR	TOR	TRI
SAND	BOR	PEN
MIRT	CAN	SHAK
LEG	FORT	
ARM	HAR	
TRES	RICE	
PRE	DOC	
RAT	LONE	
NET	FOUR	
HOG	BAN	
PIG	BET	
COW	IS	
CAT	SNAG	
DOG	STUMP	
GABLE	END	
IN	COT	
WAY	TAG	
MEG	DOS	
THE	FLY	
BER.	MON	

STATISTICS

#10

VOLUME	DAY LETTER	MMILES	SOUNDINGS	POSITIONS
1	a	21.4	596	127
1	b	14.4	442	111
1	c	8.6	351	82
1	d	3.7	197	36
1 2	e	40.0	1055	238
2	f	22.0	766	159
2 3	g	25.3	650	181
3	h	2.0	61	18
3	j	5.2	279	72
3	k	1.3	39	14
Totals....		143.9	4436	1038

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. .5529

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	.1036.
Number of positions checked98.
Number of positions revised26.
Number of soundings recorded	4436.
Number of soundings revised	...300 (Approx.)
Number of signals erroneously plotted or transferred1. (Possibly more) (See Verification Report)

Date:.....

Cartographer:.....

Verification of protracting
Verification & inking of rocks and shoals)

by

M. S. GURNEE

Time:}

52 1/2 Hrs

Verification of inking by

Time:}

Review by

E. S. Allan

Time: 28 hr

To: Mr. Bacon
 From L. S. S.

GEOGRAPHIC NAMES
 GEORGIA

Survey No. H 5529

Date. Oct. 26, 1934

Chart No. 1241

*Names underlined in red approved Nov. 7, 1934
 H. Bacon*

Diagram No. 1241-2

- * Approved by the Division of Geographic Names, Department of Interior.
- Ø, Not Approved by the Division of Geographic Names, Department of Interior.
- R, Referred to the Division of Geographic Names, Department of Interior.

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	-----	✓ <u>Ogeechee River</u>	----	----	
✓	<u>Atlantic Coast Line R.R. Bridge</u>				<u>31° 57' 2"</u> <u>81° 17' 2"</u>
✓	<u>Seaboard Air Line Ry. Bridge</u>				<u>31° 57' 2"</u> <u>81° 17' 2"</u>
✓	<u>Rock Fish Creek</u>				<u>31° 56'</u> <u>81° 12' 6"</u>
	^{H.M.S.} <u>HARVEY CUT</u> 2/20/35				
	^{H.M.S.} <u>RED BIRD CREEK</u> 2/20/35				

RAC

November 15, 1934.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5529

Locality Ogeechee River, Ga.

Chief of Party: C. A. Egner in 1934
Plane of reference is mean low water, reading
3.2 ft. on tide staff at Buckhead
7.4 ft. below B.M. 1

2.0 ft. on tide staff at Ft. McAllister
14.5 ft. below B.M. 1

Height of mean high water above plane of reference is 7.2 ft. at
Buckhead and 6.9 ft. at Ft. McAllister.

Condition of records satisfactory except as noted below:



Acting Chief, Division of Tides and Currents.

Verification Report H-5529 (1934)

I Conformity to Hydrographic Manual

The records conform to the requirements of the Hydrographic Manual except as follows:

- a. "B" day - day letters are shown in green instead of blue (Par. 145)
- b. Soundings were very poorly spaced, apparently by eye (Par. 147)
- c. There are no hydrographic signals on the sheet, yet on stamp #26 hydrographic signals are shown as plotted and checked. It is apparent that this refers to the Air Photo ~~XXXXXXXXXXXX~~ Compilation signals, and it is considered that a distinction should have been made with a note to that effect on the sheet.
- d. Reports called for in par. 16 of Rules for Verifying and Inking Hydrographic Sheets have all been submitted. No Lighthouse data for the area occurs, and no Landmarks have been submitted because, as stated in the D.R. for T-6144, none are considered important.

II Depth Curves

The usual depth curves (0, 6, 12, 18, and 30 foot) are drawn. In a few places they are incomplete or dashed, ~~due to doubtful location because of insufficient hydrography.~~ usually due to the impracticability of hydrographic development close along the shore.

III Field and Office Plotting

The smooth sheet was visually compared with the Boat Sheet and apparent discrepancies checked. Approximately one hundred positions in all were checked, and about a quarter of these were relocated.

A visual comparison was made with the Air Photo Compilation Sheets (T5114 and T5116), both on a scale of 1:21,400, and where hydrography was in poor agreement with the shoreline, a check was made with proportional dividers. In some places the high water line of islands was changed to agree more closely with the compilation sheets.

The island at (Lat. 31° 54' 0; Long. 81° 10' 6) was not shown on the smooth sheet, but was transferred thereto by the verifier by means of proportional dividers.

The Boat Sheet failed to differentiate between Control signals and Compilation Signals.

IV Remarks

All signals on this sheet have been checked in the field according to stamp #26. Discrepancies in signals noted during verification follow:

- a. Signal PINE was checked with a hydrographic fix in the field, with two check angles. This new location has been plotted, and the location as originally shown removed from the smooth sheet. The new location gives more satisfactory hydrography, and all affected positions have been replotted. *Changed to Hydrographic designation on Smooth Sheet. New location also checks in range with a fence on the Air Photo Compilation.*

IV Remarks (Con.)

o NET can be plotted by using the three double angles recorded. The location of NET accordingly, is about 30m. S.W. of the location now shown on the Smooth Sheet.

- b. Signal NET has been checked by a fix and a check angle in the field. The check angle checks the field location of signal NET fairly well, but it was found impossible to plot the original fix, so NET was retained as located by the field plotter. *Since very little improvement in the soundings would result, the field plotting was not revised.*
- c. In checking signal NE^u, it was discovered that signal PIG fails to agree with the Boat Sheet location.
- d. In the course of verification, it was also discovered that signal CY fails to check the Boat Sheet location. This signal is shown on the smooth sheet as a topographic Control signal, but fails to appear on the Control Sheet (T-6144). *Evidently spotted from Air Photo and since it is not on the Graphic Control sheet - The color has been changed to green.* It has been impossible to check any of these signals on the Air Photo Compilations, as the location was made on a celluloid print on a 10,000 scale which has never been received in the office. While there is reason to suspect that the signals NET, PIG, and CY, as now shown on the smooth sheet, as well as perhaps others, may be in error, they have been left as plotted in the field pending review of the sheet and possibly further investigation. The Hydrography dependent on these signals is not unreasonable. *See notes in red above.*

V Junctions

Junction has been made with H5528 (1934) and the agreement is good. ~~No junction soundings appear on Red Bird Creek as the single line of soundings is continuous over both sheets.~~ *Junction has also been made with H5530 (1928) and is satisfactory.*

Respectfully submitted,

Mark S. Gurnee

Mark S. Gurnee,
Verifier.

February 9, 1936.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5529 (1934)

Ogeechee River, Ossabaw Sound, Georgia

Surveyed in May, 1934

Instructions dated December 5, 1933(NATOMA)

Hand Lead Soundings - 3 point fixes on shore signals.
from plane table and signals
spotted from Air Photo Compilation.

Chief of Party - C. A. Egner.
Surveyed by - M. G. Elliott.
Protracted by - W. F. Kiley.
Soundings plotted by - V. F. Simmons.
Verified and inked by M. S. Gurnee.

1. Condition of Records.

The records conform to the requirements of the Hydrographic Manual.

2. Compliance with Instructions for the Project.

Considerable latitude was allowed the surveyor in control methods for waterways of this type. The control for the northern part of this survey was authorized in per. 11 of the instructions.

3. Sounding Line Crossings.

The few cross lines which were run or result from the work are in satisfactory agreement with the lines run parallel to the shore. More crosslines should have been run to give additional checks on the general system of lines.

4. Depth Curves.

The usual depth curves may be satisfactorily drawn. They are necessarily incomplete close inshore where the banks of the river are steep.

5. Junctions with Contemporary Surveys.

A satisfactory junction has been effected on the southeast with H-5528 (1934). The junction with H-5530 (1934) on the east at Harvey Cut is satisfactory.

6. Comparison with Prior Surveys.

H-867 (1865).

Only 3 miles of the Ogeechee river, lat. $31^{\circ}53.9'$, long. $81^{\circ}10.4'$ to lat. $31^{\circ}53.2'$ of the old survey falls within the area of the present survey. Considering the nature of the area and the date of the old survey, it is in fair agreement with the present survey.

The two islands falling within the above mentioned limits have lengthened approximately 200 meters; they are also from 20 to 60 meters wider. There are no shoals shown on the old survey that are not located on the present survey.

7. Comparison with Chart 1241.

Within the area of the present survey the chart is based on the survey discussed in the foregoing paragraph and contains no additional information with the exception of the charted 4 foot sounding in mid-channel lat. $31^{\circ}53.4'$, long. $81^{\circ}12.4'$ which falls in depths of 14 feet on the present survey. No authority could be found for this charted 4 foot sounding. It has appeared on Chart 56 (and subsequent charts 156 and 1241) since 1876 when the survey of 1865 (H-867) was first applied. H-867 (1865) shows two 24 foot soundings in the location of the charted 4 foot sounding and it is quite probable that the 24 foot sounding was inadvertently charted as a 4. The 4 foot sounding should be discontinued on the chart.

There are no aids to navigation within the limits of this survey.

8. Field Plotting.

The field protracting and plotting are accepted, but attention is directed to the following:

- a. About 1.5% of the positions were revised, this does not include those controlled by signal PINE. (see "c" below). In many places soundings were apparently spaced by eye with the result that about 10% were respaced when inked by the verifier.
- b. The color of day letters shown on the smooth sheet did not correspond to the color as recorded. These were left unaltered on the smooth sheet.
- c. The location of signal PINE, as recorded on page 12 of Volume 3 evidently was not checked against the location determined by the Air Photo Compilation. Signal PINE has been plotted using one 3 point fix and two check angles as recorded, and is now shown on the smooth sheet 86 meters southwest of its former position. All positions depending on signal PINE were revised by the verifier. A satisfactory agreement of soundings was accomplished which was not possible with signal PINE in its former plotted position.
- d. In view of the discrepancies discovered between the Air Photo Compilation locations and locations by recorded sextant angles of signals PINE and NET, it is probable that there may be other signals plotted on the smooth sheet slightly out of position. However the soundings governed by the Air Photo Compilations signals do not indicate any serious displacement of signals.

9. Additional Field Work Recommended.

No additional work is required.

10. Superseding Old Surveys.

Within the area covered the present survey supersedes the following survey for charting purposes:

H-867 (1865) in part.

11. Reviewed by Leo S. Straw, February 1935.

Inspected by R. L. Johnston.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

James Borden
Chief, Section of Field Work.

R. O. Pollock
Chief, Division of Charts.

G. Hude
Chief, Division of H. & T.

25 Jan 13, 1936
L.A.S.