

4616

EST

Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: South Carolina

11-5613

DESCRIPTIVE REPORT.

Hydro. Sheet No. "B" 4616

LOCALITY:

Middle Coast

~~Georgetown Light to Vicinity of~~

Vicinity of Murrell's Inlet to

Winyah Bay Entrance

1927

CHIEF OF PARTY:

K.T.Adams

4616

1926	Letter	Volume	Positions	Soundings	Miles, St.	Vessel.
May 7 - July 6	1 A - 51C	1	272	1555	42.2	Launch.
July 10 - July 15	1D - 123F	2	274	1855	63.8	"
July 15 - July 16	124F - 85G	3	93	647	25.5	"
April 27 - April 30	1 A - 119D	1	1264	1648	154.5	Ship.
May 5 - May 29	1 E - 48 K	2	273	1731	164.0	"
May 29 - May 31	48K - 42 M	3	294	1760	162.1	"
May 31 - June 2	42M - 34 P	4	272	1809	160.2	"
June 3 - June 9	1Q - 63T	5	260	1794	149.7	"
June 9 - June 11	64T - 93V	6	277	1730	173.9	"
June 11- June 19	94V - 29Y	7	243	1425	151.7	"
June 22- June 25	1Z - 69C'	8	220	1372	124.1	"
June 26- July 12	1D'-25G'	9	273	1940	153.3	"
July 12- July 14	26G'-73J'	10	331	1566	172.2	"
July 15- July 17	1K'-31M'	11	236	1547	163.2	"
July 23- Aug. 6	1N'-27S'	12	169	934	102.8	"
TOTALS:- - - - -			3751	23313	1963.2	

MAGNETIC WORK:

	D	I	H
Observations on land, number of results.....			
New primary stations, number of.....			
New auxiliary stations, number of.....			
Old stations reoccupied, number of.....			
New stations in old localities, number of.....			
Meridian lines established, number of.....			
Observations at sea, number of results.....			
Ship swings, number of.....			
Course observations, number of.....			
Observatory work.....			
Absolute observations, number of days.....			
Magnetograph in operation, number of days.....			
Seismograph in operation, number of days.....			
Meteorological observations, number of days.....			

TOPOGRAPHY:

Area surveyed in square statute miles.....	
Length of detailed shore-line in statute miles.....	
Length of shore-line of rivers in statute miles.....	
Length of shore-line of creeks in statute miles.....	
Length of shore-line of ponds in statute miles.....	
Length of roads in statute miles.....	
Topographic sheets finished, number of.....	
Topographic sheets, scales of.....	
Topographic sheets, limits and localities of:	
.....	
.....	
.....	
.....	

HYDROGRAPHY:

Area sounded in square statute miles.....	500
Number of miles (statute) run while sounding.....	1963.2
Number of positions determined (double angles).....	3751
Number of soundings.....	23313
Number of tidal stations established.....	1
Number of specimens of bottom preserved.....	
Current stations, number of.....	
Hydrographic sheets finished, number of.....	Sheet B
Hydrographic sheets, scales of.....	1:40,000
Hydrographic sheets, limits and localities of:	
Area from shore to 10 fm. curve between Southeast	
lines through the following points: Lat. 33° 17' Long. 79° 10'	
Lat. 33° 36' Long. 78° 58'	

STATISTICS OF FIELD WORK

Statistics of field work executed by

Date of original instructions..... Dates of supplemental instructions.....

Date and place of beginning field work.....

Date and place of closing field work.....

RECONNOISSANCE, for triangulation:

Length of scheme in statute miles.....

Area in square statute miles.....

Number of points selected for scheme.....

BASE LINES, primary or secondary:

Names and lengths of, in statute miles.....

TRAVERSE, primary or secondary:

Length of, in statute miles.....

Number of principal stations occupied for horizontal measures.....

Number of supplementary stations occupied for horizontal measures.....

TRIANGULATION, primary, secondary, or tertiary:

Area, in square statute miles.....

Signal poles erected, number of.....

Observing tripods built, number and total height of.....

Observing scaffolds built, number and total height of.....

Stations in main scheme occupied for horizontal measures, number of.....

Stations in supplemental schemes occupied for horizontal measures, number of.....

Stations occupied for vertical measures, number of.....

Geographic positions determined, number of (occupied and intersection stations).....

Elevations determined trigonometrically, number of.....

LEVELING:

Permanent bench marks established, number of.....

Secondary bench marks established, number of.....

Lines of leveling, length of, in statute miles.....

LATITUDE, LONGITUDE, AZIMUTH, AND GRAVITY:

Latitude stations occupied, names of.....

Differences in longitude, telegraphic, number of, and names of stations.....

Azimuth stations, names of.....

Gravity stations occupied, names of.....

D E S C R I P T I V E R E P O R T
T O A C C O M P A N Y
H Y D R O G R A P H I C S H E E T # B

Date of Instructions.

The work on this sheet was done under Instructions dated April 21, 1924. The actual work was accomplished between the dates of April 27, 1926 and August 6, 1926.

General Description of the Coast.

The entire coast is low and sand beach. In some places sand dunes may rise to the height of perhaps forty feet. Inshore from the beach is the tree line, back from one half to one and a half miles. This tree line in general is about eighty or ninety feet high. There is a considerable settlement at Murrel's Inlet but this is back from the beach and the houses are only occasionally seen. There is a considerable settlement right on the beach at Pawley's Island. For a more detailed description of the coast and natural objects, refer to the topographic sheets covering this area.


Outlying Dangers and Islands.

The entire coast is clear, there being no islands or shoals; the possible exception being in the vicinity of Murrell's Inlet where the four fathom curve runs about three and one half miles off-shore with several four fathom spots outside of this.

Currents, tidal or nontidal.

No current observations were taken. However it was noted that the current ran parallel to the beach inshore and was tidal, but farther off-shore the current more usually sets on and off-shore. Probably the strongest current encountered was less than a knot and a half.

Landmarks.

The only landmarks of value in navigation are (a) the small settlement at Pawley's Island (b) the large white sand dune upon which  Mag was located, which is not so prominent from the south, and (c) the collection of sand dunes just south of Murrell's Inlet and the houses inshore from there.

Inshore Dangers.

There are no inshore dangers for a vessel using reasonable caution. The two fathom curve is very close to the beach except in the vicinity of the inlets where the shoals have built out as is customary in this country. The area in the vicinity of Murrell's Inlet is shoaler than elsewhere but this is a general shoaling and may easily be noted by an inspection of the chart.

Bars and Channels.

The only inlet in which any vessel may enter is Murrell's Inlet where about three (3) feet may be had at low tide. Of course this

breaks badly with any sea and it is dangerous to cross at those times. The channel is very shifting and is not buoyed and therefore local and recent knowledge is necessary to effect any entrance.

Anchorage.

There are no protected anchorages. However this vessel anchored all over this area mostly in comparatively good weather and as far as is known the holding bottom is good.

Change of Coast Line or Depths.

No noticeable change in depths was noted. For changes in shoreline refer to topographic sheets covering this area.

Dangers on previous Charts.

The three and one half fathom spot marked E.D. in Latitude 33°24' N. and Longitude 78°49' W. does not exist. 7 1/2 to 9 fathoms is in this immediate vicinity with a least depths of thirty eight feet one mile north.

Survey Methods.

The customary Coast Survey methods were used. Hand lead soundings were used entirely. Work to within about one mile of the beach was done by the ship, and from that point inshore as close as possible by the launch. The launch work was done on a 1:20,000 scale, however being smooth plotted on the 1:40,000 scale ship sheets with the exception of the inlets of which a 1:20,000 insert was made.

Control to about nine or ten miles off-shore was by visible three point fixes on tall hydrographic signals. Beyond this point to the limit of the sheet, control was by visible three point fixes on anchored buoys which had been located by cuts from the ship.

Location of Buoys.

Practically all of the buoys which were not transferred from the other sheet were located by cuts which were plotted on a projection drawn on an aluminum plate furnished by the office. This proved an excellent method of location and gave very good intersections.

Tides.

During this period one tide gauge was maintained at Murrell's Inlet.

K. T. Adams
Comdg

Unit for Soundings --- feet.

Plane of Reference --- M.L.W.

Tide Gauge at Murrell's Inlet.

Plane of Reference ----- 4.7'

Lowest Tide ----- 1.8' - (April 26, 1926)

Highest Tide ----- ~~1~~2.3' - (May 28, 1926)

JUNE 7, 1927.

J. J. D.

11

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
volumes of sounding records for

HYDROGRAPHIC SHEET **4616**

Locality: **COAST OF SOUTH CAROLINA**

Chief of Party: **K. T. Adams, 1926.**
Plane of reference is **M L W**
4.8 ft. on tide staff at **Marvell Inlet.**

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

G. H. ...

Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 11-DRM

WASHINGTON February 27, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4616

Surveyed in 1926

Instructions dated April 21, 1924.

Chief of Party, K. T. Adams.

Surveyed by Field Party.

Protracted and soundings plotted by H. R. Hilton, G. L. Anderson.

Verified and inked by J. C. MacNab.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions with the following exception:

Paragraph 7 (a) of the specific instructions states, "From the inshore limit to the limit of visibility of buoy signals giving accurate fixes, lines spaced approximately 1/4 mile, crossed by a system of lines run approximately parallel to the beach and spaced 2 miles."

* The cross-line spacing is correct but the 1/4 mile spacing on the other system is only carried to the limit of visibility from the shore signals and not to the limit of visibility of the buoy signals. Between these two limits the lines are spaced 1/2 mile.

4. The sounding line crossings are adequate. *Some 4-6 foot differences.*
5. The usual depth curves can be completely drawn. *a. l. s.*
6. The field plotting was completed to the extent prescribed in the General Instructions.
7. The office draftsman did not have to do over any part of the drafting done by the field party.

"Note: by K.T. Adams,

* Work in this vicinity was started by Engle and I but continued the spacing begun by him. Within a week or two after relieving him of command the Chief of H. & T. inspected the party. His attention was called to this spacing and he approved it verbally."

8. The junctions with adjacent sheets are satisfactory.
9. Except for the further development of the area about 3 miles east of North Inlet at approximately lat. $33^{\circ}20'30''$, long. $79^{\circ}06'$ where the sounding of 25 feet occurs among depths of 29 and 30 feet, no further surveying should be required.

The 5 fathom shoal on chart 1110 at lat. $33^{\circ}17'$, long. $79^{\circ}06'$ plots among depths of 36 to 38 feet on H. 4616. An inspection of H. 1419, the source of the 5 fathom shoal, shows that in the vicinity the depths have become greater but does not absolutely disprove this shoal.

10. Remarks:

a. The low water line about Murrell Inlet has been added to the smooth sheet from the boat sheet upon the advice of a member of the field party.

11. Rating of work:

- a. Character and scope of surveying, good.
- b. Field drafting, excellent.

12. Reviewed by J. C. MacNab, February, 1928.

Sheet inspected by

A. L. Shalau
See notes attached.

Approved:

Chief, Section of Field Records (Charts)

Chief, Section of Field Work (H. & T.)

Supplement to Review of H. 4616

There are many areas on this sheet where the bottom is irregular and where a closer development might disclose shoaler water. Of these the following places are considered the most important and should be given consideration in connection with further work in this area:

- a. In the vicinity of the 26 foot sounding in lat. $33^{\circ}25'888\text{m.}$, long. $78^{\circ}58'00''$.
- b. Split lines should be run to the northeastward of the 18 foot sounding in lat. $33^{\circ}22'360\text{ m.}$, long. $79^{\circ}07'471\text{ m.}$
- c. The 20 foot sounding in lat. $33^{\circ}26'1220\text{ m.}$, long. $79^{\circ}04'1400\text{ m.}$
- d. A development of the area inside the 30 foot curve in lat. $33^{\circ}15'888\text{ m.}$, long. $79^{\circ}06'600\text{ m.}$ Also the area inside the 30 foot curve to the southeastward of the above area should have some split lines.
- e. The 25 foot spot in lat. $33^{\circ}19'32\text{ m.}$, long. $79^{\circ}05'752\text{ m.}$ should be further developed.
- f. Split lines are necessary in the vicinity of the 34 foot spot in lat. $33^{\circ}11'848\text{ m.}$, long. $79^{\circ}00'$.
- g. The 35 foot sounding in lat. $33^{\circ}14'00''$, long. $78^{\circ}59'453\text{ m.}$ should be further developed.
- h. A further development of the area within the 30 foot curve in vicinity of lat. $33^{\circ}10'$, long. $79^{\circ}02'$ to $79^{\circ}04'$.

A. L. Shalant

February 28, 1928.

Draftsman's Statistics on H. 4616.

No. of days ----- 65 days 1 hr.
No of positions on sheet ----- 3751
" " " checked ----- 1453
" " " changed ----- 94
(minor errors)
No of soundings on sheet ----- 23,313
" " " inked ----- 23,000

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

Sheet "B"

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

4616

U. S. Coast and Geodetic Survey.

Register No. 4616

State South Carolina

General locality Middle Coast
~~Northeast from Georgetown Light.~~

Locality Vicinity of Murrell Inlet to Winyah Bay Entrance
~~Georgetown light to East of Murrell's Inlet.~~

Chief of party K. T. Adams,

Surveyed by K. T. Adams,

Date of survey April 27, 1926 to August 6, 1926.

Scale 1:40,000.

Soundings in Feet.

Plane of reference M. L. W.

Protracted by H. K. H. Altou Soundings in pencil by G. L. A. Anderson

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, Tide books, Marigrams, 2 Boat sheets,

15 Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet . 1 Vol. Buoy Location.

Remarks:

applied to new chart 787 June 12, 1937 J.G.L.