

4181

Diag. Cht. No. 1239-2

Form 504  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

State *S. Carolina*

11-5613

DESCRIPTIVE REPORT.

*Hydro* Sheet No. **4181**

LOCALITY:

*Charleston Harbor*

*Charleston Entrance to*

*Stone River Entrance*

*1884*

CHIEF OF PARTY:

*R. F. Luce*

4181

## General Description of the Coast.

The coast is low and backed by pine, palmetto and live oak woods except at the eastern end of the sheet near the entrance to Charleston Harbor which consists of low sand dunes behind which stretches a marsh.

## Outlying Dangers and Islands.

There are no outlying islands but off the mouth of the Stono River there are shoal areas on each side of the approach. These areas break in almost any sea and can therefore be avoided.

The area between Lighthouse Inlet and the South Jetty is shoal and breaks in many spots.

## Landmarks.

Prominent landmarks are scarce. The Elks Club at Folly Beach shows up well for distances not greater than three miles offshore. It is a two-story square-looking structure with dormer windows. At present it is painted green which prevents it from being seen from greater distances.

## Inshore Dangers.

On the northeast side of the entrance to Lighthouse Inlet and about a half-mile out from the Lighthouse dock an iron frame or post protrudes to within a foot and a half of the surface at low tide. As no boats of much draft can come over the bar this will not be of much danger.

## Bars and Channels.

There is a straight channel into the Stono River whose least depth is ten feet at low water. Temporary

ranges were set by this party for use in entering the river but it is doubtful if they still remain.

Only very shallow draft boats can enter Lighthouse Inlet at low tide and smooth water because when there is a sea running, breakers entirely surround the entrance.

Ten feet of draft can be carried through the opening in the inner end of the South Jetty by ~~boats~~ men knowing the way but there are shoals in the vicinity which make it dangerous for anyone unfamiliar with the locality.

### Survey Methods.

No unusual survey methods were used and control was obtained from numerous shore signals located by topography and triangulation.

STATISTIC SHEET TO ACCOMPANY

SHEET "D"

STONO RIVER ENTRANCE TO CHARLESTON ENTRANCE.

DATE	LETTER	VOLUME	POSITIONS	SOUNDINGS	MILES	VESSELS
Sept. 16	B	1	24	100	5.0	MIKAWA
21	B	1	67	302	14.7	"
22	C	1	145	605	30.3	"
26	D	1 and 2	157	663	28.6	"
Oct. 10	E	2	54	244	8.8	"
11	F	2	97	508	18.8	"
July 22	a	1	50	244	9.0	Motor Sailer
25	b	1	62	247	10.3	"
Aug. 5	c	1	102	482	20.6	"
15	d	1	32	174	5.2	"
17	e	2	149	1002	32.0	"
18	f	2 & 3	135	471	17.1	"
19	g	3	51	261	9.4	"
Sept. 8	h	3	108	637	25.3	"
9	i	3	37	181	4.8	"
16	k	4	23	139	3.7	"
21	m	4	66	429	13.0	"
22	n	4	143	979	33.0	"
23	p	4	17	60	2.0	"
23	p	5	73	314	14.3	"
26	q	5	166	1051	34.6	"
27	r	6	62	248	10.2	"
28	s	6	109	632	19.7	"
29	t	6	132	516	17.8	"
29	u	7	10	38	1.5	"
30	v	7	5	20	0.5	"
Oct. 6	v	7	115	557	20.2	"
22	w	8	30	190	6.6	"

	1675	8872	310.8	Motor Sailer
	544	2422	106.2	Mikawa
<u>Totals</u>	<u>2219</u>	<u>11294</u>	<u>417.0</u>	

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
WASHINGTON

SECTION OF FIELD RECORDS

REPORT ON HYDROGRAPHIC SHEET No. 4181.

Surveyed in 1921.

Chief of Party: R. F. Luce.

Surveyed by R. F. Luce, R. D. Korne and F. E. Okeson.

Protracted by D. F. Whelan and W. F. Malmate

Soundings plotted by M. Leff.      Verified and inked by G. H. Everett.

1. The sounding records are faulty in that the two volumes done by the MIKAWA fail to show that the leadline was examined at any time, nor is the location of the tide gauge noted in these two volumes. The party organization notes were omitted on A day.

In the volumes of the motor sailer's work there is no notation of the leadline having been examined on about one-half of the days, or else it was done at either the beginning or ending of the day's work, rather than at both times.

2. The plan and character of development fulfill the requirements of the General Instructions except that there are practically no cross check sounding lines. These could have been executed with very little consumption of time while proceeding to and from the scene of work.
3. The plan and extent of development satisfy the specific instructions.
4. The sounding line crossings are adequate except where e day crosses w day, the latter being 1 to 2 feet deeper than the former. The reason for the difference is obscure - it may possibly be due to leadline errors as the line was examined only once on e day and not at all on w day.
5. The data is sufficient for drawing the usual depth curves.
6. The field plotting was completed to the extent prescribed in General Instructions and the office draftsman did not have to do any of it over.

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7. The junctions with adjacent sheets are satisfactory.
8. The south jetty formerly extended continuously to the shore at Cummings Pt. Traces of the jetty remain and, as they may be shoal enough to menace such craft as now pass through the opening, additional development, preferably with the drag, should be made along the axis of the old jetty.
9. The character and scope of the surveying are fair and the field drafting is excellent.
10. Reviewed by E. P. Ellis, March, 1922.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

Washington, Jan. 25, 1922.

Respectfully referred to

Chief, Section of Field Records.

Re. poor crossings of sounding lines on N. S. 4181, I must say that Mr. Camp and I have carefully investigated the same from the standpoint of tidal reductions. These have been properly made on the days concerned, due allowance being made for difference in tide at place of soundings and at place of location of tide staff. From the best tidal data which we have at hand, our tide reductions obtained appear to be correct.

The statement that "practically all soundings

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

Washington, ....., 192

Respectfully referred to

on this day (w day) cross work of previous days in this vicinity 2'-3' high " is not altogether correct, and might I suggest that poor crossings can be due to poor position fixes, which might account for some of the discrepancies noted.

Respectfully submitted,  
E. A. Le Lacheur  
Computer, Div. T. & C.

January 13, 1922.

Division of Hydrography and Topography:

Division of Charts:

Tidal reductions are approved in  
10 volumes of sounding records for

HYDROGRAPHIC SHEET 4181

Locality: Stone Inlet to Charleston Harbor, So. Carolina.

Chief of Party: R. F. Luce in 1921.

\* Plane of reference is mean low water, reading

3.2	ft.	on	tide	staff	at	Wharf,	Folly	Beach,	Folly	River.		
2.2	"	"	"	"	"	"	Dewees	Inlet,	off	Dewees	Island.	
4.9	"	"	"	"	"	"	Harrison's	Wharf,	Bull	Island,	Bull	Creek.
3.1	"	"	"	"	"	"	Lighthouse	Inlet,	Morris	Island.		

Condition of records: Satisfactory.



Chief, Division of Tides and Currents.

\* Allowance made for difference in tide at place of soundings.



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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:

U. S. Coast and Geodetic Survey.

Register No. 4181 Field Letter "D"

State South Carolina

General locality Coast Charleston Harbor

Locality  Stono River Entrance to Charleston Entrance

Chief of party R. F. Luce

Surveyed by R. F. Luce, R. D. Horne, F. E. Oleson

Date of survey August - October 1921

Scale 1 : 20000

Soundings in Feet

Plane of reference M. L. W.

Protracted by D. E. Whelan Soundings in pencil by W. M. Malone M. Luff

Inked by G. A. Everett Verified by

Records accompanying sheet (check those forwarded):

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

10 Sounding books, --- Wire-drag books, --- Photographs.

Data from other sources affecting sheet

Remarks:

Tide books covering work have been previously forwarded.

Marigrams from Lighthouse Inlet covering part of work have been previously forwarded.

*Applied to compilation of chart #491*

*May 3, 1935  
G. H. S.*

Applied (Long.  $79^{\circ}52.8'$  westward) to chart 792 November 30, 1936. HEM.