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

State *Miss & Ala.*

11-5613

DESCRIPTIVE REPORT.

Hyd. Sheet No. **4020**
4021

LOCALITY:
Mississippi Sound

1917-18

CHIEF OF PARTY:
Siems & Devan

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DATE OF INSTRUCTIONS.

October 30,, 1918.

~~Copy for Sheet D~~7 fgd 4020 +
4021GENERAL DESCRIPTION.

In general , the waters covered by hydrographic sheets "D" and "E" are navigable by boats of six to seven feet draft. There are, however, natural and dredged channels to accommodate vessels of greater draft to and from ports of importance. The only dangers to be encountered in these waters are the unmarked bars and shoals, the most important of which are enumerated and described below .

BARS AND SHOALS.

Belle Fontaine Bar. The Belle Fontaine bar extends out from the Belle Fontaine Point, in a southerly direction, for over two nautical miles with only two to four feet of water over most of it. To be sure of avoiding it is well to keep at least two nautical miles offshore on either side of the point and even at a greater distance opposite the point.

Round Island Flat. This flat is triangular in shape, the sides being parallel, and its shape practically similar to that of the island. It extends, in the main, in the northwesterly direction, while on the southern end, it extends in a northeasterly and southwesterly direction. The three limiting points are a point 1 1/2 miles N.W. of the northernmost point of the island, and the ends of a line about 2-1/4 miles long running N.E. and S. W. 1/4 mile from the southern shore and falling about the same distance on either side of the longitudinal axis of the island.

On the north shore of Horn Island, there are several small shoals bordering the channel which is marked by buoys. The (buoys) however, being of the second class type, care should always be taken to be well in the channel and to avoid coming in too close to that shore. *buoys?*

On the north shore of Petit Bois Island, the bottom is very irregular and therefore that shore should not be approached too close especially at the center where the shoal extends out about a mile from shore with but five feet of water over it.

The Grand Batture Bar. This bar extends out from the western end of Grand Batture Island, in a southerly direction for three and one half miles and is only marked by a buoy of the second class type- a red nun buoy No.8, which is in about nine to ten feet of water. In this vicinity, there still remains pilings of the former beacon, which, because they are submerged at high water are a dangerous obstruction to navigation. It is understood, according to a statement of the Light House Inspector that a new beacon has been recently built at the old location.

The shoal off the south end of Isle aux Herbes is quite steep to in places, and little warning is given by the leadline in approaching or rounding it.

CHANNELS AND ANCHORAGES. Horn Island Pass. This pass is the entrance to Pascagoula as well as to the other towns in the vicinity, such as Moss Point and Gautier, etc. The pass is well marked, but since the shoals in the immediate vicinity are subject to change, especially after storms, entrance should not be made without a local pilot who is to be found anchored in that vicinity.

This pass has been developed by the shore party in charge of Mr. L. P. Raynor. On account of irregularity of lines and some doubt as to when

hydrographic signal Midas was rebuilt in different positions, this pass was carefully resurveyed by the Str. HYDROGRAPHER while completing other work in this locality. It was found that a range on the west end of Petit Bois, would assist navigating the narrow dredged cut over the bar.

In order to prevent confusion the HYDROGRAPHER'S survey of the pass will be shown on sheet "D", while that of the shore party's is plotted on sheet "E". It will be necessary, however, to plot the HYDROGRAPHER'S work on tracing over sheet "E" and then transfer same to sheet "D" as sheet "D" does not contain one of the signals used in the work. A dangerous shoal about 10 feet of water exists 3/4 mile W.N.W. of Horn Island Light House.

The channel from Horn Island Pass to Pascagoula is well marked. The directions should closely be followed, for there are prominent shoals on either side. The Pascagoula water tank can be seen throughout the entire route, but is not to be used as a range.

The channel leading into Grand Bay is bounded on both sides by bars, on the west by the bar extending out from the eastern end of Grand Batture Island and on the east by the Point aux Pins bar. This channel is used almost exclusively by sportsmen, oyster and fishermen, though it can be used by shallow draft vessels to take refuge in Grand Bay. The bars being unmarked, however, entrance should not be attempted without local knowledge.

PASS AUX HERON dredged channel has shoaled considerably and only eight feet can be carried through at this time during normal tides. The project depth is ten feet, but dredging in the channel cannot be undertaken for some time because of other more important dredging work in connection with numerous shipbuilding enterprises along the Gulf Coast. The dredged cut between Beacon No. 4 and Day Mark No. 4 is also quite narrow and it requires care to navigate this part of the channel. A range would materially help matters as recommended in former correspondence. A temporary range was established for the Str. HYDROGRAPHER and was found to be exceedingly helpful. For plan of survey made by U. S. Engineers of Pass aux Heron in 1907, see House document No. 967--60th. Congress.

The new inlet between Petit Bois Island and Dauphin Island was carefully surveyed by the Str. HYDROGRAPHER'S launch and it was found that a comparatively straight and deep channel exists. It will be interesting and probably important for commerce to know if changes will take place in the inlet in the future. The work done in this inlet previous to December 19th. is doubtful in many places and may be rejected as the work after that date fully covers the area of the inlet.

DOG KEY PASS has been found to have more water over the bar than shown on the present chart otherwise the location and depth of the pass remains about the same. Similarity between the shape of the shoals bordering this pass and those bordering the new inlet between Petit Bois Island and Dauphin Island will be noticed. A deep channel was found between Dog Key and Ship Island, the bar at the entrance is comparatively shoal.

BILOXI CHANNEL, dredged cut, has shoaled considerably and at the present time only six feet can be carried over hard sand close to the beacons with favorable tide.

GENERAL. In general the areas of the Sound are comparatively regular in depth, but the edges of numerous long shoals extending from the north shore of the sound are somewhat lumpy.

The Gulf bordering on the islands of the Sound are steep to but great care must be exercised in navigating opposite the inlets as here the bottom is exceedingly lumpy and irregular. It is surprising to notice the absence of ranges as aids to navigation in this locality. Only in this form of marking can absolute dependence be placed, where channels are narrow and in close proximity of dangerous shoals.

TIDES Tides were observed at Biloxi, Miss. an automatic tide gauge kept in operation by the Mississippi River Commission, International Life Bldg., St. Louis, Missouri, who are kind enough to furnish us with the results of their observations. Staffs were read at the Quarantine Station at Ship Island, Horn Is. Light House, Pascagoula, Dauphin Island, Bayou la Batre and Beacon No. 8 in Pass aux Heron.

In plotting the positions on smooth sheet note should be made in the sounding record as to what tide station is to be used in the reduction of soundings in difference localities.

NOTE. (Sheet E) The shore party reports that in originally plotting up the smooth sheet that hydrographic signal Tep and Midas were plotted incorrectly and used in plotting positions, except in the following positions where the correct position of Tep was used: 18 - 26K', 38 - 51K', 74 - 83K', Launch ELIZABETH, shore party. (See recovery note for Δ Petit for position of "Pet").

** Note*

The correct position of these signals are plotted with blue circles while the incorrect positions or those used in plotting positions are indicated by red circle. (At this time the replotting of work in question has not been done).

The shore party formerly in charge of Mr. L. P. Raynor also reports that the record of signal "Pet" is missing but that its position is plotted on the sheet.

Respectfully submitted,

H. B. Seims

H. B. G. Engineer, C. & G. S.

** All positions containing
Tep, Midas and (Lad or Lad³) replotted
and checked, August 12-17, '18 by E.H.B.
Note made in sounding records.*

LETTER OF DAY	DATE	BOAT	MILES	NO. OF SDGS.	NO. POSITIONS	NO. ANGLES.
A	9/18/17	Ship.	38	1,558	148	296
B	9/19/17	"	35	1,319	139	278
C	9/21/17	"	34	998	98	196
D	9/26/17	"	36	1,128	110	220
E	10/1 /17	"	19	664	53	106
F	10/2 /17	"	17	617	73	146
G	10/3 /17	"	19	447	52	104
H	10/4 /17	"	19	642	62	124
I	10/5 /17	"	23	679	77	154
J	10/8 /17	"	2 $\frac{1}{2}$	97	12	24
K	10/10/17	"	9	272	40	80
L	10/11/17	"	43 $\frac{1}{2}$	894	129	258
M	1/ 9/18	"	19 $\frac{1}{2}$	557	79	158
a	9/25/17	L. #51.	16 $\frac{1}{2}$	716	62	124
b	9/26/17	"	24	1,170	81	162
c	10/ 2/17	"	13	488	49	98
d	10/ 3/17	"	33	912	98	196
e	10/ 5/17	"	27	1,060	91	182
f	10/ 6/17	"	12	395	45	90
g	10/ 8/17	"	10	416	51	102
h	10/10/17	"	21	730	74	148
j	10/11/17	"	33	1,035	99	198
k	1/ 9/18	"	20	651	62	164
	5/18/17	"ANNE"	16 $\frac{1}{2}$	543	64	128
	5/19/17	"	9	405	38	76
	7/20/17	"	17	746	79	158
	7/21/17	"	15	500	62	124
	7/23/17	"	21	694	77	154
	7/24/17	"	23	773	87	174
	7/25/17	"	17	582	67	134
	7/26/17	"	23	927	85	170
	7/27/17	"	22	911	89	178
	8/ 1/17	"	6	320	22	99
	8/ 2/17	"	3 $\frac{1}{2}$	168	18	36
	8/ 3/17	"	13	574	46	92
	8/ 4/17	"	10	482	37	74
	8/7 /17	"	19	684	72	199
	8/8 /17	"	10	594	56	112
	8/9 /17	"	10	488	45	90
	8/13/17	"	14	467	64	128
	8/16/17	"	15 $\frac{1}{2}$	675	64	128
	8/30/17	"	11	590	51	102
	9/ 8/17	"	15	798	73	146
	9/24/17	"	1 $\frac{1}{2}$	108	11	22
y	10/ 5/17	"	1 $\frac{1}{2}$	62	8	16
z	10/ 6/17	"	3	148	12	24
	10/10/17	"	10	453	46	92

LETTER OF DAY	DATE	BOAT	MILES	NO. SDGS.	NO. POSITIONS	NO. ANGLES.
b	10/11/17	"ANNE"	10 $\frac{1}{2}$	255	44	88
c	10/16/17	"	9 $\frac{1}{4}$	375	44	88
d	10/17/17	"	5	231	35	70
1	3/15/18	"ACACIA"	4 $\frac{1}{2}$	252	22	44
	TOTALS.		864-3/4	31,309	3,317	6,434

August 30, 1918.

Division of Hydrography and Topography: ✓ *HCH*

Division of Charts: ✓

LIBRARY

Place with descriptive report
of hydrographic sheet No. *4020*

Tidal reductions have been approved in
25 volumes of sounding records for

Drawing Section. ✓

HYDROGRAPHIC SHEET 4020

Mississippi Sound, Miss. and Ala.
F. B. T. Siems in 1917-1918.

Plane of reference is
Mean low water, reading

2.0	feet	on	staff	at	Beacon 8, Pass aux Herons, Ala.
2.1	"	"	"	"	Portersville or Bayou la Batre, Ala.
1.9	"	"	"	"	Dauphin Island, Ala.
2.2	"	"	"	"	Horn Id, Pass Light, Ala.
2.0	"	"	"	"	Pascagoula, Miss.
3.8	"	"	"	"	Bay St. Louis, Miss.

L. P. Shidy

Acting Chief, Section of Tides and Currents.

REFER TO NO.

5-EMK

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

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CHARTS (H) ←

August 24, 1917, placed with descriptive report
of hydrographic sheet No.

4021

Drawing Section

Division of Hydrography and Topography: ✓ HCS

Division of Charts: ✓

Tidal reductions have been approved in
20 volumes of soundings for

HYDROGRAPHIC SHEET 4021

Mississippi Sound, Mississippi
by F. B. T. Siems in 1917 - 18.

The plane of reference is
Mean low water, reading

5.2 ft. on tide staff at Biloxi, Mississippi
2.2 ft. " " " " Ship Island, "
3.8 ft. " " " " Bay St. Louis, "

L. P. Shidy

Acting Chief, Section of
Tides and Currents.

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. Sheet "E" 4020

State . Mississippi and Alabama

General locality . Coast of Mississippi and Alabama.

Locality . From Pascagoula to the eastern limit of Mississippi Sound.

Chief of party . H. A. Seran and F. B. T. Siems.

Surveyed by F.B.T.S., L.P.R., F.E.O., G.L., E.H.B., G.O., & R.R.M.

Date of survey . August, 1917 to January, 1918.

Scale 1: 40,000.

Soundings in . . feet

Plane of reference . Mean low water.

Protracted by N. Cherniack
H. Odesky . Soundings in pencil by N. Cherniack.

Inked by N. Cherniack . . Verified by

Records accompanying sheet (check those forwarded):

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

9
13 Sounding books, _____ Wire-drag books, _____ Photographs.

3 25

Data from other sources affecting sheet House document No. 967-60th. Congress.

Horizontal angle book, Miss. Sound, recovery notes, topographic sheets, Dauphin Is., Pascagoula, Horn Is. Light House, Portersville Bay and Beacon No. 8, Pass aux Heron tide records. Hydrographic Descriptive report for sheets "D" & "E" and topographic descriptive report. List of Plane table

Remarks: positions

Launch # 51
Elizabeth
Ship

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. Sheet "D" **4021**

State . **Mississippi**

General locality **Coast of Mississippi**

Locality . **Biloxi, Miss. to Pascagoula, Miss.**

Chief of party . **H. A. Seran, / F. B. T. Siems.**

Surveyed by . **F.B.T.S., W.D.S., L/P.R., G.L.**

Date of survey . **July, 1917 - October, 1917.**

Scale **1: 40, 000.**

Soundings in . **feet.**

Plane of reference . **Mean low water.**

* Protracted by **E.K/E., N. C., H.O.** Soundings in pencil by **E.K.E.**

* Inked by **N. Cherniack** Verified by

Records accompanying sheet (check those forwarded):

**Launch 51..
Elizabeth
Ship**

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

6 **20** Sounding books, _____ Wire-drag books, _____ Photographs.

Data from other sources affecting sheet . **Topographic sheets.**

and descriptive reports. Hydrographic descriptive report for sheets D. & E. Tidal data of Biloxi automatic gauge, Ship Is. Quar. tide records and Horn Is. Light House tide record. List Remarks: **of Plane table positions**

* *Work of S. Parly only.*

Applied to Chart 873 A.G.R.

Applied to Gulf S. H. H. Chart 876 - 3-17-48 m.m.R.



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