

4219

Diag. Chart No. 1270

4219

Form 504 DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY
State: <u>Louisiana</u>
11-5613
DESCRIPTIVE REPORT.
Hyd. Sheet No. <u>4219</u>
LOCALITY:
<u>Chandeleur Sound</u>
<u>North, Freeman</u>
<u>and Old Harbor</u>
<u>Islands.</u>
<u>1922</u>
CHIEF OF PARTY:
<u>F. S. Borden</u>

DIRECTOR
HYDROGRAPHIC SURVEY
SALES
GEODESY

OCT 30 11 23 AM '22

OFFICE
LIBRARY
WASHINGTON

DESCRIPTIVE REPORT
TO ACCOMPANY
CHANDELEUR SOUND, LA.
HYDROGRAPHIC SHEET

(FIELD LETTER "D")
SEPTEMBER 1922

F. S. Borden
Chief of Party.

Descriptive Report
to accompany
Chandeleur Sound, La.
Hydrographic Sheet

(Field Letter "D")
September 1922

F. S. Borden
Chief of Party.

OBJECT AND INSTRUCTIONS

While engaged in making hydrographic surveys off Chandeleur and Breton Islands it was found that discrepancies existed on chart # 194 west of North, Freemason and Old Harbor Islands. It was recommended that sufficient work be done to correct these discrepancies. Instructions were received to make the necessary surveys and to continue the work until a satisfactory junction was made with the old survey. At first it was thought that this work could be included on the same sheet with work that was being done east of Chandeleur Islands but the area to be surveyed proved to be larger than expected and it became necessary to make this survey on a new sheet (Sheet "D")

AREA COVERED AND CHANGES FOUND

The area which it was necessary to survey before a junction was made with the old survey extends approximately four miles west and south of the chain of islands North, Freemason and Old Harbor Island and includes the greater part of Shoalwater Bay which is formed by this chain of islands and Chandeleur Island. The changes here have been caused by the shifting of the above mentioned chain of islands to the southeastward. This shifting is caused by the Northwest Storms which occur frequently during the winter months.

In general the channel through Chandeleur Sound, which runs parallel to North, Freemason and Harbor Islands, was found to have deepened. The controlling depth however through the Sound remains the same. The axis of the channel remains about the same but the channel buoy, which has evidently been placed in position by a bearing and distance from Old Harbor Island is shown on the chart 1.2 miles to the Northward of its actual position. Using this buoy as an aid now takes a vessel very close to the broken ground extending northwestward from Old Harbor Island. The buoy should be moved about one mile to the westward or to the position in which it is shown on the chart. The bottom over the area that was at one time land area is very irregular and lumpy, over all other areas it is even and regular. The changes on the east side of Shoalwater Bay are slight, due to the unchangeable land area in this locality. The channel shown on chart 194 as Smack Channel is almost identical with that shown on the chart.

CONTROL

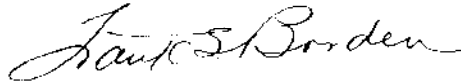
Control for the survey was obtained from tall hydrographic signals which had been erected on Chandeleur Island for the outside survey, supplemented by triangulation stations on North, Freemason and Old Harbor Islands and a few topographic and hydrographic signals. The signal shown as "Free" is triangu-

lation station Freemason 2, the original station Freemason having been washed away. Station Freemason 2 was established on Reference Mark No. 2 of the original Freemason station and the position computed from the distance and direction taken to the reference mark at the time the original station was established. The topographic signals shown on Chandeleur Island were taken from the topographic sheet of the Steamer Baché. Other topographic signals were taken from surveys made by this party.

TIDES

For the reduction of soundings tidal observations were made at Chandeleur Island Light House.

Respectfully submitted,



Frank S. Borden.

Hydrographic Statistics
to accompany
Descriptive Report
on
Sheet "D"
Chandeleur Sound, Louisiana.

Date	1922	Letter	Vol.	Positions	Soundings	Stat. Miles	Vessel
Aug.	30	A	1	32	382	12.7	Ship
Sept.	5	B	1	30	372	14.2	"
"	14	C	1	48	537	18.5	"
"	15	D	1	44	450	14.7	Launch
"	20	E	2	55	612	20.8	Ship
"	21	F	2	97	1061	58.3	"
"	22	G	2	55	554	21.7	"
Oct.	4	H	3	99	1201	45.5	"
"	5	J	3	30	334	12.2	"
"	6	K	3	63	729	27.2	"
"	6	K	4	14	156	4.2	"
"	11	L	4	8	106	3.9	"
<hr/>							
Sept.	21	A	5	82	902	36.4	Launch
"	22	B	5	55	627	24.2	"
Oct.	4	C	6	74	804	31.0	"
"	5	D	6	34	383	14.7	"
"	6	E	6	63	738	25.0	"
"	6	E	7	28	297	12.5	"
"	9	F	7	48	670	23.3	"
"	11	G	7	37	405	15.7	"
<hr/>							
Total				994	11,320	416.7	

The soundings were taken in fathoms and feet and reduced to feet and tenths. The plane of reference was Mean Low Water. Tide gauge located at Chandeleur Light House Louisiana.

Lat. 30° - 02' 52.45"
Long. 88 - 52' 17.94"

The plane of reference reading on gauge was 2.0 feet.
Lowest Tide observed reading on gauge was 1.8 ft. on July 5 and July 6, 1922
Highest tide observed reading on gauge was 4.6 ft. on October 3, 1922.

Hydrographic Sheet No. 4219.

Chandeleur Sound, La.

The survey covered by this sheet appears to be all that is necessary to develop bottom conditions and although the lines are run approximately $\frac{1}{2}$ mile apart the character of the bottom would indicate that this is close enough for a fair development. The cross lines verify this.

The sheet was developed up to and including pencil soundings and verification found this work good, except that the pencil used to plot soundings and run curves was too hard and indented the paper making it hard to ink. The red soundings shown were transferred by the Field Party from Chart No. 1625. These soundings agree perfectly with the soundings of this survey but are not correct in location. The two shoals shown just west of Signal Stop were transferred from boat sheet but the position and extent is in question.

John D. Turner
Dec 18/22

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

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4219

Surveyed in 1922.

Instructions dated Sept. 27, 1922.

Chief of Party: F. S. Borden.

Surveyed by F. S. Borden and W. D. Patterson.

Protracted and Soundings plotted by F. S. Borden and W. D. Patterson.

Verified and inked by J. D. Torrey.

1. The records as well as the plan and character of development fulfill the requirements of the General Instructions.
2. The plan and extent of development satisfy the specific instructions. The latter did not specify the spacing of the sounding lines which are one-half mile apart. Although this spacing is excessive the information given is sufficient for drawing all curves, and the development appears to be ample.
3. The sounding line crossings are excellent.
4. The field plotting prescribed in the General Instructions was completed by the field party, and was found to be good, the only criticism being that the pencil used was so hard that all marks were indented in the paper so deeply that erasures could hardly be made.
5. Junctions with adjacent sheets are satisfactory.
6. No further surveying is required within the area of the survey.
7. The character and scope of the surveying and field drafting are excellent.
8. Reviewed by E. P. Ellis, January, 1923.

Nov. 24, 1922.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 4219

Locality: Off Freemason Island, Chandeleur Sound, La.

Chief of Party: F. S. Borden

Plane of reference is

2.0 ft. on tide staff at Chandeleur Island Lighthouse, La.

For reduction of soundings,

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. T. Wade

Chief, Division 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. 4219 (Field Sheet "D")

State Louisiana

General locality . . . Chandeleur Sound

Locality North, Freemason and Old Harbor Is.

Chief of party Frank S. Borden

Surveyed by Frank S. Borden and W. D. Patterson

Date of survey September - October, 1922.

Scale 1:80,000

Soundings in feet

Plane of reference M. L. W.

Protracted by FSB - WDP. Soundings in pencil by F. S. B. - W. D. P.

Inked by J. D. Torrey Verified by J. D. Torrey

Records accompanying sheet (check those forwarded):

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

Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Remarks:

Tidal Records will be forwarded with Sheet "C" at a later date.