

4472

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

State: Georgia

11-5013

DESCRIPTIVE REPORT.
*Hydrographic*⁷ Sheet No. 4472

LOCALITY:
Georgia Coast
St. Catherine Id. & Vicinity

1925

CHIEF OF PARTY:
F. S. Borden

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET

NO.....

(Field Sheet "J")

ST. CATHARINE SOUND

AND

APPROACHES

GEORGIA

F. S. BORDEN

CHIEF of PARTY

DESCRIPTIVE REPORT

To Accompany

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AND

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CHIEF of PARTY

EXTENT

This sheet comprises a survey of St. Catharine Sound and approaches. It adjoins sheet "H" to the southward, sheet "I" to the northward and the offshore sheet to the eastward. The work was carried up the inlet until a junction had been made with the older surveys.

CHANGES

Extensive changes have taken place in this locality particularly over the shoals at the entrance to the sound. The depth over the bar has increased to 12 and possibly 13 feet. The controlling depth is on the inner bar. The channel narrows down considerably in this locality. The buoys as located at present are not well placed to mark the best water.

LANDMARKS

The only prominent land mark as seen from the sea buoy is the high dune shown on the sheet as **O ABLE**. From the sea buoy the south entrance point of the sound **appears** higher than the north entrance point, the woods reaching almost to the high water mark. The edge of the wood line can be considered as the tangent to the point on this side of the sound when seen from offshore.

ACCURACY

In general crossings are good. The line 118-122 D has a bad crossing of three feet. Apparently this line is in error as the soundings appear low. Investigation fails to discover the cause of the error. The sounding, nine feet, between 59 and 60 F is probably one fathom in error and should be 15 feet. Several crossings in the sound show slight discrepancies due probably to sudden changes in current with consequent non-uniformity of speed over the ground. It is believed however that enough lines have been run in this locality to make it possible to interpret the contour of the bottom correctly.

If questions arise in regard to work shown on the smooth sheet it is recommended that weight be given to the boat sheet as the work shown thereon was carefully scrutinized when field work was in progress.

Respectfully submitted,

Frank S. Borden.
Frank S. Borden.

Statistics Sheet No.

(Field Sheet "J")

Date, 1925	Letter	Volume	Positions	Soundings	Miles Statute	Vessel
February 27	A	1	81	361	23.0	Lch. No. 2
May 14	B	2	98	366	18.0	Mikawe M.S.
" 15	C	2	72	270	13.0	" " " "
" 16	A	1	139	702	35.3	" " " "
" 25	B	1	62	276	14.5	" " " "
" 28	C	1	77	394	18.0	MIKAWA
" 28	C	2	56	277	12.5	Mikawe M.S.
" 29	D	2	122	622	34.5	MIKAWA
" 30	E	2	106	504	25.0	Mikawe M.S.
" 30	E	3	34	190	9.0	" " " "
May 1	F	3	89	416	25.5	" " " "
" 5	G	3	127	477	24.5	" " " "
" 6	H	3	44	234	13.0	MIKAWA
" 6	H	4	131	531	28.5	Mikawe M.S.
" 7	J	4	149	515	27.5	" " " "
" 8	K	4	72	243	12.0	" " " "
" 8	K	5	41	90	5.0	" " " "
" 11	L	5	46	124	5.0	" " " "
" 12	M	5	121	532	27.0	" " " "
" 13	N	5	103	479	21.0	MIKAWA
" 13	N	6	16	93	11.0	MIKAWA
" 14	P	6	26	134	6.0	MIKAWA
" 15	Q	6	17	71	3.5	MIKAWA
June 10	R	6	80	305	16.5	MIKAWA & M.S.
TOTAL			1909	8206	428.8	

OCT 19 1925

~~Division of Hydrography and Tides and Currents~~

Division of Charts:

Tide reducers are approved in
volumes of sounding records for

HYDROGRAPHIC SHEET NO. **4472** (field letter "J")

Locality: **Approaches to St. Catharine's Sound, Ga.**

Chief of Party: **P. S. Borden in 1925.**

Plane of reference is	St. Catharine
2.3 ft. on tide staff at	Tybee
0.0 " " " " "	Wassaw
1.4 " " " " "	

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.

Chief, Division of Tides and Currents.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND REFER TO No.

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

October 21, 1925.

REPORT ON HYDROGRAPHIC SHEET NO. 4472.

The protracting was accurate and the time intervals carefully adhered to in the plotting of the soundings.

The positions of the beginning and ending of lines were not given in the sounding records.

The sounding records were kept very neat.

The drafting conforms to the requirements of the general instructions.

The time interval as required by the general instructions was not followed in this work. The time interval used was ^{and 45} 30 ~~minutes~~ for ^{seconds} 1 seconds depth under 2 fathoms.



H. R. Edmonston.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

November 24, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4472

St. Catherine Sound, Georgia

Surveyed in 1925.

Instructions dated May 8, 1924 and January 10, 1925.

Chief of Party, F. S. Borden.

Surveyed by L. C. Wilder and G. I. Aslakson.

Protracted and soundings plotted by B. G. Jones.

Verified and inked by H. R. Edmonston.

1. The records conform to the requirements of the General Instructions except for the failure to describe beginnings and endings of sounding lines.
2. The plan and character of the survey conform to the requirements of the General Instructions except that the time intervals between soundings are greater than called for in paragraph 225 of the General Instructions. It is particularly important in a region like that covered by this sheet, consisting as it does very largely of narrow ridges and valleys, that the soundings be as closely spaced as possible in order to show all the changes in the bottom.

The system of sounding lines adopted for this survey in the entrance channel and inside waters cannot give the best results in such formations. The lines are, for the most part, parallel to the axes of the channels and average 150 meters apart. As some of the ridges and valleys are of less width than this space, it is quite likely that some of them were missed, and it is practically certain that the minimum depths on the ridges and maximum depths in the channels were not found, particularly so in view of the excessive distances between soundings.

There seems to be a tendency to interpret the first part of the second paragraph of paragraph 211 of the General Instructions as a recommendation to develop all channels by lines parallel to the

axes. This recommendation should apply only when the current is excessive, as lines crossing the channels carry the maximum information. In St. Catherine Sound the flood current is 1.5 knots and the ebb is 2.2, which are not sufficient to reduce the accuracy of boats' positions or of soundings.

3. The plan and extent of the survey satisfy the specific instructions, except that additional development should have been made on the outer bar and on the three shoal spots south of it. ✓
4. The sounding lines are adequate considering the uneven character of the bottom.
5. The information appears to be sufficient for drawing the usual depth curves. However, the lack of completeness of the survey due to the causes noted in paragraph 2 has probably resulted in some inaccuracies in the curves. ✓
6. The usual field plotting was done by the field party and was found to be accurately and neatly executed.
7. The junctions with the surveys to the eastward and southward are satisfactory. The sheet north of this one has not been completed. The correctness of the two 18 foot soundings on H. 3983 at lat. $31^{\circ} 37'$, long. $81^{\circ} 03'$ is verified by this survey, but additional development would have been desirable in this area. ✓
8. No additional surveying is required except perhaps in the area mentioned in the preceding paragraph and in paragraph 3.
9. The character and scope of the surveying are fair and the field drafting excellent.
10. Reviewed by E. P. Ellis, November, 1925.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4472

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. _____

Field Sheet "J"
REGISTER NO. 4472

State Georgia _____

General locality Georgia Coast _____

Locality St. Catherine Sound and Vicinity _____

Scale 1:50,000 Date of survey 27 June 10 1925

Vessel Albatross _____

Chief of Party W. L. Borden _____

Surveyed by L. L. Alden; J. L. Alden _____

Protracted by S. G. Jones _____

Soundings penciled by S. G. Jones _____

Soundings in ~~fathoms~~ feet

Plane of reference Mean High Water _____

Subdivision of wire dragged areas by _____

Inked by _____

Verified by _____

Instructions dated June 24 1924

Remarks: _____