

4376

Diag. Ch. 1243

U.S. COAST AND GEODETIC SURVEY
DEC 2 1924
Acc. No.



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

State: Florida

11-5613

DESCRIPTIVE REPORT.
 4376
 Hydrog Sheet No.

LOCALITY:
East Coast
Fernandina to St. Johns River

1924

CHIEF OF PARTY:
E.S. Borden

4376

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET NO. 4376

(Field Sheet " C ")

FERNANDINA to ST. JOHNS RIVER

July - August

1924.

STEAMER BACHE

F. S. BORDEN,
Commanding.

EXTENT:

This sheet includes the area extending off shore from the beach to a junction with the hydrography shown on sheet No. 3770. It also includes the hydrography of Fort George and Nassau Inlets and shows approximately four miles of the inside route as it approaches South Amelia river, crosses Nassau Sound and enters Sawpit creek. The survey also overlaps the work of the U.S. Engineers at the entrance to the St. Johns river but does not extend into the inlet, which was thoroughly surveyed by the Engineers in June, 1924.

CHANGES:

The principal changes which have taken place are confined largely to the two inlets. The depth of water over the Nassau inlet bar however remains about the same but the channel has straightened, due no doubt, to the building up of the islands midway between the two entrance points.

It was found necessary to carry the hydrography up the Nassau and South Amelia rivers farther than had been expected in order to obtain a junction with the old surveys. In the case of the South Amelia river it was carried up to the end of the first reach in order to develop the shoal spit extending southward from the point opposite the mouth of Harrison creek (Chart No. 577). Attention is called to the sounding which reduces to minus two feet at the outer end of this spit. Vessels going north on a mid channel course and starting to round the point too soon often ground on this spit. In the case of the Nassau river the work was carried up somewhat above Middle Marsh Island in order to correct changes caused by the change in shape and size of this Island.

TIDES:

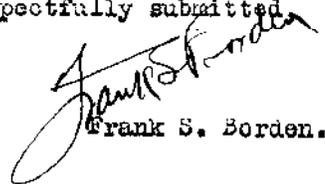
All soundings were reduced from tidal observations made either at Atlantic Beach or Fernandina. In the case of work inside the inlet the time of tide was taken the same as at Fernandina while outside it was taken the same as Atlantic Beach or thirty minutes earlier than Fernandina.

LANDMARKS FOR CHARTS:

The only prominent objects as seen from seaward are the St. Johns Lighthouse, Fernandina Lighthouse and Mt. Cornelia.

The sand dunes on the south entrance point of Nassau Sound are higher than any other dunes between the St. Johns river and St. Marys river and it is recommended that they be shown on the chart.

Respectfully submitted,


Frank S. Borden.

STATISTICS FOR SHEET " C "

Date: 1924	Letter	Volume	Positions	Soundings	Miles, statute	Vessels.
July 17,	A	1	109	605	18	Launch #2
" 18	B	1	135	709	24	" "
" 21	C	1	41	214	12.3	" "
" 21	C	2	20	116		" "
" 22	D	2	151	860	32.0	" "
" 23	E	2	106	583	21.3	" "
" 23	E	3	23	135	4.9	" "
" 24	F	3	122	640	23.5	" "
" 25	G	3	101	510	20.2	" "
August 1	H	3	18	96	17.5	" "
" 1	H	4	66	336		" "
" 4	J	4	49	224	9.3	" "
" 5	K	4	97	476	23.5	" "
" 18	L	4	56	225	9.5	" "
" 21	M	5	97	429	16.2	" "
" 22	N	5	96	357	16.3	" "
TOTALS			1287	6515	248.5	

Section of Field Records.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
volumes of sounding records for

HYDROGRAPHIC SHEET **4376**

Locality: **East Coast of Florida.**

Chief of Party: **F. S. Borden in 1934.**

Plane of reference is **mean low water, reading.**
4.8 ft. on tide staff at **Wharf, Atlantic Beach, Fla. (based on**
comparison with automatic tide gauge at Fernandina.)

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 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.

Report on Verification and Inking Hydrographic Sheet

No. 4376

Records well kept and easily read, with the exception of Vol. 4 which had been wet.

Time interval of sounding is not frequent enough to meet the requirements of the General Instructions.

No bottom characteristics are given for large areas.

In general the protracting was carefully and accurately done.

The shoalest soundings were not shown on the sheet.

Around the southeastern part of Amelia Island information was hardly sufficient for developing the usual depth curves.

C. B. Brooks

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON March 30, 1925.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4376

Fernandina to St. Johns River, Florida.

Surveyed in 1924

Instructions dated May 8, 1924.

Chief of Party, F. S. Borden.

Surveyed by W. D. Patterson and L. C. Wilder.

Verified and inked by C. B. Brooks.

1. The records do not conform to the requirements of the General Instructions in that bottom characteristics are omitted in about two-thirds of the sounding volumes.

About 90% of the area of this survey is under 4 fathoms in depth and, according to paragraph 225 of the General Instructions the time intervals should have been 15 and 20 seconds, whereas the interval of 30 seconds was maintained throughout nearly the entire work. As much of the area consists of narrow channels and ridges it is quite probable that the critical depths were often missed. ✓

2. The plan and character of the survey conform to the requirements of the General Instructions.
3. The plan and extent of the survey satisfy the specific instructions.
4. The sounding line crossings are adequate.
5. The information is sufficient for drawing the usual depth curves.
6. The usual field plotting was done by the field party. It was accurately done but care was not always taken to plot the shoalest soundings where omissions were necessary for lack of space. ✓
7. The junction with H. 3770, surveyed in 1915, shows that there has been no change in depths along the coast during the past nine years.

Covered by later survey by same party. JB

- 8. ~~There is a gap of one-half to one mile in width between the upper edge of this survey and the lower edge of the U. S. Engineers' survey of 1923.~~

*Bars & channels;
edge of survey
about 60 ft.
Outer ends
edge of
about 70 ft
JB*

✓ The spacing of sounding lines averages 200 meters over the two bars into Nassau Sound. This wide spacing, together with the fact that there are only about one-half the usual number of soundings on each line gives an inadequate representation of the two bars. Otherwise the survey may be considered adequate and no further surveying is required.

excellent

- 9. The character and scope of the surveying is ~~fair~~ and the field drafting excellent.
- 10. Reviewed by E. P. Ellis, March, 1925.

*Report approved -
A. L. Giacomini,
Chief, Field Records Section.*

*J. Sturdy
Chief Section Field Work.*

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. 4376

State Florida *field letter "C"*

General locality East Coast

Locality Fernandina to St. Johns River

Chief of party F. S. Borden

Surveyed by W. D. Patterson & L. C. Wilder

Date of survey July - Aug., 1924

Scale 1:20 000

Soundings in Feet

Plane of reference M. L. W.

Protracted by I. R. & L. C. W. Soundings in pencil by J. M. N. - F. S. B.

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, Tide books, cohier tidal data Boat sheets,

5 Sounding books, Wire drag books, Photographs.

Data from other sources affecting sheet

Remarks: