

8108

Diag. Cht. No. 1243-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ECFP-1953 Office No. H-8108

LOCALITY

State Florida

General locality Fernandina Beach

Locality Nassau Sound

194 53554

CHIEF OF PARTY

Clarence R. Reed

LIBRARY & ARCHIVES

DATE September 17, 1957

8108

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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.

REGISTER No. H-8108

Field No. ECFP-1953

State FLORIDA
General locality FERNANDINA BEACH
Locality NASSAU SOUND
Scale 1:10,000 Date of survey 12/11/53 to 4/7/54
Instructions dated 30 Sept. 1953
Vessel EAST COAST FIELD PARTY
Chief of party CLARENCE R. REED
Surveyed by E.K. McCAFFREY, C.E. HORNE & R.B. NOBLE
Soundings taken by ~~ECG~~ graphic recorder, ~~ECG~~, ~~W~~ HANDLEAD & POLE
Fathograms scaled by PARTY PERSONNEL
Fathograms checked by NORFOLK DISTRICT OFFICE
Protracted by W.L. JONNS
Soundings penciled by W.L. JONNS
Soundings in ~~3000~~ feet at MLW ~~MLW~~ *All 3 fathometers calibrated at 22.5 ft depths*

REMARKS:

lam

NOTES FOR DESCRIPTIVE REPORT
TO ACCOMPANY

Hydrographic Sheets H-8107, H8108
(Field Nos. ECFP-1853 & ECFP-1953)

Nassau Sound & Little Talbot Island, Florida

East Coast Field Party

Clarence R. Reed, Chief of Party

PROJECT CS-364

1953-54

SCALE 1:10,000

PROJECT

This survey was accomplished under instructions dated 30 September 1953, and amendment to the instructions, dated 28 December 1953, calling for basic hydrographic surveys in the vicinity of St. Marys Entrance and Nassau Sound.

SURVEY LIMITS & DATES

The survey on sheet H-8107 (Field No. ECFP 1853) covers the area on chart 577 (1947) bounded on the north by latitude $30^{\circ}28'45''$ and sheet H-8108 (Field No. ECFP 1953), on the west by Little Talbot Island, on the south by the north jetty of the St. Johns River Entrance, and on the east by longitude $81^{\circ}22'15''$. The survey on this sheet also includes the Fort George River from its entrance to the intracoastal waterway (approx. longitude $81^{\circ}27'$).

The survey on sheet H-8108 (Field No. ECFP 1953) covers Nassau Sound, westerly to Longitude $81^{\circ}29'$ and northerly to Latitude $30^{\circ}32'30''$. The survey also includes the outer coast bounded on the north by latitude $30^{\circ}32'30''$, on the east by longitude $81^{\circ}23'$, and on the south by latitude $30^{\circ}28'45''$ and sheet H-8107 (Field Sheet ECFP 1853). Sawpit Creek is also included up to the Intracoastal Waterway, longitude $81^{\circ}28'15''$.

VESSELS AND EQUIPMENT

Launch 172 (aluminum) and launch 115 (borrowed from the Ship HYDROGRAPHER), were used on both boat sheets to conduct hydrography. Both were operated from a mooring on Sawpit Creek near the Nassau Sound Fishing Camp, Florida.

Launch 172 has a turning radius of 15 meters while running at a sounding speed of 6 knots at 2500 R.P.M.

Echo soundings were obtained with graphic recorders Nos. 67, 138 SPX, and 1198, with transducers mounted inboard.* Graphic recorder No. 67 was used in launch 115 on sheet H-8108. Recorder No. 138 SPX was used in launch 115 on sheet H-8108 and in launch 172 on sheets H-8107 and H-8108. Recorder No. 1198 was used in both launches on both sheets. (*On Launch 115 units were in fish bolted to keel.)

A skiff was used for hydrography one day on each sheet when a lead line was used to obtain soundings.

TIDES & CURRENTS

The tide note is attached to this report. No currents were observed by this party on this project.

SMOOTH SHEET

The smooth sheet ^{was} ~~is to be~~ plotted by the Norfolk Processing Office.

** Smooth sheet positions from T-98045 (1951-54) & T-11453 (1951-54)*

CONTROL STATIONS

The control consisted mainly of triangulation stations and photo-hydro stations. The latter were transferred from air-compilation sheets RS-492, RS-493. Where hydrographic stations were necessary, their positions were located by cuts from sextant fixes or by sextant fixes at the station sites. Some stations were obtained by planetable survey (ECFP-Aa & Ab, 54).

to be destroyed

SHORELINE AND TOPOGRAPHY

** smooth-sheet shoreline from T-98045 & T-11453*

The shoreline and topographic details were transferred from air-compilation sheets RS-492, RS-493, RS-494. Because of apparent changes in the shoreline, a planetable survey of portions of each sheet was conducted to obtain the necessary high water-line. *Planetable info. transferred to T-98045 & T-11453*

This survey involved Bird Island and the northern tip of Little Talbot Island on Nassau Sound, and the area immediately adjacent to the mouth of the Fort George River. Revisions were made on the boat sheets of the shoreline adjacent to the mouth of the Fort George River (see sheet H-8107), and Bird Island (see Sheet H-8108).

SOUNDINGS

The depths were measured with graphic recorders, sounding poles, and hand leads. Bottom samples were obtained with armed hand leads.

CONTROL OF HYDROGRAPHY

The sounding lines of the survey were controlled by three-point sextant fixes. The fixes were taken primarily at 1 1/2 minute intervals. Jumps were experienced on the southerly portion of sheet H-8107 when the fix was switched from triangulation stations to air-photo controlled stations. A planetable survey of the stations in question, (ICE, SON, GAD, POL, BAR, DAY, & ANN), revealed a discrepancy in the positions of these stations. A number of fixes were replotted and it was found that no jumps occurred with the planetable positions of the stations. The planetable positions were plotted on the boat sheet and the air-photo positions crossed out. The replotted fixes used to check the new positions of the stations have been left on the boat sheet in pencil (see boat sheet). The planetable positions of the stations mentioned should be used in plotting the smooth sheet.

refers to H-8107

In Sawpit Creek and parts of the Fort George River where hydrographic control was difficult, positions of sounding lines were referred to distinctive shoreline details. Appropriate remarks were entered in the sounding volume.

ADEQUACY OF SURVEY

This survey is considered adequate to supersede prior surveys.

CROSSLINES

Prescribed crosslines were run with satisfactory crossings, except as noted under Miscellaneous. *(conflict on H-8107 (1953) only.)*

COMPARISON WITH PRIOR SURVEYS

In as much as this is a very changeable area, and the latest prior surveys were made in 1934, it seems inadvisable to make a detailed comparison with the prior survey. However, a general comparison reveals

4

that Bird Island in Nassau Sound has changed in shape, size, and position, and is now located in a more southerly position. The present dimensions and location were determined by a planetable survey conducted by this party. (EGFP-Aa-54)

1953 - The natural channel which is located on the north side of Bird Island now hugs the island at a distance of approximately 100 to 200 meters, as compared to 50 to 150 meters on the 1934 survey and 530 to 660 meters on the latest published chart (No. 577 pub. 1947). The natural channel south of Bird Island is shoaler than shown on the chart. A 5 foot shoal in the mouth of the north channel controls the depth. A 4 foot bar extends nearly across the mouth of the south channel. Both channels are difficult to find, even with local knowledge.

The extensive shoals at the entrances to both Nassau Sound and the Fort George River have changed somewhat in shape, but still occupy the same general positions.

In the Fort George River the shoals are more prevalent and extensive than the 1934 survey shows. At low water the Fort George River becomes a mass of sand islands. These shoals were sketched in at low water (see boat sheet). (H-8107)

COMPARISON WITH CHART

In general, the statements made under the preceding heading can be applied to this heading also. The bridges over Nassau Sound, Sawpit Creek, and the Fort George River, and the canal between Nassau Sound and Sawpit Creek, were not built in 1934 when the last survey took place, but they are shown on chart 577 (1947).

The dock charted on the Fort George Inlet at Lat. $30^{\circ}24.44'$ Long. $81^{\circ}24.68'$ is no longer standing. The only remaining evidence of it is a few insignificant piles. (H-8107)

There are also piles, some of which are submerged at high water, located on the Fort George River at Lat. $30^{\circ}25.41'$ Long. $81^{\circ}25.06'$. (H-8107)

There is a small shaky dock standing on the Fort George River at Lat. $30^{\circ}25.87'$ Long. $81^{\circ}25.41'$.

1953 - There are two wrecks of airplane cockpits on the north beach of Bird Island in Nassau Sound which are submerged at MHW. Their location is approximately Lat. $30^{\circ}29.35'$ Long. $81^{\circ}25.78'$. These are not shown on the boat sheet. They are inside the low water line.

PRELIMINARY REVIEW BY CHART DIVISION

Changes in the bottom were found as suggested by the preliminary review in the Fort George River, the Fort George Inlet, and the entrance to Nassau Sound.

The vertical and horizontal bridge clearances requested were obtained, and are as follows:

1953 - Fort George River Fixed Bridge
Horizontal Pier Clearance 38.4'
Vertical Clearance at MHW 17.5' } on H-8107 (1953)

1953 - Sawpit Creek Fixed Bridge
Horizontal Pier Clearance 38.4'
Vertical Clearance at MHW 14.2'

1953 - Nassau Sound Swing Bridge
Horizontal Pier Clearance both north and south draws between cribs - 60.0'

COAST PILOT INFORMATION

A separate report of Coast Pilot information will be submitted.

LANDMARKS FOR CHARTS

No new landmarks or discrepancies with charted landmarks are necessary for these sheets.

GEOGRAPHIC NAMES

The island found at Lat. $30^{\circ}30'$ Long. $81^{\circ}26'$ in Nassau Sound is locally known as "Bird Island". No other changes or additions to geographic names are noted. *Name list attached.*

MISCELLANEOUS

The sounding line on sheet H-8107 (Field No. BOFP 1853), between 1b and 13b, Launch 115 (see Vol. 6 pgs 13-17) fails to check with the adjacent sounding lines as to depth. It is suspected that the fathometer speed was in error and not noted. The soundings obtained indicate a uniform slope with no shoals requiring development. Omit this line from the smooth sheet and draw depth curves across approximately as per boat sheet. The line was not re-run due to ending of the field season.

Positions 21 thru 107e, launch 115, sheet H-8107 (Field No. BOFP 1853), were rejected as the soundings on these lines were in serious disagreement with soundings on adjacent lines and at crossings. These sounding lines were re-run on j and k days, March 29 and 31 using launch 172 with good agreement obtained at crossings and with soundings on adjacent lines.

The velocity corrections were obtained by averaging appropriate bar checks for each fathometer and lath and plotting these values on the curve sheets found at the end of this report.

Respectfully submitted,

Charles E. Horne
ENS., USCGS

ADDITIONAL NOTES BY CHIEF OF PARTY

Signals located by plane table in the entrance to Nassau Sound were so located because of difficulty in identification of suitable points on the photographs and also because plane table work was necessary for shoreline changes since the photography.

Signals at the south end of Little Talbot Island were located by plane table because the intersections for photo - hydro signals were weak. The plane table was needed here also for shoreline revision. (HMS-FDT) (1953)

An auxiliary boat sheet was used on survey H 8106 (EGFP 1955) because a skewed smooth sheet is needed to cover the area properly. The approximate smooth sheet limits required are indicated on the regular and auxiliary boat sheets for this survey. Depth curves north of signal MUD are not in exact agreement on the two sheets. It is believed this condition will be improved by application of the final tides and plotting on a single smooth sheet.

The highway bridge over Sawpit Creek is to be taken from the air-photos altho it was not shown on the revised planimetric map. The same is true for the Intracoastal Waterway cut canal just to the west. Also see 2804 S (HMS-FDT) and Intracoastal # 6-12

Due to engine trouble and other difficulties experienced with USCGC HYDROGRAPHER launch CS-115 as well as with aluminum launch CS-173 the time available for hydrography was seriously reduced. Consequently the 200 meter line spacing (See Paragraph 11 of Instructions 9/30/53) was extended into many areas of uniformly sloping bottom rather near the entrances to the sounds. Taking into consideration the fact that these entrances are extremely changeable it is not felt that lack of close development at these points is a serious omission. Since the entrances to Nassau Sound have controlling depths of 4' and 5' feet a close development of greater channel depths upstream is not warranted.

The controlling depths in Fort George Inlet and Fort George River appear to be 3 feet on the bar at Latitude $30^{\circ}24.9'$ Longitude $81^{\circ}24.0'$; 3 1/2 feet at Latitude $30^{\circ}24.75'$ Longitude $81^{\circ}24.6'$; 4 feet opposite signal MUD (approx. Lat. $30^{\circ}25.4'$) and 4 feet near Beacon 5 (approx. Long. $81^{\circ}25.7'$). A small amount of additional development at these points would be desirable. An attempt to run a mid-channel line on 46 to 50 h day - approx. Long $81^{\circ}24.6'$; failed because the tide was so high the channel could not be seen. A study of the air-photographs at this point indicates that the channel follows approximately between the 3 foot depth curves penciled on the boat sheet. It is narrow and difficult to follow. (H-8107)

Forwarded:

Clarence M. Reed
CDE, USCGCS
Chief of Party

TIDE NOTE TO ACCOMPANY

HYDROGRAPHIC SURVEY SHEETS H-8107 & H-8108
(Field Nos. NCVP 1853, 1953)

Portable automatic tide gages were maintained at Nassauville, Sawpit Creek Entrance, Simpson Creek Entrance, and the Fort George Club, Fort George River. No differences in time or height were applied to the observed tides. Planes of reference were furnished by the Washington Office or computed from elevations of previous tidal bench marks.

| STATION | LATITUDE | LONGITUDE | MLW ON STAFF |
|---------------------------------|----------|-----------|--------------|
| Nassauville | 30°33'.8 | 81°31.6 | 4.8' |
| H-8108 * Sawpit Creek Entrance | 30°30'.8 | 81°27'.4 | 3.2' |
| H-8108 * Simpson Creek Entrance | 30°29'.0 | 81°25'.4 | 1.5' |
| ✓ Fort George Club | 30°26'.4 | 81°26'.3 | 3.7' |

FATHOMETER CORRECTIONS

PROJECT OS-364

Hydrographic Surveys H-8107, H-8108 (Field Nos. EOFF 1853, 1953)

The corrections listed below are based on an initial set as stated in each case. Where the initial varies from the stated value on the fathogram index corrections must be entered in the sounding volumes.

FATHOMETER NO. 67

Launch 115 Initial Set at 3.0'
Dec. 11 - Dec. 15, 1953 & Jan. 21, 1954

| Correction | Depth |
|------------|------------|
| A range | All depths |
| 0.0 | |

FATHOMETER NO. 138 SPX

Launch 115 Initial at 3.0'
Dec. 17, 1953 - Feb. 3, 1954

| Correction | Depth | |
|------------|-------|------|
| A range | From | To |
| 0.0 | 0.0 | 8.8 |
| -0.2 | 8.9 | 18.0 |
| -0.4 | 18.1 | 27.5 |
| -0.6 | 27.6 | 37.0 |
| -0.8 | 37.1 | 46.0 |
| -1.0 | 46.1 | 55.0 |
| B range | | |
| -3.4 | 45.0 | 51.0 |
| -3.6 | 51.1 | 56.0 |
| -3.8 | 56.1 | 62.0 |

FATHOMETER NO. 138 SPX

Launch 172 Initial at 0.0'
Jan. 27 - March 22, 1954

| Correction | Depth | |
|------------|-------|------|
| A range | from | To |
| -0.2 | 0.0 | 22.0 |
| 0.0 | 22.1 | 32.0 |

(CONT'D NEXT PAGE)

FATHOMETER CORRECTIONS (CONT'D)

9

| A range | From | To |
|---------|------|------|
| -0.2 | 32.1 | 42.0 |
| -0.4 | 42.1 | 49.0 |
| -0.6 | 49.1 | 54.0 |
| -0.8 | 54.1 | 55.0 |

| B range | From | To |
|---------|------|------|
| -3.4 | 35.0 | 50.0 |
| -3.6 | 50.1 | 55.0 |

FATHOMETER NO. 119 S

Launch 115 Initial at 2.0'

Feb. 17 - March 18, 1954

| Correction | Depth | |
|------------|------------|------|
| A range | From | To |
| 0.0 | All depths | |
| B range | From | To |
| -0.2 | 35.0 | 49.0 |
| -0.4 | 49.1 | 50.0 |

FATHOMETER 119 S

Launch 173 Initial at 2.0'

March 23 - end of season

Must be typing -
error. ZERO is
the initial for this
fath. and this
launch on H-B107
and H-B108

| Correction | Depth | |
|------------|-------|------|
| A range | From | To |
| +0.4 | 0.0 | 22.0 |
| +0.6 | 22.1 | 30.0 |
| +0.8 | 30.1 | 37.5 |
| +1.0 | 37.6 | 45.0 |
| +1.2 | 45.1 | 52.0 |
| +1.4 | 52.1 | 55.0 |

STATISTICS TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8108 (Field No. HGF 1953)

PROJECT CS-364

| DATE 1953 | LOE | DAY LTR | VOL. NO. | LEAD LINES | NO. OF POSITIONS | STAT. MI. SDG. |
|-----------------|-----------|------------|-------------|---------------|---------------------|-------------------|
| Dec 11 | 115 | a * | 1 | 3 | 29 | 3.4 |
| 15 | " | b | 1 | 1 | 15 | 1.9 |
| 17 | " | c * | 1 | - | 132 | 17.6 |
| 18 | " | d | 2 | - | 17 | 1.7 |
| 1954 | | | | | | |
| Jan 20 | 115 | e | 2 | - | 16 | 2.7 |
| 21 | " | f | 2 | - | 40 | 5.5 |
| 22 | " | g * | 2 | - | 65 | 9.0 |
| 25 | " | h * | 2 | 3 | 36 | 4.3 |
| 26 | " | j * | 3 | 1 | 69 | 7.4 |
| 29 | " | k | 3 | - | 122 | 16.5 |
| Feb 2 | " | l | 4 | - | 64 | 10.3 |
| 3 | " | m | 4 | - | 88 | 13.9 |
| 10 | 172 | n | 445 | - | 77 | 12.8 |
| 11 | " | p | 5 | - | 63 | 10.3 |
| 15 | " | q * | 5 | - | 77 | 10.4 |
| 16 | " | r * | 546 | - | 81 | 12.8 |
| 17 | " | s | 6 | - | 60 | 9.4 |
| 18 | 115 | t | 6 | - | 31 | 3.8 |
| 23 | " | u * | 647 | - | 43 | 6.7 |
| 25 | 172 | v | 7 | - | 51 | 7.5 |
| 26 | " | w | 7 | - | 65 | 8.8 |
| 27 | " | x | 8 | 1 | 117 | 14.6 |
| Mar 3 | " | y | 8 | - | 48 | 6.4 |
| 5 | " | z * | 849 | - | 107 | 13.6 |
| 8 | " | aa | 9 | 1 | 119 | 16.2 |
| 9 | " | ba | 9410 | - | 66 | 9.3 |
| 10 | " | ca * | 10 | - | 119 | 19.6 |
| 22 | " | da | 10 | - | 28 | 3.2 |
| 23 | " | ea | 11 | - | 72 | 9.9 |
| 24 | " | fa | 11 | - | 110 | 14.4 |
| 25 | " | ga | 11412 | 1 | 52 | 6.7 |
| 29 | " | ha | 12 | 7 | 26 | 2.9 |
| Apr 1 | " | ja | 12 | 1 | 23 | 3.8 |
| 7 | 16' skiff | a | 12 | 55 | 20 | 1.8 |
| TOTAL FOR SHEET | | | | 74 | 2148 | 299.1 |

Area Surveyed: 17.2 square stat. miles

PROCESSING OFFICE
LIST OF SIGNALS

H-8108

TRIANGULATION STATIONS

| | |
|-------|--|
| ANDY | ANDERSON 2, 1933-53 |
| BIG | BIG, 1934 |
| ROAK | CROAKER (USE), 1932-53 |
| LEE | NASSAU CUTOFF LIGHT 57, 1954 (Removed. See Chart Letter 892 (1954)) |
| LIT | SOUTH AMELIA RIVER LIGHT 50, 1954 (Now #44" See → 892 (1954)) |
| MID | MID 2, 1954 |
| NAS | NASSAU, 1861-1953 |
| NORTH | NORTH (USE), 1933-53 |
| SOUND | SOUND, 1934-53 |
| TED | NASSAU CUTOFF LIGHT 57, 1954 (changed to "47" See Chart Letter 892 (1954)) |
| MELIA | MELIA, 1933 |

TOPOGRAPHIC STATIONS

SOURCE T-11453

| | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Bud | End | Hit | Jap | Ked | Lad | Nat | Oak | Yel |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|

SOURCE T-9804 (s)

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Bus | Car | Gen | Dog | Don | Gas | Jay | Joe | Low | Man |
| Met | Pal | Pat | Red | Pot | Rod | Sin | Sun | Tip | Wes |

↑ { 0 "Rod" is Sawpit Creek Lite "60"
Number changed to "48" See
Chart Letter 892 (1954)

HYDROGRAPHIC STATIONS

| | |
|------|-------------------|
| Bill | vol. 3, pg. 3 |
| Bob | vol. 1, pg. 17&22 |
| Edd | vol. 8, pg. 60 |
| | vol. 9, pg. 64 |
| Gab | vol. 4, pg. 5&6 |
| Lam | vol. 4, pg. 5&6 |

PROCESSING OFFICE
LIST OF FLOATING AIDS

| <u>BUOY</u> | <u>LATITUDE</u> | <u>LONGITUDE</u> | <u>DEPTH</u> | <u>POS. NO.</u> | <u>DATE</u> |
|-------------------------------------|-----------------|------------------|--------------|---|-------------|
| Nassau Sound Appr. Buoy 6A✓ | 30-29.41'✓ | 81-22.79'✓ | 37'✓ | 54ea✓ | 3/23/54 |
| South Amelia R. Lighted Buoy 52✓ | 30-31.70'✓ | 81-27.55'✓ | 10'✓ | 15b✓ (chart 577 has this buoy as No. 46) | 12/15/53 |

APPROVAL SHEET

HYDROGRAPHIC SURVEYS H-8107 & H-8108

The records and boat sheets for Hydrographic Surveys H-8107 and H-8108 have been inspected by me and are approved.

Preliminary positions of fixed aids to navigation located by the hydrographic party have been scaled from the boat sheet and are listed on Form 567. These aids *CL 892 (1954)* should be scaled from the smooth sheet for their final position.

Positions of the following floating aids to navigation are to be scaled from the smooth sheet (H-8108):

Nassau Sound Approach Buoy 6A ✓

South Amelia River Lighted Buoy 52 ✓

A single alphabetical series of day letters with separate colors for each vessel was used on Survey ECFP-1953 (H-8108) except that one day of skiff work at the end of the season was called "a" day (yellow). These errors were not discovered until considerable work had been done. No confusion should result altho standard practice was not adhered to. ✓

Clarence R. Reed
CDR, USC&GS
OinC, East Coast Field Party

PROCESSING OFFICE ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8108 (Field No. ECFP-1953)

GENERAL

With the exception of the omissions noted by the Chief-of-Party, this appears to be an excellent basic survey. Soundings on crossline 13 thru 25n^{*} (blue) do not agree with surrounding hydrography, how-ever, agreement on the other lines was very good considering the irregular character of the bottom and the amount of wave action encountered. ** resolved by empirical speed corr'ns.*

SOUNDINGS

All fathograms were check scanned and the soundings reduced ✓
with templates in the Processing Office.

Norfolk, Va.
11 Sept. 1957

Respectfully submitted,

Hugh L. Proffitt
Hugh L. Proffitt
Cartographer.

Survey No. H-8108

[illegible]

TOPOGRAPHIC TITLE SHEET

FIELD NO. ECFP-Ab-54

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE

Florida

GENERAL LOCALITY

Fernandina Beach, Fla.

LOCALITY

Fort George River

SCALE

1:10,000

DATE OF SURVEY

March, 19 54

VESSEL

East Coast Field Party

CHIEF OF PARTY

Clarence R. Reed

SURVEYED BY

Robert B. Noble

INKED BY

Robert B. Noble

HEIGHTS IN FEET ABOVE MHW OR

☐ TO GROUND

☐ TO TOPS OF TREES

CONTOUR

APPROXIMATE CONTOUR

FORM LINE INTERVAL FEET

PROJECT NUMBER

CS-364

REMARKS

*All information on this planetable
sheet has been transferred to*

T-11453

T-11454

H-8107

H-8108

*The sheet has been marked
for destruction.*

*WE
2/3/59*

| | | | | | |
|--|--|---|--|-----------------------------|--|
| FORM 537a (9-24-47) | | DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY | | REGISTER NO. T - | |
| TOPOGRAPHIC TITLE SHEET | | | | FIELD NO. ECFP-Aa-54 | |
| Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office. | | | | | |
| STATE Florida | | | | | |
| GENERAL LOCALITY Fernandina Beach | | | | | |
| LOCALITY Nassau Sound | | | | | |
| SCALE 1:10,000 | | DATE OF SURVEY January , 19 54 | | | |
| VESSEL East Coast Field Party | | | | | |
| CHIEF OF PARTY Clarence R. Reed | | | | | |
| SURVEYED BY Robert B. Noble | | | | | |
| INKED BY Robert B. Noble | | | | | |
| HEIGHTS IN FEET ABOVE MHW OR _____ <input type="checkbox"/> TO GROUND <input type="checkbox"/> TO TOPS OF TREES | | | | | |
| CONTOUR APPROXIMATE CONTOUR FORM LINE INTERVAL _____ FEET | | | | | |
| PROJECT NUMBER CS-364 | | | | | |
| REMARKS <div style="font-family: cursive; font-size: 1.2em;"> All information on this planetable sheet has been transferred to T-9804 S, T-11453 & H-8108; sheet has been marked for destruction. </div> <div style="text-align: right; margin-top: 20px;"> <i>ME</i> 2/3/59 </div> | | | | | |

DESCRIPTIVE REPORT
TO ACCOMPANY

GRAPHIC CONTROL SHEETS

Project CS-364, St. Marys Entrance and Nassau Sound,
Georgia and Florida Coasts.

SHEETS

| | |
|----------------------|-----------------|
| FIELD NO. ECFP-Aa-54 | 1:10,000 - 1954 |
| FIELD NO. ECFP-Ab-54 | 1:10,000 - 1954 |

CONTROL

The control on both sheets consisted entirely of triangulation stations. On sheet FIELD NO. ECFP-Aa-54 the sub-surface mark for BIG, 1934 was found partially exposed in the side of the bank. The station mark was found lying at the bottom of the bank. The sub-surface mark was used for topographic control. On sheet FIELD NO. ECFP-Ab-54 one temporary station, LITTLE (temp.) 1954, was established by Photogrammetrist J.C. Lajoie.

METHODS USED

On sheet FIELD NO. ECFP-Aa-54 the planetable was located by setting up on range with two triangulation stations and resecting from a third station or by solution of the three-point problem. On sheet FIELD NO. ECFP-Ab-54 the planetable was located either by solution of the three-point problem or setup over triangulation stations. A 2790 meter traverse was run starting at the setup indicated near the south end of Little Talbot Island and closing at station LITTLE (temp) 1954. The 3 meter error of closure was distributed throughout the traverse in proportion to the distance from the origin.

SHEET COVERAGE

Each sheet covered an area as follows:

| | |
|-------|---|
| Sheet | FIELD NO. ECFP-Aa-54, 1954; Nassau Sound |
| | FIELD NO. ECFP-Ab-54, 1954; Fort George Inlet and vicinity. |

MISCELLANEOUS

Position jumps were experienced by the hydrographic party when changing fixes using the photo-hydro signals* on the south end of Little Talbot Island and south of Fort George Inlet. For this reason these signals were relocated on planetable sheet FIELD NO. ECFP-Ab-54. Several sounding lines were replotted using the planetable positions of the signals and this appeared to resolve the discrepancies. Portions of the shoreline which could not be located accurately by photogrammetric methods were located by planetable and are shown on the sheets.

* located by photogrammetric methods. *SNR*

Approved and forwarded,
Clarence R. Reed
Clarence R. Reed
CinC, East Coast Field Party

Respectfully submitted,
Robert B. Noble
Robert B. Noble
ENS. USC&GS

H-8107 (1954)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. .8198...

Records accompanying survey;

Boat sheets 1(2 parts), sounding vols. .12.; wire drag vols.;
bomb vols.; graphic recorder rolls 13. Envelopes
special reports, etc. .1-Smooth sheet and 1-Descriptive report.
.....

The following statistics will be submitted with the cartographer's report on the sheet:

| | |
|---|--|
| Number of positions on sheet |248 |
| Number of positions checked |23 |
| Number of positions revised |0 |
| Number of soundings revised (refers to depth only) | Several hundred. See Verifier's Report Paragraphs 9-14-35 |
| Number of soundings erroneously spaced |0 |
| Number of signals erroneously plotted or transferred |0 |
| Topographic details | Time ...3 hrs. |
| Junctions | Time ...2 hrs. |
| Verification of soundings from graphic record | Time ...20 hrs. {See par. 35, Verifier's report |
| Verification by <i>[Signature]</i> | Total time 112 hrs. Date Oct. 23 58 |
| Reviewed by <i>[Signature]</i> | Time 16 Date 2/17/59 |

DIVISION OF CHARTS

Review Section - Nautical Chart Branch

Review of Hydrographic Survey

Registry No. H-8108

Florida, Fernandina Beach, Nassau Sound

Field No. ECFP-1953

Surveyed - Dec. 1953 - April 1954

Scale 1:10,000

Project No. CS-364

Soundings:

Graphic recorder
hand lead
pole

Control:

Sextant fixes on
shore signals

Chief of Party - C. R. Reed

Surveyed by - E. K. McCaffrey, C. E. Horne, R. B. Noble

Protracted by - W. L. Jonns (Norfolk P.O.)

Soundings plotted by - W. L. Jonns

Verified and inked by - S. Rose

Reviewed by - L. V. Evans III 2/17/59

Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with the incomplete manuscript of photogrammetric survey T-9804S (1951-54) and the reviewed photogrammetric survey T-11453 (1951-54).

The sources of control are listed in the Descriptive Report.

2. Sounding Line Crossings

Final smooth sheet soundings are in adequate agreement at crossings.

3. Depth Curves and Bottom Configuration

The 6-ft and deeper depth curves are adequately defined. Although the low water line is not fully defined there is sufficient information for charting the area.

The ocean bottom is generally even, but many minor (2-3 ft.) features modify the otherwise smooth slopes. In the entrance to Nassau Sound, typical of inlets in unstable areas, there are extensive bars and shoals.

4. Junctions with Contemporary Surveys

Satisfactory junctions were effected with H-8107 (1954) in outside waters to the south. To the east and north and at the limits on the inside portion, the present survey extends to the project limits. Depths at those limits are in harmony with the charted hydrography.

5. Comparison with Prior SurveysA. H-1110 (1871), 1:20,000H-1113a (1871), 1:10,000

These surveys were superseded in the common areas by H-5798 (1934) and to that extent need no further consideration. However, H-1110 extends beyond the limits of H-5798, where a comparison with the present survey reveals some increases in depths as shown by the following examples:

| <u>Prior depth</u> (feet) | <u>Latitude</u> | <u>Longitude</u> | <u>Present Depth</u> (feet) |
|------------------------------|-----------------|------------------|--------------------------------|
| 28 | 30°30.0' | 81°23.1' | 36 |
| 27 | 30°31.45' | 81°23.6' | 37 |
| 30 | 30°32.3' | 81°23.8' | 35 |

The present survey supersedes these prior surveys in the common areas.

B. H-3770 (1915), 1:80,000

No significant changes have occurred in the small common area between this survey and the present one. The present survey is adequate to supersede this prior survey in the common area.

C. H-4376 (1924), 1:20,000

This prior survey was superseded by H-5798 in their common area but it extends beyond the limits of H-5798. A comparison between the present survey and that part of H-4376 not superseded by H-5798 shows no appreciable changes. The present survey is adequate to supersede this prior survey within the common area.

D. H-5798 (1934), 1:10,000

This prior survey covered the inlet and all of the inside area of the present survey, thus including the most changeable portions of the area. The highly unstable nature of the inlet area is best shown by the drastic changes in the vicinity of Bird Island. The island has undergone changes in size, shape, and position, with corresponding changes in adjoining hydrography, as for example in (1) lat. $30^{\circ}30.1'$, long. $81^{\circ}26.0'$, where a present 27-ft. channel falls in the former location of mud flats in a lagoon within the former extent of Bird Island, and (2) lat. $30^{\circ}30.35'$, long. $81^{\circ}25.9'$, where a former 30-ft. channel has been replaced by shoals and bars.

Other prominent changes found in a comparison between the present and this prior survey are exemplified by the following:

| <u>Prior depth</u> (feet) | <u>Latitude</u> | <u>Longitude</u> | <u>Present depth</u> (feet) |
|------------------------------|--------------------|--------------------|--------------------------------|
| 6 | $30^{\circ}31.28'$ | $81^{\circ}27.27'$ | 9 |
| 7-10 | $30^{\circ}30.97'$ | $81^{\circ}26.80'$ | 4 |
| 14-20 | $30^{\circ}30.56'$ | $81^{\circ}26.87'$ | 0 |

The present survey is adequate to supersede this prior survey within their common area.

6. Comparison with Chart 577 (print of 10/27/58)A. Hydrography

The charted hydrography originates entirely with the boat sheets (Bp 51842-43) of the present survey. Only minor differences of 1-2 feet are noted between the chart and smooth sheet depths.

B. Aids to Navigation

South Amelia River daybeacon "45" was not located by the field party. Light "50", lighted buoy "52", Nassau cutoff light "53" and Sawpit Creek light "60" are charted in substantial agreement with their survey positions;

but have been re-designated "44", "46", "47", and "48", respectively; Nassau Cutoff light "57" has been discontinued (H.O.N. to M. 26, 1955). Nassau Sound Approach buoy "6A", the only other charted aid in the area of the present survey, is in good agreement with its survey position. The charted positions of the aids adequately serve the purpose intended.

7. Condition of Survey

- A. The field records are complete except for the lack of enough bar checks to eliminate the possibility of fathometer errors as a source of crossing discrepancies. The verifier in some instances resorted to arbitrary adjustments of ± 1 ft. to resolve crossing disagreements and eliminate unnatural curves.
- B. The smooth plotting was generally satisfactory, but the fathogram scanning, using templates, tended to be erratic. An excessive number of soundings had to be revised to resolve crossing discrepancies.
- C. The Chief of Party in his addendum to the Descriptive Report discussed the circumstances leading to the wide line spacing in areas which would otherwise have been more closely developed.

8. Compliance with Project Instructions
in

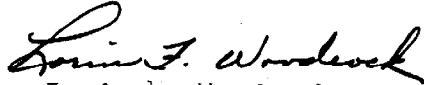
Except as noted in the preceding section this survey adequately complies with the instructions for the project.

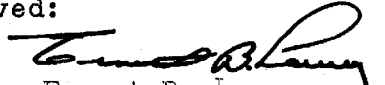
9. Additional Field Work Recommended

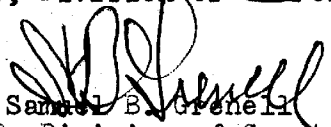
This survey is considered basic and no additional field work is recommended.

Examined and Approved:


Max G. Ricketts
Chief, Nautical Chart Branch


Lorin F. Woodcock
Chief, Hydrography Branch


Ernest B. Lewey
Chief, Division of Charts


Samuel B. Greenell
Chief, Division of Coastal
Surveys

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

10 October 1957

Plane of reference approved in
12 volumes of sounding records for

HYDROGRAPHIC SHEET 8108

Locality Nassau Sound, Florida

Chief of Party: C. R. Reed in 1954

Plane of reference is mean low water, reading

2.2 ft. on tide staff at Sawpit Creek Entrance

9.4 ft. below B.M. 1 (1953)

1.5 ft. on tide staff at Simpson Creek Entrance

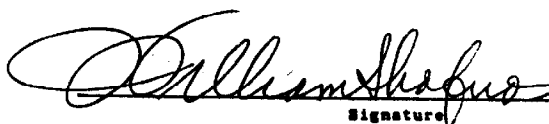
6.0 ft. below B.M. 1 (1954)

Height of mean high water above plane of reference is:

Sawpit Creek Ent. 5.0 ft.

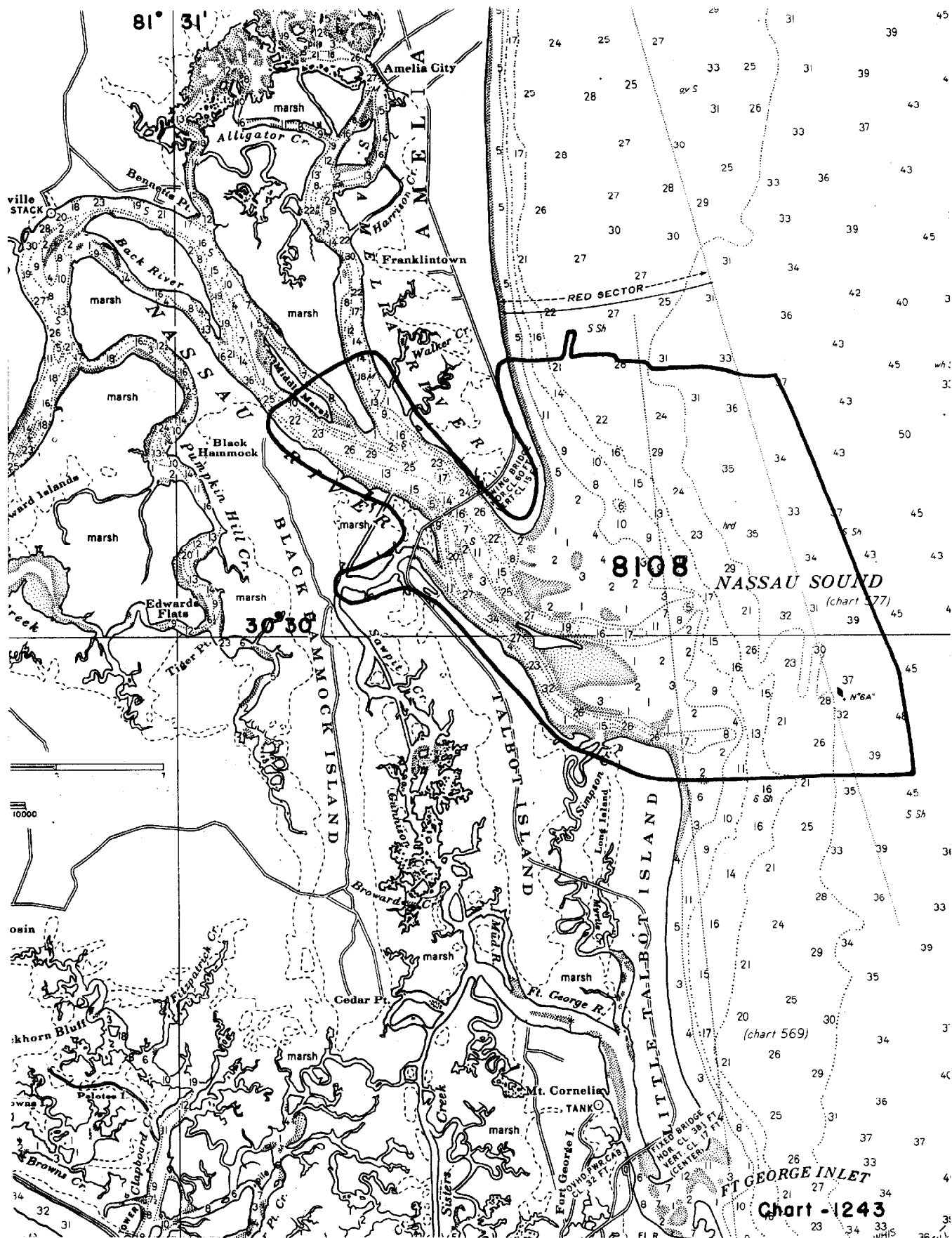
Simpson Creek Ent. 4.6 ft.

Condition of records satisfactory except as noted below:



Signature

Chief, Tides Branch



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8108

Record of Application to Charts

| DATE | CHART | CARTOGRAPHER | REMARKS |
|-----------|-------|---|---|
| 7 Oct 57 | 577 | Wichols | Originally applied thru last sheet - some additions made from smooth sheet Before After Verification and Review Exam. no errors <i>Partial changes</i> |
| 7 Oct 57 | 1243 | " | Before After Verification and Review Exam. no corr. |
| 28 Aug 58 | 841 | H. E. MacEwen | Before After Verification and Review Partial application |
| 29 Aug 58 | 842 | H. E. MacEwen | Before After Verification and Review Partial application |
| 9-3-58 | 569 | J. H. Eaton | Before After Verification and Review Partial application |
| 10-23-57 | 1243 | H. C. Anderson via 577 E. M. Albert - 8108 | Before After Verification and Review before |
| 3-19-59 | 841 | R. E. Elkins | Before After Verification and Review Completely applied. |
| 3-19-59 | 842 | R. E. Elkins | Before After Verification and Review Completely applied. |
| 4-2-59 | 577 | R. E. Elkins | Before After Verification and Review Completely applied. |
| 10/28/59 | 1243 | G. R. Wittmann | Before After Verification and Review Complete app. THRU 577 Dg 25 |
| 5/10/61 | 569 | J. H. Eaton | Comp. app'd. after 11 E.R. thru cks 577 Dg. #25 |
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M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.