

8107

Dist. Cht. No. 1243-2

CS-364

Form 504

U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. BCFP-1853 Office No. H-8107

LOCALITY

State Florida

General locality North of St. Johns River Entrance

Locality Little Talbot Island and Fort George

Inlet

194 ~~5~~ 54

CHIEF OF PARTY

Clarence R. Reed

LIBRARY & ARCHIVES

DATE November 16, 1955

8107  
02018

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-8107

Field No. ECFP 1853

State Florida

General locality ~~Fernandina Beach~~ North of St. Johns River Entrance

Locality Little Talbot Island & Fort George Inlet

Scale 1:10,000 Date of survey 17 Feb. to April 7, 1954

Instructions dated 30 Sept. 1953

Vessel East Coast Field Party

Chief of party Clarence R. Reed

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

Soundings taken by ~~fathometer~~ graphic recorder, hand lead, ~~wire~~ & sounding pole

Fathograms scaled by Party personnel

Fathograms checked by R.B. Noble, E.K. McCaffrey, E.E. Horne

Protracted by J.A. Bright & G.O. Wimbro

Soundings penciled by G.O. Wimbro

Soundings in ~~fathoms~~ feet at MLW ~~MLW~~ and are true depths

REMARKS:

*Handwritten initials*

FIELD

LIST OF SIGNALS

HYDROGRAPHIC SURVEY H-8107 (Field No. ECFP 1853)

ABE----Planetable Sheet ECFP-Ab-54  
BAG----Planetable Sheet ECFP-Ab-54  
BOB----RS-493  
BUD----RS-493  
DAY----Planetable Sheet ECFP-Ab-54  
DOC----RS-493  
DOG----RS-493  
EAR----Planetable Sheet ECFP-Ab-54  
END----RS-493  
EVA----RS-493  
FAB----RS-493  
FOE----Hydro Vol. 3 pg. 18 (Lch 172)  
FUD----RS-493  
GAB----RS-493  
GAD----Planetable Sheet ECFP-Ab-54  
GAR----RS-493  
HUB----RS-493  
ICE----Planetable Sheet ECFP-Ab-54  
JAP----RS-493  
JOY----RS-493  
KED----RS-493  
KIR----RS-493  
LAD----Hydro Vol. 6 pg. 24 (Lch 115)  
LAM----RS-493  
MAG----RS-493  
MUD----RS-493  
NAT----RS-493  
NEW----Planetable Sheet ECFP-Ab-54  
NIN----RS-493  
OAK----RS-493  
ONE----Hydro Vol. 2 pg. 3 (Lch 172)  
POL----Planetable Sheet ECFP-Ab-54  
PON----RS-493  
REAR---Beacon 4, 1926  
RED----RS-493  
ROGE---George 1861  
SON----Planetable Sheet ECFP-Ab-54  
TANK---Ribault Club Water Tank 1932  
TOWE---VII (USE), 1926  
TRE----Hydro Vol. 2 pg. 9 (Lch 172)  
TWO----Hydro Vol. 2 pg. 3 (Lch 172)  
VEE----Hydro Vol. 2 pg. 14 (Lch 172)  
VEN----RS-493  
WEB----Planetable Sheet ECFP-Ab-54

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 GS-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 119S, 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. 119S 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 is to be plotted by the Norfolk Processing Office.

### 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 (ECP-Aa & Ab, 54). *see Proc. Office Addendum*  
*to be destroyed*

### SHORELINE AND TOPOGRAPHY

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.

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).

*All data  
later incor-  
porated in  
T-11453-4*

### 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  $1\frac{1}{2}$  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, EAR, DAY, & ABE), 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. *Used*

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.

### 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

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

ECFP-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 300 meters as compared to 50 to 150 meters on the 1934 survey and 520 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.

refers to H-8108

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.

See Review Par. 5

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 maze of sand islands. These shoals were sketched in at low water (see boat sheet).

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°24.44' Long, 81°24.68' is no longer standing. The only remaining evidence of it is a few insignificant piles.

There are also piles, some of which are submerged at high water, located on the Fort George River at Lat. 30°25.41' Long. 81°25.06'.

There is a small shaky dock standing on the Fort George River at Lat. 30°25.87' Long. 81°25.41'.

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°29.95' Long. 81°25.78'. These are not shown on the boat sheet. They are inside the low water line.

ECFP-1953

H-8108

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:

Fort George River Fixed Bridge

Horizontal Pier Clearance 38.4' 30° 25' 11"  
Vertical Clearance at MHW 17.5' 81° 25' 05"

Sawpit Creek Fixed Bridge

Horizontal Pier Clearance 38.4'  
Vertical Clearance at MHW 14.2'

Nassau Sound Swing Bridge

Horizontal Pier Clearance both north and south draws between cribs - 60.0'

H-8108

ECFP-1953

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 <sup>noted</sup> necessary for these sheets.

GEOGRAPHIC NAMES

The island found at Lat. 30°30' Long. 81°26' in Nassau Sound is locally known as "Bird Island". No other changes or additions to geographic names are noted. *Noted by 854: v.H.*

MISCELLANEOUS

The sounding line on sheet H-8107 (Field No. ECFP 1853), <sup>line omitted on S.S.</sup> between 1b and 13b, Launch 115 ( see Vol.6 pgs 13 -17) fails to check <sup>area flat.</sup> 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. ECFP 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 launch and plotting these values on the curve sheets found at the end of this report. *Not with this sheet: presumed to be with H-8108, not yet rec'd.*

Respectfully submitted,

*Charles E. Horne*  
Charles E. Horne  
ENS., USC&GS

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.

H-5168

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.

An auxiliary boat sheet was used on survey H 8108 (ECLP 1953) 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 BUD 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. H-8108

Due to engine trouble and other difficulties experienced with USC&GS HYDROGRAPHER launch CS-115 as well as with aluminum launch CS-172 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. > H-8108

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 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.

shoreline  
change in  
+ his acct  
1955 photo  
RWB  
4/19/56

Forwarded:

*Clarence R. Reed*

Clarence R. Reed  
CDR, USC&GS  
Chief of Party



TIDE NOTE TO ACCOMPANY

HYDROGRAPHIC SURVEY SHEETS H-8107 & H-8108  
(Field Nos. ECFP 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.

<u>STATION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>MLW ON STAFF</u>
Nassauville	30°33'.8	81°31'6	4.8'
Sawpit Creek Entrance	30°30'.8	81°27'.4	2.2'
Simpson Creek Entrance	30°29'.0	81°25'.4	1.5'
Fort George Club	30°26'.4	81°26'.3	2.7'

FATHOMETER CORRECTIONS

PROJECT GS-364

Hydrographic Surveys H-8107, H-8108 (Field Nos. ECFP 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 2.0'  
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)

A range	From	To
-0.2	32.1	42.0
-0.4	42.1	49.0

FATHOMETER CORRECTIONS (CONT'D)

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		
-3.4	35.0	50.0
-3.6	50.1	56.0

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		
-0.2	35.0	48.0
-0.4	48.1	60.0

FATHOMETER 119 S

Launch 172 Initial at 2.0' ?

March 23 - end of season

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-8107 (Field No. ECFP 1853)

PROJECT CS-364

DATE 1954	DAY LTR	VOL. NO.	LEAD LINES	NO. OF POSITIONS	STAT. MI. SDG.
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LAUNCH 115

Feb. 17	a	6	--	10	2.0
25	b	6	--	127	21.0
26	c	6	--	14	2.3
27	d	6&7	--	84	14.2
Mar. 8	e	7	--	107	19.2
9	f	7&8	7	103	15.5
Total Launch 115			7	445	74.2

LAUNCH 172

Feb. 23	a*	1	--	115	17.9
24	b	2	--	40	5.1
Mar. 1	c	2	--	41	5.6
2	d	2&3	--	157	26.0
4	e	3	--	63	8.5
12	f	3	1	84	13.1
25	g	3&4	--	18	3.0
26	h	4	--	91	12.6
29	j	4	2	36	4.5
31	k	4&5	6	105	14.9
Total Launch 172			9	750	111.2

16' SKIFF

Apr. 7	a	5	4	4	0.6
Total Sheet H-8107			120	1199	186.0

Area Surveyed 13.0 Square Stat. miles

APPROVAL SHEET

HYDROGRAPHIC SURVEYS H-8107 & 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 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

} H-8108

*Clarence R. Reed*

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

PROCESSING OFFICE  
LIST OF SIGNALS

H-8107

TRIANGULATION STATIONS

NEW ST. JOHNS L.H. (NEW), 1954  
TANK FORT GEORGE ISLAND, RIBAULT CLUB, WATER TANK, 1929-32  
TOWE VII (U.S.E.), 1926-53  
REAR BEACON 4, 1926-53  
ROGE GEORGE, 1861-1953  
JOHN ST. JOHNS LIGHT, 1926-32

TOPOGRAPHIC STATIONS

T-11454

Abe Bag Can Day Ear Doc Gab Mud Pol Red Ven  
Web

T-11453

Bob Bud Dog End Eva Fab Fud Gad Gar Hub Ice  
Jap Joy Kud Kin Lam Mag Nat Nin Oak Pon Son

HYDROGRAPHIC STATIONS

Foe Vol. 3, pg. 18  
Lad Vol. 6, pg. 24  
One Vol. 2, pg. 3  
Tre Vol. 2, pg. 9  
Two Vol. 2, pg. 3  
Vee Vol. 2, pg. 14

ADDENDUM  
To Accompany

HYDROGRAPHIC SURVEY H-8107 (Field No. ECFP-1853)

SOUNDINGS

Soundings at crossings check fairly well, how-ever, there are discrep-  
ancies of 2 feet at Lat. 30-25.32' Long. 81-22.48' and Lat. 30-24.90 Long. ✓

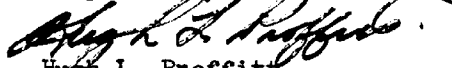
81-23.35.

(1) resolved (to 1 ft.) by rescanning  
(2) resolved by speed corr'n.

SHORELINE AND CONTROL

Control and shoreline revisions, done by the field party on graphic  
control surveys ECFP-Aa & Ab-54, have been applied to T-11453 and T-11454. ✓  
These compilations were used as a source for all shoreline changes and topo-  
graphic control.

Respectfully submitted,

  
Hugh L. Proffitt  
Cartographer.



GEOGRAPHIC NAMES

Survey No. H-8107

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
			On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
<u>Florida</u>			)							BGN	1
<u>Fernandina Beach</u>			)		for title						2
											3
<u>Fort George Inlet</u>											4
<u>Fort George River</u>											5
<u>Little Talbot Island</u>											6
<u>Fort George Club</u>				(tide station)							7
<u>Mad River</u>											8
<u>Sisters Creek</u>										BGN	9
<u>Simpson Creek</u>				(tide station)							10
<u>Nassau Sound</u>											11
<u>Bird Island</u>											12
					Names approved 12-6-55						13
					L. HECK						14
<u>Tide stations off limits of sheet:</u>											15
<u>Nassauville</u>											16
<u>Sawpit Creek Entrance</u>											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 3107.....

Records accompanying survey:

Boat sheets ..1...; sounding vols. ..8...; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls 8-Envs;  
 special reports, etc. 1-Smooth sheet, & 1-Descriptive report.....  
 .....

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

Number of positions on sheet		1198....	
Number of positions checked		.9....	144
Number of positions revised		.....-	
Number of soundings revised (refers to depth only)		57....-	
Number of soundings erroneously spaced		.....-	
Number of signals erroneously plotted or transferred		.....-	
Topographic details	Time	18....-	
Junctions	Time	.....-	
Verification of soundings from graphic record	Time	8....8	
<i>Preliminary verify - M. Evans</i>	73		3/28/56
Verification by <i>Paul O. Harrison</i> .....	Total time	.51 hr	Date 5/23/56
Reviewed by <i>M. Evans</i> .....	Time	44....	Date 4/3/56

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8107

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2-3-56	1243	L.A.M.	Before <del>After</del> Verification and Review <i>Examined. No corrections made 3MA</i>
4/19/56	<sup>Reconstruction</sup> 577	N.W. Burgoyne	<del>Before</del> <sup>Preliminary</sup> After Verification and Review
8/21/56	1111	G.F. Jordan	<del>Before</del> <sup>partial</sup> <del>After</del> <sup>part.</sup> Verification and Review <i>NO. Corr. 13MA</i>
11-3-56	842	<del>McAdams</del>	Before After Verification and Review <i>any more ch 577</i>
9-3-58	569	J.H. Eaton	<del>Before</del> After Verification and Review <i>app ch 577</i>
10-8-58	1243	H.G. Anderson	<del>Before</del> After Verification and Review <i>13MA</i>
5-18-62	1111	G.R. Johnson	<del>Before</del> After Verification and Review <i>Fully Applied Thru Ch 1243 Drg #16 &amp; Aid Post #31</i>
7/5/63	636 SC	J.H. Eaton	<del>Before</del> After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

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.

112

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~XXXXXXXXXXXXXXXXXXXX~~  
Division of Coastal Surveys

14 December 1955

Division of Charts: R. H. Carstens

Plane of reference approved in  
8 volumes of sounding records for

HYDROGRAPHIC SHEET 8107

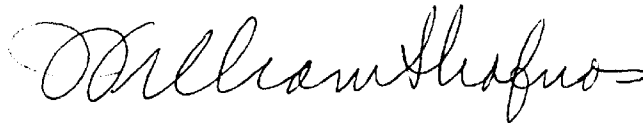
Locality Fernandina, Fla.

Chief of Party: C. R. Reed in 1954  
Plane of reference is mean low water, reading  
1.5 ft. on tide staff at Simpson Creek Entrance  
6.0 ft. below B. M. 1 (1954)

2.7 ft. on tide staff at Fort George Club  
14.0 ft. below B.M. 1 (1934)

Height of mean high water above plane of reference is:  
Simpson Creek Entrance ----- 4.6 ft.  
Fort George Club ----- 5.0 ft.

Condition of records satisfactory except as noted below:



Acting Chief, Division of ~~Tides and Currents~~ Branch

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8107

FIELD NO. ECFP-1853

Florida, North of St. Johns River Entrance, Fort George  
Inlet - Little Talbot Island

Project No. CS-364

Surveyed - February, April, 1954

Scale 1:10,000

Soundings:

Control:

808 Fathometer (mainly)

Sextant fixes

Hand lead

Pole

Chief of Party - C. R. Reed

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

Protracted by - J. A. Bright, G. O. Wimbro

Soundings plotted by - G. O. Wimbro

Preliminary verification by - L. V. Evans III

Verified and inked by - P. E. Harrison

Reviewed by - L. V. Evans III 3 April 1956

Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with the reviewed manuscripts of air-photographic surveys T-11453 and T-11454 (1953-54).

The sources of the control are given in the Descriptive Report.

2. Sounding Line Crossings

The final soundings, after revisions made where necessary, during verification, are in adequate agreement at all crossings.

3. Depth Curves and Bottom Configuration

All the usual depth curves except the MLW line are well defined in the open-water area of this survey. Neither this survey nor the concurrent shoreline surveys (T-11453, T-11454) delineated the MLW line along the sea coast.

The depth curves in parts of Fort George Inlet and Fort George River, which are changeable areas are not completely defined.

The ocean bottom within the area of this survey is a relatively smooth, sandy slope which is comparatively steep to the 12-ft. curve and thence more gradual to the survey limit in 35- to 40-ft. depths. The general trend of the slope parallel to the shore is modified by shoals extending from Nassau Sound and Fort George Inlet.

Fort George Inlet and Fort George River have winding, changeable channels separated by extensive shoals bare at low water.

#### 4. Junctions with Contemporary Surveys

The junction with H-8108 (1954) to the north, the only adjoining, contemporary survey, will be considered in the review of that survey. Depths at the limits of this survey to the east, to the southeast off the St. Johns River entrance, and to the northwest in Sisters Creek are in adequate harmony with charted hydrography.

#### 5. Comparison with Prior Surveys

H-351 (1853), 1:10,000	H-1110 (1871), 1:20,000
H-536 (1857), 1:10,000	H-4376 (1924), 1:20,000
H-1147 (1872), 1:10,000	H-5910 (1934-35), 1:10,000

These surveys comprise the previous coverage of the area of the present survey at the dates shown. A comparison of these surveys with the present survey reveals that extensive changes have occurred. The changes on the outer coast are attributed to the effect of the jetties at the St. Johns River entrance along the south edge of the present survey. The jetties, built during the period between the 1871 and 1924 surveys, altered the flow of currents causing radical changes in this unstable, sandy area.

The most conspicuous changes have taken place in the vicinity of Fort George Inlet. On the north side of the inlet the southern tip of Little Talbot Island migrated along the trend of the coast line to a position in 1934-35 about 2 miles south-southeast of its 1853 location. By the time of the present survey that feature had receded nearly  $\frac{1}{2}$  mile. The neck of land on the south side of the present inlet is a new feature formed after the jetties were built. There, too, the successive surveys show accretion to 1934-35 and subsequent erosion. The course of Fort George Inlet has been correspondingly altered. From the comparison of successive surveys the inlet appears to be subject to perennial shifting of position and depths.

In addition to the foregoing, continual accretion has occurred along the ocean shoreline of Little Talbot Island, such that

the MHW line of the present survey falls as much as  $\frac{1}{4}$  mile east (seaward) of the 1853 shoreline. This has caused a general shoaling of depths along the shore, the effects of which diminish in deeper water. From the general vicinity of the 30-ft. curve to the limit of the present survey there has been very little change in the bottom. Examples of this shoaling are listed in the following comparison:

<u>Prior Depth (feet)</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Present Depth</u>
4-6	30°25.2'	81°24.32'	MHW
9-11	30°24.9'	81°24.0'	3-4 ft.
14	30°27.0'	81°24.76'	MHW

Exceptions to the general shoaling are found in the outer parts of the bars off Nassau Sound and Fort George Inlet, where considerable scouring has occurred, as shown by the following examples:

<u>Prior Depth (feet)</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Present Depth (feet)</u>
5	30°28.4'	81°23.9'	14-15
4	30°24.35'	81°23.27'	17-20

Within the Fort George River the channels and shoals have shifted appreciably. The trend has been toward lesser depths and more extensive shoals.

In this changeable area the present survey is adequate to supersede the prior surveys within the common areas.

## 6. Comparison with Chart 577 (latest print date 1/16/56)

### A. Hydrography

Within the present survey area the charted hydrography originates principally with the boat sheet of the present survey (Sp. 51344), together with a few offshore soundings from the prior surveys and from prior Corps of Engineers surveys. Minor changes of 1 or 2 ft. have been made during preliminary verification, resulting most noticeably in changes to the low-water curve in the Fort George Inlet area and at lat. 30°28.7', long. 81°24.3'. Differences of 2 to 3 ft. between some of the charted offshore depths and the present survey are apparent.

The present survey shows the vertical clearance of the bridge over Fort George River to be 17.5 ft., whereas the clearance is charted as "8 to 15 feet".

The present survey entirely supersedes the charted information within the common area.

B. Aids to Navigation

The aids to navigation located by the present survey are in substantial agreement with the aids charted at the time of the survey. However, one beacon (formerly Wh. Bn. No. 3) has been subsequently moved and all but 2 of the aids have been renumbered in accordance with H. O. Notice to Mariners 27 (1955), 28 (1955) and 38 (1955).

7. Condition of Survey

(a) This survey has been given only a preliminary verification. The final evaluation of records and plotting is deferred pending complete verification.

(b) The Descriptive Report is complete and comprehensive.

(c) An arbitrary speed correction was applied to one short sounding line during preliminary verification to resolve a 2-ft. crossing discrepancy and to bring the line into agreement with adjacent hydrography. It is noted that two other lines run by the same launch were rejected by the field party, indicating intermittent errors in fathometer depths (see Descriptive Report, "Miscellaneous", page 4).

(d) Several other 2-ft. crossing discrepancies were resolved or reduced to an accepted 1-ft. crossing by re-scanning the fathograms.

(e) The channels through Fort George Inlet between long.  $81^{\circ}24.25'$  and long.  $81^{\circ}25'$  are not completely delineated and indications of alternate channels were not developed.

(f) In Fort George River additional lines would have been desirable to delineate the channel more definitely in the following areas:

1. Between lat.  $30^{\circ}25.2'$  and lat.  $30^{\circ}25.5'$  at long.  $81^{\circ}25.12'$ .

2. Vicinity of Bn. No. 5 at lat.  $30^{\circ}26.4'$ , long.  $81^{\circ}25.7'$ .

8. Compliance with Project Instructions

Except as noted in paragraph 7 (e & f) this survey adequately complies with the Project Instructions.



9. Additional Field Work Recommended

This survey is considered to be basic except for the areas noted in paragraph 7 (e & f). Considering the unstable nature of the area, further development would no doubt have to be extended well beyond the area of deficiencies to effect suitable junctions. Since the area is not of great importance additional field work is not recommended.


Examined and Approved:



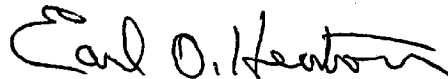
F. R. Edmonston  
Chief, Nautical Chart Branch



E. R. McCarthy  
Chief, Chart Division



S. C. Bull  
Chief, Hydrography Branch



Earl O. Heaton  
Chief, Division of Coastal Surveys

Addendum to Review

H-8107 (1954)

Verified and inked by - P. E. Harrison  
Review Addendum by - J. P. Weir 3/1/63  
Inspected by - I. M. Zeskind

The verification of this survey has been completed. Soundings and depth curves have been completely inked.

Junctions with Contemporary Surveys

The junction with H-8462(1958-59) on the southeast will be considered in the review of that survey. The junction with H-8108(1954) on the north has been considered in the review of that survey.

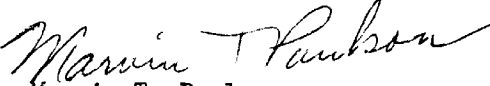
Comparison with Chart 577(print date 1/28/63.)

The charted hydrography originates with the present survey after preliminary verification and review, and is in agreement with the present survey. The charted low water line has been revised from 1958 photographs flown subsequent to the present survey.

Condition of Survey

- (a) Completion of the verification reveals that the smooth plotting was well done.
- (b) The Descriptive Report is complete and comprehensive.

Approved:

  
Marvin T. Paulson  
Chief, Nautical Chart Division

NASSAU SOUND

30° 30'

8107

(chart 569)

81° 20'

Chart - 1243

