

9475

Diag. Cht. Nos. 1001-3 & 1243-2

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT  
(HYDROGRAPHIC)

Type of Survey ..... HYDROGRAPHIC .....  
Field No. .... AHP-10-4-74 .....  
Office No. .... H-9475 .....

LOCALITY

State ..... FLORIDA .....  
General Locality ..... EAST COAST .....  
Locality ... PALM VALLEY TO ST. JOHNS RIVER .....

19 74

CHIEF OF PARTY

F. T. Smith

LIBRARY & ARCHIVES

DATE ..... 5/4/76 .....

9475  
9476

**HYDROGRAPHIC TITLE SHEET**

H-9475

INSTRUCTIONS - 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.

AHP-40-4-74

State Florida

General locality East Coast of Florida

Locality Palm Valley to St. John's River

Scale 1:40,000 Date of survey 18 Oct. - 7 Dec. 1974

Instructions dated 26 March 1973 Project No. OPR-436-746-73

Vessel NOAA Launches 1255 and 1257

Chief of party Lt. Cdr. F. T. Smith

Surveyed by Lt. Cdr. John O. Rolland, Lt. D. Yeager, Lt.(jg) R. Floyd

Soundings taken by echo sounder, ~~and lead line~~ DE-723-D

Graphic record scaled by Digitized

Graphic record checked by Launch Officers and Survey Technicians

Protracted by \_\_\_\_\_ Automated plot by CALCOMP\*68-AMC

Verification by R.G. Roberson (AMC)

Soundings in ~~fathoms~~ feet at MLW MLLW

REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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*Applied to state 4/7/77*  
*[Signature]*

81°00

"AA"

MI-40-3-74  
H-9474

JUNCTION WITH  
HT MITCHELL WORK  
1974

PROGRESS SKETCH  
OPR-436 - AHP-74  
CHART IIII

1974 PROGRESS

JUL AUG SEP OCT NOV DEC

1021	815	1062	448	859	401
205	192	67	81	41	58
713	1000	239	196	178	120
74	80	88	40	83	23
20	12	0	15	0	16

LNm Sou  
" Mis  
" Dist  
Sq NM S  
Bottom S

NOVEMBER  
1974

DEC. 74

AHP-40-4-74  
H-9475

OCTOBER  
1974

"BB"

SEPTEMBER  
1974

JUNE 1974

AHP-40-3-74  
H-9456

"CC"

JUNE 1974

JULY  
74

2  
3

DESCRIPTIVE REPORT  
FOR  
HYDROGRAPHIC SURVEY H-9475  
AHP-40-4-74

A. Project

This survey was accomplished between 18 Oct. 1974 and 5 Dec. 1974 under the following Project Instructions:

OPR-436-746-73 Coasts of Georgia and Florida dated 26 March 1973  
Change #1: Supplement to instructions dated 3 May 1973  
Change #2: Supplement to instructions dated 17 May 1973

B. Area Surveyed

The area encompassed by this survey is south of the St. Johns River entrance at Mayport, Florida. It was surveyed at a scale of 1:40,000. The survey is bounded on the south by Lat.  $30^{\circ} 07' 00''$  and on the north by Lat.  $30^{\circ} 21' 00''$  and on the east by Long.  $81^{\circ} 09' 30''$ .

The survey extends from the 2 fathom contour on the inshore extension to the approximate 10 fathom contour on the offshore end.

The survey junctions with the following surveys:

H-8462, 1:20,000, 1958-59  
H-9456, 1:40,000, 1974  
H-9373, 1:80,000, 1973  
H-9474, 1:40,000, 1974

See sketch of Project area on preceding page.

C. Sounding Vessels

All sounding on this survey was accomplished by NOAA Launch 1257 and NOAA Launch 1255. All survey records are annotated with vessel numbers.

D. Sounding Equipment

NOAA Launch 1257 used the following equipment for all soundings obtained during this survey:

Raytheon Fathometer, Model DE-723-D S/N 37024  
Raytheon Digital Depth Monitor, Model DE-723-41, S/N 37016  
Raytheon Electronic Cabinet Unit, Model DE-723-42, S/N 1910

NOAA Launch 1255 utilized the following sounding equipment for depths obtained during this survey:

Raytheon Analog recorder, Mod. DE-723D, S/N 2934  
Raytheon Digital Depth Monitor, Mod. DE-723D, S/N 1045  
Raytheon ECU, Mod. DE-723D, S/N 2781

Velocity corrections were determined by both bar check data and Beckman TDC Observations.

Depths on this survey range from 6 to 73 feet.

No difficulties were encountered with sounding equipment during this period.

A separate report on corrections to echo soundings is accompanying this report.

#### E. Smooth Sheet

The smooth sheet for this survey will be plotted at the Atlantic Marine Center, Norfolk, Virginia.

#### F. Control

This survey was controlled using the Hasting's Raydist system operating in the Range-Range Mode.

NOAA Launch 1257 operated on a first party system, frequency 3306.400 kHz while NOAA Launch 1255 operated using a fourth party system, frequency 3306.520 kHz. Both launches used the same set of shore stations.

Only one set of shore station locations was needed to accomplish this survey. The locations are as follows:

\*Left Station: Horse, 1974  
Red Raydist Model AA-60, S/N 54  
Lat.  $30^{\circ} 06' 04.073''$  ✓  
Long.  $81^{\circ} 26' 04.333''$  ✓

Right Station: Navy, 1974  
Green Raydist, Model AA-60, S/N 119  
Lat.  $30^{\circ} 23' 17.689''$  ✓  
Long.  $81^{\circ} 24' 23.370''$  ✓

\*Note: on day 329, the red station, Model AA60, S/N 54 was replaced with a red station Model AA60, S/N 67 due to electronic failure of previous transmitter.

Station location and calibration signals were located using third-order methods by Mr. Jim Shea of Operations Division, Atlantic Marine Center.

Calibration of Raydist system was accomplished by means of 3-point sextant fixes, at least one object was changed during each series of calibrations.

A separate report on the corrections to electronic control for this boatsheet will accompany the survey data. It contains the original field calibration data. An abstract of electronic correctors is in the appendix of this report.

#### G. Shoreline

There was no shoreline delineated during this survey as no photo control or manuscripts were provided.

In accordance with the project instructions, the 12 foot curve was adequately delineated in all areas where the survey was bounded by shoreline.

#### H. Crosslines

Crosslines were run to the extent of 8% of the basic system of sounding lines. Agreement was excellent, 0 to 1 ft. in most cases. In cases where disagreement by as much as 2 feet occurs it can be attributed to relatively steep slopes or very <sup>irregular</sup> bottom configuration in the vicinity of the discrepancy.

#### I. Junctions

Junctions along the southern edge of AHP-40-4-74 with sheet AHP-40-3-74 (H-9474) completed by NOAA Launches 1255, 1257 and 1261 was very good, 0-1 ft. in most cases with disagreement only in areas of steep relief or irregular bottom configuration.

Junction with H-9373<sup>(1973)</sup> at a scale of 1:80,000 on the eastern edge of the sheet was also good, 0-2 feet generally, with exception only in irregular areas as noted before.

Junctions with contemporary survey H-9474<sup>(1974)</sup> completed by NOAA Ship Mt. Mitchell in 1974, along the northern boundary of the sheet shows excellent agreement. In almost all cases 0-1 ft. Along the northeast corner of sheet AHP-40-4-74 junctions with survey H-8462, at a scale of 1:20,000, surveyed in 1958. Agreement was 2-3 ft. With addition of velocity corrections to the survey by NOAA Launch 1257, agreement becomes very good, 0 to 1 foot. It is assumed that velocity corrections have been applied to survey H-8462, 1958.

### K. Comparison with the Chart

This survey fell on an area covered by two C&GS charts - 1243 and 569. In general, the southern portion of the survey agreed quite well with the chart. The northern portion, on the other hand, disagrees with the chart to a great extent. Minor changes are not noted in this report and, as a consequence, a comprehensive chart comparison should be made in the office, especially of the northern portion of this survey.

In the following discussion, all soundings referred to from this survey have had approximate velocity corrections applied. The boatsheet itself was not plotted with velocity corrections. Charted depths for investigation as pre-survey review items are listed under section J above and are not repeated here.

Comparison with C&GS 569, 6th edition, March 18, 1972

The 42 foot depth charted at latitude  $30^{\circ} 20.5'$ , longitude  $81^{\circ} 15.6'$  is in an area where the depths determined in this survey range from 46 to 52 feet. There is also a ~~41~~ <sup>44 (reduced)</sup> foot depth 0.4 mile south southeast of that position.

The charted 62 at  $30^{\circ} 20.9'N$ ,  $81^{\circ} 11.9'W$  is adjacent to a 54 foot sounding obtained in this survey. There is also a 45 foot depth 0.2 mile north of that charted 62.

At  $30^{\circ} 20.9'N$ ,  $81^{\circ} 11.2'W$  the chart shows a depth of 76 feet. The general depths within 0.2 mile of this position are 57 to 68 feet. The charted 72 foot depth 0.4 mile southwest of this position also misrepresents the area. The depth here is around 68 feet. However, there are some 75 foot soundings to the southeast of that charted 72.

The charted 71, 78, and 77 foot depths along a line from  $30^{\circ} 20.0'N$ ,  $81^{\circ} 11.9'W$  to  $30^{\circ} 20.1'N$ ,  $81^{\circ} 10.8'W$  are incorrect. The depths in this area have shoaled and range from 66 to 75 feet.

The 70 charted at  $30^{\circ} 19.2'N$ ,  $81^{\circ} 10.7'W$  is correct as charted. However, there is a 60 foot depth 0.1 mile northwest of that position.

At  $30^{\circ} 19.2'N$ ,  $81^{\circ} 11.5'W$  a 72 is charted where the depth is actually 68 feet. Three tenths of a mile to the west there are some 57 foot depths that are not shown on the chart.

The depth at  $30^{\circ} 18.7'N$ ,  $81^{\circ} 11.5'W$  has shoaled to 63 feet rather than the 67 as charted.

There is a 59 foot depth at  $30^{\circ} 18.9'N$ ,  $81^{\circ} 10.9'W$ . This is not indicated on the chart. Another shoal 60 foot depth is not charted 0.6 mile south southeast of this position.

The charted 66 foot depth at  $30^{\circ} 19.4' N$ ,  $81^{\circ} 12.3' W$  is approximately correct, but there is a 61 foot depth adjacent to the southwest, which is not charted.

At  $30^{\circ} 19.1' N$ ,  $81^{\circ} 13.3' W$  the depth is 52 feet. The chart shows 65 feet here. A tenth of a mile north there is a depth of 47 feet.

There are three 44 foot soundings along a line from  $30^{\circ} 18.6' N$ ,  $81^{\circ} 12.8' W$  to  $30^{\circ} 18.2' N$ ,  $81^{\circ} 12.2' W$ . None of these shoal soundings are indicated on the chart.

At  $30^{\circ} 20.0' N$ ,  $81^{\circ} 14.2' W$  a 44 foot depth was found where the charted depth is 50 feet.

None of the shoal soundings along a line from  $30^{\circ} 20.1' N$ ,  $81^{\circ} 15.5' W$  to  $30^{\circ} 19.4' N$ ,  $81^{\circ} 15.4' W$  are charted. Depths in this area range from 41 to 56 feet.

The 58 and 56 foot depths charted at  $30^{\circ} 15.7' N$ ,  $81^{\circ} 20.4' W$  and  $30^{\circ} 15.3' N$ ,  $81^{\circ} 20.2' W$  respectively, have shoaled about 4 feet. Similarly, the charted 55 and 56 foot depths about 1/2 mile south of this area have shoaled 3 to 4 feet.

At  $30^{\circ} 17.8' N$ ,  $81^{\circ} 19.1' W$  the depth obtained during this survey is 47 feet. The charted depth here is 56 feet. Just north of that charted sounding is a 45 foot depth.

The 61 foot sounding charted at  $30^{\circ} 15.5' N$ ,  $81^{\circ} 18.4' W$  is incorrect. The actual depth here is 56 feet. Six tenths of a mile south of that area is a 54 foot depth where the chart shows 58.

The charted 60, 57, 61, 57, and 56 foot soundings in the vicinity of  $30^{\circ} 16.4' N$ ,  $81^{\circ} 16.7' W$  no longer represent the bottom accurately. This area has shoaled 3 to 5 feet.

A depth of 54 feet was found at  $30^{\circ} 17.9' N$ ,  $81^{\circ} 16.0' W$  where the charted depth is 59 feet. Four tenths of a mile south southeast of this position a 56 is charted adjacent to a 50 foot depth determined during this survey.

At  $30^{\circ} 17.13' N$ ,  $81^{\circ} 15.1' W$  there is a 50-foot depth which should be charted since it is only 0.1 mile from a charted 58.

The 49 foot depth charted at  $30^{\circ} 17.9' N$ ,  $81^{\circ} 14.3' W$  is roughly correct, but there is a 43 foot sounding only 0.1 mile east of that position. Five tenths of a mile south southeast of that point, a 53 foot depth is charted. The actual depths in this area are 46 to 50 feet.

In an area between  $30^{\circ} 17.6' N$ ,  $81^{\circ} 14.7' W$  and  $30^{\circ} 17.0' N$ ,  $81^{\circ} 14.2' W$ , the chart shows depths of 65, 68, and 72 feet. The actual depths here are about 61 feet.



At  $30^{\circ} 16.0' N$ ,  $81^{\circ} 14.7' W$  a 45 foot sounding was obtained where the chart shows a depth of 57 feet.

A charted 55 is located at  $30^{\circ} 17.3' N$ ,  $81^{\circ} 13.7' W$ . The depth here is actually 51 feet.

At  $30^{\circ} 17.8' N$ ,  $81^{\circ} 12.0' W$  a 50 foot depth was found which plots over a charted 64.

The 50 foot soundings near  $30^{\circ} 17.4' N$ ,  $81^{\circ} 12.6' W$  lie between two charted 55 foot depths.

A 49 foot sounding was obtained at  $30^{\circ} 16.3' N$ ,  $81^{\circ} 12.4' W$ . This falls right near a charted 56. Two tenths of a mile southeast of that position, a 47 was found.

Between the 45 charted at  $30^{\circ} 15.5' N$ ,  $81^{\circ} 16.0' W$  and the 48 charted at  $30^{\circ} 14.7' N$ ,  $81^{\circ} 15.4' W$  a sounding of 42 was obtained. This is the shoalest sounding in a large area and should be charted.

The 50 foot sounding at  $30^{\circ} 14.4' N$ ,  $81^{\circ} 16.6' W$  should be charted as it falls between a charted 57 and 55.

The charted 63 at  $30^{\circ} 15.6' N$ ,  $81^{\circ} 16.9' W$  is incorrect. The depth at that location is 57 feet and at 0.1 mile southwest of that position a 49 foot depth was obtained.

At  $30^{\circ} 15.8' N$ ,  $81^{\circ} 18.6' W$  a 56 is charted where the actual depth is 51 feet. Eight tenths of a mile south of that point, another 56 is charted where the general depths are 52 to 53 feet.

A 49 is charted at  $30^{\circ} 14.2' N$ ,  $81^{\circ} 19.0' W$  where the depth is 45 feet. A 41 foot depth was obtained 0.2 mile southwest of that position.

The charted 59 at  $30^{\circ} 14.0' N$ ,  $81^{\circ} 18.4' W$  is in an area where the general depths range from 52 to 55 feet.

At  $30^{\circ} 16.0' N$ ,  $81^{\circ} 13.2' W$  where there is a charted 59, the depth obtained was 53 feet. A 33 depth is, however, located in this vicinity.

At  $30^{\circ} 16.2' N$ ,  $81^{\circ} 13.7' W$  a 70 is charted where the actual depth is 63 feet.

There is a 60 foot charted depth at  $30^{\circ} 17.1' N$ ,  $81^{\circ} 11.7' W$  where the actual depth is 53 feet. A tenth of a mile northeast of that location, the depth is 50 feet.

A depth of 49 feet was obtained at  $30^{\circ} 16.0' N$ ,  $81^{\circ} 10.9' W$ . This shoal is not indicated on the chart.

Comparison with C&GS 1243, 10th edition, January 27, 1973

The 62 foot depth at  $30^{\circ} 15.0'N$ ,  $81^{\circ} 11.3'W$  is charted where the general depths are 56 to 58 feet. *Area is rough on bottom*

There is a 50 foot sounding at  $30^{\circ} 15.4'N$ ,  $81^{\circ} 11.7'W$  that is not presently shown on the chart. Depths within 1/2 mile of this position are generally 53 to 62 feet.

A depth of 49 feet was found at  $30^{\circ} 14.0'N$ ,  $81^{\circ} 11.2'W$ . The shoal is not charted.

The 57 foot charted depth at  $30^{\circ} 15.5'N$ ,  $81^{\circ} 14.3'W$  is correct as charted. However, there is a 49 foot sounding obtained 0.1 mile north of that position during this survey.

One mile south of that point is a 49 foot depth that should be charted but is not.

At  $30^{\circ} 13.6'N$ ,  $81^{\circ} 18.9'W$  the depth ranges from 46 to 49 feet. The charted depth here is 54 feet.

The bottom shoals to 44 feet at  $30^{\circ} 13.0'N$ ,  $81^{\circ} 19.3'W$ . This is not indicated on the chart.

The 56 charted at  $30^{\circ} 12.4'N$ ,  $81^{\circ} 15.3'W$  is approximately correct but there is a 47 just 0.2 mile west of that position.

The area bounded by  $30^{\circ} 14'N$ ,  $81^{\circ} 14'W$ ;  $30^{\circ} 14'N$ ,  $81^{\circ} 12'W$ ;  $30^{\circ} 12'N$ ,  $81^{\circ} 12'W$ ; and  $30^{\circ} 12'N$ ,  $81^{\circ} 14'W$  is relatively rugged. The charted soundings are fairly accurate but the shoalest soundings are not shown. There is a 49 foot depth at  $30^{\circ} 14.0'N$ ,  $81^{\circ} 13.2'W$ . A 47 was obtained at  $30^{\circ} 13.3'N$ ,  $81^{\circ} 13.2'W$ . The shoalest soundings in the area are a 45 at  $30^{\circ} 12.6'N$ ,  $81^{\circ} 13.2'W$  and 44 foot depths in the vicinity of  $30^{\circ} 13.0'N$ ,  $81^{\circ} 14.0'W$ . At  $30^{\circ} 12.4'N$ ,  $81^{\circ} 12.1'W$ , a 49 foot sounding was obtained.

The charted 74 at  $30^{\circ} 13.0'N$ ,  $81^{\circ} 11.9'W$  is located where the general depths are actually about 66 feet. One mile due east of that point a 79 is charted where the depth is 70 feet.

A 53 foot depth was obtained at  $30^{\circ} 13.0'N$ ,  $81^{\circ} 10.4'W$ . This falls roughly between a charted 79 and 71. *No 79 sounding found*

Similarly, at  $30^{\circ} 13.7'N$ ,  $81^{\circ} 11.0'W$  a depth of 52 was obtained which falls between a charted 71 and 58.

At  $30^{\circ} 11.5'N$ ,  $81^{\circ} 12.2'W$  a 63 is charted which is correct. However, there is 55 foot depth just 0.2 mile northwest of that location.

The charted 52 at  $30^{\circ} 11.1'N$ ,  $81^{\circ} 15.1'W$  is adjacent to a 44 foot depth obtained in this survey.

At  $30^{\circ} 11.4'N$ ,  $81^{\circ} 15.8'W$  a 41 foot sounding was obtained which was the shoalest sounding in the area. This depth is not charted.

The charted 60 foot depth at  $30^{\circ}08.1'N$ ,  $81^{\circ}17.2'W$  is in an area where the actual depths are 54 to 56 feet.

The actual depths near  $30^{\circ}11.0'N$ ,  $81^{\circ}18.9'W$  are 50 to 52 feet. The charted depth here is 56 feet.

At  $30^{\circ}09.0'N$ ,  $81^{\circ}11.1'W$  the depth obtained in the survey is 65 feet while the charted depth is 59 feet.

#### L. Adequacy of Survey

This survey is complete and adequate to supersede prior surveys for charting purposes.

#### M. Aids to Navigation

Numerous flag buoys marking fishing reefs are charted in this area.

At the time this survey was carried out all but one marker in the survey area were reported as missing.

This flag marker was found during survey operations. Its position is:

Latitude  $30^{\circ} 16' 10.43''$   
Longitude  $81^{\circ} 14' 23.49''$

It is privately maintained by local sports fishing groups as are the other markers contained in the survey area.

No other floating or non-floating aids are included in this area.

#### N. Statistics

Total NM of Sounding Line	<u>1257</u>	<u>1255</u>
Nautical Miles Crossline	<del>1000</del>	373
Nautical Miles of Development	38	71
Miscellaneous Distance Run	46	12
Nautical Miles To & From	67	63
Bottom Samples	260	176
	0	13

#### O. Miscellaneous

Much of the field work was done in marginal and adverse sea conditions. This was due to the time of year in which the survey was conducted, and the fact that Project SCOPE had to be completed by the end of 1974.

The plotter sheets were originally layed out in anticipation of continuing northward on another boatsheet. It was later decided that the NOAA Ship Mt. Mitchell would conduct that survey instead of the Atlantic Hydrographic Party.

At that time, the plotter origin of the northern plotter sheet of this survey was relocated to its present position as indicated on the off-line boatsheet.

Electronic correctors for pattern II varied by a relatively large amount because of a defective transmitter in the red Raydist Station. The drifts is especially noticeable on day 318.

P. Recommendations

None

Q. Reference to Reports

1. Electronic Control Report, OPR-436, AHP-40-4-74, H-9475
2. Corrections to Echo Soundings, OPR-436, AHP-40-4-74, H-9475

APPROVAL SHEET  
SURVEY H-9475 (AHP-40-4-74)

The hydrographic records transmitted with this report are complete and adequate.



F. T. Smith  
Lt. Cdr., NOAA  
Chief, AHP

Tide Note

Predicted Tides from Atlantic Beach,  
Lat.  $30^{\circ} 20'$ , Long.  $81^{\circ} 24'$  were applied to data obtained by  
NOAA Launches 1255 and 1257

Actual tides from Atlantic Beach should be applied to all depths on the  
survey. No zoning is required.

*See tide approval note  
next page - for tide station used.*

3/13/75

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for Form 362

Tide Station Used (NOAA Form 77-12): Jacksonville Beach

Period: Oct. 18 - Dec. 7, 1974

HYDROGRAPHIC SHEET: H-9475


OPR: 436

Locality: Off the coast of eastern Florida

Plane of reference (mean ~~lower~~ low water): 6.0 ft.

Height of Mean High Water above Plane of Reference is 5.1 ft.

Remarks: Zone direct.

  
for Chief, Tides Branch

GEOGRAPHIC NAMES

H-9475

Name on Survey	Source of Name											
	A	B	C	D	E	F	G	H	K			
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. MAPS	QUADRANGLE	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	RAND McNALLY ATLAS	U.S. LIGHT LIST			
ATLANTIC BEACH												1
ATLANTIC OCEAN												2
JACKSONVILLE BEACH												3
MICKLER LANDING												4
NEPTUNE BEACH												5
PONTE VEDRA BEACH												6
PALM VALLEY (TITLE)												7
ST JOHNS RIVER (TITLE)												8
												9
												10
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Approved  
 Chas. E. Harrington  
 Staff Geographer - CS1x2  
 6 July 1976



ATLANTIC MARINE CENTER  
APPROVAL SHEET  
FOR  
AUTOMATED SURVEY H-9475

- A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position printout has/~~has~~ not been made. A new final sounding printout has/~~has~~ not been made. *see sdg printout notation*

Date: April 15, 1976

Signed: William L James

Title: Chief, Verification Branch

- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic and AMC Manuals. Exceptions are listed in the verifier's report.

Date: 22 April 1976

Signed: C. W. Hall

Title: Chief, Processing Division

**HYDROGRAPHIC SURVEY STATISTICS**  
**HYDROGRAPHIC SURVEY NO. 9475**

**RECORDS ACCOMPANYING SURVEY:** To be completed when survey is registered.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET (mylar)	1	BOAT SHEETS ( <del>paper</del> -2 parts)	1
DESCRIPTIVE REPORT	1	OVERLAYS (final)	2 *

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	XX 1		XX 1			
VOLUMES						2*
BOXES			1-with Final Printout & Supporting Data			

T-SHEET PRINTS (List) NONE

SPECIAL REPORTS (List) \* Volumes included with this survey are Operations Logs, Electronic Control and Calibration Report and Report of Corrections to Echo Soundings.

**OFFICE PROCESSING ACTIVITIES**

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				2226
POSITIONS CHECKED		300		
POSITIONS REVISED		8		
DEPTH SOUNDINGS REVISED	13	85		
DEPTH SOUNDINGS ERRONEOUSLY SPACED	14	10		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		0		
JUNCTIONS		8		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS	8	20		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK	8	101		
<b>TOTALS</b>	<b>16</b>	<b>129</b>	<b>29</b>	

PRE-VERIFICATION BY F.L. Saunders	BEGINNING DATE 17-March-1975	ENDING DATE 17-March-1975
VERIFICATION BY F.L. Saunders, D.C. Calland, R.G. Roberson	BEGINNING DATE 15-March-1975	ENDING DATE 16-July-1975
REVIEW BY Hydrographic Inspection Team, AMC	BEGINNING DATE 15 April, 1976	ENDING DATE 18 May 1976

REGISTRY NO. H-9475

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey, the following shall be completed:

CARDS CORRECTED

DATE \_\_\_\_\_ TIME REQUIRED \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

REGISTRY NO. \_\_\_\_\_

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE 5/2/82 TIME REQUIRED \_\_\_\_\_ INITIALS JHC

REMARKS:

H-9475

Information for Future Presurvey Reviews

There are no significant changes of the bottom configuration between the present and prior surveys.

<u>Position Index</u>		<u>Bottom Change Index</u>	<u>Use Index</u>	<u>Resurvey Cycle</u>
<u>Lat.</u>	<u>Long.</u>			
300	0812	2	2	50 years
301	0812	2	2	50 years
302	0812	2	5	25 years
300	0813	2	2	50 years
301	0813	2	2	50 years



arcs plotted on "Position Overlay to Accompany H-9475 (1974)" were plotted using a frequency of 3306.520 KHz.

Shoreline was taken from Shoreline Manuscripts TP-00659 through TP-00661. The manuscripts were compiled at a scale of 1:20,000, later reduced to a scale of 1:40,000. All three sheets had been reviewed. Dates of photography, field edit, and final review (if applicable) are listed below.

October 1973 - April 1974  
 January 1975  
 September 1975

### 3. Hydrography

A. Crossings: Depths at crossings are in adequate agreement.

B. Depth Curves: Standard depth curves delineate the bottom configuration of the area. The 36 foot curve and a 45 foot curve were drawn to better show the bottom undulations. *Also other brown curves were added.*

C. Low-water Line: The low-water line shown on this survey was taken from the shoreline manuscripts TP-00659, TP-00660, and TP-00661. See "Control and Shoreline" section of this report for dates of compilation.

D. Developments: The investigation of least depths and development of bottom configuration is adequate.

Pre-survey Review Items that fell on this survey were 24g, 31e, 31f, 31g, 31i, and 31j. These items were searched for and not found. No further development of these items was accomplished. Four dashed circle items were investigated as follows:

*(all are fisherman obstructions)*  
 $30^{\circ}19.53' \lambda 81^{\circ}18.30'$   
 (1) A 37 foot charted depth was investigated, and it was found that the area's general depth was 49 feet (position numbers 1312-1320.)

$30^{\circ}20.0' \lambda 81^{\circ}13.1'$   
 (2) A 56 foot depth on the chart is located in an area of several 50 foot soundings; however, the surrounding area is somewhat deeper. Position numbers 125-126 and 133-134 have the 50 foot soundings.

$30^{\circ}20.45' \lambda 81^{\circ}10.1'$   
 (3) Positions 1361-1362 located a shoal depth of 53 feet in an area where a 56 foot depth is charted.

(4) A reported 38 foot depth in the vicinity of positions 1324-1338 was not found.

### 4. Condition of the Survey

The sounding records, automated plotting and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual, supplemented by the Atlantic Marine Center Manual.

## 5. Junctions

Satisfactory junctions were effected with H-9456 (1974) and H-9474 (1974). A butt junction should be made with survey H-8462 (1958) by the compiler. The fourth adjoining survey is H-9373 (1973). A junction strip was provided by the EDP Branch of the Atlantic Marine Center from the library of magnetic tapes of recently completed surveys. There were some areas of H-9373 (1973) where discrepancies were evident between H-9373 (1973) and this survey. These minor discrepancies should be resolved where all survey records for both surveys are present. The curves in the area where this survey joins H-8462 (1958) were inked and considered the most adequate for charting.

*selection made by the chart compiler*

## 6. Comparisons

A. Prior Surveys: H-3770 (1915) 1:80,000 - Little comparison can be made between these two surveys since they have only a small amount of area common to both of them. Deeps in the area of latitude  $30^{\circ} 20'$  and longitude  $81^{\circ} 17'$  have shoaled to 60 feet or less. The 45 foot soundings at latitude  $30^{\circ} 20.5'$  and longitude  $81^{\circ} 16'$  have not moved appreciably. This survey has considerably more detail due to better control and tighter line spacing.

H-3964 (1917) 1:60,000 - In the Southeast corner of <sup>*the present*</sup> this survey the 60 foot depths have shoaled and moved to the East as compared to H-3964. On the Southern edge at approximately  $81^{\circ} 15'$  in the area of the 36 foot curve there is only a two or three foot change in depth (either shoaler or deeper). Between  $30^{\circ} 10'$  and  $30^{\circ} 12'$  along the 60 foot curve the changes are numerous, the bottom has shoaled and appears to be much more irregular. A shoaling trend toward the East can be noted in this particular area. Along a line from  $30^{\circ} 07'$ ,  $81^{\circ} 18'$  to  $30^{\circ} 11'$ ,  $81^{\circ} 18'$  the high spot (ridge) is still in the same area; as illustrated by brown curve on this survey. The ridge that falls in the area bounded by  $30^{\circ} 07'$ ,  $81^{\circ} 13'$ ;  $30^{\circ} 07'$ ,  $81^{\circ} 15'$ ;  $30^{\circ} 10'$ ,  $81^{\circ} 15'$ ;  $30^{\circ} 10'$ ,  $81^{\circ} 13'$  was also in the same general position during the survey of H-3964. The 45 foot curve (brown) on this survey confirms their existence at the times of the survey. The 45 foot shoal area appears larger on this survey. This increase in size may be attributed to the closer line spacing of the most recent survey. In the Northern portion of the survey there is a general Eastward movement of the 60 foot curve.

H-4373 (1924) 1:20,000 - In the Northern end of the survey there has been a slight Westward movement of the 30 foot curve. Between  $30^{\circ} 16'$  and  $30^{\circ} 18'$  the 30 foot curve moved Eastward. For the most part these surveys when compared show very minor changes in the 12, 18, and 30 foot curves.

B. Published Chart: #11488 (formerly 1243), 11th edition, dated November 23, 1974.

### (a) Hydrography

The hydrography on the chart originates with the previously

mentioned prior surveys which require no further discussion.

The charts and survey sheet generally agree within one to two feet.

(b) Aids to Navigation

There was only one buoy located on this survey, and it is adequately situated to locate the fish haven for which it is intended. In Section M of the Descriptive Report a position (geographic) is given. No data can be found to support this position; therefore, its position was hand plotted on the smooth sheet. It is recommended that the buoy be retained on the survey.

7. Compliance With Instructions

This survey does comply with the Project Instructions.

8. Additional Field Work

This is an excellent basic survey. Additional field work is not recommended.

9. Hydrographic Inspection Team Comments

Hydrographic Inspection Team comments are included within this report and Verification deficiencies found, if any, have been corrected on the Smooth Sheet.



## Additional Notes for H-9475

Sections J and K of the Descriptive Report, Comparison With Prior Surveys and Comparison With the Chart, respectively, located many depths and, in some cases, Pre-survey Review Items. A generalized location along with a distance and direction to the newly found depth was provided by the hydrographer.

The chart compiler should refer to Sections J and K of the Descriptive Report for important changes in depths found during this survey.

The present survey is adequate to supersede the prior charted hydrography within the common area.

H-9475  
AHP-40-4-74  
OPR-436

This completed smooth sheet has had five developments deleted from the plot. They have been plotted on separate smaller (1:10,000) overlays and are included with the Descriptive Report. None of the information contained in these developments has been transferred to the smooth sheet since they add no pertinent data. These developments <sup>were</sup> run while searching for stray soundings or depths taken from charts. These developments are marked on one of the overlays that accompany the boatsheet.

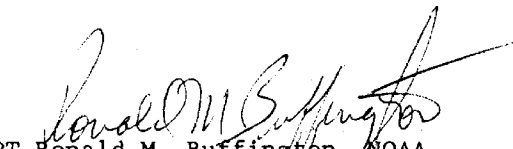
*Plots filed  
with pentads  
241 & 42 were  
retained.*

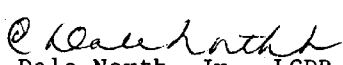
Section J of the Descriptive Report is not a discussion of prior surveys. It is merely a discussion of Pre-Survey Review Items which were possibly taken from prior surveys but have no bearing on the data as a prior survey comparison.

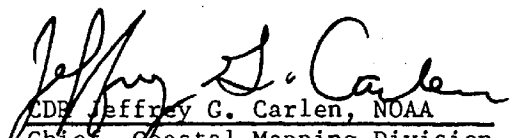
For the most part the bottom configuration is a gently sloping grade; however, in the area of the sixty foot curve the bottom becomes irregular.

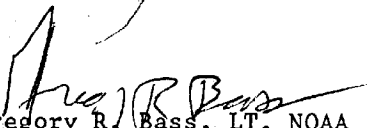
Approval Sheet for Survey H-9475


Examined and Approved:  
Hydrographic Inspection Team  
Date: *May 3, 1976*

  
CAPT Ronald M. Buffington, NOAA  
Chief, Operations Division

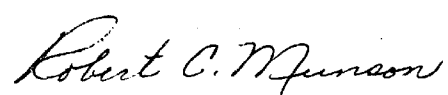
  
C. Dale North, Jr., LCDR, NOAA  
Chief, Processing Division

  
EDP Jeffrey G. Carlen, NOAA  
Chief, Coastal Mapping Division

  
Gregory R. Bass, LT, NOAA  
Chief, EDP Branch

  
William L. Jonns  
Chief, Verification Branch

Approved/Forwarded

  
Robert C. Munson  
RADM, NOAA  
Director, Atlantic Marine Center



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SURVEY  
Rockville, Md. 20852

C352

July 3, 1976

TO: *A. J. Patrick*  
A. J. Patrick  
Chief, Marine Surveys Division

THRU: Chief, Quality Control Branch

FROM: *G. K. Myers*  
G. K. Myers  
Quality Evaluator

SUBJECT: Quality Control Report, H-9475, Florida, East Coast, Palm Valley to St. Johns River

A quality control inspection of H-9475 has been accomplished to evaluate the accuracy and adequacy of the survey with respect to data acquisition, delineation of least depths and navigation hazards, decisions and actions by the verifier, and cartographic presentation of data.

The following deficiencies were noted during quality evaluation:

1. It would have been desirable to have verified the positions of charted fish haven buoys mentioned in the Descriptive Report. The detached positions of these aids should have been recorded and plotted on the boat sheet.
2. In changeable areas general statements regarding changes are sufficient to replace the overly detailed comparisons in the Descriptive Report. Specific consideration need be given only to Presurvey Review source items and the important soundings or changes in the area determined by the hydrographer. A deluge of detail is not required.
3. Foreshore characteristics should have been transferred from the photogrammetric manuscripts to the smooth sheet during verification.
4. Some curves were not drawn to coincide in overlapping areas between adjoining surveys during verification.
5. A butt junction was not required with H-8642 (1958-59) on the northwest as indicated by the verifier. An adequate junction was effected between this survey and the present survey during quality control evaluation. The following statement should have been made in the Verifier's Report:



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"Adequate junctions were effected with H-8462 (1958-59) on the northwest, H-9474 (1974) on the north, H-9373 (1973) on the east, and H-9546 (1974) on the south."

6. Some soundings located nearshore were brought forward from H-4373 (1924) to supplement the present hydrography during quality evaluation. These soundings should have been carried forward by the verifier and noted in the report.

7. The 37-foot sounding charted at latitude 30°19.55', longitude 81°18.28' from H-8462 (1958-59) was cleared by an effective depth of 44 feet on FE 2, 1971 WD and should be deleted from chart 569.

8. A comparison between the present survey and FE 2, 1971 WD was completed during quality evaluation. No conflicts between present depths and effective wire-drag depths were found.

9. A comparison of the present survey with chart 569 (print date January 12, 1974) by the hydrographer was not discussed by the verifier.

10. The verifier's statement that the hydrography on the chart originates with the prior surveys is incomplete. A discussion of the following items completes a comparison between the chart and the present survey.

a. A statement under the heading Comparison with Charts that the present survey is adequate and supersedes the charted information, except for the following items;

<u>Charted Feature</u>	<u>Latitude/Longitude</u>	<u>Source</u>
Pier ruins	30°17.5', 81°23.4'	1969 photos
Visible wreck	30°14.0', 81°22.5'	LNM 24/74
Pier ruins	30°13.1', 81°22.3'	1969 photos
Pier ruins	30°09.7', 81°21.3'	1964 photos

Also, the following fish havens were neither proved nor disproved on the present survey and should be retained on the chart:

<u>Latitude/Longitude</u>	<u>Source</u>
30°12.0', 81°10.3'	LNM 33/72
30°20.0', 81°10.0'	LNM 33/72
30°20.4', 81°12.4'	LNM 33/72
30°20.0', 81°10.9'	LNM 24/72
30°16.8', 81°09.6'	LNM 33/72
30°16.6', 81°13.8'	LNM 35/72

b. Soundings of 41 to 46 feet charted in the vicinity of latitude  $30^{\circ}20.3'$ , longitude  $81^{\circ}16.1'$  originate with C.L. 407 (1962) by the U.S. Navy and are uncorrected for the velocity of sound. Corrected soundings may be 2 to 3 feet deeper than those charted. The present survey supersedes these soundings.

c. The 38 REP (1974) PA charted at latitude  $30^{\circ}21.0'$ , longitude  $81^{\circ}17.18'$  from C.L. 535 (1974) falls in depths of 61-62 feet on the present survey and H-3770. The specific investigation on the present survey is adequate to discredit this reported depth and it should be deleted from the chart.

11. The 43-foot sounding charted at latitude  $30^{\circ}16.9'$ , longitude  $81^{\circ}20.92'$  from H-3964 (1916) falls in depths of 49-50 feet on the present survey and is probably 1 fathom in error. It is considered discredited by the present survey and should be deleted from the chart.

cc:  
C351

