

9642

Diag. Cht. Nos. 1114, 1260 & 1261-2

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. HSB-10-1-76
Office No. H-9642

LOCALITY

State FLORIDA
General Locality NORTHWEST COAST
Locality SOUTH OF ST. MARKS

1976-77

CHIEF OF PARTY

William R. Daniels

LIBRARY & ARCHIVES

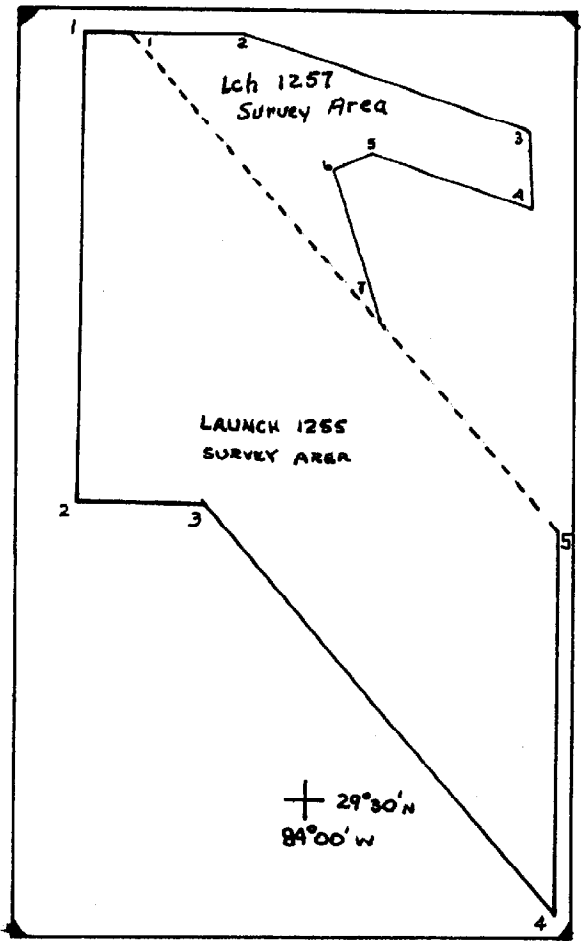
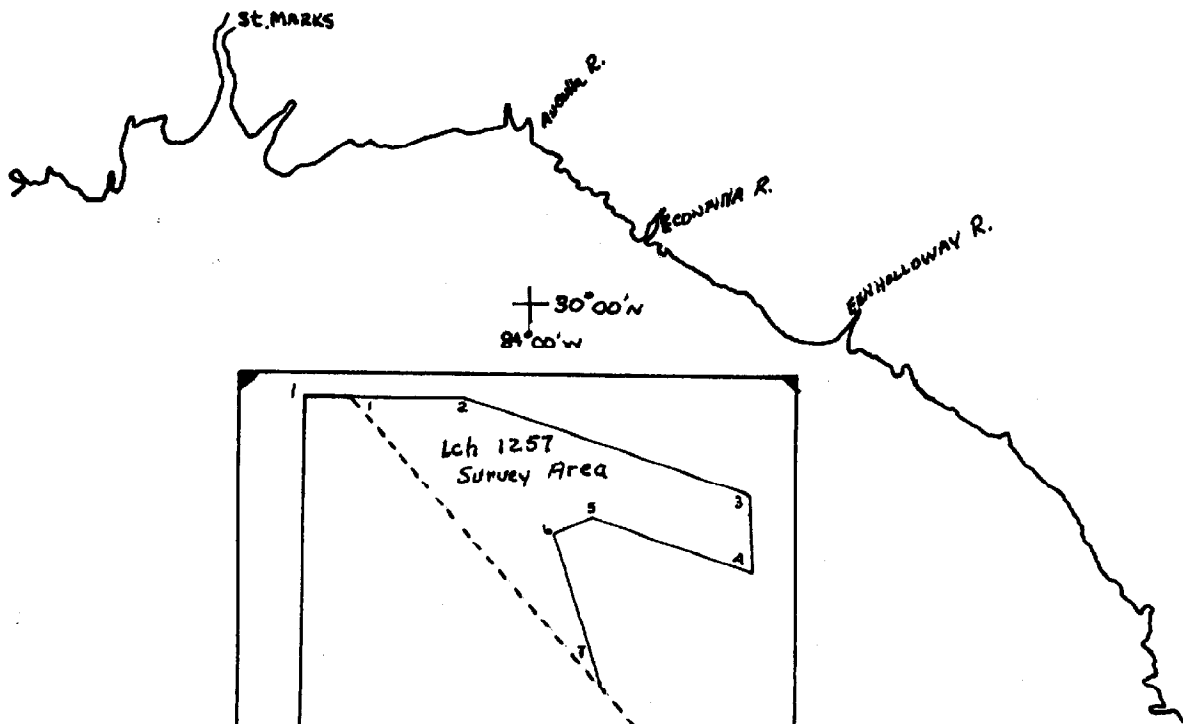
DATE May 1, 1978

9642

Charts

11405-1261
11407-1260
11400-1114

NOAA FORM 77-28 (11-72)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTER NO. H-9642
HYDROGRAPHIC TITLE SHEET		
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. HSB-40-4-76
<p>State <u>Florida</u></p> <p>General locality <u>Northwest Coast</u></p> <p>Locality <u>South of St. Marks</u></p> <p>Scale <u>1:40,000</u> Date of survey <u>8/16/76 - 5/20/77</u></p> <p>Instructions dated <u>20 August 1974*</u> Project No. <u>OPR-508-AHP-75</u></p> <p>Vessel <u>NOAA Launch 1255 & 1257 (Hydrographic Surveys Branch)</u></p> <p>Chief of party <u>WILLIAM R. DANIELS, LCDR, NOAA</u></p> <p>Surveyed by <u>A. E. Theberge, Jr., LCDR, NOAA and J. H. Bennett, Jr., LT., NOAA</u></p> <p>Soundings taken by hand lead, plate <u>echo sounder</u></p> <p>Graphic record scaled by <u>DB, SL, AT, JB, MB, GH, EM</u></p> <p>Graphic record checked by <u>AT, JB, MB</u></p> <p>Protracted by <u>NA</u> Automated plot by <u>AMC-CALCOMP 618</u> Field sheet PDP8/e COMPILOT</p> <p>Verification by <u>AMC Verification Branch</u> <u>D. V. Mason</u></p> <p>Soundings in feet <u>feet</u> at <u>MLW</u> MLW</p>		
REMARKS: <u>* Change No. 1 14 April 1975</u> <u>* Change No. 2 7 Sept 1976</u> <div style="text-align: center; font-size: 1.2em;"> <u>App'd. to stds. 7-12-78</u> <u>WJT</u> </div>		



OPR 508-AMP-75
 H-9642
 HSB 40.4-76

TAMPA BAY TO CAPE SAN BLAS
 CHART # 11400
 (FORMALLY C/GS 1114)
 SCALE 1:456394

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9642 (HSB 40-4-76)

SCALE: 1:40,000
VESSEL: Hydrographic Surveys Branch
CHIEF: William R. Daniels

A. PROJECT

This project was accomplished under Project Instructions OPR-508-AHP-75, Northwest Coast of Florida, 20 August 1974. The instructions were amended by Change Number 1, Amendment to Instructions, 14 April 1975, and Change Number 2, Amendment to Instructions, 7 September 1976.

B. AREA SURVEYED

The area encompassed by the survey was south of St Marks, Florida. The following points form the boundaries of the area surveyed by NOAA LAUNCH 1255:

1) Northwest	29 57.0 N
	84 09.0 W
2) West	29 40.5 N
	84 09.0 W
3) Southwest	29 40.5 N
	84 04.0 W
4) South	29 26.0 N
	83 50.0 W
5) East	29 39.6 N
	83 50.0 W

B. (continued)

The following points encompass the area surveyed by
NOAA LAUNCH 1257:

- 1) 29 56.8 N
84 07.0 W
- 2) 29 56.9 N
84 02.2 W
- 3) 29 53.6 N
83 51.1 W
- 4) 29 50.8 N
83 51.2 W
- 5) 29 52.6 N
83 57.5 W
- 6) 29 52.2 N
83 58.8 W
- 7) 29 46.4 N
83 56.8 W

The survey was conducted from 16 August 1976 to 20 May 1977.

C. SOUNDING VESSELS

All sounding on this survey was accomplished with NOAA LAUNCH 1255 (VESNO 1255) and NOAA LAUNCH 1257 (VESNO 1257) All survey records are labeled with vessel numbers. In addition, LAUNCH 1255 has records annotated in blue, LAUNCH 1257 in black.

Position Numbers Used:

LAUNCH 1257 0000 - 1335
LAUNCH 1255 5000 - 10648

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following Raytheon Equipment was used to obtain soundings during the survey:

Electronic Cabinet Unit:	LAUNCH 1255 Model 723-42 Unit 723 S/N 2781	LAUNCH 1257 Model 723-42 Unit 723 S/N 1910
Digital Depth Monitor:	Model DE723-41 Unit DE-723D S/N 1045	Model DE723-41 Unit DE-723D S/N 2772
Recorder:	Model DE-723 Unit 723-40	Model DE-723 Unit 723-40 S/N 37024
	J.D. 229 - 264 S/N 2924	
	J.D. 265 - 272 S/N 37024	(on loan from LAUNCH 1257)
	J.D. 273 - 048 S/N 37019	
	J.D. 049 - 083 S/N 2934	

NOAA LAUNCH 1255

The Raytheon recorders used on 1255 failed due to a variety of mechanical reasons. Bar checks were taken with each fathometer to compare the Analog-Digital Correction. When scanning fathograms and using any correction it was well annotated on the survey records.

Velocity corrections were determined solely by means of bar checks. Bar checks were taken as frequently as possible, weather permitting. The bar check lines were measured and re-marked at the beginning of the survey. On J.D. 013 the line was replaced with chain. The correction for the bar check line was 0' for the entire survey.

D. (NOAA LAUNCH 1255) continued

The velocity corrections were determined by averaging the digital depths (both down and up) for the various depths. These means were then added to the transducer draft to obtain the applicable depth. This value was then compared to the true depth, which is the bar depth plus the line correction (in this survey 0').

After all the correctors were determined, they were placed in tabular form. It was determined that two velocity curves should be drawn due to the change in water temperature during the survey. Corrections from bar checks taken on days 229 - 314 were used to compute Table I. Table II was computed from values taken on days 314 - 083. The two curves were then established by plotting average correctors versus the respective depths. Then to make the velocity tables, depths were scaled off each time the correction changed 0.1'.

Settlement and Squat was determined on 28 April 1976 off Cedar Key, Florida. The method used was as follows:

A line on which the vessel would run was defined via the hydroplot system. A point on this line where depths would be measured was further defined by noting the value of a raydist arc which was being crossed. Differences in depth between stopped and running at speed indicate the settlement and squat correction. Tide was accounted for by obtaining four depths at each speed - stopped, out at speed, back at speed, and stopped. By averaging the two depths while stopped over the point and then the two depths at speed, the effect of tide was eliminated. Data from both settlement and squat determinations are included in the appendix of this report.

Since the entire survey was run at 2000 RPM, LAUNCH 1255 used a settlement and squat correction of -0.1' for the entire survey. This was applied on the TC/II tape.

The draft (water line to bottom of transducer) of LAUNCH 1255 was measured on J.D. 329 when the vessel was out of the water for repairs. It was determined to be 2.6'. This value was used for the entire survey.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS
(continued)

NOAA LAUNCH 1257

All velocity correctors were determined by bar check. Historic settlement and squat data was used during the survey. LAUNCH 1257 has a static draft of 2.7' and an underway draft of 2.4' at survey speed of 1850 RPM. On J.D. 140 (1977), a settlement and squat determination was attempted in the vicinity of Ochlockonee Shoal. The method used was the same as 1255's, however, data was inconclusive inasmuch as the bottom was a little too irregular. Results indicated a TRA corrector of 2.2' at 1850 RPM as opposed to the 2.4' historical value. Because of the irregular bottom, the OIC of NOAA LAUNCH 1257 chose to continue to use the 2.4' corrector until a test may be run in ideal conditions. Underway draft of 2.4 shown on master and corrector tapes. *No other settlement and squat test was conducted during this survey.*

E. HYDROGRAPHIC SHEETS

The field sheets for LAUNCH 1255 and 1257 were prepared using the Processing Trailer assigned to the party. Main scheme hydrography was plotted on one field sheet and another sheet was prepared where crosslines, bottom samples, developments, and splits were plotted. Any other additional data required to replace rejected soundings were also plotted on the overlay.

Verification and smooth plotting will be done at the Atlantic Marine Center, Norfolk, Virginia. Projection and control parameters are in the Appendix.

As opposed to the G.P.'s of the corners of the registered survey area, the following G.P.'s are suggested to outline the survey area for smooth plotting purposes:

29	25.1N	29	57.3 N
83	48.2W	84	10.6W

F. CONTROL STATIONS

Left (RED) Station: JOHNSON RAYDIST 1976
G.P. 29 43' 36.668"
84 53' 08.295"

Right (GREEN) Station: MOUND TOWER 1935
G.P. 30 05' 16.124"
84 09' 46.424"

JOHNSON RAYDIST 1976 was located by Mr. Jim Shea of Atlantic Marine Center Operations Division. MOUND TOWER 1935 is an intersection station located by a geodetic field party.

G. HYDROGRAPHIC POSITION CONTROL

Control for this survey was Hastings Raydist DR-S system operating in the range-range mode with first and third party users. No known difficulties were experienced that could have degraded the expected position accuracy.

SHORE STATION EQUIPMENT:

Left Station: RED Raydist Model AA-60
S/N 55 J.D. 229 - 312
S/N 84 J.D. 312 - 140

Right Station: GREEN Raydist Model AA-60
S/N 69

EQUIPMENT ABOARD LAUNCH 1255:

Antenna Loading Coil, Model QB-52B, S/N 194
DRS System Navigator, Model ZA-67B, S/N 58
Raydist Transmitter, Model TA-96B, S/N 45

LAUNCH 1255 worked in a third party mode with a frequency of 3306.495 KHz. There were no Raydist Equipment failures aboard LAUNCH 1255 during the period of this survey.

EQUIPMENT ABOARD LAUNCH 1257:

Antenna Loading Coil, Model QB-52B, S/N 81
DRS System Navigator, Model ZA-67B, S/N 67
Raydist Transmitter, Model TA-96B, S/N 86

LAUNCH 1257 worked in the first party mode with a frequency of 3306.400 KHz.

Calibration of the Raydist system by LAUNCH 1255 was accomplished by comparing the observed Raydist values with actual values while alongside the St Marks Front Range Light located with third order methods by Mr. Jim Shea of Operations Division, AMC. The offset distance from the Raydist antenna to the center of the fixed aid was accounted for by averaging pairs of observed readings taken on opposite sides of the aid. Four values (two pairs) were observed for each calibration. Calibrations were taken before and after hydrography was run each day except when both stations stopped tracking during the day because of weather. On day 229 visual calibrations were taken and compared with calibrations taken at Ochlockonee Light "2" and found to agree. On days 229 - 261 calibrations were taken both at St Marks Front Range Light (201) and Ochlockonee Light "2" (202) and found to agree so calibrations from that time on were taken at St Marks Front Range Light. The morning and afternoon calibrations generally agreed well indicating this data is adequate to be applied to raw positions throughout the survey.

Calibration of the Raydist system by LAUNCH 1257 was accomplished by averaging the four readings obtained by running by each corner of the St Marks Front Range and comparing this averaged value for each rate to the known value. On J.D. 246 visual fix calibrations were compared to values obtained at St Marks Front Range and Ochlockonee Light "2". All were in good agreement. Thereafter all calibrations were obtained at St Marks Front Range.

H. SHORELINE

There was no shoreline delineated on this survey.

I. CROSSLINES

Crossline agreement is good. Differences range from 0-3 feet. Due to meteorological conditions affecting predicted tidal level during the course of survey operations, it is believed these differences will be resolved when smooth tides are applied to the hydrographic data. Crosslines constitute 9.8% of main scheme sounding line.

J. JUNCTIONS See Verifiers Report

This survey, H-9642 (HSB 40-4-76), junctions with H-9641 (HSB 40-3-76) 1:40,000 scale to the east, and H-9589 (AHP 40-2-76) 1:40,000 scale to the southeast. Since H-9641 was run concurrently with the same sounding vessels and position control, agreement is excellent. No comparisons were made with H-9589 to the southeast since copies of that survey were not available.

This survey (H-9642) also junctions with H-7818 to the west. This is a 1:100,000 scale survey conducted in 1950. Agreement is good with differences ranging from 0 to 4 feet. This survey (H-9642) also junctions with H-9683 (HSB 40-1-77) 1:40,000 scale to the west.

K. COMPARISON WITH PRIOR SURVEYS

The survey area was previously covered by the surveys H-1332, 1:40,000, and H-1929, 1:80,000. These surveys were conducted in 1876 and 1889 and the sounding density is very sparse. The depths on NOS Chart 11405 (1261) and 11407 (1260) which cover the survey limits are representative soundings taken directly from the old surveys. For these reasons comparison of the previous surveys would be of little value. However comparison of the charts mentioned are made in the next section.

L. COMPARISON WITH THE CHART

Charts 11407 (1260), 6th ed., Nov 23/74 and 11405 (1261), 13th ed., Nov 8/75, 1:80,000 scale, are the largest scale charts on which the survey H-9642 lies. The soundings were transferred from the charts to the field sheets by having the charts enlarged to a 1:40,000 scale by photographic means. The soundings on these charts which lie within the H-9642 survey limits were compiled directly from surveys conducted in the 1880's. Generally the charted soundings agreed with depths from the H-9642 survey, with the charted depths being 2-3' deeper on the average. Those charted soundings which were shallower than those found in the survey were investigated by running developments over them at reduced line spacing. Refer to the field sheet for developments of charted shoaler soundings. Developments 28-34, 36-43, 47, 49, and 50 were run at 50 meter line spacing over charted shoaler soundings. In all cases indications of a shoaler sounding at the specific location were not found.

M. ADEQUACY OF SURVEY

This survey is sufficiently complete and adequate to warrant its use to supersede prior surveys for charting.

N. AIDS TO NAVIGATION

Light 22, Fl. W., 2.5s, designated number 126.50 on page 12 of the United States Coast Guard Light List, Volume II, 1977, has a published G.P. of 29 53'.5 N and 83 53'.2 W. During the survey the correct G.P. was found by LAUNCH 1257 to be 29 53' 26" N and 83 53' 03" W. This rounds off to 29 53'.4 N and 83 53'.0 W. The light list should be changed accordingly.

O. STATISTICS

	<u>Vesno 1255</u>	<u>Vesno 1257</u>	<u>Total</u>
Total number of positions:	5648	1335	6983
N.M. of sounding lines:	2335.0	488.9	2823.9
N.M. of crosslines:	224.0	52.0	276.0
N.M. of development:	94.0	62.0	156.0
Total N.M. of Hydrography:	2653.0	602.0	3255.9
Square N.M. of Hydrography:	240.0	40	280.0
Bottom samples:	52	--	52

P. MISCELLANEOUS

On Julian Day 060, Launch 1255 investigated a report of the existence of a spring hole located in the vicinity of 29 46' N, 84 04' W. This location was based on a dead reckoned course from the aid to navigation R "24"; charted position 29 51'.5 N, 84 10'.3 W. The information was furnished by Mr. Charles Clements of Shell Point, Florida (phone: home 926-3696, office 925-6111 ext. 307), a member of the local Coast Guard Auxiliary. Mr. Clements, after diving in the spring, reported the hole to be approximately 61' deep, possibly leading into an underground cave. Because of the unusual nature of this feature, LAUNCH 1255 ran 50 meter line spacing in an area of approximately one square mile around the reported location. No evidence was found of its existence in this area and it is recommended that no further investigation be conducted until a better approximate location can be determined. Future surveys in the area should be aware of its existence and inspect fathograms for any evidence of it.

Tides in this area are subject to great effect from prevailing meteorological conditions. Prolonged northerly winds will reduce the water level in this portion of the Gulf by as much as 1' to 2' below predicted tidal levels. Conversely, southerly winds pile up the water with resulting higher tides than predicted.

Developments in the survey area that were run by LAUNCH 1257 are numbered thusly. 1-27 are double checks of anomalous data on the fathogram records: i.e., fish, grass spikes, and possible obstructions. (See accompanying table for cross referencing). 28-34, 36-43, 47, 49, and 50 are checks of charted soundings that are shoaler than those obtained during the survey. 35, 44, 45, 46, and 48 are densifications of soundings in shoal areas observed on the present survey. Nothing was found on the double checks of 1-27. Developments run by LAUNCH 1255 are unnumbered.

Q. RECOMMENDATIONS

The sounding lines in the previous surveys were run at approximately a mile apart and a great many shoaler soundings were obtained during the survey H-9642 which were previously uncharted. The shoalest soundings were developed at reduced line spacing in order to determine the least depths. It is recommended that the entire survey should be reviewed carefully and a new edition of the chart be produced on the basis of the soundings obtained during this survey, H-9642; 1:40,000, 1976.

LAUNCH 1255 ran a development in the area of a charted wreck, position 29 51'.1N, 84 05'.0W taken from NOS chart 11400 (1114), 1:456,394 scale, 14th ed., Sept. 7/74.

No evidence of this wreck was found and it is recommended that it be deleted from the chart. Furthermore, it is noted that this wreck is not shown on chart 11405. *Although this wreck was not found it is not considered disproved and should not be deleted from chart 11400 based upon this survey.*

It is recommended that a warning be printed on any new editions of Charts 11405 and 11406 advising the mariner of the meteorological effect on predicted tides, i.e., prolonged northerly winds will cause tides to be 1' to 2' below predicted values and prolonged southerly winds will cause water levels to be 1' to 2' higher than predicted values. These factors were amply demonstrated values. These factors were amply demonstrated by NOAA LAUNCH 1255 running aground in the St. Marks River during a low spring tide coupled with a strong northeaster. *Will be noted in Coast Pilot B-7 8-10-78*

R. AUTOMATED DATA PROCESSING

<u>Program Number</u>	<u>Program Name</u>	<u>Version Date</u>
RK 111	Range-Range Real Time Plot	01/30/76
RK 201	Grid, Signal and Lattice Plot	04/18/75
RK 211	Range-Range Non-Real Time Plot	01/15/76
RK 300	Utility Computations	02/05/76
PM 360	Electronic Corrector Abstract	02/02/76
RK 500	Predicted Tide Generator	11/10/72
AM 602	ELINORE - Line Oriented Editor	05/20/75

S. REFERENCES TO REPORTS

None

Respectfully Submitted,

Albert E. Theberge, Jr., LCDR., NOAA
OIC Launch 1257 (HFP#1)

FIELD TIDE NOTE

Field tide reduction of soundings was based on predicted tides from St. Mark's River Entrance, Florida, corrected to Fisherman's Rest, latitude $29^{\circ}44'$, longitude $83^{\circ}32'$.

There were no tide gages installed by the hydro party within the limits of this survey.

NOAA LAUNCH 1257
Velocity Corrections

J.D. 247 - J.D. 259
(3 SEP - 15 SEP 1976)

NOAA LAUNCH 1257 gathered no bar check data for this period. The necessary velocity corrections were extrapolated as follows:

Bar check data from NOAA LAUNCH 1255 (digital depth monitor #1045) was compared with bar check data from NOAA LAUNCH 1257 (digital depth monitor #2772) for similar periods. A constant correction factor was observed which was then applied to bar check data for this period from LAUNCH 1255 to arrive at the following corrections, graph, and velocity correction table.

(NOTE: LAUNCH 1257 recorded no soundings deeper than 25' during this period)

TRUE DEPTH (FT)	CORRECTIONS (FT)
5	-0.1
10	0.3
15	0.5
20	0.6
25	0.9

VELOCITY CORRECTION TABLE #1
J.D. 247 - J.D. 259

APPLICABLE DEPTH (FT)	VELOCITY CORRECTION (FT)
0 - 5.5	-0.1
6.4	0.0
7.5	0.1
8.8	0.2
10.6	0.3
13.0	0.4
17.0	0.5
21.0	0.6
23.0	0.7
23.8	0.8
- deeper	0.9

Table #1

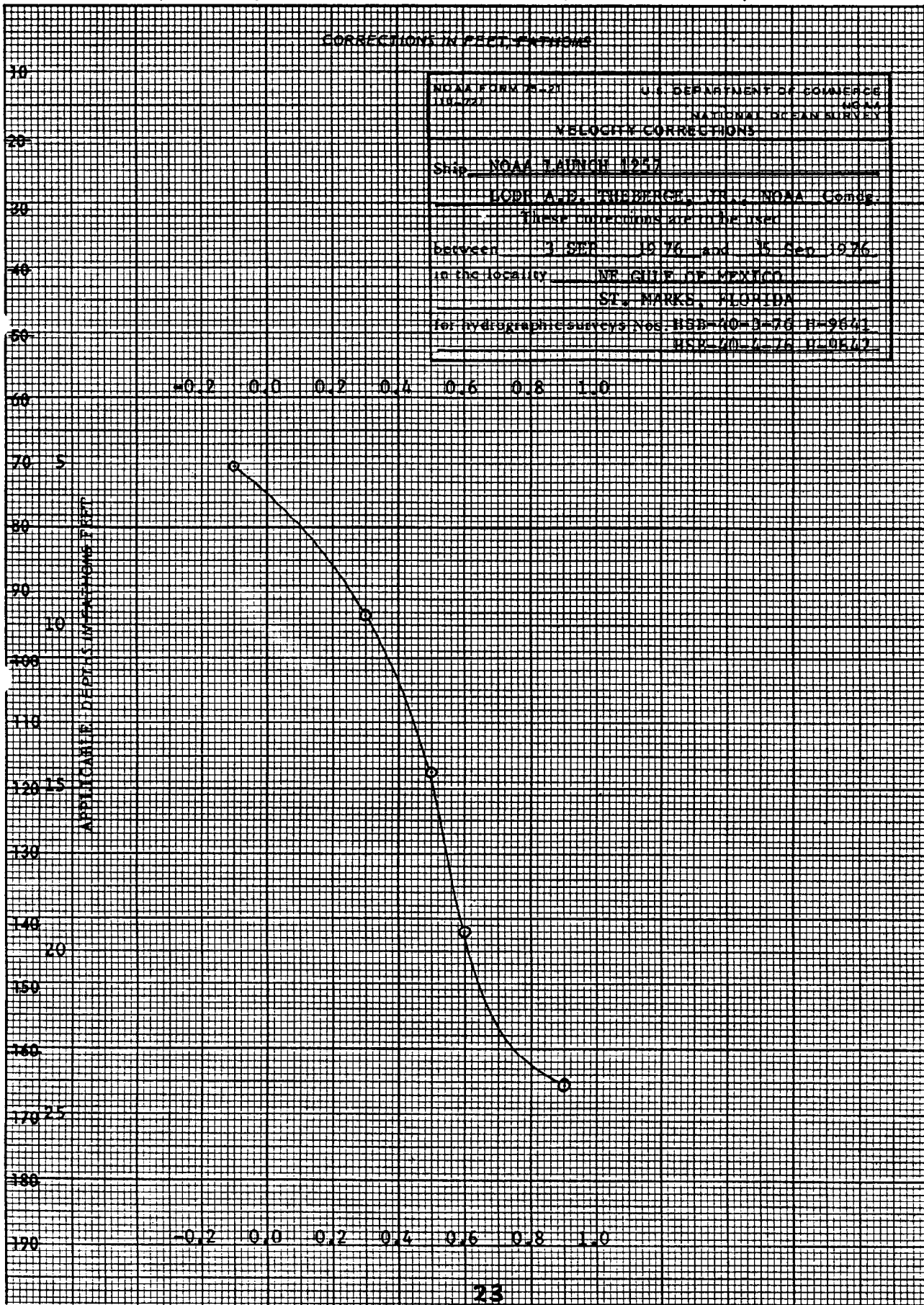
(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET, FATHOMS

NOAA FORM 1201 (Rev. 12-75)	U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEANIC SURVEY
VELOCITY CORRECTIONS	
Ship <u>NOAA LAUNCH #257</u>	
Comd. <u>LOUI A. E. THEBERGE, JR., NOAA Comd.</u>	
These corrections are to be used between <u>1 SEP 1976</u> and <u>31 SEP 1976</u>	
in the locality <u>NE GULF OF MEXICO</u>	
<u>ST. MARKS, FLORIDA</u>	
for hydrographic surveys Nos. <u>HSB-40-3-76 H-9641</u>	
<u>USN-70-1-76 H-00642</u>	

For deep water add these figures

APPLICABLE DEPTHS IN FATHOMS FEET



NOAA LAUNCH 1257
 Abstract of Bar Check Corrections
 (draft = 2.7')
 correction = true depth - (mean instrument depth + 2.7')
 J.D. 309 - J.D. 338 (1976)

True Depth (ft)	Table #2					Average Corrections (ft)
	J.D. 309	314	316	324	338	
5	-0.3	-0.1	-0.4	-0.1	-0.3	-0.2
10	0.1	0.2	0.1	0.1	0.1	0.1
15	0.3	0.3	0.3	0.1	0.3	0.3
20	0.5	0.6	0.6	0.5	0.3	0.5
25	0.7	0.9	0.7	0.7	0.5	0.7
30	0.9	1.0	0.9	0.9	0.8	0.9
35	---	1.1	0.9	0.9	0.9	1.0
40	---	---	1.1	1.0	0.9	1.0

Table #3
 J.D. 041 - J.D. 070 (1977)

True Depth (ft)	J.D.		Average Corrections (ft)
	041	070	
5	-0.2	-0.5	-0.4
10	-0.1	-0.1	-0.1
15	0.0	0.0	0.0
20	-0.1	0.1	0.0
25	0.0	0.2	0.1
30	0.3	0.4	0.4
35	0.3	0.6	0.4

Table #2

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET PER SECOND

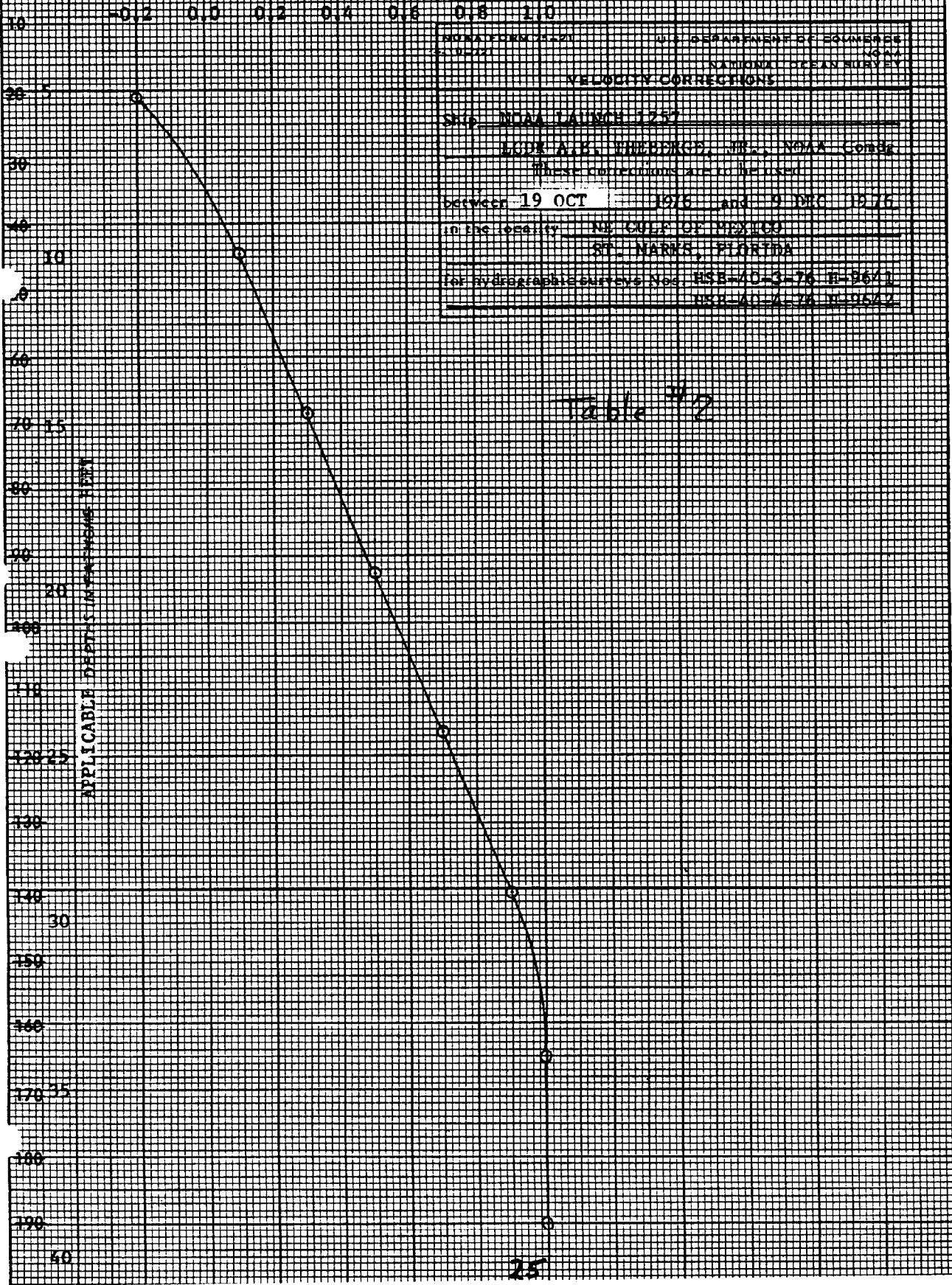
-0.2 0.0 0.2 0.4 0.6 0.8 1.0

NOAA FORM 1221 5-11-74	U.S. DEPARTMENT OF COMMERCE NOA NATIONAL OCEAN SURVEY
VELOCITY CORRECTIONS	
Ship: NOAA LAUNCH 1257	
LCDR A.B. WREBERG, JR., NOAA Comd'g	
These corrections are to be used	
between 19 OCT 1976 and 9 DEC 1976	
in the locality: NW GULF OF MEXICO	
ST. MARKS, FLORIDA	
for hydrographic surveys Nos. HSB-AD-3-76 B-9641	
DSB-AD-4-76 B-9642	

Table #2

(For deep water add these figures)

APPLICABLE DEPTHS IN METERS (DOWN)

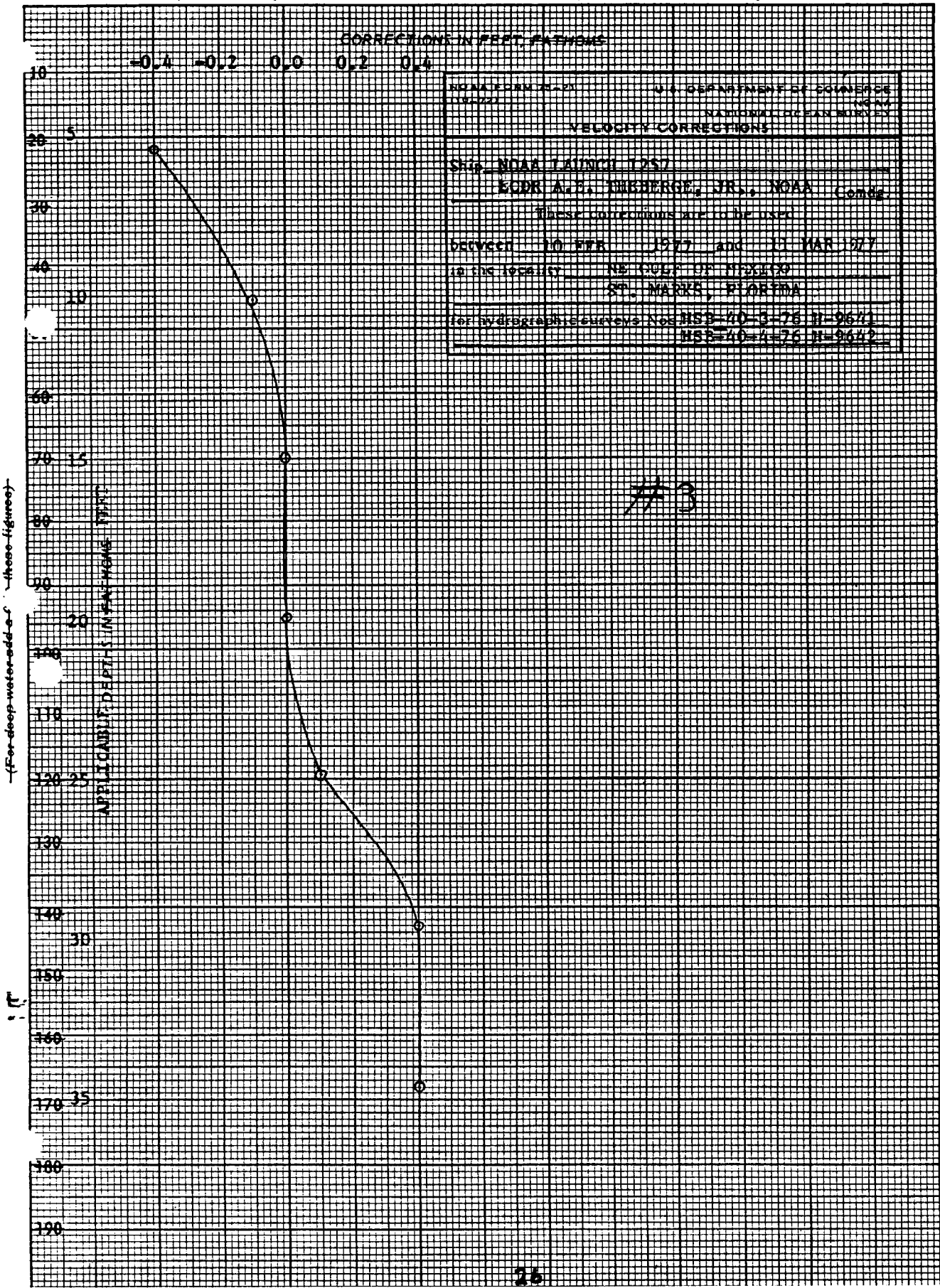


10'

50

25'

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)



NOAA FORM 5021
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEAN SERVICE
VELOCITY CORRECTIONS

SHIP: NOAA TAUNTON (257)
 COMMANDER: GORDON A. D. DIEBBERGER, JR., NOAA Comdr.
 THESE CORRECTIONS ARE TO BE USED
 BETWEEN 10 FEB 1977 AND 31 MAR 1977
 IN THE LOCALITY: NE GULF OF MEXICO
 ST. MARKS, FLORIDA
 FOR HYDROGRAPHIC SURVEYS Nos. HSB-40-3-76 H-9641
 HSB-40-4-76 H-9642

#3

(For deep water add 0.1 to these figures)

4

NOAA LAUNCH 1257
Abstract of Bar Check Corrections

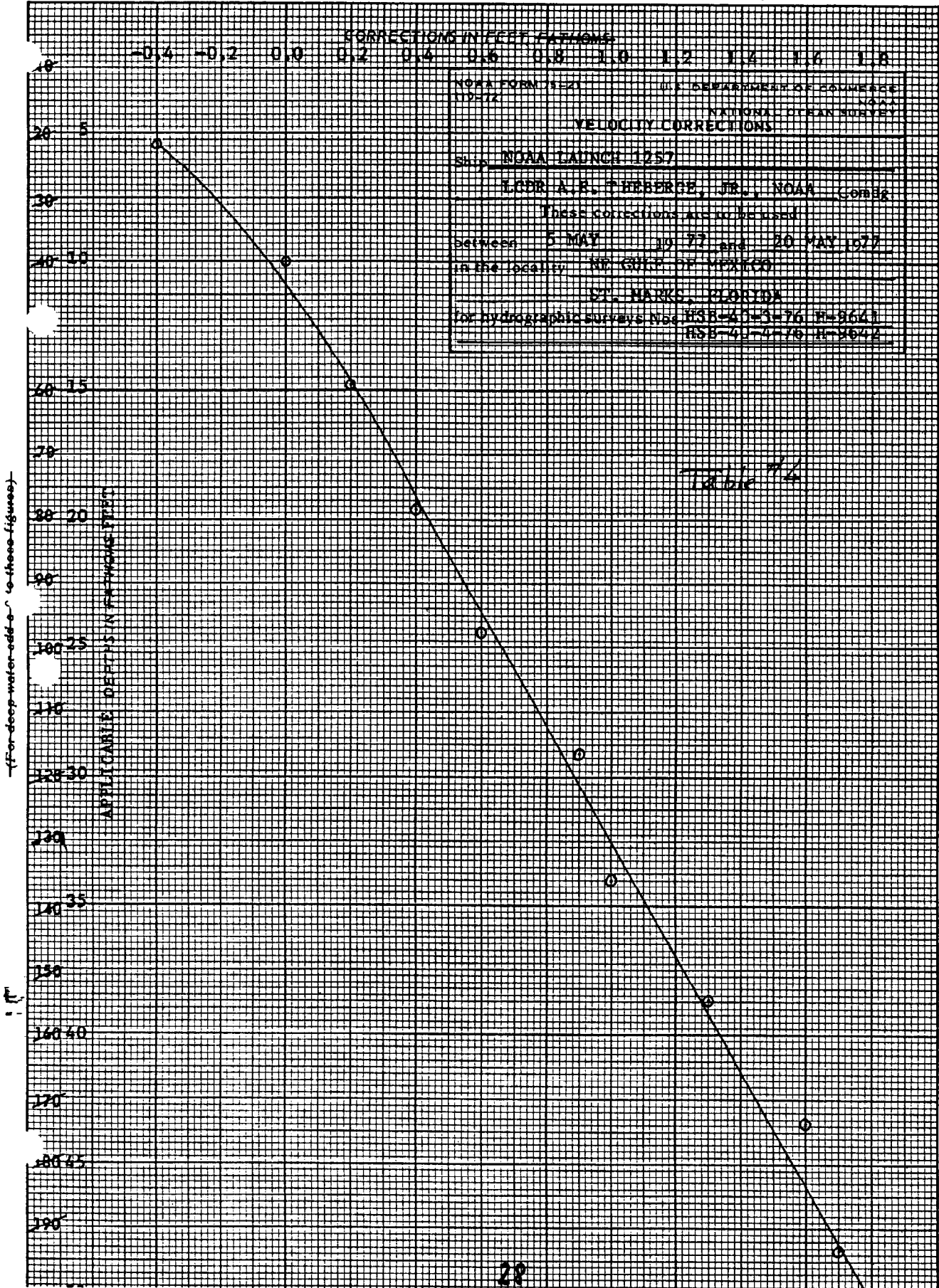
J.D. 125 - J.D. 140 (1977) Table #4

True Depth (ft)	J.D. 125	139	Average Corrections (ft)
5	-0.5	-0.3	-0.4
10	-0.1	0.1	0.0
15	0.1	0.4	0.2
20	0.4	0.5	0.4
25	0.7	0.6	0.6
30	0.9	0.9	0.9
35	1.1	0.9	1.0
40	---	1.3	1.3
45	---	1.6	1.6
50	---	1.7	1.7

Table #4

(For 1 inch equal 1 fathom for deep water and 1 inch equal 0.1 fathom for shoal.)

4



NOAA LAUNCH 1255
Abstract of Bar Check Corrections

Table #5

J.D. 229 - J.D. 289

TRUE DEPTH (FT)	J.D.				AVERAGE CORRECTIONS (FT)
	229	261	278	289	
5	-0.1	---	-0.2	-0.1	-0.13
10	0.3	0.3	0.4	0.2	0.30
15	0.6	0.6	0.4	0.4	0.50
20	0.8	0.7	0.6	0.6	0.68
25	0.9	1.0	1.0	0.9	0.95
30	1.5	1.3	1.3	1.1	1.30
35	1.7	1.6	1.9	1.4	1.65
40	1.9	1.8	2.1	1.5	1.83
45	2.3	2.0	2.7	1.8	2.20
50	2.5	2.4	3.0	2.0	2.48

J.D. 342 - J.D. 061

Table #6

TRUE DEPTH (FT)	J.D.										AVERAGE CORRECTIONS (FT)
	342	345	348	013	033	048	056	060	061		
5	-0.1	-0.3	-0.2	-0.3	-0.2	-0.2	-0.1	-0.1	-0.2	-0.19	
10	0.1	0.0	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.16	
15	0.2	0.2	0.3	0.1	0.2	0.3	0.2	0.2	0.3	0.22	
20	0.5	0.2	0.6	0.5	0.3	0.5	0.4	0.3	0.3	0.40	
25	0.6	0.6	---	0.4	0.4	0.5	0.4	0.5	0.5	0.49	
30	0.8	0.7	---	0.8	---	0.8	0.7	0.7	0.7	0.74	
35	1.0	1.0	---	0.9	---	0.7	0.7	---	0.9	0.87	
40	---	1.0	---	0.9	---	0.7	1.0	---	0.9	0.90	
45	1.4	1.4	---	1.0	---	0.9	1.0	---	1.1	1.13	
50	---	---	---	1.5	---	1.0	1.0	---	---	1.17	

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

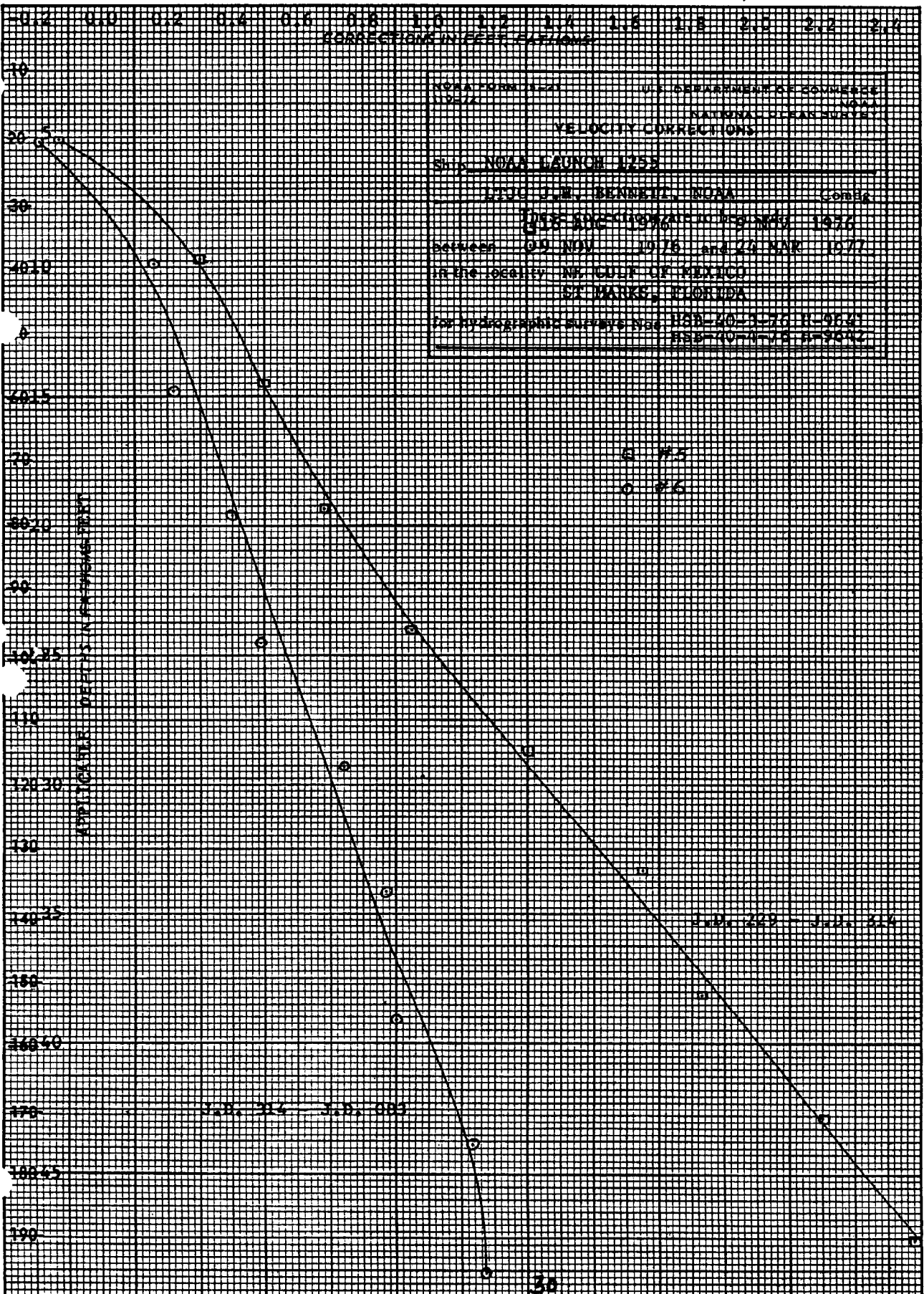
CORRECTIONS IN FEET FATHOMS

NOAA FORM 1221
 U.S. DEPARTMENT OF COMMERCE
 NATIONAL OCEANOGRAPHIC SERVICE
 VELOCITY CORRECTIONS

SHIP: NOAA LAUNCH 1253
 CAPTAIN: J. W. BENNETT, NOAA
 DATE: 015 DEC 1966 AT 0755 W, 1976
 BETWEEN: 09 NOV 1976 AND 20 MAR 1977
 IN THE LOCALITY OF: GULF OF MEXICO
 ST. MARKS, FLORIDA

FOR HYDROGRAPHIC SURVEYS USE: HSB-40-1-76 H. OF A.
 HSB-40-1-76 H. OF A.

(For deep water - 0.1 to these figures)



227
 -314

VELOCITY CORRECTIONS
OPR 508-AHP-75
HSB 40-4-76
H 9642
VESNO 1257

TABLE 1: J.D. 247 - J.D. 259 (1976)

000055	1	0001	0001	000	125700	009642
000064	0	0000				
000075	0	0001				
000088	0	0002				
000106	0	0003				
000130	0	0004				
000170	0	0005				
000210	0	0006				
000230	0	0007				
000238	0	0008				
999999	0	0009				

TABLE 2: J.D. 293 - J.D. 344 (1976)

000057	1	0002	0002	000	125700	009642
000071	1	0001				
000089	0	0000				
000111	0	0001				
000135	0	0002				
000160	0	0003				
000184	0	0004				
000207	0	0005				
000231	0	0006				
000255	0	0007				
000279	0	0008				
000305	0	0009				
999999	0	0010				

TABLE 3: J.D. 041 - J.D. 070 (1977)

000061	1	0004	0003	000	125700	009642
000075	1	0003				
000093	1	0002				
000118	1	0001				
000234	0	0000				
000255	0	0001				
000268	0	0002				
000283	0	0003				
999999	0	0004				

VELOCITY CORRECTIONS
(CONTINUED)
OPR 508-AHP-75
HSB 40-4-76
H 9642
VESNO 1257

TABLE 4* J.D. 125 - J.D. 140 (1977)

000059	1	0004	0004	000	125700	009642
000071	1	0003				
000085	1	0002				
000100	1	0001				
000117	0	0000				
000137	0	0001				
000156	0	0002				
000178	0	0003				
000203	0	0004				
000225	0	0005				
000247	0	0006				
000270	0	0007				
000292	0	0008				
000313	0	0009				
000336	0	0010				
000358	0	0011				
000380	0	0012				
000403	0	0013				
000425	0	0014				
000448	0	0015				
000469	0	0016				
000492	0	0017				
999999	0	0018				

VELOCITY TABLES

H-9642 (HSB-40-4-76)

VESNO 1255

000050	1	0002	0005	000	125500	009642
000057	1	0001				
000065	0	0000				
000077	0	0001				
000091	0	0002				
000108	0	0003				
000133	0	0004				
000158	0	0005				
000180	0	0006				
000201	0	0007				
000220	0	0008				
000238	0	0009				
000254	0	0010				
000269	0	0011				
000285	0	0012				
000300	0	0013				
000316	0	0014				
000331	0	0015				
000345	0	0016				
000361	0	0017				
000376	0	0018				
000392	0	0019				
000407	0	0020				
000422	0	0021				
000438	0	0022				
000453	0	0023				
000468	0	0024				
999999	0	0025				
000056	1	0002	0006	000	125500	009642
000068	1	0001				
000085	0	0000				
000106	0	0001				
000134	0	0002				
000171	0	0003				
000207	0	0004				
000243	0	0005				
000279	0	0006				
000315	0	0007				
000352	0	0008				
000382	0	0009				
000414	0	0010				
000455	0	0011				
999999	0	0012				

NOAA Launch 1255

Settlement & Squat Determination

April 28, 1976

Cedar Key, Florida

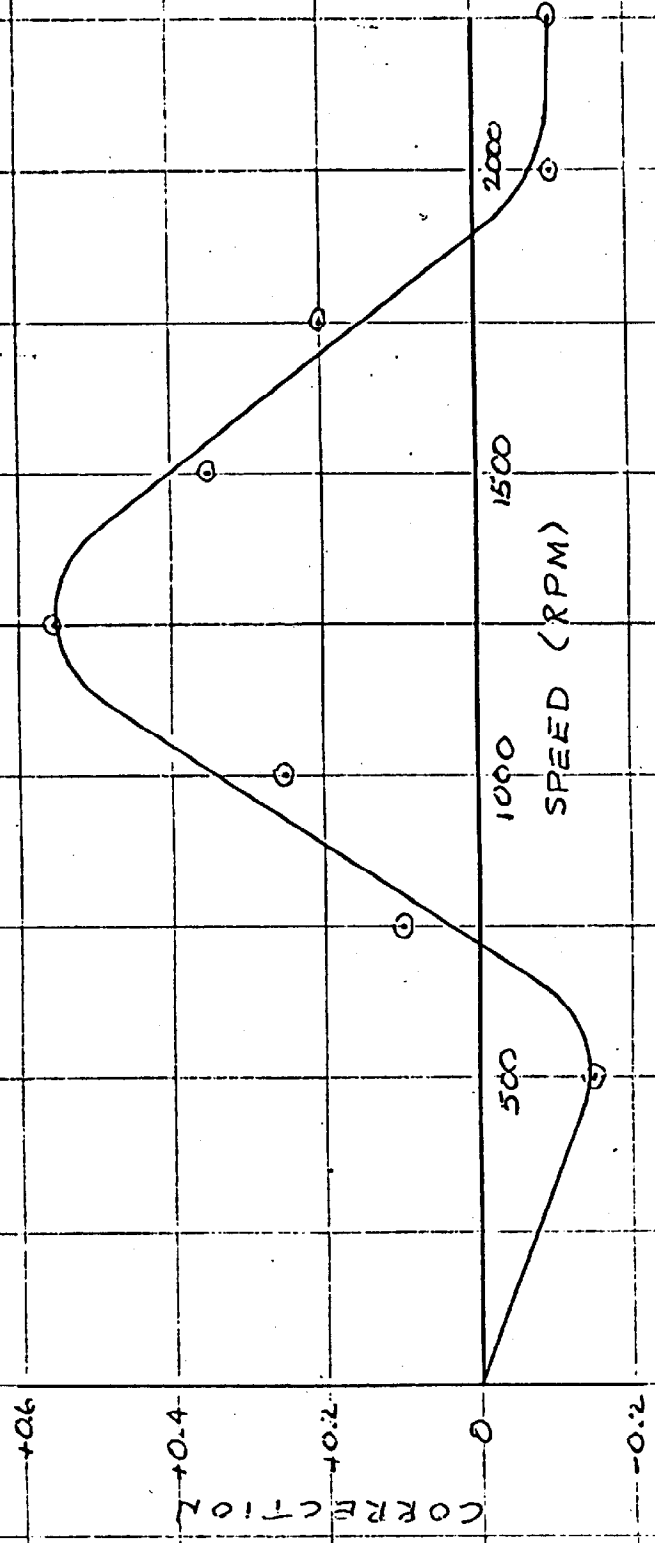
<u>Speed (RPM)</u>	<u>Stopped</u>	<u>Depths</u>		<u>Stopped</u>	<u>Average Stopped</u>	<u>Avg at Speed</u>	<u>Settlement and Squat</u>
		<u>Out</u>	<u>Back</u>				
500	22.7	22.9	22.8	22.7	22.7	22.85	-0.15
750	22.7	22.6	22.6	22.7	22.7	22.6	+0.10
1000	22.7	22.4	22.3	22.5	22.6	22.35	+0.25
1250	22.5	21.9	21.9	22.4	22.45	21.9	+0.55
1500	22.4	21.9	21.8	22.0	22.2	21.85	+0.35
1750	22.0	21.8	21.9	22.1	22.05	21.85	+0.20
2000	22.1	22.2	22.1	22.0	22.05	22.15	-0.10
2250	22.0	22.0	21.9	21.7	21.85	21.95	-0.10

NOAA Launch 1255

Settlement & Squat Curve
from data obtained

28 April 1976

off Cedar Keys, Florida



SIGNAL LISTING

OPR 508-AHP-75

HSB 40-4-76

H 9642

VESNO 1257

Lch 1257 1st Party, Freq = 3306.400 KHz
Lch 1255 3rd Party Freq. = 3306.495 KHz

001	7	29	43	36668	084	53	08295	250	0000	330640	Johnson
002	7	30	05	16124	084	09	46424	250	0000	330640	Mound Tower
101	7	30	04	25052	084	10	47088	139	0000	000000	St. Marks Lighthouse
201	7	30	02	25974	084	10	37552	243	0000	000000	St. Marks Ft. Range Lt.
202	7	29	56	02168	084	18	05112	243	0000	000000	Ochlockonee Lt. "2"
203	7	29	56	49504	084	20	27687	243	0000	000000	CS-0A
204	7	29	54	57346	084	22	09670	243	0000	000000	Micro wave Tower
205	7	29	58	43091	084	23	06156	243	0000	000000	Chaires water tank.

APPROVAL SHEET

SURVEY H-9642 (HSB-40-4-76)

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

No direct supervision was given by me during field work and the field sheet was examined only during routine field inspection of the hydro party.

This survey is complete and adequate with no additional field work recommended.

Approved and forwarded,



WILLIAM R. DANIELS
LCDR, NOAA
Chief, HSB

September 13, 1977

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

Tide Station Used (NOAA Form 77-12): 872-8229 Shell Point

Period: August 16, 1976 - May 20, 1977

HYDROGRAPHIC SHEET: H-9642

OPR: 508

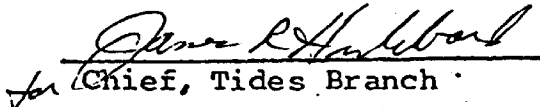
Locality: Vicinity of Apalachee Bay, Florida
diurnal

Plane of reference (mean ~~lower~~ low water): -0.03 foot

Height of Mean High Water above Plane of Reference is
3.1 feet

Remarks: Recommended zoning:

- 00 22
1. South of 29°45' apply a ~~-30~~-minute time correction to high waters
and -15 minute time correction to low waters.
 2. North of 29°45' apply -15 minute time correction to high waters.
- 00 07 - 00 07


for Chief, Tides Branch

GEOGRAPHIC NAMES

H-9642

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
ST. MARKS (TITLE)											1
APALACHEE BAY											2
											3
											4
											5
											6
											7
											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25

APPROVED

Chas. E. Harman

STAFF GEOGRAPHER - C3x8

5 MAY 1978

APPROVAL SHEET
FOR
SURVEY H-9642

- 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.
- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the ~~PROX~~ VISIONAL Hydrographic Manual. Exceptions are listed in the Verifier's Report.

Date: Apr 11, 1978

Signed:

for R. O. Sander

Title:

Chief, Verification Branch

HYDROGRAPHIC SURVEY STATISTICS

H-9642

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	2
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	2

DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES	6		18			2-misc. data
CAHIERS	6 with printouts		6			
VOLUMES	2					
BOXES						1 box sawtooth

T-SHEET PRINTS (List) tooth records

SPECIAL REPORTS (List)

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	PRE-VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			6983
POSITIONS CHECKED		375	
POSITIONS REVISED		17	
SOUNDINGS REVISED		589	
SOUNDINGS ERRONEOUSLY SPACED		0	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	

TIME - HOURS

CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)			
VERIFICATION OF CONTROL		4	
VERIFICATION OF POSITIONS		61	
VERIFICATION OF SOUNDINGS	2	58	
COMPILATION OF SMOOTH SHEET		15	
APPLICATION OF TOPOGRAPHY		0	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		15	
COMPARISON WITH PRIOR SURVEYS & CHARTS		26	
VERIFIER'S REPORT		15	
OTHER		117	
TOTALS	2	311	313

Pre-Verification by G. Trefethen	Beginning Date 09/26/77	Ending Date 09/26/77
Verification by S. Kelley, J. Bradford, D. Mason	Beginning Date 10/15/77	Ending Date 03/29/78
Verification Check by B. Stephenson	Time (Hours) 3	Date 04/06/78
Marine Center Inspection by Hydrographic Inspection Team (AMC)	Time (Hours) 8	Date 04/07/78
Quality Control Inspection by <i>YK Myers</i>	Time (Hours) 18	Date 5/5/78
Requirements Evaluation by <i>J. Baumgardner</i>	Time (Hours) 3	Date 5/10/78

Passed RHC 5/9/78

Reg. No. H-9642

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 REQ'D _____ INITIALS _____

REMARKS:

Reg. No. 9642

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 10-13-82 TIME REQ'D. _____ INITIALS JAC

REMARKS:

H-9642

Information for Future Presurvey Reviews

No significant bottom changes have occurred since the prior surveys.

<u>Position Index</u>		<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
292	0840	2	1	50 years
293	0840	2	1	50 years
294	0840	2	2	50 years
295	0840	2	2	50 years
293	0841	2	1	50 years
294	0841	2	2	50 years
295	0841	2	2	50 years

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. H-9642

FIELD NO. HSB-40-4-76

Florida, Northwest Coast, South of St. Marks

SCALE: 1:40,000

PROJECT NO.: OPR-508

SURVEYED: August 16, 1976 through May 20, 1977

SOUNDINGS: Raytheon DE-723

CONTROL: Raydist DR-S
(Range-Range)

Chief of Party W. R. Daniels
Surveyed by A. E. Theberge
 J. H. Bennett
 D. M. Bryant
 G. S. Lloyd
 E. L. Martin
 G. D. Hendrix
Automated Plot by CALCOMP-618 Plotter (AMC)
Verified and Inked by D. V. Mason
 March 29, 1978

1. Introduction

a. No unusual problems were encountered during the verification of this survey.

b. The projection parameter was revised during verification.

c. The red changes in the Descriptive Report were made by the verifier.

2. Control and Shoreline

a. The source of control is adequately described in Sections F and G of the Descriptive Report.

b. There is no shoreline in the survey area.

3. Hydrography

a. Depths at crossings were in good agreement.

b. The standard depth curves were drawn and adequately delineated the bottom configuration. Dashed and supplemental 36-foot curves were added to improve the delineation of the bottom configuration.

c. The developments were adequate to delineate the bottom and to obtain least depths.

4. Condition of Survey

a. Bar checks were not taken as prescribed in Section 1.5.2, Echo Sounder Calibrations, of the Provisional Hydrographic Manual.

b. In Section D of the Descriptive Report the hydrographer assumed a 2.4-foot TRA correction for Launch 1257. When the results of a determination, albeit over an irregular bottom, indicated a corrector of 2.2 feet. The final determination was deferred until a test could be run under ideal conditions. Julian day 140 was the last hydrographic day, so no other test was conducted. The 2.4-foot corrector shown on the master and corrector tapes for this survey may be in error and subsequently, survey depths from Launch 1257 may be 0.2 feet deeper than actual depths. Although this at first does not seem significant, the rounding procedure used in reducing smooth plotted depths could result in depths one foot greater than depths that should be shown. An examination of the smooth depths from Launch 1257 does not indicate that the adverse situation exists.

c. For Big Bend Light No. "22", the D.P.'s taken on this light were deleted by the field. Data for light "22" was taken from the calibration sheet and inserted at Position No. 16.

5. Junctions

H-9641 (1976) to the east
 H-9589 (1976) to the southeast
 H-9683 (1977) to the west
 H-7818 (1950) to the west

Adequate junctions were effected with H-9641 (1976), H-9589 (1976) and H-9683 (1977). An adequate junction could not be effected with H-7818 (1950) because of differences in depths in the junctional areas. It is recommended that a butt junction be made with this survey during Quality Control. There are no contemporary surveys to the north.

6. Comparison With Prior Surveys

a. H-1279a (1875) 1:20,000
 H-1279b (1875) 1:20,000* - *Does not fall within limits of H-9642.*
 H-1332 (1876) 1:40,000

In the common area, these surveys cover all of the northern limits of the present survey and only minor depth differences

could be detected. Agreement was excellent.

- b. H-1928 (1889) 1:80,000
 H-1929 (1889) 1:80,000* *Comparison made during Quality Control.*

These surveys cover the remaining area of the present survey and the charted depths from these surveys compare favorably. Depths vary from 1 to 6 feet. Differences can be attributed to natural change in bottom configuration and improved surveying methods.

The present survey is adequate to supersede the above prior surveys within the common areas.

* These prior surveys have been back ordered without success. It is requested that a comparison be made during Quality Control.

7. Comparison With Charts 11405 (13th Edition, ~~November 8, 1975~~)
 11407 (6th Edition, November 3, 1974)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys and requires no further consideration.

Attention is directed to : The charted wreck at position 29° 51.1' N, 84° 05.0' W from Chart 11400. This item is adequately described in Section Q of the Descriptive Report. Although this wreck was not found, it is not considered disproved and should not be deleted from Chart 11400 based upon this survey.

Except as noted, the present survey is adequate to supersede the charted hydrography.

b. Aids to Navigation

The aid to navigation located was adequate to serve its intended purpose. Note hydrographer's comments in Section N of the Descriptive Report.

8. Compliance With Instructions

This survey adequately complies with the Project Instructions.

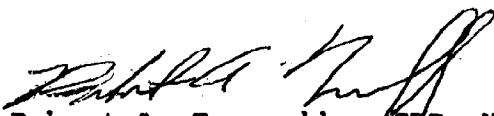
9. Additional Field Work

This is an excellent basic survey and no additional field work is necessary.

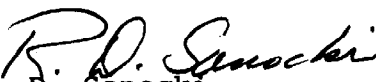
Inspection Report
H- 9642

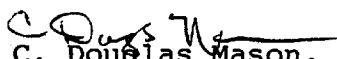
Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. HIT comments regarding quality of field work, compliance with instructions, and adequacy of the survey have been incorporated within the Verifier's Report.


Examined and Approved:
Hydrographic Inspection Team
Date: April 7, 1978


Robert A. Trauschke, CDR, NOAA
Chief, Processing Division

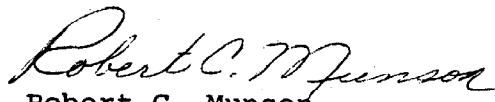
Absent
Charles H. Nixon, CAPT, NOAA
Chief, Operations Division


R. D. Sanocki
Technical Assistant
Processing Division


C. Douglas Mason, LT, NOAA
Chief, Electronic Data
Processing Branch


Billy J. Stephenson
Team Leader
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/GKM

May 5, 1978

A. J. Patrick
TO: A. J. Patrick
Chief, Marine Surveys Division
G. K. Myers
FROM: George K. Myers
Chief, Quality Control Branch

SUBJECT: Quality Control Report for H-9642 (1976-77), Florida, Northwest Coast, South of St. Marks

Survey H-9642 was inspected to evaluate the accuracy and adequacy of the survey with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, sounding line crossings, smooth plotting, decisions and actions by the verifier, and cartographic presentation of data.

H-7818 (1950) on the west is not considered a contemporary survey; therefore, a butt junction was not attempted with this survey during quality evaluation.

A comparison between H-7818 and the present survey reveals only minor differences in depths. The changes are considered to have been caused by current action and sedimentation.

The present depths are in good agreement with charted depths in this area at the project limits on the west.

In general, the present survey was found to conform to National Ocean Survey standards and requirements except as discussed in the Verifier's Report, HIT Report, and as follows:

The bottom characteristic "rky" located at latitude 29°53.3', longitude 83°59.1' on the smooth sheet of the present survey is not indicated in the survey records. This description was deleted during quality control.

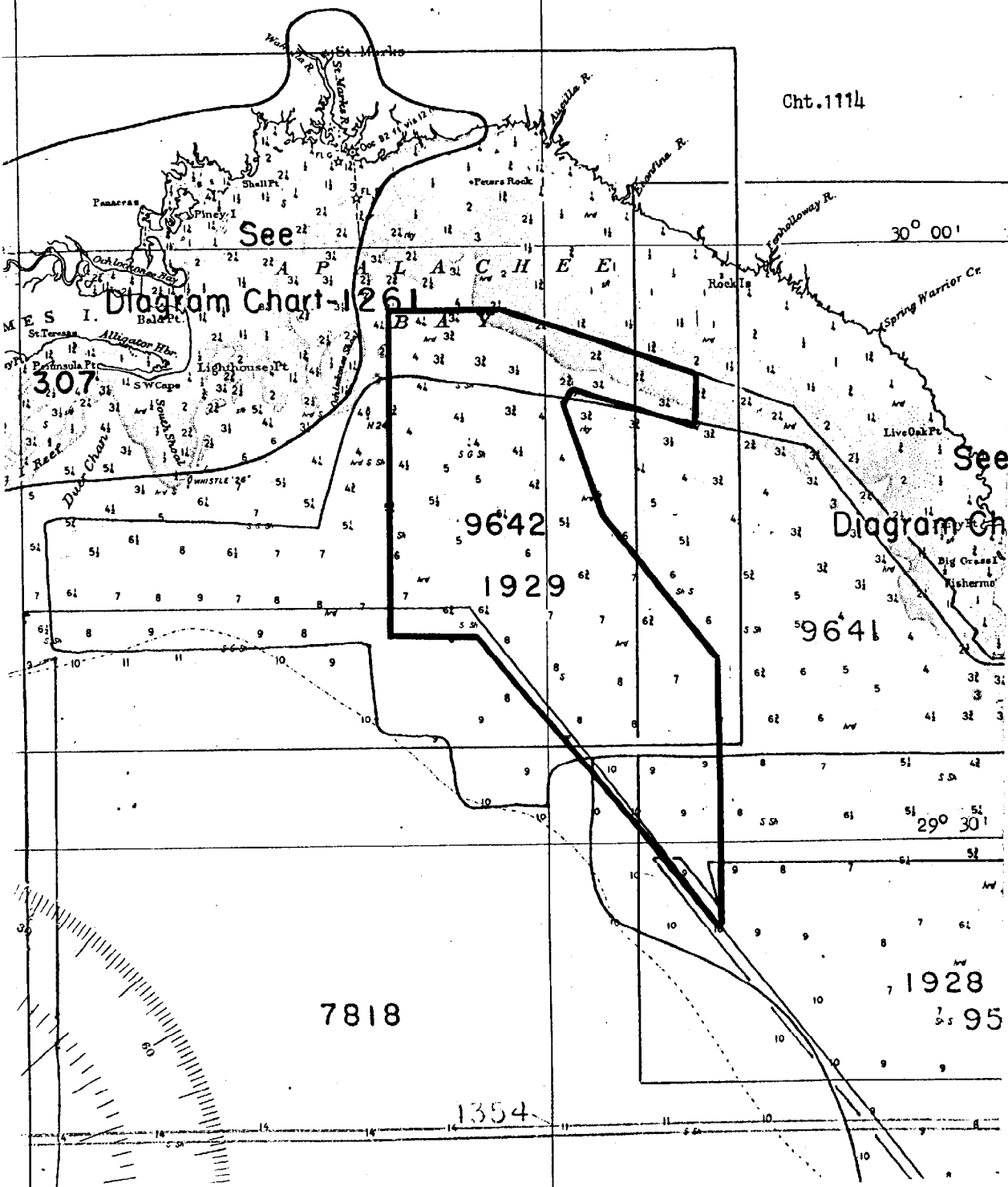
cc:
C351



84° 00'

Cht. 1114

30° 00'



See

Diagram Chart-1261

See

Diagram Ch

9642

1929

9641

7818

1354

1928

95

29° 30'

