

9928

Diagrams 1115-3 & 1265-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey .. Hydrographic.....
Field No. HSB-20-1-81.....
Office No..... H-9928.....

LOCALITY

State Florida.....
General Locality Northwest Coast.....
Locality Santa Rosa Island.....

1981

CHIEF OF PARTY
LCDR. G.W. Jamerson.....

LIBRARY & ARCHIVES

DATE October 24, 1983.....

9928

Area 4
CNT-11382
11383
11378A
11360
11006
411

INDEX

	Page
Hydrographic Title Sheet.....	1
Boatsheet Layout.....	2
A. Project.....	3
B. Area Surveyed.....	3
C. Sounding Vessel.....	3
D. Sounding Equipment and Corrections to Echo Soundings.....	3-4
E. Hydrographic Sheets.....	4
F. Control Stations.....	4
G. Hydrographic Position Control.....	4-5
H. Shoreline.....	5
I. Crosslines.....	5
J. Junctions.....	6
K. Comparison with Prior Surveys.....	6-7
L. Comparison with Chart.....	7
M. Adequacy of Survey.....	8
N. Aids to Navigation.....	8
O. Statistics.....	8
P. Miscellaneous.....	8
Q. Recommendations.....	8
R. Automated Data Processing.....	8
S. Reference to Reports.....	9
Projection Parameters. <i>Removed - placed in Misc Printout envelope</i>	10-11
Field Tide or Water Level Notes.....	12-14
Geographic Names List.....	15
Abstract of Corrections to Echo Soundings/TC-TI. <i>Removed - placed in Misc PD. env.</i>	16-28
Abstract of Corrections to Electronic Position Control.....	29-30
List of Stations (Signal List).....	31
Abstract of Positions. <i>Removed - placed in Misc Printout envelope</i>	32-33
Bottom Samples (NOAA Form 75-44). <i>Removed - placed in Misc Printout envelope</i>	34-41
Landmarks for Charts (NOAA Form 76-40).....	41 42
Approval Sheet.....	42

HYDROGRAPHIC TITLE SHEET

H-9928

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-20-1-81

State Florida

General locality Northwest Coast

Locality Santa Rosa Island

Scale 1:20,000 Date of survey 19 Feb. 81 thru 11 Nov. 81

Instructions dated August 3, 1979 Project No. OPR-J²¹⁷~~127~~-HSB-80

Vessel NOAA Launch 1257

Chief of party Lt.Cdr. George W. Jamerson, NOAA

Surveyed by Lt.Cdr. Andrew A. Armstrong, NOAA

Soundings taken by echo sounder, hand lead, pole

Graphic record scaled by AA, GL, MM, GM, GH,

Graphic record checked by AA,

Protracted by _____ Automated plot by Field Sheet PDP8/e
AMC Xynetics 1201

Verification by _____

Soundings in _____ feet at Mean Lower Low Water

REMARKS: AA - Lt.Cdr. Andrew A. Armstrong

GL - George Lloyd

GH - Glen Hendrix

MM - Maria Mangual

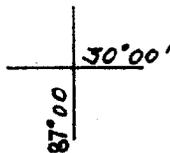
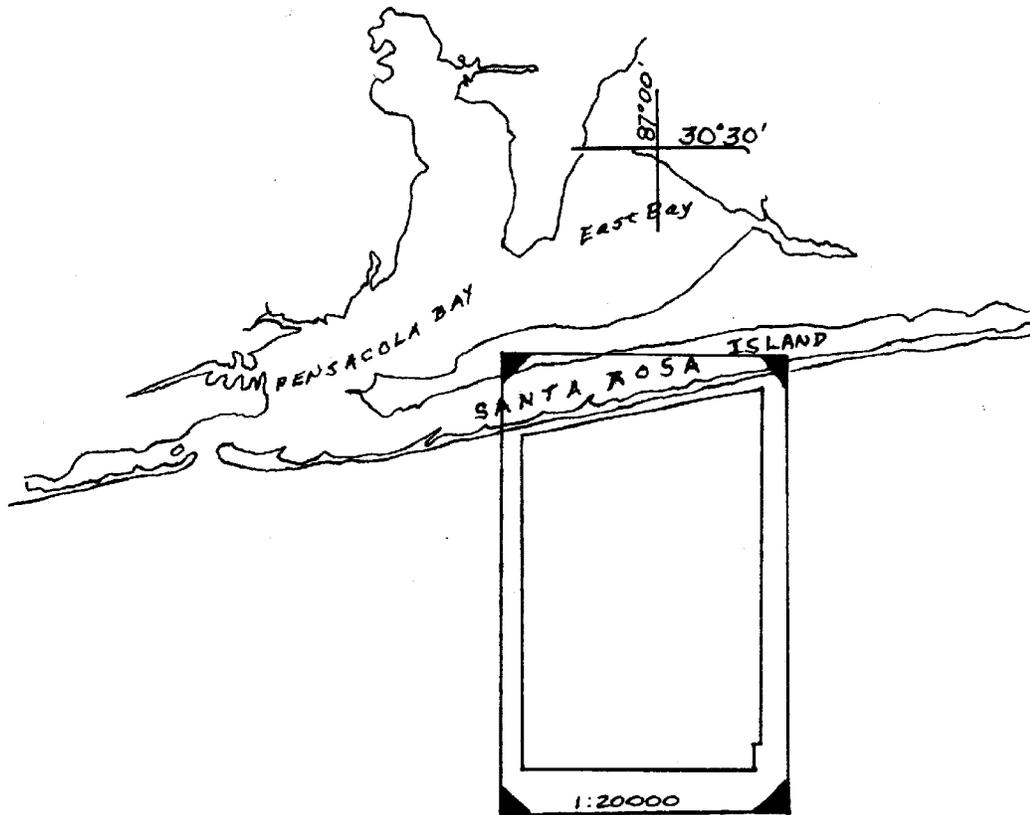
GM - Gary Merrill

*NOTES IN THE DESCRIPTIVE REPORT WERE MADE IN RED DURING VERIFICATION!

STANDARDS CL'D 10-31-83

Gloy

AWOIS ✓ Red 11/2/83



OPR-J-217
HSB 20-1-81
H-9928

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9928
HSB-20-1-81

Scale: 1:20,000 ✓
Chief of Party: Lt. Cdr. George W. Jamerson ✓
Officer-in-Charge: Lt. Cdr. Andrew A. Armstrong ✓
Hydrographic Surveys Branch, Hydrographic Field Party #1 ✓
Launch 1257 ✓

A. PROJECT - See note below

This survey was accomplished under Project Instructions OPR-J217, dated August 3, 1979, and amended by Change No. 1, dated December 22, 1980 and Change No. 2, dated January 12, 1981.

B. AREA SURVEYED

The area surveyed was south of Santa Rosa Island near Navarre Beach, Florida, and bounded by the following points:

Lat. 30°22'00"N	Long. 86°56'00"W
Lat. 30°08'00"N	Long. 86°56'00"W
Lat. 30°20'20"N	Long. 87°05'30"W
Lat. 30°08'00"N	Long. 87°05'30"W

This survey was conducted from February 19, 1981 to November 11, 1981 (JD 050 to 315) inclusive. ✓

C. SOUNDING VESSEL

All soundings obtained on this survey were obtained from NOAA Launch 1257 (EDP #1257). All survey records are annotated with the vessel number. ✓

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following Raytheon fathometer equipment was used during this survey:

JD 050 - 315:	Recorder	Model # DE723-D
		Serial #2042
	ECU	Model # DE723-D
		Serial #37009
	Digitizer	Model # DE723-D
		Serial #2772

No unusual problems were encountered with this equipment. The fathometer was monitored continuously while sounding and was under constant adjustment to insure that no initial corrections were necessary.

Note: Although this survey was begun when Project Instruction # OPR-J217-HFP-80 was in effect, the project limits fall outside the area defined in this survey. However, it is in the area defined in the Project Instruction for OPR-J217-HFP-

77.

Settlement and squat tests on Launch 1257 were run on March 28, 1981, before cleaning the bottom and May 18, 1981 at Pensacola Bay Entrance. The results of these tests are included in the Appendix of this report. Settlement and squat corrections have been applied to the field sheet as dynamic draft on the ~~electronic~~ corrector tape.

Velocity and instrument corrections were determined by bar-checks and TDC casts. Since several adjacent survey sheets were being run at the same time with the same equipment, barchecks, and casts were combined. Common velocity tables, compiled by date, were used for all sheets. Field sheets were plotted using approximate velocity curves developed by moving the TDC curves to coincide with and extend the barcheck curves. Final velocity curves and tables were constructed from the TDC curves. Instrument correction is shown on the TRA abstracts and applied by TC/TI. The lengths of the line on the bar were checked on February 26, 1981 and December 15, 1981. The results of this inspection showed that no correction was necessary. The TDC used to obtain velocity corrections was a Martek ~~Instrument~~ Model 101-10, Serial # 477.

Instrument

E. SURVEY SHEETS

The field sheets were prepared in the field using a PDP8/e computer and a DP-3 complot plotter. Work sheets, smooth field sheets, and overlay sheets are included with this survey. Mainscheme hydrography, crosslines, significant developments and splits are plotted on the smooth field sheets while other developments, splits, bottom samples, prior survey soundings, junctions soundings and charted soundings, are shown on the overlay sheet. Projection parameter tape listing for the field sheets is included in the Appendix of this report. The final smooth sheet and verification of this survey will be accomplished at the Atlantic Marine Center on the Harris/7 computer and Xynetics 1201 plotter.

F. CONTROL STATIONS

Control stations used during this survey were either existing third order or better geodetic control stations published by NGS or were established by HFP-1 to third order or better standards. All stations are referred to the North American 1927 datum. A list of all control stations used during this survey is included in the Appendix of this report. Horizontal control data were submitted via the NGS computer terminal system. Positions can be verified by Hydrographic Surveys Branch of AMC.

G. HYDROGRAPHIC POSITION CONTROL

Equipment - Control for this survey was a Hasting-Raydist DR-S system operating in the range/range mode.

Shore station equipment:

Left station: Green Raydist Model AA-60
Serial No. 68:JD50-135,155-315
Serial No. 69:JD142-154

Right station: Red Raydist Model AA-60
Serial No. 84:JD50-315

Launch equipment:

Navigator Model ZA 67B
Serial No. 109:JD50-76
Serial No. 67:JD79-149

Antenna Loading Coil Model QB 52
Serial No. 81:JD50-315

Transmitter Model TA96
Serial No. 87:JD50-149

The system frequency was 3306.40. The left station antenna was a 100-foot ~~aluminum~~ ^{aluminum} tower. The right station antenna was a 120-foot tower previously used as a Loran A antenna. The launch antenna was a 35-foot whip located over the fathometer transducer.

Problems encountered with the use of this equipment were very limited. Some units failed during operation, but they were replaced immediately with spares and repaired by Hastings-Raydist factory personnel. Thunderstorms, as expected, occasionally disrupted the signal.

The control equipment was calibrated by three point sextant fixes with check angles. Calibrations were taken before and after each period of hydrography unless the Raydist signal was lost. A strip chart recorder was monitored between calibrations to check for lane gains or losses.

H. SHORELINE See section 2.b. of the Evaluation Report

No shoreline was delineated on this survey. Shoreline was transferred to the field sheet from Chart 11382, blown up to the scale of the survey. This was done as a visual aid for planning purposes. The charted shoreline seemed to correspond well with the actual shoreline as observed from the survey launch.

I. CROSSLINES See section 3.a. of the Evaluation Report

Crosslines constitute 10% of the mainscheme hydrography. Ninety-nine percent (99%) of the crossings agree within one foot. No soundings are in disagreement at crossing by more than two feet. Those crossings which disagree by more than one foot are in areas of steep bottom topography.

J. JUNCTIONS See section 5 of the Evaluation Report

This survey junctions with the following surveys:

1. H-9804 to the east; ✓
2. H-9798 to the south; ✓
3. H-9943 to the west. ✓

Ninety-eight percent (98%) of these junction soundings agree within one foot when compared with the current survey and none of the junction soundings are in disagreement by more than four feet. The reason for this disagreement is believed to be the very irregular character of the bottom in these areas. Adjacent soundings within both the present survey and the junction survey frequently vary by the same amount.

The hydrographer recommends that in the junction areas, the soundings from the present survey be charted and that the depth curves be smoothed between the two sheets, favoring the shoaler of any two overlapping soundings.

K. COMPARISON WITH PRIOR SURVEYS See section 6 of the Evaluation Report

This survey was previously covered by the following surveys:

1. H-4139 (1920), 1:80,000 scale
2. H-4604 (1927), 1:40,000 scale
3. H-5033 (1930), 1:20,000 scale
4. H-5115 (1931), 1:40,000 scale
5. H-6555 (1940), 1:40,000 scale
6. H-6636 (1940), 1:20,000 scale
7. H-6687 (1940), 1:40,000 scale

Comparison showed that while the bottom has very likely shifted somewhat near shore, in waters less than 40-feet, the more recent, larger scale surveys agree quite well with the present survey. However the closer line spacing in the present survey improves significantly the definition of the contours. The older surveys and smaller scale surveys show general agreement of bottom trends, but the exact locations of the bottom features shown on the prior surveys are frequently up to 500 m or more in error. These errors increase dramatically the farther offshore the comparison is made. There does not appear to be any trend to the errors, either in depth or direction. (See also Section L)

Where discrepancies exist, it is recommended that the soundings from the present survey supersede the prior surveys' soundings. A concur 57-foot sounding from H-4604, 1:40,000, 1926 and 1927 at Latitude $30^{\circ}19'50''$, Longitude $86^{\circ}56'44''$ was searched for thoroughly, but no depth of less than 67-foot was detected. Prior surveys H-4139, H-6555, H-6687 and H-6636 are not being returned with this survey because they are required for comparison with other surveys currently in progress.

L. COMPARISON WITH THE CHART

No presurvey review items fall within the limits of this survey. This survey was compared as the survey progressed with Chart 11382, 25th Edition 1979 and with Chart 11382, 56th Edition of 1977, blown up to the scale of the survey. An uncharted 57 foot shoal at Latitude $30^{\circ}19'24''$, Longitude $85^{\circ}58'30''$ was detected and developed. Changes in the chart coincide with the differences noted in Section K. Within about five miles of shore, the changes, except the shoal noted above, are mostly improvements in the accuracy of the 60 foot contour. Farther offshore, the changes are extensive (see Section K). They most likely stem from weak position control on the prior surveys and not from any change in the bottom. ~~concur~~

No dangers to navigation were located during the survey. Several small spikes were detected while running mainscheme hydrography and were subsequently investigated on JD 148 and 149. A wide-beam transducer was used and lines were run close enough together to ensure complete bottom coverage. The lines were plotted on the rough field sheet in the line plot mode of RK 112. The data was not plotted on the smooth field sheet. These spikes were evaluated as follows:

1. Latitude $30^{\circ}13'45''$, Longitude $86^{\circ}56'06''$ - probably small pieces of junk dropped to the bottom to attract fish. Too small to warrant charting. No conceivable hazard to navigation.
2. Latitude $30^{\circ}11'49''$, Longitude $87^{\circ}00'21''$ - nothing found during investigation. The spike was probably a cluster of fish near the bottom.
3. Latitude $30^{\circ}11'06''$, Longitude $87^{\circ}04'57''$ - because this was a large spike, a lead-line was drifted through the area after nothing was detected on the fathometer. Nothing was found. The spike was probably a concentration of fish near the bottom.
4. Latitude $30^{\circ}10'45''$, Longitude $87^{\circ}04'57''$ - both lead-line and fathometer searches were also made on this spike. Nothing was found. The spike was evaluated as another concentration of fish.
5. Latitude $30^{\circ}09'21''$, Longitude $87^{\circ}04'57''$ - nothing found during investigation. Echoes were probably only fish.
6. Latitude $30^{\circ}10'54''$, Longitude $87^{\circ}01'27''$ - nothing found during investigation. Spike was probably a cluster of fish.

On JD 133 several small but very solid-looking spikes were recorded on the fathogram while running shoreline. These spikes, when plotted, appeared to fall in a linear pattern. They were investigated on JD 148. The sea was calm and the water clear enough to see the bottom distinctly. The boat was run very slowly back and forth across the positions where the spikes were detected. Two lookouts ~~scanned~~ scanned the bottom visually and the fathometer was continuously monitored. No trace of any solid object was found. The spikes on the original fathogram were evaluated as fish or porpoise, both of which were numerous in the area that day.

M. ADEQUACY OF SURVEY

This survey is complete and adequate to warrant its use to ✓
supersede prior surveys for charting in the common areas.

N. AIDS TO NAVIGATION

No fixed or floating aids to navigation, cable crossings, or ✓
bridges are located within the limits of this survey.

O. STATISTICS

Number of positions	2,640
Nautical miles of mainscheme sounding line .	1,058.3
Nautical miles of crossline	103.3
Nautical miles of development	36.2
Total miles of hydrography	1,197.8
Number of bottom samples	112
Number of barchecks	98
Number of TDC casts	79

P. MISCELLANEOUS

Loran C comparisons were conducted by recording Loran values
simultaneously with Raydist rates at bottom sample sites. The
comparison forms ~~are submitted in the appendix to this report.~~
have been submitted to CAMI.

A copy of the smooth sheet should be sent to Gulf Islands
National Seashore, P. O. Box 100, Gulf Breeze, Florida 32561
Attention Mr. Buck Thackery, Resource Manager.

Q. RECOMMENDATIONS

See Sections J, K, L, M, and P for specific recommendations.

R. AUTOMATED DATA PROCESSING

Programs used during field data acquisition and field processing
of this survey are as follows:

<u>PROGRAM</u>	<u>DESCRIPTION</u>	<u>VERSION DATE</u>
RK111	Range-range Real Time Hydroplot	1/30/76
RK112	Range-range Real Time Hydroplot	9/11/80
RK112	Range-azimuth Hydrolog	8/4/81
RK201	Grid, Signal, and Lattice Plot	4/18/75
RK211	Range-range Non-Real time plot	2/2/81
RK300	Utility computations	10/21/80
RK300	Reformat and Data Check	5/4/76
PM360	Electronic Corrector Abstract	2/2/76
RK407	Geodetic Inverse/Direct Computation	9/25/78
AM500	Predicted Tide Generator	11/10/72
RK530	Layer Corrections for Velocity	5/10/76
RK561	H/R Geodetic Calibration	2/19/75
AM602	Extended-line oriented editor	5/20/75

Approximate velocity tables 1 and 2 which were used to plot most of the smooth field sheet were constructed with a +.2 ft error. The final velocity tables are correct. Some very small (.2 ft) error also were present in the tide tapes used to plot data collected in April. Both of these errors are negligible in their effect on the accuracy of the field sheet.

S. REFERENCE TO REPORTS

Descriptive Report H-9804, 1979, 1:20,000
Descriptive Report H-9798, 1978, 1:40,000
Descriptive Report H-9943, 1981, 1:20,000

Respectfully submitted,

Robert Lewis

Lt. Cdr. Andrew A. Armstrong, NOAA
OIC, HFP-1

OPR-J217
HSB-20-1-81
H-9928

FIELD TIDE NOTE

Field tide reduction of soundings was based on predicted tides from Pensacola, Florida, corrected to Pensacola Bay Entrance, Florida, and were interpolated using a PDP8/e computer and Program A.M. 500.

Smooth tide correctors will be obtained from Navarre Beach Station # (872-9678), Pensacola Municipal Pier Station # (872-9840), and Dauphin Island Station # (873-5180). These stations were installed on: Navarre Beach Station, April 24, 1980; Pensacola Municipal Pier Station, August 6, 1980; and Dauphin Island Station, October 30, 1979. All stations have operated well throughout the period.

<u>STATION</u>	<u>LOCATION</u>
872-9678	Lat. 30 ^o 22.6'N Long. 86 ^o 51.9'W
872-9840	Lat. 30 ^o 24.2'N Long. 87 ^o 12.8'W
873-5180	Lat. 30 ^o 15.0'N Long. 88 ^o 04.5'W



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Atlantic Marine Center
Hydrographic Survey Branch
439 W. York Street
Norfolk, Virginia 23510

Reply to Attn. of:

Date : September 16, 1981

To : Chief, Tides and Water Levels Division

From : Lt. Cdr. A. A. Armstrong

Subject: Request for Tide Data

Please furnish smooth tide correctors and zoning information to Atlantic Marine Center, Processing Division, CAM3, for survey H-9928, (HSB-20-1-81), project OPR-J217-HFP-81.

Field tide reduction of soundings was based on predicted tides from Pensacola, Florida, corrected to Pensacola Bay Entrance.

Smooth tide correctors should be obtained from stations 872-9678 (Navarre Beach), 872-5180 (Pensacola, Florida), 873-5180 (Dauphin Island, Alabama).

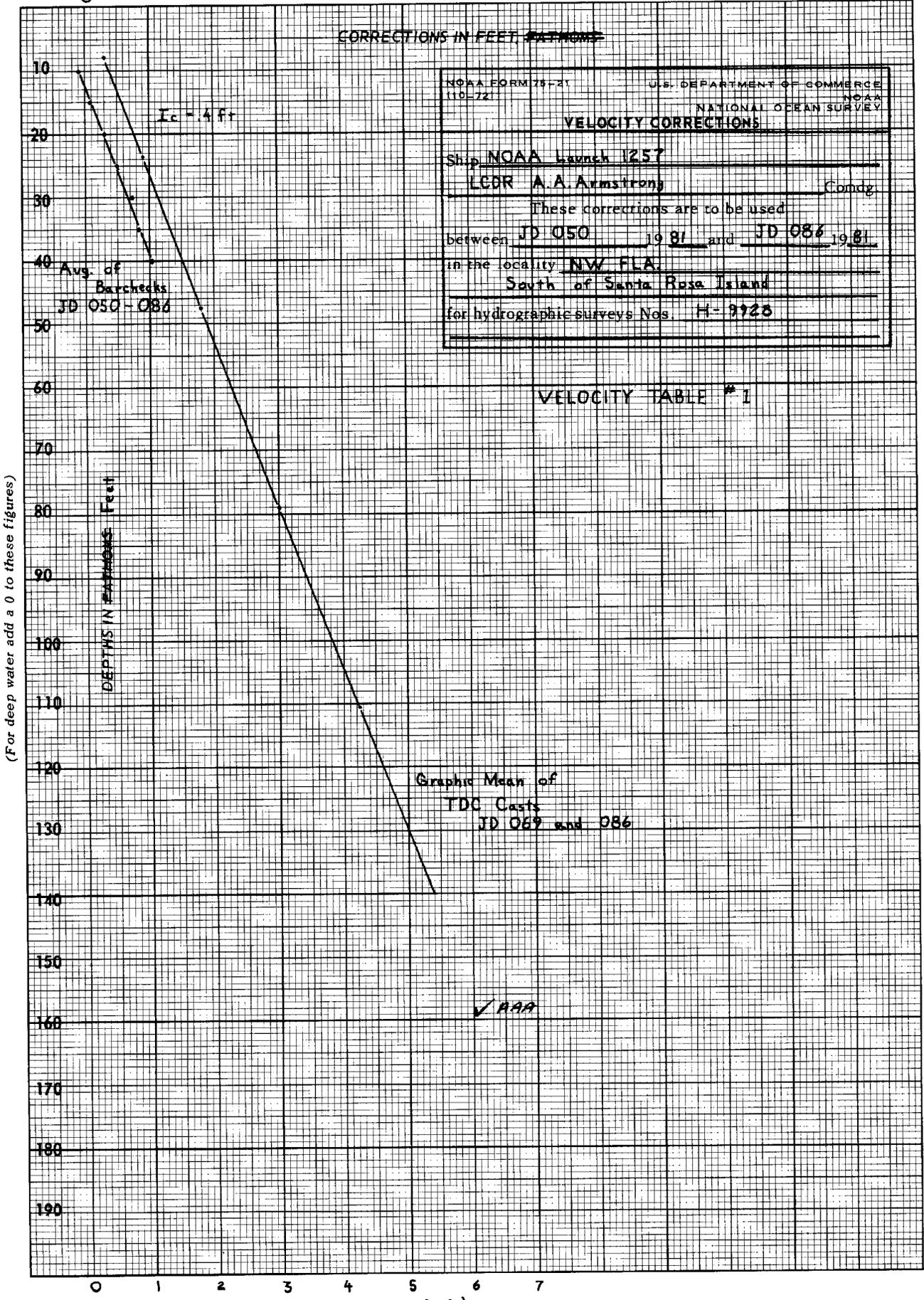
The following times of hydrography include two hours before and after actual hydrography times.

<u>J.D. (1981)</u>	<u>FROM (GMT)</u>	<u>TO (GMT)</u>
050	1500	2300
061	1400	2300
069	1400	2300
070	1500	2300
071	1400	2000
076	1300	2100
079	1600	2100
084	1300	2400
085	1300	2400
086	1400	2300

<u>J.D. (1981)</u>	<u>FROM (GMT)</u>	<u>TO (GMT)</u>
097	1300	1800
105	1300	2300
110	1300	2400
111	1400	2400
113	1300	2300
114	1300	2100
119	1300	2300
121	1200	2400
127	1200	2200
131	1300	2200
133	1200	2300
134	1200	2100
135	1300	2200
142	1200	2200
147	1200	2000
148	1200	2300
149	1300	2100
315	1400	2200

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

CORRECTIONS IN FEET FATHOMS



NOAA FORM 75-21 (10-72)	U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY
VELOCITY CORRECTIONS	
Ship <u>NOAA Launch 1257</u>	
LCDR <u>A.A. Armstrong</u> Comdg.	
These corrections are to be used	
between <u>JD 050</u> <u>1981</u> and <u>JD 086</u> <u>1981</u>	
in the locality <u>NW FLA</u>	
<u>South of Santa Rosa Island</u>	
for hydrographic surveys Nos. <u>H-9928</u>	

VELOCITY TABLE #1

(For deep water add a 0 to these figures)

461240

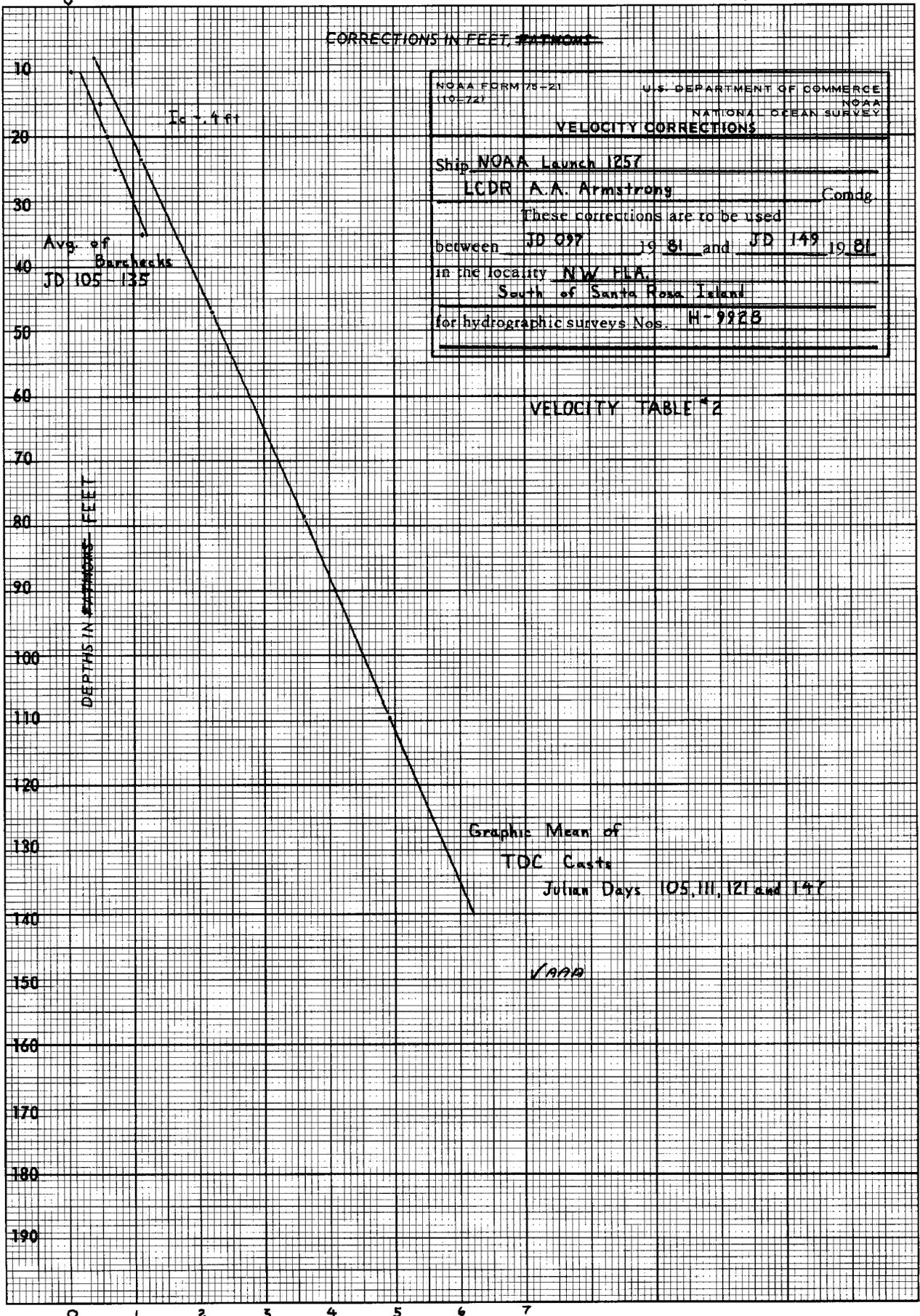
20 X 20 TO THE IN.
KEUFFEL & ESSER C.
7 X 10 INCHES
MADE IN U.S.A.

SMOOTH VELOCITY TABLE #1
OPR J217
HSB 20-1-81
H-9928
VESNO 1257

000027 0 0000 0001 125700 001981
000080 0 0002
000128 0 0004
000182 0 0006
000235 0 0008
000288 0 0010
000333 0 0012
000397 0 0014
000448 0 0016
000502 0 0018
000554 0 0020
000607 0 0022
000661 0 0024
000712 0 0026
000766 0 0028
000814 0 0030
000866 0 0032
000917 0 0034
000968 0 0036
001019 0 0038
001070 0 0040
001120 0 0042
001172 0 0044
001222 0 0046
001273 0 0048
001323 0 0050
001375 0 0052
001422 0 0054
001475 0 0056
999999 0 0058

VAAT

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



(For deep water add a 0 to these figures)

20 X 20 TO THE IN KEUFFEL & ESSER CO. 7 X 10 INCHES MADE IN U.S.A.

161240

SMOOTH VELOCITY TABLE #2

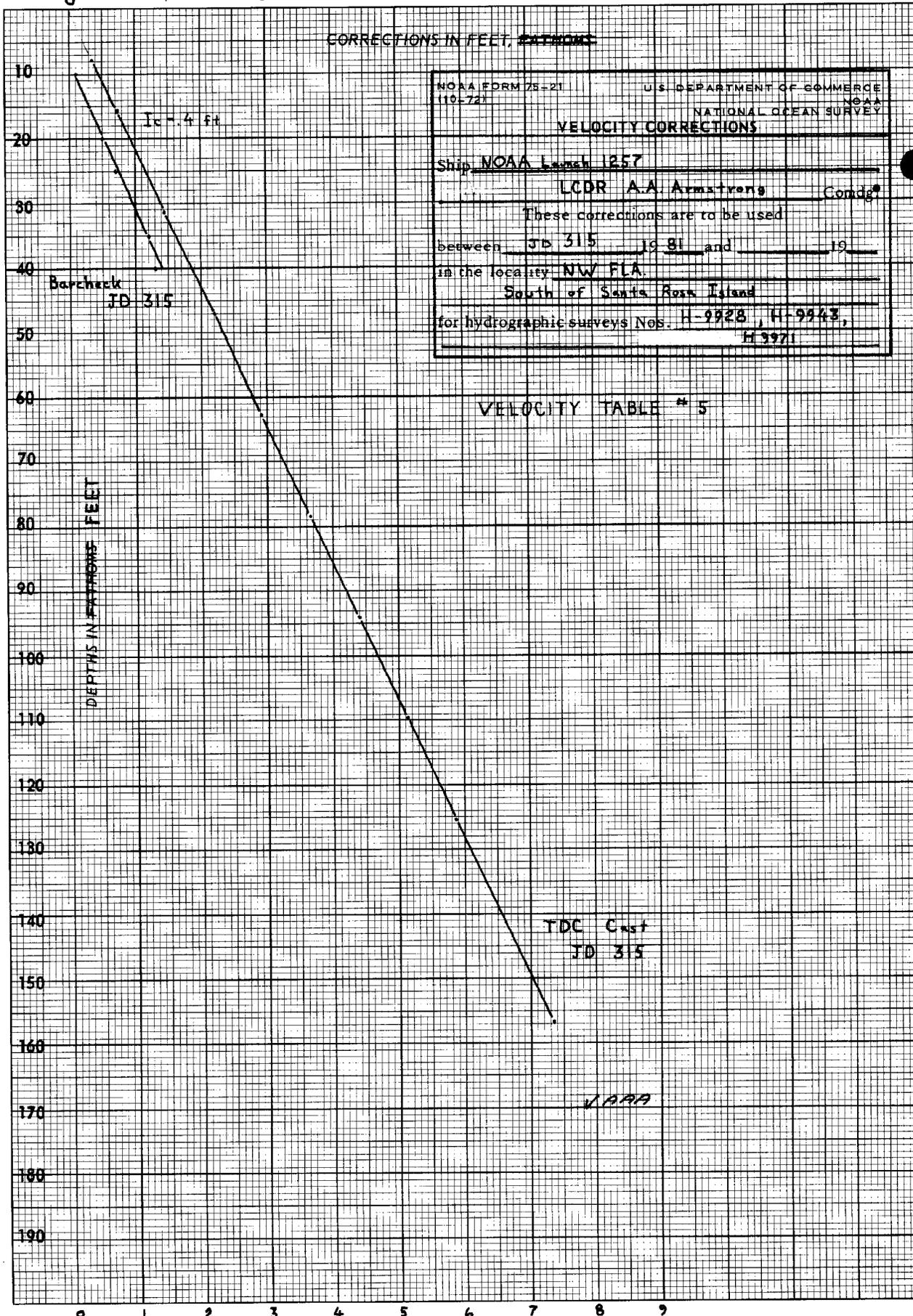
OPR J217
HSB 20-1-81
H-9928
VESNO 1257

000019 0 0000 0002 125700 001981
000058 0 0002
000099 0 0004
000140 0 0006
000183 0 0008
000227 0 0010
000272 0 0012
000316 0 0014
000358 0 0016
000401 0 0018
000435 0 0020
000491 0 0022
000525 0 0024
000582 0 0026
000628 0 0028
000672 0 0030
000712 0 0032
000763 0 0034
000806 0 0036
000855 0 0038
000902 0 0040
000949 0 0042
000996 0 0044
001043 0 0046
001092 0 0048
001138 0 0050
001185 0 0052
001233 0 0054
001282 0 0056
001328 0 0058
001373 0 0060
001423 0 0062
001470 0 0064
999999 0 0066

✓ AAA

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

CORRECTIONS IN FEET, FATHOMS



NOAA FORM 75-21 (10-72)	U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY
VELOCITY CORRECTIONS	
Ship <u>NOAA Launch 1257</u>	
by <u>LCDR A.A. Armstrong</u> Comdg.	
These corrections are to be used	
between <u>JD 315</u> 19 <u>81</u> and <u> </u> 19 <u> </u>	
in the locality <u>NW FLA.</u>	
<u>South of Santa Rosa Island</u>	
for hydrographic surveys Nos. <u>H-9928, H-9943,</u>	
<u>H-9971</u>	

VELOCITY TABLE # 5

(For deep water add a 0 to these figures)

20 X 20 TO THE IN.
KEUFFEL & ESSER CO.
7 X 10 INCHES
MADE IN U.S.A.

61240

SMOOTH VELOCITY TABLE #5

OPR J217

HSB 20-1-81 H-9928

HSB 20-2-81 H-9943

HSB 20-5-81 H-9971

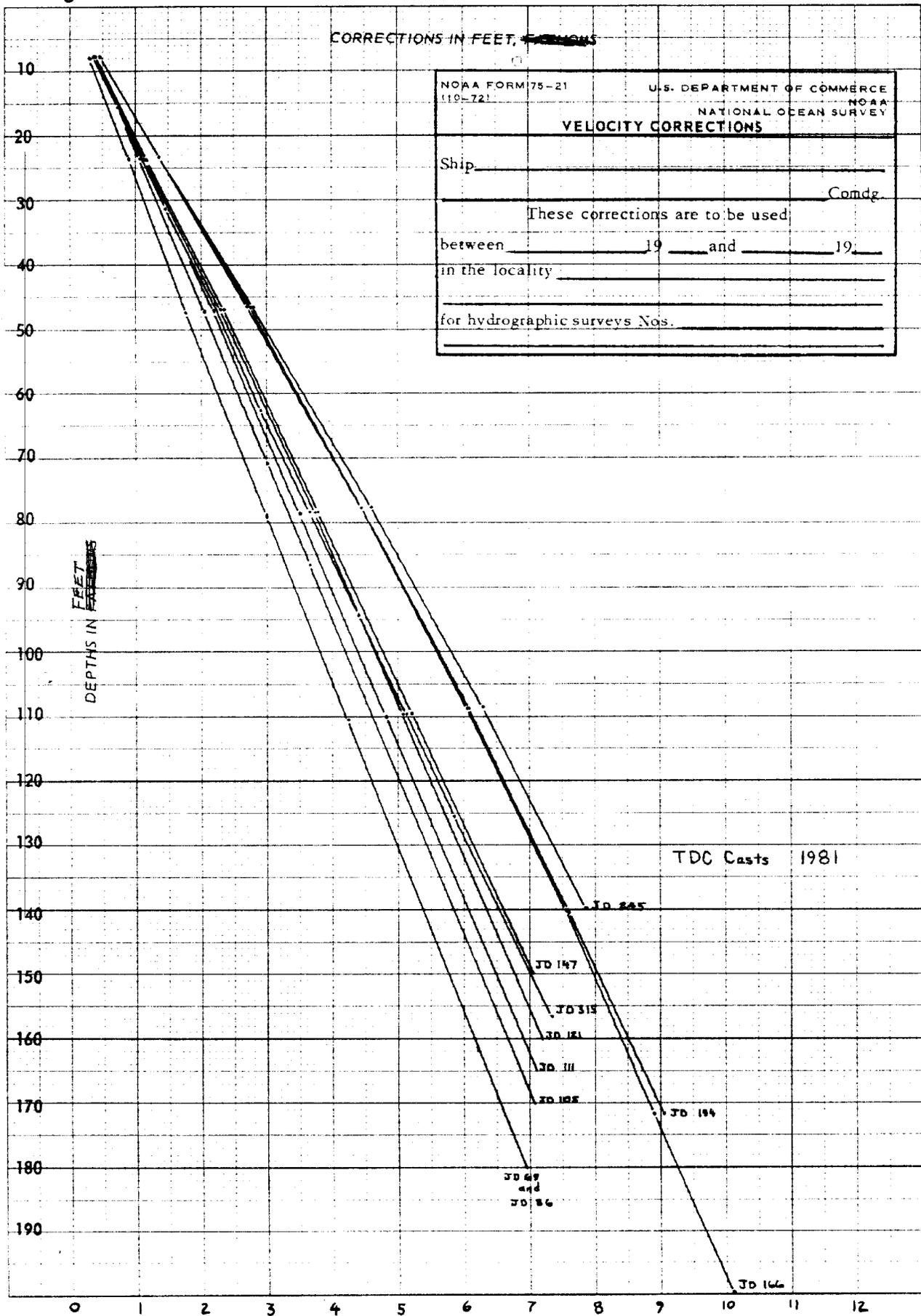
VESNO 1257

000026 0 0000 0005 125700 001981
000070 0 0002
000110 0 0004
000152 0 0006
000193 0 0008
000236 0 0010
000280 0 0012
000325 0 0014
000367 0 0016
000408 0 0018
000448 0 0020
000491 0 0022
000535 0 0024
000580 0 0026
000626 0 0028
000667 0 0030
000710 0 0032
000750 0 0034
000793 0 0036
000837 0 0038
000877 0 0040
000921 0 0042
000962 0 0044
001005 0 0046
001047 0 0048
001090 0 0050
001131 0 0052
001174 0 0054
001218 0 0056
001260 0 0058
001302 0 0060
001347 0 0062
001388 0 0064
001430 0 0066
001473 0 0068
001515 0 0070
001560 0 0072
999999 0 0074

✓ A A A

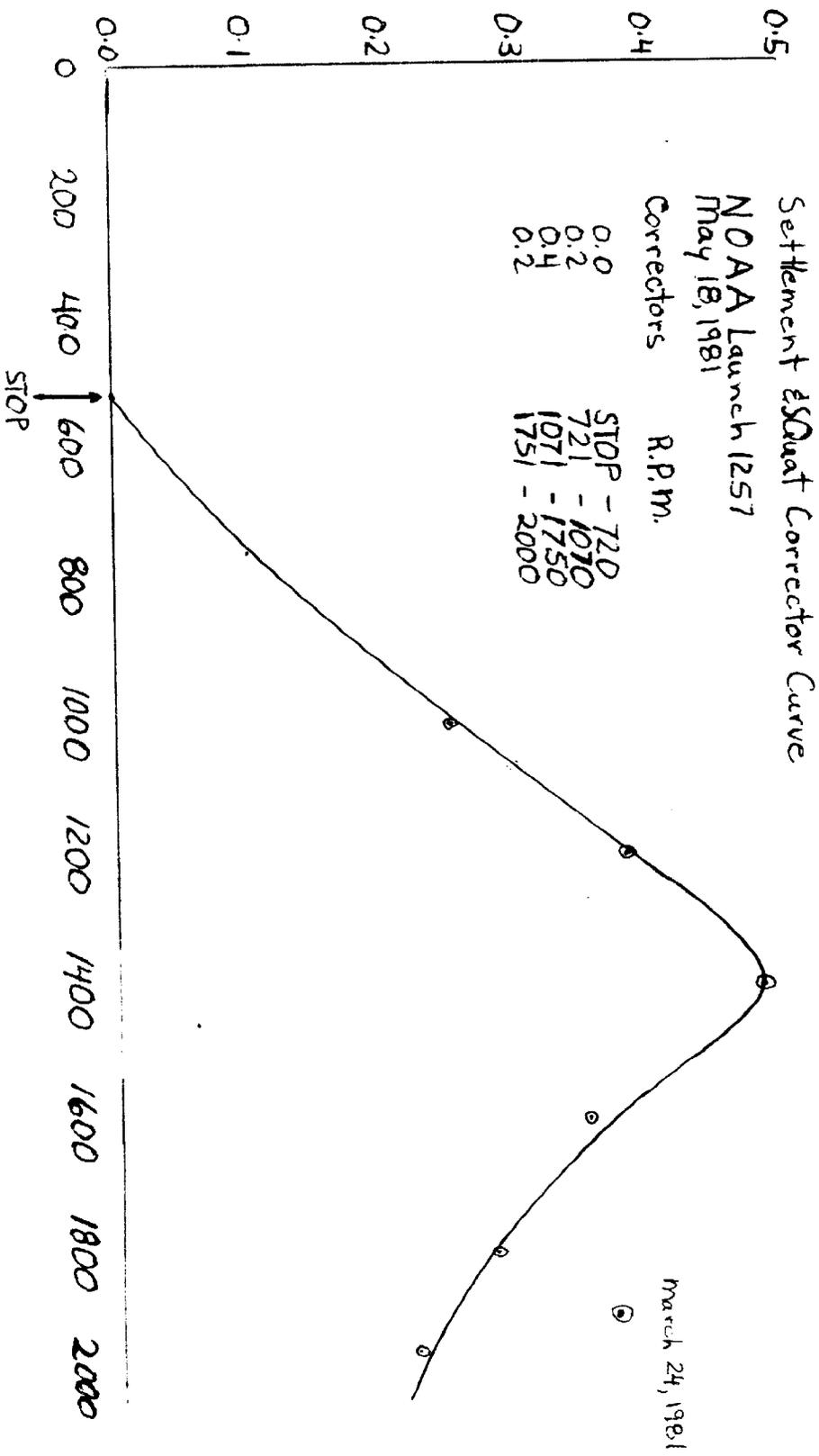
(23.)

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



16 1240

NO X 20 TO THE IP
 REPT. & ENDRS



SIGNAL TAPE LISTING
 OPR-J-217
 HSB-20-1-81
 H-9928
 VESNO 1257

106	7	30	21	35305	087	10	56109	139	0000	000000	GULF BREEZE TANK	1981
107	7	30	19	07174	087	15	18724	139	0000	000000	PARK RANGERS ANT POLE	1981*
108	7	30	19	06723	087	15	43994	139	0000	000000	Hx72xFLx80	1981* ✓
110	7	30	19	18469	087	17	06198	250	0018	000000	Hx73xFLx80	1981 1981
114	7	30	20	45346	087	18	29205	139	0000	000000	PENSACOLA LIGHTHOUSE CENTER	1867 1934*
116	7	30	20	12536	087	18	59500	139	0000	000000	CAUCUS CHANNEL R RNG LT	1981*
120	7	30	19	30907	087	18	46774	250	0008	000000	FORT MCREE LEADING LT	1981*
900	7	29	40	09229	085	21	26851	250	0000	330640	CAPE SAN BLAS LORAN TOWER	1956**
902	7	30	19	15517	087	13	24115	250	0000	330640	H-62-01	1980 1980**
908	7	30	22	45075	086	52	47698	250	0000	330640	Hx4xFLx77	1980**

Control located by:
 * Hydrographic Surveys Branch
 ** Operations Division
 *** National Geodetic Survey

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Andrew A. Armstrong, LCDR., NOAA
POSITIONS DETERMINED AND/OR VERIFIED	Robert De Croix
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW	
ACTIVITIES	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)	
OFFICE	FIELD (Cont'd)
I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field P - Photogrammetric L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75
A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75
**FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	
**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.	

APPROVAL SHEET
SURVEY H-9928 (HSB-20-1-81)

The hydrographic records transmitted with this report are complete and adequate to supersede prior surveys for charting with no additional field work recommended.

Direct daily supervision was not given by me during the field work.

Approved and forwarded,



George W. Jamerson
Lt. Cdr. NOAA
Chief, Hydrographic Surveys Branch

DATE: February 25, 1982

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): 872-9678 Navarre Beach, FL

Period: February 19-November 11, 1981

HYDROGRAPHIC SHEET: H-9928

OPR: J217

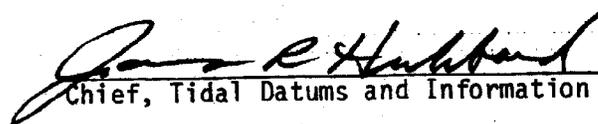
Locality: Offshore of Santa Rosa Island, Florida

Plane of reference (mean lower low water): 25.64 ft. ✓

Height of Mean High Water above Plane of Reference is 1.38 ft. ✓

REMARKS: Recommended Zoning:

Zone Direct


Chief, Tidal Datums and Information Branch

HYDROGRAPHIC SURVEY STATISTICS

H-9928

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION			AMOUNT
SMOOTH SHEET		1	SMOOTH OVERLAYS: POS. ¹ ARC, ² EXCESS			3
DESCRIPTIVE REPORT		1	FIELD SHEETS AND OTHER OVERLAYS			6
DESCRIP- TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR- GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDIAN FILES	Feth. Raw 1/0					
ENVELOPES						
VOLUMES						
CANIERS						
BOXES				2 Smooth Plt 2 Misc. DATA		
SHORELINE DATA						
SHORELINE MAPS(List): TP-00548, TP-00549						
PHOTOBATHYMETRIC MAPS(List):						
NOTES TO THE HYDROGRAPHER(List):						
SPECIAL REPORTS(List):						
NAUTICAL CHARTS(List): 11382						

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	EVALUATION	TOTALS
POSITIONS ON SHEET			2636
POSITIONS REVISED	2497		2497
SOUNDINGS REVISED	219	3	222
CONTROL STATIONS REVISED			
	TIME - HOURS		
	VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION	2	20	22
VERIFICATION OF CONTROL	8		8
VERIFICATION OF POSITIONS	36		36
VERIFICATION OF SOUNDINGS	147		147
VERIFICATION OF JUNCTIONS		14	14
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	106	30	136
COMPARISON WITH PRIOR SURVEYS AND CHARTS		43	43
EVALUATION OF SIDESCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		33	33
OTHER		4	4
DIGITINING	21		21
TOTALS	320	144	464
Pre-processing Examination by J.S. Bradford, R.G. Roberson	Beginning Date 6 MAY 82	Ending Date 14 MAY 82	
Verification of Field Data by J.B. Wilson, R.G. Roberson	Time(Hours) 320	Ending Date 12 APR 83	
Verification Check by H.R. Smith, J.S. Bradford	Time(Hours) 57	Ending Date 30 MAY 83	
Evaluation and Analysis by R.G. Roberson	Time(Hours) 144	Ending Date 5 AUG 83	
Inspection by CDR K.Wm. Kieninger, R.D. Sanocki	Time(Hours) 24	Ending Date 12 AUG 83	

GEOGRAPHIC NAMES (FIELD)

Name on Survey	Source of Name										No.
	A	B	C	D	E	F	G	H	I	J	
	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			
Gulf Island National Seashore				X							1
Gulf of Mexico									X		2
Santa Rosa Island	11382										3
<i>Range Pt.</i>	X										4
	11382										5
											6
											7
											8
											9
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											25

GEOGRAPHIC NAMES

Name on Survey	ON CHART NO. 11382 ON PREVIOUS SURVEY ON U.S. QUADRANGLE MAPS FROM LOCAL INFORMATION ON LOCAL MAPS P.O. GUIDE OR MAP GRAND McNALLY ATLAS U.S. LIGHT LIST										
	A	B	C	D	E	F	G	H	K		
FLORIDA (title)	X										1
GULF OF MEXICO	X										2
SANTA ROSA ISLAND	X										3
											4
											5
											6
											7
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											24
											25

Approved:

Charles B. Harrington
Chief Geographer - N/C 2x5

6 MAY 1983

ATLANTIC MARINE CENTER
EVALUATION REPORT

SURVEY NO.: H-9928

FIELD NO.: HSB 20-1-80

Florida, Northwest Coast, Santa Rosa Island

SURVEYED: February 19 through November 11, 1981

SCALE: 1:20,000

PROJECT NO.: OPR-J217-HSB-80

SOUNDINGS: Raytheon DE-723D
Survey Fathometer

CONTROL: Hastings RAYDIST
DR-S (range/range)

Chief of Party
Surveyed by

G. W. Jamerson
A. A. Armstrong
G. D. Hendrix
G. Lloyd
M. Mangual
G. Merrill
Xynetics 1201 Plotter (AMC)

Automated Plot by

1. INTRODUCTION

- a. No unusual problems were encountered during verification.
- b. Notes in the Descriptive Report were made in red during verification.

2. CONTROL AND SHORELINE

- a. Control is adequately discussed in sections F and G of the Descriptive Report.
- b. Shoreline originates with Coastal Zone Maps TP-00548 and TP-00549 of 1978 with field edit performed in 1979.

3. HYDROGRAPHY

- a. Soundings at crossings are in good agreement with depths generally varying from one (1) to two (2) feet. In the area south of Latitude $30^{\circ}-10'$ N and east of Longitude $87^{\circ}-01'$ W, the depths at crossings vary by four (4) feet. The irregular bottom in this area is considered the contributing factor for the variations.
- b. Depth curves could be drawn in their entirety. The six (6) and zero (0) foot curves were not delineated. This was not done because the sounding vessel could not safely operate in these depths. Brown and dashed depth curves were drawn to show additional bottom relief.
- c. Development of the bottom configuration and determination of least depths is considered adequate with the exception of the two partially developed areas in the vicinity of Latitude $30^{\circ}-18.9'$ N. Longitude $86^{\circ}-59.5'$ W. Also, axis lines on some of the features on the survey would have helped to establish the features' extent.

4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual with the following exceptions:

- a. Daily bar checks were not taken as required by Section 1.5.2 of the Hydrographic Manual. There were twenty-eight (28) days of hydrography and only eight (8) bar checks were taken.
- b. The velocity tapes submitted by the field unit were not in the proper format. This problem was corrected during verification.
- c. A copy of the appropriate chart was not submitted with the survey records to the marine center.
- d. The chart enlargement submitted by the field did not have the chart number, edition number, or grid labels.
- e. The hydrographer did not compare the survey with the latest available chart (11382, 26th Edition, Nov. 15/80).
- f. East of Longitude $87^{\circ}-00'-00''$ W the majority of distances between position fixes are in excess of the maximum allowable distance of 5.0 cm found in Section 1.4.5.1 of the Hydrographic Manual by approximately 0.5 cm. Considering the control type (electronic), and that each sounding has a discrete position, the adverse impact on the overall survey is negligible. Care should be taken to ensure that the fix interval spacing be kept within the standards.

5. JUNCTIONS

H-9798 (1978) to the south
H-9804 (1979) to the east
H-9943 (1981) to the west

An adequate junction was effected with H-9943 (1981). Junctional surveys H-9798 (1979) and H-9804 (1979) have been forwarded to Headquarters in Rockville, Maryland. Agreement in the junctional areas of H-9798 (1979), H-9804 (1979) and the present survey are excellent.

6. COMPARISON WITH PRIOR SURVEYS

H-4133 (1920) 1:80,000
H-4139 (1919-20) 1:80,000
H-4604 (1926-27) 1:40,000
H-5033 (1930) 1:20,000
H-5115 (1930-31) 1:40,000
H-6555 (1940) 1:40,000
H-6636 (1940) 1:20,000
H-6687 (1940) 1:40,000

The above prior surveys taken together cover the present survey. General agreement between the present and prior surveys was very good. The differences between the inshore

area to the sixty (60) foot curve are generally plus or minus (+/-) three (3) feet. A significant disagreement in the vicinity of Latitude $30^{\circ}-19'-57''$ N, Longitude $86^{\circ}-56'-54''$ W was found in comparison with H-4604 (1926-27) where shoaling to fifty-seven (57) feet was present. A development in the area by the present survey revealed depths of sixty-seven (67) to sixty-eight (68) feet without any indication of a shoal feature.

In depths greater than sixty (60) feet the prior surveys are generally with in plus or minus (+/-) three (3) feet of present survey depths. An isolated instance in the vicinity of Latitude $30^{\circ}-12'-27''$ N, Longitude $87^{\circ}-01'-33''$ W with depths up to twelve (12) feet shoaler on the prior survey H-4139 (1919-20) may be attributable to less accurate sounding and control methods. Sounding line spacing in the area is considered sufficient to discredit the prior survey depths.

The present survey is adequate to supersede the prior surveys in the common area.

7. COMPARISON WITH CHART 11382 (25th Edition, Oct 27/79)

a. HYDROGRAPHY

The charted hydrography originates with the previously discussed prior surveys with some charted depths whose source was not readily ascertainable. The depths in those areas, considering the overall development by the present survey, are sufficient to portray an accurate bottom configuration; therefore, superseding those depths. Inshore of fifteen (15) foot depths was not surveyed by this survey, and a comparison with prior survey depths along this margin revealed some deepening. The prior survey depths inshore of the present fifteen (15) foot depths may no longer be reliable for charting purposes. However, with the present 1:80,000 scale chart covering this inshore area there is no significant impact regarding coverage in this approximately 200 meter wide unsurveyed area.

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

b. AIDS TO NAVIGATION

There are no fixed or floating aids to navigation within the survey area.

8. COMPLIANCE WITH PROJECT INSTRUCTION

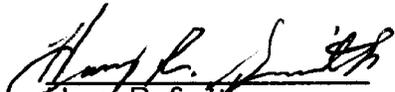
This survey adequately complies with the Project Instructions except for section 7.2 (timely submission of data) and change No. 2, section 4.12 (chart edition for comparison).

9. ADDITIONAL FIELD WORK

This is a good basic survey; no additional work is recommended.


James B. Wilson
Cartographic Technician
Verification of Field Data


Robert G. Roberson
Cartographer
Evaluation and Analysis


Harry R. Smith
Senior Cartographic Technician
Verification

INSPECTION REPORT
H-9928

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts of the survey have been made. The survey complies with National Ocean Service requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report.

Inspected



R. D. Sanocki
Chief, Verification Section
Hydrographic Surveys Branch



Karl Wm. Kieninger, CDR, NOAA
Chief, Hydrographic Surveys Branch

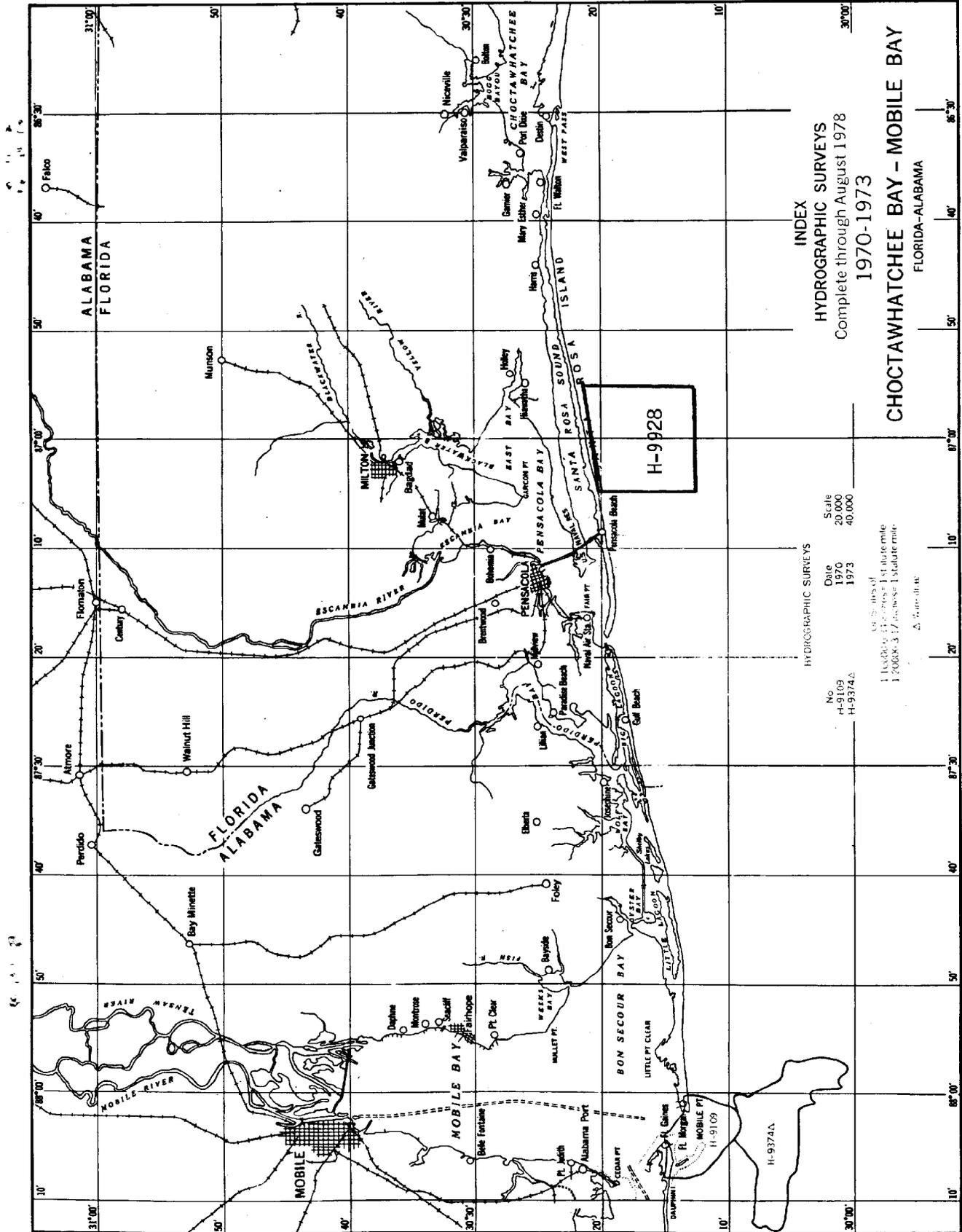
Approved 18 August 1983



Wesley V. Hull, RADM, NOAA
Director, Atlantic Marine Center

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 85 F



H-9928 shown on Master Diagrams 1115-3 & 1265-3

