

10069

Diagram No. 1263-2

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-10-12-82
Office No. H-10069

LOCALITY

State Florida
General Locality Gulf of Mexico
Locality Bell Shoal

1982

CHIEF OF PARTY
LCDR R.W. Jones

LIBRARY & ARCHIVES

DATE September 3, 1986

☆U.S. GOV. PRINTING OFFICE: 1980-766-230

10069

11384
11385
SIGN OFF
BACK

HYDROGRAPHIC TITLE SHEET

H-10069

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-10-12-82

State Florida

General locality St. Joseph Bay Gulf of Mexico

Locality St. Andrews Point to St. Joseph Point Bell Shoal

Scale 1:10,000 Date of survey Dec 7, 1982 - Apr 1, 1983

Instructions dated July 27, 1981 * Project No. OPR-J247-HSB-81

Vessel NOAA Launches 1004 and 1283

Chief of party Lt. Cdr. Ronald W. Jones

Surveyed by Lt(jg) Frederick W. Rossmann

Soundings taken by echo sounder, hand lead, pole All

Graphic record scaled by ^{S.} R. Snow, ^{B.} D. Elliott, ^{J.} M. McMann, ^{B.} C. Bush, ^{P.} J. Oswald

Graphic record checked by ^{R.} F. Rossmann, ^{S.} R. Snow

Protracted by _____ Field Sheet PDP8/e
Automated plot by AMC Xynetics 1200

Verification by AMC Hydrographic Surveys Branch

Soundings in ~~XXXXXX~~ feet at ~~XXXX~~ MLLW

REMARKS: *Change No. 1, October 1, 1981

Change No. 2, August 23, 1982

2 Notes in the Descriptive Report were made in red during office processing.

STANDARDS CK'D 9-9-86

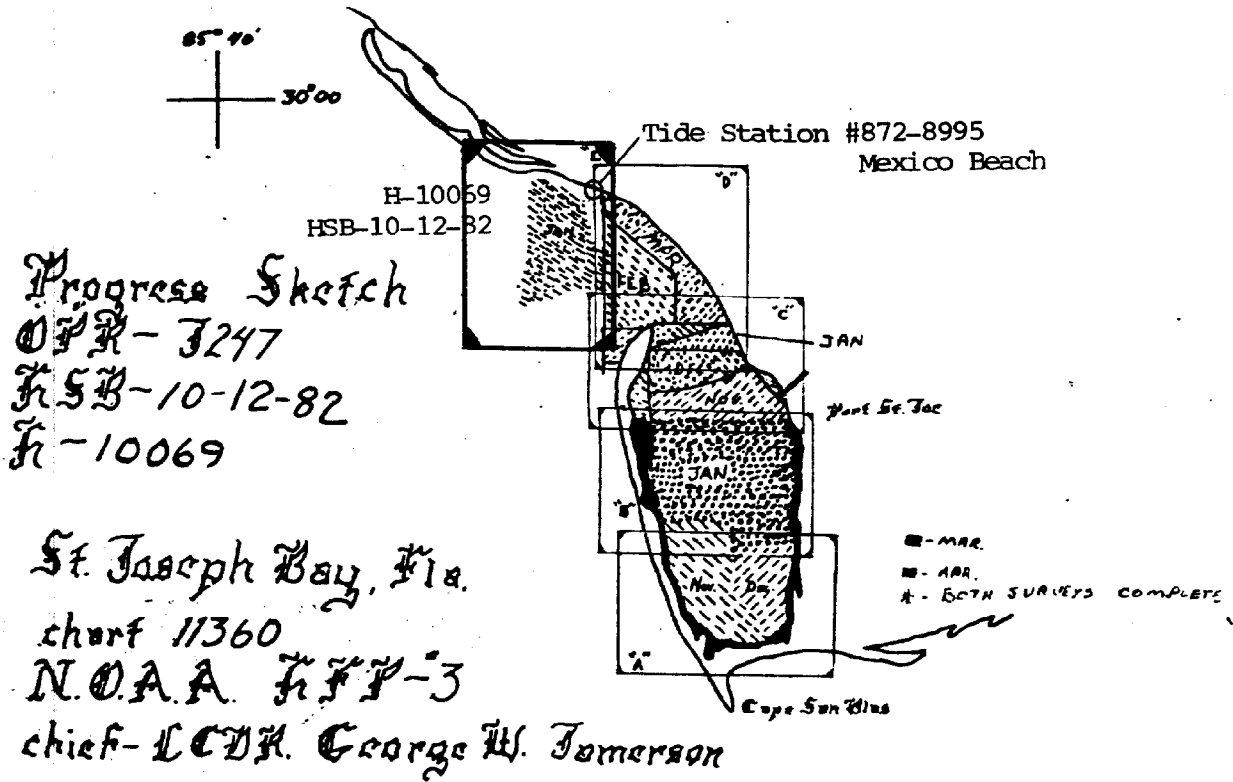
C. Loy

AWOIS/SURF MBM 11/14/86

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* Removed from original Descriptive Report and filed with original survey records.	



85° 10' 29' 30'

Legend 1982

month	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
sq. naut. mi.	4.1	3.3	3.0	8.5	5.4	4.5	6.5
naut. mi. endg.	103.5	80.0	63.3	141.0	147.8	103.2	72.5
dist to-from	12.0	21.0	24.0	120.0	192	176	60.0
misc. dist.	22.0	40.0	22.0	59.0	78.5	108.5	29.0
btm. sample	0	39	4	0	0	71	12
tide gage	2.0	-	-	-	-	-	-
entr. sta.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
cross line	0.0	0.0	6.5	0.0	22.6	0.0	21.0

82 1983

Dec	Jan
∅	8.0
∅	141.4
18	72
44.9	36
49	∅
∅	∅
0.0	0.0
∅	∅

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10069
HSB-10-12-82

Scale: 1:10,000

Chief of Party: Lt. Cdr. Ronald W. Jones
Officer-in-Charge: Lt(jg) Frederick W. Rossmann
Hydrographic Field Parties Section, HFP-3
Launches 1004 and 1283

A. PROJECT

This survey was accomplished under Project Instructions OPR-J247-HSB-81, St. Joseph Bay, Florida, dated July 27, 1981, and amended by Change No. 1, dated October 1, 1981, and Change No. 2, dated August 23, 1982.

B. AREA SURVEYED

The area surveyed was west of St. Joseph Bay, Florida. It includes the shoreline from the western end of Mexico Beach, Florida running west for four (4) nautical miles. It includes portions of the Entrance Channel into St. Joseph Bay. The survey also encompasses the offshore area of Bell Shoal. The survey is bounded by the following points:

Latitude 29°56'57"N,	Longitude 85°25'30"W
Latitude 29°51'00"N,	Longitude 85°25'30"W
Latitude 29°55'58"N,	Longitude 85°30'00"W
Latitude 29°57'57"N,	Longitude 85°30'00"W

This survey was conducted from December 7, 1982 to April 1, 1983.

C. SOUNDING VESSEL

All soundings obtained on this survey were obtained from NOAA Launches 1004 and 1283. All survey records are annotated with the vessel number 1004 or 1283.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS - See sections 4.e. and 4.g. of the Evaluation Report

The following fathometer equipment was used during the survey:

<u>JD</u>	<u>Launch</u>	<u>Equipment</u>
356 - 49	1004	Recorder Model #5000 (Ross) S/N 1053
		Digitizer Model #6000 (Ross) S/N 1083
		Inverter Model #3000 (Ross) S/N 1036
		Model #4000 (Ross) S/N 1087

<u>JD</u>	<u>Launch</u>	<u>Equipment</u>
341 and 61-82	1283	Recorder Model #719B (Raytheon) S/N 6211
83-84		Recorder Model # 179B ⁷¹⁹ (Raytheon) S/N 5881
88-91		Recorder Model #719C (Raytheon) S/N 9941

Several problems were noted in the above equipment during the survey.

A wavy fluctuation of the initial was noted on the Ross Fathogram.

On several occasions, this fluctuation was caused by problems with Launch 1004's 24-volt charging system and the DC/AC inverter. The fluctuation from the initial varied from 0.0 to approximately 0.7 feet. These fluctuations were taken into account when the fathogram was scanned. The 719B, Serial # 6211, developed a short circuit that would cause the fathometer to stop. By the end of Julian Day 82, the unit failed and was returned to the Atlantic Marine Center for repairs. It was determined that the 719B Serial #5881 chart drive speed was slightly out of calibration during a check of the system. This problem effected only one day of hydrography, JD 84, when 19.2 nautical miles of sounding lines were run. The recorded depths and positional information are not effected by this problem as the problem only causes a slight shift in time between the begin and end of each line of hydrography. No attempt was made to adjust the recorded time to actual time to correct this error.

The Ross fathometer was monitored continuously while sounding. Phase checks were made on numerous occasions during sounding operations. Initial errors occurred on the Ross as noted earlier. The Raytheon fathometers were monitored continuously while sounding. The initial and the tide and draft were set on zero feet with speed of sound being adjusted at fifty feet. No initial errors were noted on the Raytheon fathograms for this survey.

Settlement and squat tests were run on both Launch 1004 and 1283:

<u>Launch</u>	<u>Date (JD)</u>	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>
1004	Jan 24, 1983 (24)	St. Joseph Bay, 29°49.0'N FL	85°18.8'W	
1283	April 1, 1983 (91)	St. Joseph Bay, 29°49.0'N FL	85°18.8'W	

The results of these tests are included in the appendix of this report. Settlement and squat corrections will be applied via the TC/TI tape during plotting of the smooth sheet at the Atlantic Marine Center and were not applied to the field sheets.

Velocity and instrument corrections were determined by barchecks which were taken when sea conditions would permit an accurate measurement. No barchecks were obtained using Raytheon Model #719B, S/N 5881. The

velocity curve derived from the Raytheon 719C, should be applied to the two days of hydrography, JD 83-84, obtained with the 719B, S/N 5881. This should give a velocity curve which is closer to the temperature and salinity of the water than the velocity curve of S/N 6211, S/N 6211 was used earlier in the survey during the colder weather.

Smooth tides have been requested for the periods of hydrography. Smooth tides will be applied during the plotting of the smooth sheet at the Atlantic Marine Center.

E. SURVEY SHEETS (FIELD)

Eight mylar field sheets were prepared in the field using a PDP8/e computer and a DP-3 complot plotter:

- 2 - work sheets
- 2 - semi-smooth field sheets
- 2 - smooth field sheets
- 2 - overlay field sheets

Mainscheme hydrography and junction soundings are plotted on the smooth field sheets, while crosslines, developments, splits, bottom samples and aids to navigation are shown on various overlay sheets. Projection parameter tape listings for the field sheets are 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 the Xynetics 1201 Plotter.

F. CONTROL STATIONS

Control stations used during this survey were either existing geodetic control stations published by National Geodetic Survey (NGS) or were established by Hydrographic Field Parties Section (HFPS) Horizontal Support Group in 1980 to third order standards. Existing NGS control was verified at the same time. 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.

G. HYDROGRAPHIC POSITION CONTROL - See section 4.c of the Evaluation Report.

The method used to control this survey was Range/Range. The lines of hydrography were steered on constant range arcs from one of the two Remote Del Norte stations.

The following is a breakdown of Del Norte equipment used by Julian Date:

<u>JD</u>	<u>DMU</u>	<u>MASTER</u>	<u>REMOTES</u>	
341	395	76 #162	78 #220	74 #218
356-357	180	76 #162	78 #220	74 #218
003-007,013	180	76 #162	76 #251	74 #218
026-039	180	78 #169		74 #218
040,045-046	180	78 #169	72 #1316	74 #218
049,061-062				
066-068,073,				
074,081	180	78 #169	78 #220	74 #218
082-084,088	180	78 #169	72 #1316	74 #218
089-091	180	78 #169	72 #1316	78 #220 74 #218

Nearly all daily system checks were conducted at the Front Light of Range A, Latitude 29°54.4'N, Longitude 85°24.3'W. This site is approximately one nautical mile east of the survey limits. Inverse distances from the horizontal control stations to Range A Front Light were determined using the PDP8/e computer and RK 407 (Geodetic Inverse/Direct Computation). Unless noted in the sounding volume, the launch normally laid to alongside the Range Light to calibrate. On one occasion (JD 083) it was impractical to return to the Front Range calibration site, so the boat took rates at the water level staff in Salt Creek. Later (JD 088) a daily check was made at Range A Front Light and a comparison was made at the water level staff. The rates from the two days compare favorably.

Daily correctors obtained from baseline calibrations are generally used to correct the electronic positioning system when baseline calibration data were available. However, daily correctors obtained from the daily system checks are to be applied on JD 341, JD 363 through JD 017, JD 29 and JD 39. ON JD 341, daily correctors of -7 and +16 should be applied as the DMU/Master has been calibrated over a short baseline (233 m). Remote 78, S/N 220, was recalibrated on JD 342, but Remote 74 S/N 218, had no closing baseline before DMU, S/N 395, failed on JD 344. No closing baseline is available for the entire period of JD 363 to JD 017 as the Master Unit was inadvertently changed during the baseline calibration. The mean of daily system checks are to be applied as daily correctors for the hydrography during this period. Daily correctors were similarly obtained for JD 26 and 39 to the 76 Remote, S/N 251, as no closing baseline was obtained due to failure of that remote.

All field sheets were plotted using zeros as correctors. All corrector tapes have been marked for editing by the Processing Branch at AMC so the actual corrector are applied to the smooth sheets. (See pg. 31)

Problems encountered with the use of this equipment were mainly related to low battery voltage. Launch 1004 24-volt battery charger failed early in the survey. A new printed circuit board was provided for the charger which solved the voltage problem on the launch. Null zones were found in two portions of the survey. These null zones were successfully overcome by using 90° antennas on the remotes and adding an additional four foot of height to the mast for the master. One Del Norte, S/N 395, failed early in the survey and was returned to Norfolk for repairs.

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

Shoreline detail for this survey was obtained from Class I shoreline maps, TP-00349 and TP-00351. These 1:20,000 maps were enlarged photographly to the scale of the survey.

No noticeable changes between the mapped shoreline and the surveyed shoreline were noted during hydrographic operations. It was observed that the beach area is subject to dynamic change due to wind and sea action.

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

Crosslines constitute 7% of the mainscheme hydrography. Ninety-eight percent (98%) of the crossings agree within one foot. No soundings are in disagreement at crossing by more than ±two feet.

J. JUNCTIONS - See section 5. of the Evaluation Report.

This survey junctions with the following surveys:

H-9915 to the West
H-9734 to the Southwest
H-9996 to the East

Agreement between the junction survey and the current survey is excellent. All soundings are in agreement by one foot. This one foot difference is caused by either the difference between real and predicted tides and by possible sediment transfer in this relatively shallow water during severe weather.

A Holiday exists between the current survey and the junction of H-9915 and H-9734. This area, approximately 1/2 mile square, is on the southwest corner of the survey at Latitude 29°55'30"N, Longitude 85°29'40"W in depths between 24 and 27 feet. The Holiday was discovered after hydrography was completed and the party had departed the area. This occurred because this small area was outside of the project limits in the project instructions.

K. COMPARISON WITH PRIOR SURVEYS - See section 6. and 4.h. of the Evaluation Report.

This survey was previously covered by the following survey:

H-1265A (1875), 1:20,000 scale

Comparison with H-1265 was fair as many differences were found between the two surveys. An exact comparison was difficult to make because of the poor quality of the reproduction of H-1265 and the change in datum. The soundings from the current survey generally appear shallower, 1-2 feet, than those from the 1875 survey. The 12-foot and 18-foot contours have changed, especially the 12-foot contour along the inshore, western end of this survey. Several of the deep areas (greater than 30') have diminished in size since 1875.

It is recommended that the soundings from the present survey supersede the prior surveys' soundings.

L. COMPARISON WITH THE CHART - See section 7. of the Evaluation Report.

The following presurvey review items were investigated during this survey:

A search for PSR #13 (NM 13/42, 1942) was attempted on JD 84. Indications of an obstruction were also noted on JD 007 between positions 711 and 712 at Latitude 29°53'56.6", Longitude 85°27'47.9". The wreck is a cargo ship, 598 gross tons. It was sunk on the 21 of March 1942 by a marine casualty (fire). The wreck was last reported in Local Notice to Mariners 50/78, which listed the wreck as a dangerous submerged wreck P.A. at Latitude 29°54'01"N, Longitude 85°27'51"W. A wreck was located using the fathometer and investigated by NOAA Divers. The vessel was laying northeast to southwest on the bottom and appears to be broken into several pieces. The divers determined the highest point on the wreck and used a leadline to measure the least depth. The least depth over the wreck is 15.0 ft reduced for ^{month} predicted tides. A fathogram trace of the wreck is included in the survey Data. The wreck was reported by telephone and letter to the United States Coast Guard

Eighth District. Recommendation: Chart at Latitude 29°53'32.2"N, Longitude 85°27'59.7"W. This wreck can not be positively identified as that of PSR #13 and is about 1/2 nautical miles away from its reported P.A. position. A thorough search of this reported position was not conducted and the aforementioned obstruction (JD 007) was also not developed further. - See sections 7.2.1) and 7.2.2) of the Evaluation Report.

This possible obstruction (JD 007) was found again by fathometer in preparation for diving, although data was not recorded. The dive had to be cancelled due to heavy seas. This obstruction appears to rise eight feet above the surrounding depths for a least depth of 14.0 feet reduced for ^{9 meters} predicted tides. It is recommended that this obstruction be charted as a dangerous submerged obstruction at position Latitude 29°53'56.6"N, Longitude 85°27'47.9"W. It is further recommended that the P.A. wreck at Latitude 29°54'01"N, Longitude 85°27'51"W be deleted as it would be adequately charted by the above known obstruction, 170 meters away. See sections 7.2.2), 7.2.3) and 9 of the Evaluation Report

PSR Item #12, dangerous submerged wreck, was deleted by Change 1, dated October 1, 1981. A limited investigation (50 meter line spacing) was conducted in the area of the PSR item, Latitude 29°55'24", Longitude 85°25'54". No evidence of the wreck was found during the investigation.

A comparison was made between the survey and Chart 11393; 13th Edition.

The following changes were noted during the comparison: The four foot shoal at Latitude 29°57.25', Longitude 85°29.5' no longer exists. The least depth in this area is now eight feet. The 12-foot contour has moved approximately 1000 meters shoreward around Longitude 85°28'W. The 18-foot contour has shifted slightly but roughly maintains its charted shape. The charted 30-foot contour indicating a 32 foot depth at Latitude 29°54'N, Longitude 85°26'30"W has filled in and is approximately one fourth its charted size. Depths from this survey tend to be in exact agreement or deeper by 2 to 3 feet. - See section 6 of the Evaluation Report.

No attempt was made to develop the entrance to Salt Creek ^{in the vicinity of Lat. 29°57'N, Long. 85°25'54"W} at Mexico Beach, Florida. The channel is reported ^{in 1972} as four feet deep on the chart. On several occasions during the survey, the channel was completely closed due to drifting sand. The seaward end of the creek is in a constant state of flux and depths do not remain consistent in this area. A note should be added to the chart stating, "Local knowledge is necessary to enter Salt Creek". A Coast Pilot Report, NOAA Form 77-6, has been submitted also. -Concur

M. ADEQUACY OF SURVEY - See section 9 of the Evaluation Report.

This survey is complete and adequate to supersede prior surveys for charting except for the following two areas. As noted earlier, a Holiday exists in the junction sounding at the southwest corner of the survey. A small Holiday exists on the inshore end of hydrography. The Holiday is located at Latitude 29°57'25"N, Longitude 85°28'57"W. Several attempts were made to run hydro in this Holiday, but wind and sea conditions made it impossible to safely navigate it. with a 17-foot Monark launch. The safe offshore limit is defined by Positions 3482 through 3484. The inshore limit is the six foot contour. It is the hydrographer's opinion that the six foot contour is adequately defined. This Holiday does not affect the adequacy or the completeness of the survey.

N. AIDS TO NAVIGATION - See section 7.c. of the Evaluation Report.

Eight floating aids to navigation in the survey area were located and comparisons between their charted and surveyed positions are excellent. All buoy descriptions are adequate in comparison to the Light List (Vol II, 1982). All floating aids adequately delineate the entrance channel.

There were no fixed aids in the survey area. All fixed aids and landmarks in the project area were previously submitted (1981 - 1982) and have been entered in the NGS data base.

O. STATISTICS

Number of positions -----	3489
Nautical miles of sounding lines -----	331.9
Nautical miles of crossline -----	22.7
Nautical miles of development -----	37.0
Total miles of hydrography -----	391.6
Number of bottom samples -----	75
Number of barchecks -----	30

P. MISCELLANEOUS

No information on currents was obtained during the survey.

Several areas on the survey were developed to better define the bottom contour. An anomaly was noted in the eighteen foot contour at Latitude 29°55'40"N, Longitude 85°28'15"W. When the area was developed, several 17-foot depths were noted where 19-foot depths had been recorded earlier. The deeper depths are on the mainscheme sheet and were used to draw the contour. There are other differences less significant than this between the overlay and mainscheme and in most cases the depths on the mainscheme were used for contouring. These anomalous depths should be resolved when smooth tides are applied.

Q. RECOMMENDATIONS

It is recommended that a side scan sonar search be made around PSR #13.

See Sections L and M 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>
RK201	Grid, Signal and Lattice Plot	04/18/76
RK211	Range-range Non-real Time Plot	01/15/76
RK300	Utility Computations	02/05/76
RK330	Reformat and Data Check	05/04/76
RK407	Geodetic Inverse/Direct Computation	09/25/78
AM500	Predicted Tide Generator	11/10/72

<u>PROGRAM</u>	<u>DESCRIPTION</u>	<u>VERSION DATE</u>
RK530	Layer Corrections for Velocity	05/10/76
RK561	H/R Geodetic Calibration	02/19/75
RK562	Geodetic Calibration	09/10/74
AM602	Elinore-line Oriented Editor	05/20/75

S. REFERENCE TO REPORTS

Coast Pilot Report
Control Report for OPR-J247, dated July 22, 1981.

Respectfully submitted,

Frederick W. Rossmann

Lt(jg) Frederick W. Rossmann
NOAA
OIC, HFP-3

SIGNAL TAPE LISTING

ST. JOSEPH BAY, FLA.

OPR-J247

HSB-10-12-82

H-10069

SHEET "E" PT. 1&2

106	5	29	52	15238	085	23	35108	250	0020	000000	H-60-FL-1980
107	4	29	52	32123	085	21	44937	250	0000	000000	ST. JOE PT. R. RNG. C-1980
111	4	29	54	24198	085	24	18512	250	0000	000000	ST. JOE PT. F. RNG. A-1980
112	1	29	55	04935	085	22	50097	250	0025	000000	ST. JOE PT. LGTD. RNG A REAR LI
118	1	29	57	29475	085	28	16671	250	0005	000000	H-61-FL-1980 1980

* CONTROL EST. BY FIELD SUPPORT SECTION R. DECROIX, J. DANIEL
1980

** SIGNAL NO. IN ACCORDANCE WITH PREVIOUS SURVEY/ HFP#3

NONFLOATING AIDS ~~FOR CHARTS~~ FOR CHARTS

Replaces C&GS Form 567. TO BE CHARTED TO BE REVISED TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office) HFP-3 STATE Florida LOCALITY St. Joseph Bay DATE 3/83

The following objects HAVE ~~XX~~ NOT been inspected from seaward to determine their value as landmarks. DATUM 1927 North American

OPR PROJECT NO. OPR-247 JOB NUMBER H-10069 SURVEY NUMBER

CHARTING NAME	DESCRIPTION <small>(Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)</small>	POSITION		METHOD AND DATE OF LOCATION <small>(See instructions on reverse side)</small>		CHARTS AFFECTED
		LATITUDE ° / ' / D.M. Meters	LONGITUDE ° / ' / D.P. Meters	OFFICE	FIELD	
LIGHT	St. Joseph Bay Range A Rear Light (St. Joseph Point Lgtd Rng A) L.L. #1566 Station 112	29 55	85 22		F-2-6-L 8/80	11389 11393
LIGHT	(St. Joseph Point F. Rng A) L.L. #1565 Station 111 St. Joseph Bay Range A Front Light	29 54	85 24		F-2-6-L 8/80	11389 11393
LIGHT	(St. Joseph Point R. Rng B) L.L. #1572 Station 110 St. Joseph Bay Range B Rear Light	29 53	85 22		F-2-6-L 8/80	11389 11393
LIGHT	St. Joseph Bay Range B Front Light (St. Joseph Point F. Rng B and D) L.L. #1571 & 1580	29 53	85 23	04-230	F-2-6-L 8/80	11389 11393
	St. Joseph Bay Range D Front Light					
NOTE: The above aids are near the limits of this survey.						
All fixed aids and landmarks within the project area have been previously located and entered in the NBS data base 1981 -1982.						

6-916 (20)
6-822 (20)

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Frederick W. Rossmann
POSITIONS DETERMINED AND/OR VERIFIED	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
<p style="text-align: center;">INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)</p>	
<p>OFFICE</p> <p>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</p> <p>FIELD</p> <p>I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant</p> <p>A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p>	<p>FIELD (Cont'd)</p> <p>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</p> <p>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</p> <p>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75</p> <p>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>
<p><input type="checkbox"/> PHOTO FIELD PARTY</p> <p><input checked="" type="checkbox"/> HYDROGRAPHIC PARTY</p> <p><input type="checkbox"/> GEODETTIC PARTY</p> <p><input type="checkbox"/> OTHER (Specify)</p>	<p>FIELD ACTIVITY REPRESENTATIVE</p>
<p><input type="checkbox"/> REVIEWER</p> <p><input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE</p>	<p>OFFICE ACTIVITY REPRESENTATIVE</p>

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

NONFLUORESCENT LANDMARKS FOR CHARTS

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

ORIGINATING ACTIVITY

TO BE CHARTED
 TO BE REVISED
 TO BE DELETED

REPORTING UNIT
(If not Party, Ship or Office)
HFP-3

STATE
Florida

LOCALITY
St. Joseph Bay

DATE
3/83

The following objects HAVE HAVE NOT been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.
J-247

JOB NUMBER
H-10069

DATUM
1927 North American

METHOD AND DATE OF LOCATION
(See instructions on reverse side)

OFFICE

FIELD

CHARTS
AFFECTED

CHARTING
NAME
TANK

(Mexico Beach Municipal Tank)

L-916 (82)

DESCRIPTION
(Record reason for deletion of landmark or aid to navigation.
Show triangulation station names, where applicable, in parentheses.)

LATITUDE

LONGITUDE

• /
D.M. Meters
29 56

//
D.P. Meters
36.637

° /
85 24

F-2-6-L
8/80

11389
11393

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Frederick W. Rossmann
POSITIONS DETERMINED AND/OR VERIFIED	
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,	
<p>OFFICE</p> <p>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</p> <p>FIELD</p> <p>I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection</p> <p>A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p>	<p>FIELD (Cont'd)</p> <p>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</p> <p>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</p> <p>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75</p> <p>**PHOTOGAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>
<p>ORIGINATOR</p> <p><input type="checkbox"/> PHOTO FIELD PARTY</p> <p><input checked="" type="checkbox"/> HYDROGRAPHIC PARTY</p> <p><input type="checkbox"/> GEODETIC PARTY</p> <p><input type="checkbox"/> OTHER (Specify)</p> <p>FIELD ACTIVITY REPRESENTATIVE</p> <p>OFFICE ACTIVITY REPRESENTATIVE</p> <p><input type="checkbox"/> REVIEWER</p> <p><input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE</p>	

IV. DANGERS: Mention those of concern to the navigator where special caution should be indicated in the Coast Pilot.

V. CURRENTS: Indicate places you have experienced conditions of current where special caution should be mentioned in the Coast Pilot.

VI. ANCHORAGES: Mention best anchorage in the area and other secure anchorages having good holding ground.

LOCATION (Include anchorage bearings and natural ranges if available)

TYPE OF BOTTOM OBSERVED:

	EXCEL	GOOD	FAIR	POOR	COMMENT	RECOMMENDED FOR VESSELS:	
						LENGTH	DRAFT
HOLDING QUALITY						_____ TO _____ FT.	_____ TO _____ FT.
PROTECTION OFFERED							
ACCESSABILITY							

VII. REMARKS:

VIII. OTHER COAST PILOT CHANGES

U.S. COAST PILOT			
NUMBER	EDITION	PAGE	LINE(S)
5	15	143	13-14

NOTE: Any chart(s) submitted with your report to show conditions will be replaced free of charge.

READ: STRIKE OUT: INSERT AFTER: (Circle one)

CHANNEL LEADS TO SALT CREEK, THIS CHANNEL IS SUBJECT TO SHOALING AND REQUIRES LOCAL KNOWLEDGE TO ENTER SALT CREEK.

RL copy

Atlantic Marine Center
Hydrographic Field Parties Section

May 23, 1983

TO: N/CG222 - Norman E. Banks
THRU: N/MOA233 - Ronald W. Jones
FROM: OIC,HFP-3 - Frederick W. Rossmann
SUBJECT: Advance Information - Dangerous Sunken Wreck - Vicinity Entrance
Channel to Port St. Joe, FL (Chart 11393)

The enclosed copies of a letter and chart 11393 have been transmitted to the Commander, Eight Coast Guard District. The information was also telephoned May 20, 1983, to the Aids to Navigation Section, USCG Eight District, recommending the issuance of a Local Notice to Mariners.

cc:
MOA1

Enclosures



RL copy

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Atlantic Marine Center
Hydrographic Field Parties Section

May 23, 1983

N/MOA233:RAL

TO: Commander, Eight Coast Guard District

THRU: Lt. Cdr. Ronald W. Jones *Ronald W. Jones*

FROM: Lt(jg) Frederick W. Rossmann *Robert Lewis*

SUBJECT: Information pertinent to Navigation - Dangerous Sunken Wreck in the Vicinity of Entrance Channel Port St. Joe, Florida - Chart 11393

The following information is a result of a recent National Ocean Service hydrographic survey in the vicinity of Bell Shoal and the Entrance Channel to Port St. Joe, Florida (Survey H-10069).

An uncharted dangerous wreck was found at Latitude 29°53'32.2", Longitude 85°27'59.7" on March 25, 1983 at 2108 GMT. The wreck was found with a fathometer and once found was investigated by NOAA divers. The vessel appears to be broken in several pieces and the highest point was measured by diver held leadline to be 16.6 feet at the time of location. Predicted tides for the area at the time of measurement was 1.4 feet thus making a least depth of 15 feet.

The position of the wreck was obtained by range/range techniques using a Del Norte short range electronic control system.

A copy of Chart 11393, 13th Edition with the position of the wreck indicated is enclosed.

The above information was transmitted by telephone May 20, 1983 to the Aids to Navigation Section U.S.C.G Eight District.

Enclosure



APPROVAL SHEET
SURVEY H-10069 (HSB-1012-82)

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 a routine field inspection of the hydro party.

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



Ronald W. Jones
Lt. Cdr., NOAA
Chief, Hydrographic Field Parties Section

Atlantic Marine Center
439 West York Street
Norfolk, VA 23510

July 7, 1983

N/MOA232:RGR

TO: Commander (oan)
Eighth Coast Guard District
Hale Boggs Federal Building
500 Camp Street
New Orleans, LA 70130

FROM: Karl Wm. Kieninger, CDR, NOAA
Chief, Hydrographic Surveys Branch, N/MOA23

SUBJECT: Danger to Navigation

An uncharted obstruction with a reported depth of fourteen (14) feet has been found in Latitude 29°53'56.5"N, Longitude 85°27'49.0"W.

Source: NOS Survey H-10069
Charts: 11360, 11389, 11393

cc: N/CG222
N/MOA233

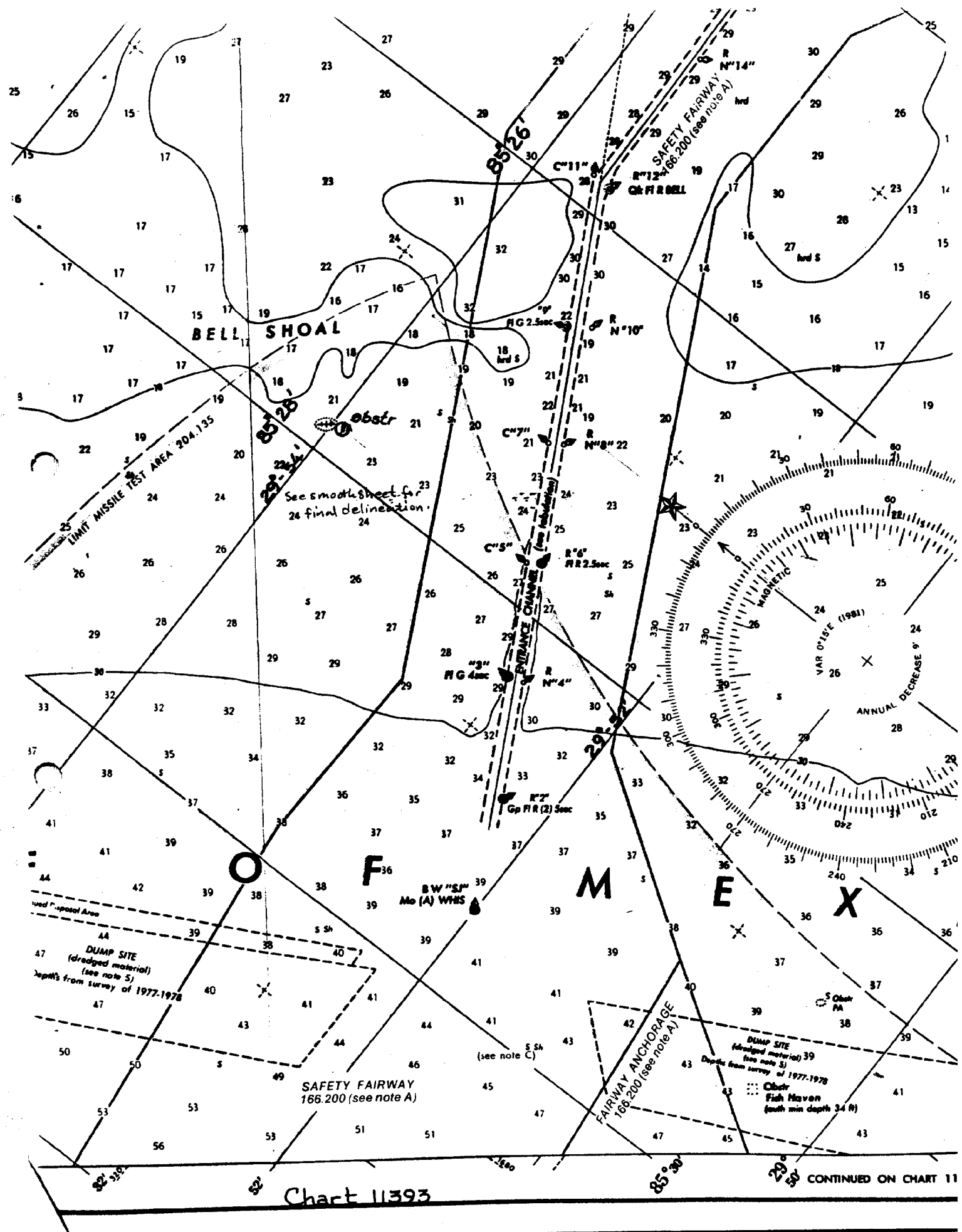


Chart 11393

CONTINUED ON CHART 11

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: H-10069

Number of positions	3406
Number of soundings	12073
Number of control stations	5

	<u>TIME-HOURS</u>	<u>DATE COMPLETED</u>
Preprocessing Examination	22	3 AUG 83
Verification of Field Data	392	10 SEP 85
Quality Control Checks	75	
Evaluation and Analysis	46	31 JAN 86
Final Inspection	8	29 JAN 86
TOTAL TIME	543	
Marine Center Approval		31 JAN 86

Transmittal letter of survey and survey records will be included in the Descriptive Report to identify the records accompanying the survey.

9/13/83

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 8995 Mexico Beach, Florida

Period: December 7, 1982-April 1, 1983

HYDROGRAPHIC SHEET: H-10069

OPR: J-247

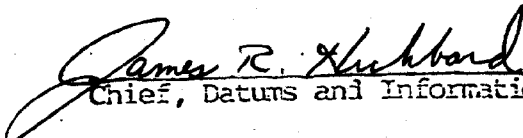
Locality: St. Joseph Bay Entrance, Florida

Plane of reference (mean lower low water): 3.17 feet

Height of Mean High Water above Plane of Reference is 1.6 feet

REMARKS: Recommended Zoning:

Zone Direct


Chief, Datums and Information Branch

GEOGRAPHIC NAMES

H-10069

Name on Survey	A ON CHART NO. B ON PREVIOUS SURVEY NO. C ON U.S. QUADRANGLE MAPS D FROM LOCAL INFORMATION E ON LOCAL MAPS F P.O. GUIDE OR MAP G RAND McNALLY ATLAS H U.S. LIGHT LIST K											
	BELL SHOAL	X										
FLORIDA (title)	X											2
GULF OF MEXICO	X											3
MEXICO BEACH (locality)	X											4
ST. ANDREW POINT	X											5
SALT CREEK	X											6
												7
												8
												9
												10
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												25

Approved:

Charles E. Harrington
Chief Geographer - N/CG 2x3

FEB 10 1986

ATLANTIC MARINE CENTER
EVALUATION REPORT

SURVEY NO.: H-10069

FIELD NO.: HSB-10-12-82

Florida, Gulf of Mexico, Bell Shoal

SURVEYED: 7 December 1982 through 1 April 1983

SCALE: 1:10,000

PROJECT NO.: OPR-J247-HSB-81

SOUNDINGS: ROSS Digital Echo
Sounder, RAYTHEON
DE-719B and DE-719C
Fathometers

CONTROL: DEL NORTE (Range/
Range)

Chief of Party.....R. W. Jones

Surveyed by.....F. W. Rossman
.....R. S. Snow
.....D. B. Elloitt
.....M. J. McMann
.....C. B. Bush
.....J. P. Oswald

Automated Plot by.....XYNETICS 1201 Plotter (AMC)

1. INTRODUCTION

a. No unusual problems were encountered during office processing.

b. Notes in the Descriptive Report were made in red during office processing.

2. CONTROL AND SHORELINE

a. Control is adequately discussed in sections F., G., and S. of the Descriptive Report.

b. Shoreline originates with 1:20,000 scale registered Coastal Zone Maps TP-00349 and TP-00351 of 1977-78. The shoreline was applied to the present survey by enlarging the needed areas of the shoreline manuscripts.

The charted pier in Latitude 29°56'54"N, Longitude 85°25'27"W is approximately sixty (60) meters longer as shown on the present survey than the shoreline map and charted lengths. Prior survey H-9996 (1982) also shows the pier longer than the pier on the manuscript and with a red addition from an detached position taken by the hydrographer. This red addition is also shown on the present survey. It is recommended that this pier be charted as shown on the present survey.

3. HYDROGRAPHY

a. Soundings at crossings are in excellent agreement and comply with the criteria found in sections 4.6.1 and 6.3.4.3. of the HYDROGRAPHIC MANUAL.

b. The standard depth curves could not be drawn in their entirety; the zero (0) curve was not delineated because of vessel safety. Supplemental three (3) and twenty-four (24) foot curves were drawn to show additional bottom relief. Additionally, some brown and dashed curves were also drawn to delineate bottom relief.

c. The development of the bottom configuration and determination of least depths is considered adequate with the following exception:

The obstruction located in, Latitude 29°53'56.4"N, Longitude 85°27'48.8"W, should have been further developed with additional lines of hydrography and a least depth determined using a lead line.

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. The hydrographer noted a junctional holiday between the present survey and H-9734 (1977) and H-9915 (1980). The hydrographer's reason for the holiday was that the "holiday was discovered after hydrography was completed...". Hydrography is not complete until all of the requirements found in the Project Instructions have been met. It is most important for the hydrographer to examine the data acquired in the survey area with junctional data provided by Headquarters or the marine center for any holidays or deficiencies prior to departure from the survey area and not at some later date. It should be noted that, in this case, junctional data was provided by the marine center.

b. A fourteen (14) foot dangerous obstruction was found on the present survey during field operations; however, the hydrographer failed to prepare a report for a Notice to Mariners for this danger to navigation. A letter for a notice to mariners was prepared at the Atlantic Marine Center during office processing and forwarded to the Aids to Navigation office, Eighth Coast Guard District on 7 July 1983. A copy of the letter is appended to the Descriptive Report.

c. The hydrographer's comments concerning daily electronic control correctors and baseline calibrations on page 6 of the Descriptive Report are confusing. An evaluation of the

baseline corrector data and daily system check data during office processing determined that the daily system check data would be used for the final electronic correctors. The daily system check data was applied to the survey data during office processing.

d. A dive report was not submitted by the hydrographer for the dive operations conducted on 25 March 1983. Section 7.13. of the Project Instructions outlines the requirements for information submitted concerning dive operations.

e. The hydrographer used three (3) different RAYTHEON fathometers on vessel number (VESNO) 1283. There were no bar checks taken using fathometer 5881. Two (2) out of a possible ten (10) bar checks were taken with fathometer 9947 and eleven (11) out of a possible twenty (20) bar checks were taken using fathometer 6211. This does not meet the criteria found in section 1.5.2 for twice daily bar checks. Additionally, bar checks are used not only for velocity correctors but also for instrument error determination. Without these data it is not possible to determine if there was instrument error for fathometer 5881.

f. The spacing between soundings exceeded the six (6) millimeter criteria found in section 1.4.6. of the HYDROGRAPHIC MANUAL. In this case, the distance in excess of the maximum allowable spacing is not considered sufficient to degrade the overall quality of the survey.

g. Velocity corrector tables were not correct as submitted by the field unit. Additional values had to be picked off of the the velocity graphs to provide complete velocity tables.

h. The hydrographer failed to make a comparison with prior survey H-1511b (1881-82). Section 6.10.1. of the Project Instructions was deficient because this prior survey was not included on the list of prior surveys.

i. It would have been desirable to have ^{32.2} delineated the extent of the wreck found in Latitude 29°53'56.6"N, Longitude 85°27'47.5"W^{32.7}. This delineation would have complimented the least depth found by the divers and provided a more complete portrayal for charting. *Per Telcom with 7/1/82 11/14/82*

j. The hydrographer ran the range on Port St. Joe Entrance Channel but noted that it was too "hazy". No other records indicate whether the hydrographer ran the range at a later date. Section 4.2.3.1. of the Project Instructions outlines this requirement.

k. The hydrographer states that there are no fixed aids to navigation in the survey area. This is true; however, section 4.2.3.1. of the Project Instructions requires that all fixed aids in the "project area" should be located. Even though

these aids may have been located in 1981 and 1982 it is imperative that the aids be checked to ensure that they have not been relocated.

l. The field records submitted by the field unit were well annotated.

m. The scanning of the fathograms by the field unit was excellent.

5. JUNCTIONS

H-9734 (1977) to the southwest
H-9915 (1980) to the west
H-9996 (1982) to the east

Standard junctions could not be effected with the junctional surveys. The junctional surveys are archived at National Ocean Service (NOS) Headquarters, Rockville, Maryland. Any desired adjustments to the depth curves on these surveys in the junctional areas will be made at headquarters. Differences in curves must be resolved by the chart compiler on the nautical charts.

A junctional holiday exists between the present survey and H-9734 (1977), in Latitude 29°55'30"N, Longitude 85°29'40"W. Discussions of this holiday are found in section J. of the hydrographer's Descriptive Report and in section 4.a. of this report. It is not felt that this holiday is so great that it degrades the overall quality of the present survey.

4. COMPARISON WITH PRIOR SURVEYS

H-1265a (1875) 1:20,000
H-1511b (1881-82) 1:40,000

The two (2) prior surveys listed above cover the present survey area in its entirety.

Survey H-1265a (1875) covers the majority of the present survey area. The present survey is generally in good agreement with the prior survey. Depth generally vary from zero (0) to plus or minus (+/-) one (1) to three (3) feet. Notable exceptions are:

a. Thirty-two (32) foot depths in a depression area on the prior survey in Latitude 29°53'50"N, Longitude 85°26'12"W that are eighteen (18) to twenty-four (24) feet deeper than present survey soundings. This feature is migrating to the east.

b. A finger like shoal on the prior survey in the vicinity of Latitude 29°56'00"N, Longitude 85°26'00"W with a least depth of thirteen (13) feet has migrated to the east approximately

500 meters. The shoalest depth on this feature found by the present survey is fourteen (14) feet.

The differences between the present and prior survey can be attributed to natural change in the bottom and technological advances in surveying.

The U. S. Army Corps of Engineers maintained Port St. Joe Entrance Channel was not in existence when the two (2) prior survey were conducted.

Survey H-1511b (1881-82) covers only a small portion of the northwest corner of the present survey. The present and prior surveys compare favorably in the common area with the present survey being slightly deeper. The exception is a shoal about 1.4 nautical miles long extending east-west on the prior survey with a least depth of four (4) feet in the vicinity of Latitude 29°57'18"N, Longitude 85°29'12"W. Present survey depths in the shoal area are seven (7) to fourteen (14) feet. These difference are attributable to natural processes.

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

7. COMPARISON WITH CHART 11393 (13th Edition, June 19/82)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys, U. S. Army Corps of Engineers surveys and miscellaneous sources. The following should be noted:

1) The charted pier in approximate Latitude 29°56'54"N, Longitude 85°25'27"W is approximately sixty (60) meters longer as it is shown on the present survey. This pier is also found on junctional survey H-9996 (1982) and is also discussed in section 2.b. of this report. It is recommended that this pier be charted as shown on the present survey.

2) An uncharted obstruction with an echo sounder least depth of fourteen (14) feet was located in Latitude 29°53'56.6"N, Longitude 85°27'47.9"W. This obstruction is approximately 150 meters southeast of the charted dangerous sunken wreck, PA in Latitude 29°54'01"N, Longitude 85°27'51"W. The charted dangerous sunken wreck, PA is listed as Pre-survey Review item 13 in the original Project Instructions. Change Number 1, dated 1 October 1981, to the Project Instructions revised this wreck's designation to AWOIS item 2626. It is recommended that the charted sunken dangerous wreck, PA be deleted from the chart and the obstruction found on the present survey be charted.

3) An uncharted wreck was found by the hydrographer in Latitude 29°53'32.2"N, Longitude 85°27'59.7"W with a lead line

least depth of sixteen (16) feet. This wreck is approximately 930 meters southwest of the charted dangerous sunken wreck, PA discussed in the section above. It is the opinion of this report that this wreck is the charted sunken wreck in Latitude 29°54'01"N, Longitude 85°27'51"W as AWOIS item 2626. It is recommended that the wreck with a least depth of sixteen (16) feet found by the hydrographer be charted as shown on the present survey.

4) Bell Shoal extends as far south as Latitude 29°53'30"N on the chart. The southernmost end of Bell Shoal on the present survey extends to Latitude 29°54'00"N and is no longer a continuous feature. It is recommended that the Bell Shoal be charted as shown on the present survey.

The present survey except as noted above is adequate to supersede the charted hydrography in the common area.

b. Controlling Depths

There are no conflicts between the present survey depths and the tabulation for Port St. Joe Entrance Channel shown on the chart.

c. Aids to Navigation

The hydrographer located eight (8) floating aids to navigation in the survey area. These aids appear adequate to serve their intended purpose.

8. COMPLIANCE WITH INSTRUCTIONS

This survey complies with the Project Instructions except as noted in section 4. of this report.

9. ADDITIONAL FIELD WORK

This is a good basic survey. It is recommended that the junctional holiday mentioned in sections 4.a. and 5. of this report be completed at a convenient time. It may also be desirable to thoroughly investigate the obstruction with a fourteen (14) foot least depth found in Latitude 29°53'56.6"N, Longitude 85°27'47.9"W to obtain an adequate description of the obstruction.

Reginald L. Keene

Reginald L. Keene
Cartographic Technician
Verification of Field Data

Robert G. Roberson

Robert G. Roberson
Supervisory Cartographer
Evaluation and Analysis

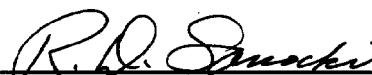
Robert R. Hill

Robert R. Hill
Senior Cartographic Technician
Verification Check

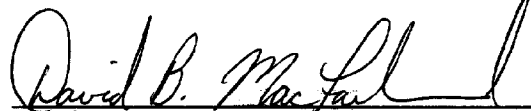
Inspection Report
H-10069

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, Hydrographic Surveys
Processing Section
Hydrographic Surveys Branch



David B. MacFarland, Jr., CDR, NOAA
Chief, Hydrographic Surveys Branch

Approved: 31 January 1986



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. 84 E

