

10232

WIRE DRAG

Diagram No. 1257-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Wire Drag

Field No. R/H-20-1-86

Registry No. H-10232WD

LOCALITY

State Florida

General Locality .. Gulf of Mexico

Sublocality Approach to Tampa Bay

1986

CHIEF OF PARTY
LCDR. R.K. Norris

LIBRARY & ARCHIVES

DATE November 17, 1987

10232
WIRE DRAG

3006 & 3007
CHT
11412
11400
11420
11006 } CHARTS
SIGN off
ON File in Back

HYDROGRAPHIC TITLE SHEET

H-10232 WD ✓

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.

R/h 20-01-86 & R/H 20-02-86 ✓

State Florida ✓General locality Gulf of Mexico ✓Locality Tampa Bay ✓Approach to Tampa Bay ✓Scale 1:20,000 ✓Date of survey June 30, 1986 - August 28, 1986 ✓Instructions dated January 7, 1986 ✓Project No. OPR-J657-Ru/He-86 ✓Vessel NOAA Ship's RUDE (9040) & HECK (9041) ✓

9140

Chief of party LCDR. Robert K. Norris ✓Surveyed by Lt. J.C. Talbott, Lt(jg)A.E. Francis, Lt.(jg) J.E. Lowell ✓Soundings taken by echo sounder, hand lead, pole Raytheon DSF-6000N, hand lead, wire drag ✓Graphic record scaled by A.E.F., J.E.L., W.L.M., K.F.S. ✓Graphic record checked by A.E.F., J.E.L., W.L.M., K.F.S. ✓Protracted by N/A ✓

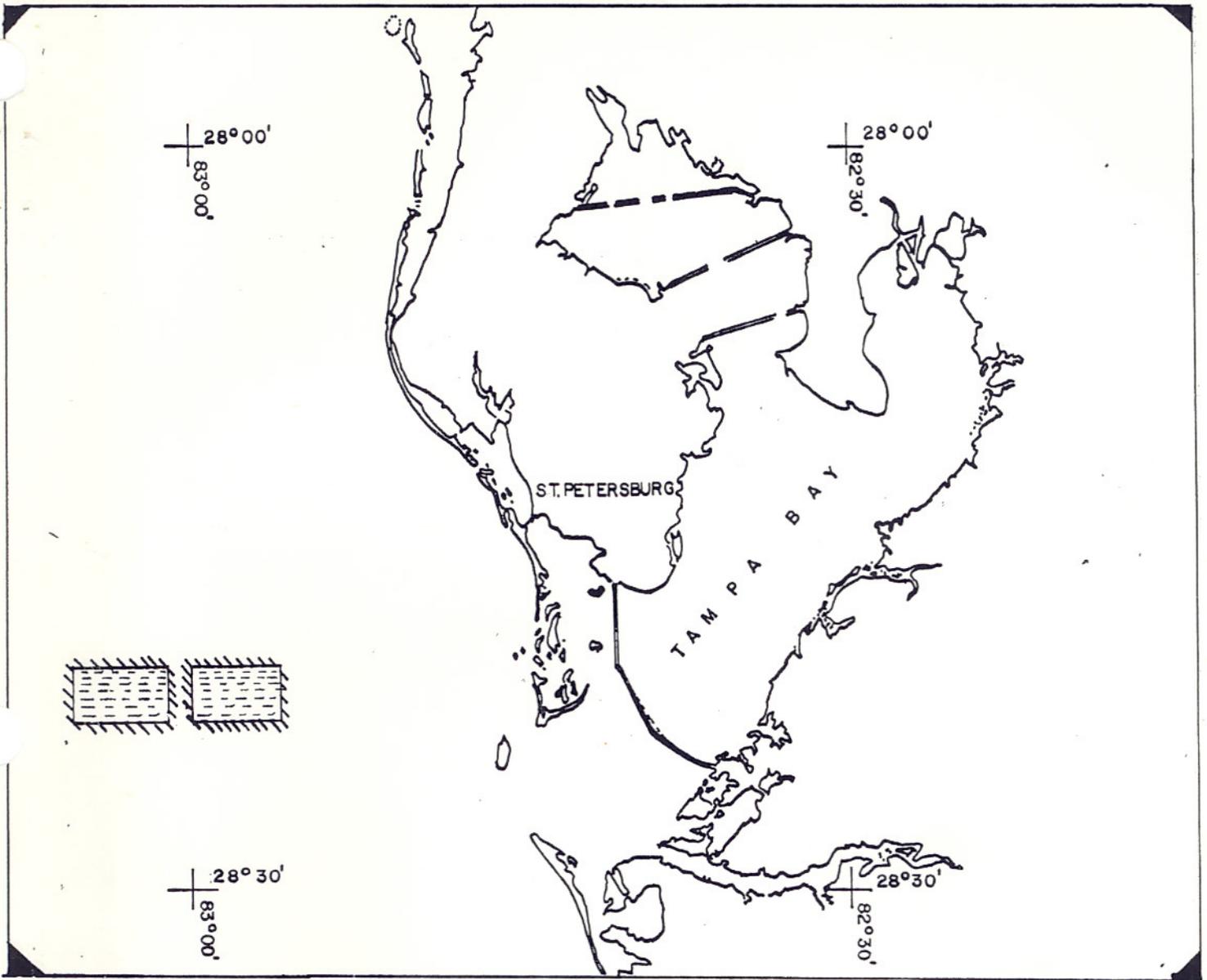
Automated plot by

Houston Instruments ✓

Plotter

(Rough Strips Only) ✓Verification by Evaluation and Analysis Group, Hydrographic Surveys Branch, AMC ✓Soundings in XXXXXX fathoms feet at XXXXXX MLLW corrected for smooth predicted tides ✓REMARKS: all times recorded in UTC

SURF and AWOIS ✓ 2/89 SRS



P R O G R E S S S K E T C H

OPR-J657-RU/HE-86

TAMPA BAY, FLORIDA
AUGUST 1986

NOAA SHIPS RUDE AND HECK
ROBERT K. NORRIS, LCDR, NOAA
COMMANDING

from chart 11442

scale = 1:456,394

LEGEND

- LNM WIRE DRAG
- SQM WIRE DRAG
- LNM SIDE SCAN
- SQM SIDE SCAN
- LNM DISTANCE TO & FROM
- LNM MISC. DISTANCE
- CONTROL STATIONS
- AWOIS ITEMS

Aug
28.7
25.7
0.0
0.3
67.0
219.0
0
0

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* = *Data removed from the Descriptive Report and filed with the field records.*

OPR-J657-RU/HE-86
FIELD SHEET # R/H 20-01-86
REGISTRY NO. H-10232WD
SCALE 1:20000
NOAA SHIPS RUDE and HECK
LCDR ROBERT K NORRIS, CMDG

A) PROJECT AUTHORITY

This project was conducted in accordance with Hydrographic Project Instructions OPR-J657-RU/HE-86, Tampa Bay Anchorage Area, Florida, dated January 7, 1986. There were no changes to the original instructions.

B) AREA SURVEYED

The area surveyed during this project was located within the two offshore anchorage areas north of "T" buoy. The areas were bounded by the following points.

Shallow Anchorage R/H 20-02-86

Northwest corner	Lat: 27° 39.0' ✓ Long: 083° 00.0' ✓
Northeast corner	Lat: 27° 39.0' ✓ Long: 082° 55.9' ✓
Southwest corner	Lat: 27° 36.8' ✓ Long: 083° 00.0' ✓
Southeast corner	Lat: 27° 36.8' ✓ Long: 082° 55.9' ✓

Deep anchorage R/H 20-01-86

Northwest corner	Lat: 27° 39.0' ✓ Long: 083° 05.1' ✓
Northeast corner	Lat: 27° 39.0' ✓ Long: 083° 01.0' ✓
Southwest corner	Lat: 27° 36.8' ✓ Long: 083° 05.1' ✓
Southeast corner	Lat: 27° 36.8' ✓ Long: 083° 01.0' ✓

The inclusive dates of survey operations were June 30, 1986 (DOY 181) thru August 28, 1986 (DOY 240).

C) SOUNDING VESSELS

Two sounding vessels were used to collect data during this survey. The NOAA Ship RUDE served as the guide vessel, and the NOAA Ship HECK as the end vessel. The vessel's numbers and the days of the year (DOY) they were conducting operations follow:

<u>EDP #</u>	<u>VESSEL</u>	<u>HULL #</u>	<u>DOY</u>
9040	NOAA ship RUDE	S590	181-240
9041	NOAA ship HECK	S591	182-240

The NOAA ships RUDE & HECK are sister ships designed for wire drag surveys. They are 90 ft. LOA, displacing 250 tons. For wire drag operations, hydraulic drive motors were engaged to reduce towing speed to 1.5 kts. This project consisted of wire drag operations exclusively. There were no unusual configuration problems encountered.

Two tester launches were used on this project for testing the wire depth, but no sounding data was collected by either boat. The launches were 21 foot, fiberglass hulled launches, constructed by Sisu Marine.

D) DRAG GEAR

The standard drag gear located on the two ships was utilized during the survey. All towline lengths, section lengths, toggle intervals, and other wire drag procedures were within the accepted standards listed in the Wire Drag Manual, Publication 20-1.

E) SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO-SOUNDING

Both ships were equipped with Raytheon DSF 6000 N echo sounders that were run concurrently with the wire drag operations. The serial numbers and dates of equipment use are as follows:

9040	NOAA ship RUDE		
	Raytheon DSF 6000 N	S/N A116 N	entire project
9140	NOAA ship HECK		
	Raytheon DSF 6000 N	S/N B051 N	entire project

Soundings were taken in depths from 20 to 80 feet.

Settlement and Squat was determined for the NOAA ship HECK on June 01, 1986 (DOY 152) in Key West Harbor, Key West, Florida. The vessel was run at various speeds past a level party located on the southern most pier of the Naval Air Station, Truman Annex. The settlement and squat correctors are included in appendix IV. ✓

It is presumed by the hydrographer that the sounding data collected by the ships will not be used for charting. Hydrographic data was not digitized during on-line data acquisition or off-line processing. Selected soundings were hand plotted on an overlay using the DSF 6000 N trace, a 6.8 ft TRA, and predicted tides. This was to give the Hydrographer some information to help in planning the drag strips and for off line analysis. This information was used during the prior survey and chart comparisons and the overlays are included in the data package. ✓

All hydrography is reconnaissance hydrography - Not intended for charting.

Smooth tides were requested from Chief, Tides and Water Levels Branch (N/OMS12) in a letter dated October 10, 1986 (see appendix II). ✓

E) HYDROGRAPHIC SHEETS

All field sheets were made aboard the NOAA ship RUDE using the DEC PDP 11/34 computer.

The field sheets were plotted at a scale of 1:20000 and were used aboard each vessel to hand plot the vessels towing position while on line. After completion of a drag strip, the data was plotted on a modified field sheet, and this data was used as an overlay to assist in the development of the A & D sheet. The parameters of the modified sheets are located in the strip header on each individual strip. ✓

Two rough A & D sheets were used (R/H 20-01-86 deep, R/H 20-02-86 shallow) to make the sheets more manageable in size. The final A & D sheet is submitted on one large sheet as per the project instructions (labeled R/H 20-01-86 & R/H 20-02-86). All data collected has been labeled according to the A & D rough sheet it was collected on. Position numbers have been duplicated between the two rough sheets but not internally on either sheet. This should not be a problem due to the separation of the data per individual rough sheets.

All field records and tapes will be forwarded to the Atlantic Marine Center for verification and smooth plotting. ✓

F) CONTROL STATIONS

This survey was conducted using existing control throughout the project area. No new horizontal control stations were established by ships personnel. The stations used and their positions are as follows: ✓

STATION NUMBER	STATION NAME
001	VA ARGO (1986) ✓ Lat: 27° 48' 34.5 ⁴⁹ N ✓ Long: 082° 47' 01.8 ⁷⁵ W ✓
002	VA Hosp Tank <i>Bay Pines Veterans Administration Hospital, 1934</i> Lat: 27° 48' 36.59 ⁴ N ✓ Long: 082° 46' 21.79 ⁸ W ✓
004	Egmont Channel Range Rear Light (1957) ✓ Lat: 27° 36' 55.8 ¹³ N ✓ Long: 082° 44' 33.34 ⁷ W ✓
005	Egmont Key Lighthouse (1873) ✓ Lat: 27° 36' 01.74 ³ N ✓ Long: 082° 45' 39.08 ⁵ W ✓
006	Egmont Channel Range Front Light (1957) ✓ Lat: 27° 36' 47.55 ⁸ N ✓ Long: 082° 45' 56.11 ⁰⁷ W ✓
007	Pilots Lookout Tower, 1982 Lat: 27° 35' 09.7 ⁷² N ✓ Long: 082° 45' 41.6 ⁵ W ✓
008	Tampa Pilots, 1981 Lat: 27° 35' 05.08 ⁴ N ✓ Long: 082° 45' 41.15 ³ W ✓
009	Egmont Key LH ECC, 1981 Lat: 27° 36' 01.78 ⁷ N ✓ Long: 082° 45' 39.03 ⁴ W ✓

All stations are of Third-order, Class I control accuracy, or better. The station positions are based upon the North American Datum of 1927. ✓

H) WIRE DRAG POSITION CONTROL

Due to the wide variances in range during this survey, two electronic positioning systems were used, the Motorola Mini-Ranger Falcon 484 and the Cubic Western DM-54 ARGO. The Mini-Ranger Falcon system was used primarily in the shallow water anchorage (R/H 20-02-86) and the ARGO system used primarily in the deep water anchorage (R/H 20-01-86). *Both systems were used in both areas.* ✓

A list of all electronic positioning systems used during this survey follows:

NOAA Ship RUDE (9040)
 Motorola Mini-Ranger Falcon 484

RPU S/N: E014	ENTIRE PROJECT	✓
MSTR R/T S/N: F3410	ENTIRE PROJECT	
CDU S/N: E0012	ENTIRE PROJECT	

CUBIC WESTERN DM-54 ARGO

RPU S/N: R1083662	ENTIRE PROJECT	✓
CDU S/N: C037944	ENTIRE PROJECT	
ALU S/N: A0379120	ENTIRE PROJECT	
STRIP CHART RECORDER S/N: 0384198	ENTIRE PROJECT	

NOAA Ship HECK (9041)
 Motorola Mini-Ranger Falcon 484

RPU S/N: E0140	DOY 138 - DOY 147	
RPU S/N: E3409	DOY 147 - DOY 242	✓
MSTR R/T S/N: F3409	DOY 147 - DOY 242	
MSTR R/T S/N: F0241	DOY 147 - DOY 242	
CDU S/N: E0012	ENTIRE PROJECT	

CUBIC WESTERN DM-54 ARGO

RPU S/N: B0379116	ENTIRE PROJECT	✓
CDU S/N: C047821	ENTIRE PROJECT	
ALU S/N: A0379127	ENTIRE PROJECT	
STRIP CHART RECORDER S/N: 0384197	ENTIRE PROJECT	

REMOTE MINI-RANGER UNITS

STATION	CODE #	S/N	
002	1	F3237	✓
002	4	F3222	
009	6	F3244	

ARGO SHORE STATIONS

STATION NUMBER	RPU S/N	ALU S/N	
001	R047850	A047846	✓
008	R047864	A047849	

Wire drag position control for the survey was a range-range system using one of the two systems. Shore stations were set up on VA ARGO (001) and Tampa Pilots (008) ARGO stations, VA Hosp Tank (002) and Egmont Key LH ECC (009) M/R station. Specific information for the control used on each individual strip see the Abstract of Positions (Appendix VII) or the header information on the strips.

F
Final correctors which will be applied should be the difference between the mean of the opening and ending baseline calibrations and the opening baseline correctors. Using the same reasoning for applying the final correctors as with the ARGO, it is recommended that the final correctors only be applied to the Detached Positions. *See section 4.c. of the Evaluation Report.*

All system checks were within accuracy tolerances for a survey of this scale. It is requested that the baseline calibration data be applied to the Mini-Ranger raw position data during the final processing. *See section 4.c. of the Evaluation Report.*

I) JUNCTIONS

There were no junction requirements for this survey.

J) SPLITS, HOLIDAYS, AND INSUFFICIENT OVERLAP

There are no splits, holidays or areas of insufficient overlap. *See section 4.e. of the Evaluation Report.*

K) COMPARISONS WITH HYDROGRAPHIC DATA

Comparisons were performed with prior surveys:

<u>REGISTRY NUMBER</u>	<u>SCALE</u>	<u>YEAR SURVEYED</u>
H-1486a	1:40,000	1881
H-7793	1:100,000	1948-50
H-9338	1:20,000	1975

A comprehensive hydrographic comparison is not the intent with this survey. The soundings used in the comparison were collected by the ships during wire drag operations and are rough in nature. Only general trends can be noted, not individual sounding comparisons. With this in mind several observations can be made.

Comparisons performed with prior surveys H-146a and H-7793, were found to be in fair agreement. The general trend was the sounding data plotted on this project is slightly shallower than the prior soundings in all areas. These comparisons were made by overlaying the hydrographic overlay on selected lat-long points for general area comparisons due to the difference in scale.

Comparisons performed against prior survey H-9338 was found to be in fair agreement, however the bulk of the sounding data analyzed is shoaler than the prior survey depths by two to four feet. This difference could be attributed to inaccuracies in the rough soundings in that only predicted tides were used in an area where predicted tides can be in error and no velocity corrections were applied. If

See also section 6. of the Evaluation Report.

the difference is attributable to shoaling, it is considered not to be a danger to navigation. The project area is adequately covered by the prior survey and no new hydrography is recommended.

The following charts were used for comparisons:

See section 7. of the Evaluation Report.

<u>CHART NUMBER</u>	<u>EDITION</u>	<u>EDITION DATE</u>
11412	29th	July 28, 1984
11414	28th	Oct 1, 1983

As per the project Instructions, charted soundings were transferred onto the boat sheets before any sounding data was obtained. All charted features and soundings came from the largest scale chart of the area. This procedure allowed for direct chart comparison while the vessels were conducting operations. There were no discrepancies noted other than mentioned in the prior survey comparison.

A Danger to Navigation was reported during this project concerning the Wreck position 33, R/H 20-01-86. The notification was dated August 4, 1986 and a copy is attached to this report.

L) AIDS TO NAVIGATION

During the project, the Egmont Key Channel buoys were positioned by the NOAA ship RUDE. This information is submitted in a separate sounding volume. The fathometer trace and other data is included at the back of the accordion folder for R/H 20-02-86 Shallow Anchorage.

There was no DIPFILE information to use in the positional comparison. The positions obtained on this project seem to confirm the charted positions as scaled off the chart, but the measurement is very rough. Agreement was generally within 1 mm at the scale of the chart. The channel buoys seem adequately charted for their intended purpose. *See also section 7.b. of the Evaluation Report.*

M) PROCEDURES

Throughout the project there were groundings of one or more of the drag buoys. In most cases, the groundings were expected or were not surprises. In an attempt to clear the anchorages to the depth given in the Project Instructions, many strips were run with the uprights set to ground out at one end of the line and still obtain the required sweep depth for most of the drag duration. In the deep anchorage this system worked well, with much of the area swept to the required 50 foot depth. The rest of the area was swept to a depth that was expected to be ^{approx.} 3 feet over the bottom from the plotted hydrographic soundings collected. In the shallow area the 40 foot ^{approx.} depth was only obtained on ~~two~~ ^{one} drag strips, with the rest at a depth ^{approx.} 3 feet over the bottom.

Note: Wire drag strips under 50ft. were, in general, run very close to the bottom.

There were no nonstandard procedures or innovations used during this survey.

N) NOTABLE OCCURRENCES

Data labeled R/H 20-02-86 shallow anchorage

DOY 182 strip 01; Start of line was void due to excessive lift. End of line grounded out in 34' of water determined by the hydrographic plot. The uprights were set at 43'.

DOY 183 strip 01; Excessive lift void and two groundings. Recon. hydro showed 36' and 42' depths respectively with uprights set at 42'.

DOY 188 strip 01; Excessive lift void and two groundings. Uprights set at 42' in water 38 - 40 feet deep.

DOY 189 strip 01; Ground out in water less than 40' with 40 ft. uprights.

DOY 190 strip 01; This strip grounded out and helped delineate the north limit of the charted spoil area.

DOY 192 strip 01; Ground out at start of line, 36' soundings and 39' uprights. Hang at end of line.

DOY 195 strip 01; Two groundings in 30 - 35 feet of water, uprights set at 37'

DOY 196 strip 01; Three groundings, all in shallower water than the upright length.

DOY 196 strip 02; Two groundings in less water than the uprights. The ships were forced off line to avoid a large anchored ship.

DOY 197 strip 01; Ground out on eastern limit of charted spoil area.

DOY 197 strip 02; Buoy # 3 fouled at start of line. Buoy cleared when a tester boat pulled on it. Eventual ground out in 32' soundings with uprights at 38'.

DOY 216 strip 01; Ground out at end of line in 32' soundings and 34' uprights.

DOY 217 strip 01; Ground out at end of line in 32' soundings and 36' uprights.

DOY 234 strip 01; Ground out to delineate the northern limit of charted spoil area.

DOY 239 strip 02; Hang

DOY 240 strip 01; cleared spoil area, high lifts resulted in a shallower effective depth than expected. End of project.

Data labeled R/H 20-01-86 deep anchorage

DOY 198 strip 01; Continual groundings, uprights set too deep. Hang with wire on the bottom.

DOY 199 strip 01; Hang

DOY 212 strip 01; Hang

DOY 212 strip 02; Ground out at end of line. Recon. hydro showed 50' depths, uprights set at 54'.

DOY 218 strip 01; Ground out at end of line. Recon. hydro showed 51' depths, uprights set at 54'.

DOY 219 strip 01; Wire parted during possible "V ing".
DOY 219 strip 02; Two groundings in 46 and 48 feet of water.
Uprights set at 52 feet.
DOY 220 strip 01; Wire set at 50' uprights then changed to 52' uprights to obtain a 50' effective depth. Cranking void at start of line.
DOY 226 strip 01; Ground out wire in 43' depths with uprights set at 47 feet.
DOY 226 strip 02; Poor bight setout, was not normal until position 240. Some excessive lift and a hang on the wreck located on DOY 212.
DOY 227 strip 01; Attempted drag with the uprights set to deep. A hang was experienced but no good position was obtained.
DOY 231 strip 01; Cleared hang position 31.
DOY 231 strip 02; Attempted to clear wreck position 62 but excessive sag in section over wreck resulted in hang.
DOY 238 strip 01; The drag was planned to clear several voids and then continued to ground out and help delineate the charted spoil area in the shallow anchorage.
DOY 239 strip 01; Cleared wreck and all associated hang voids at position 63.

O) MISCELLANEOUS

The currents in the area were generally light. On several occasions however, currents did effect the drag. At no time was the current unacceptable. No anomalous currents were noted.

A user report will be submitted at a later date due to personnel injuries.

No magnetic observations were taken on this project.

No Coast Pilot observations were taken on this project because resources had to be concentrated on wire drag operations to obtain completion by the mandatory project termination date.

P) HANGS - *See section 7.a. of the Evaluation Report.*

R/H 20-02-86 Shallow Anchorage:

DOY 192 strip 01; Hang occurred during the time that the wire was grounded out and being pulled along the bottom. No position number was assigned and the position information was scaled from the plotted position on the drag strip plot. This hang was deemed insignificant for diver investigation and was later cleared by a wire drag with an effective depth of 33¹/₂ feet.

DOY 239 strip 02; This drag strip was expected to clear the spoil area or hang on the highest mound. Hang position 470 was diver investigated on the same day with a ^{shallowest sounding} ~~least depth~~ of 33¹/₂ obtained with a lead line. The hang was a rock that protruded from the bottom 2 feet. for further details see appendix XII.

R/H 20-01-89 Deep Anchorage:

DOY 198 strip 01; Continual grounding on drag strip, uprights set to deep. No position number was assigned and the position information was scaled from the plotted position on the drag strip plot. This hang was deemed insignificant for diver investigation due to the wire being on the bottom. *See sections 7.d, 7.a.1), & 7.a.4) of the Evaluation Report.*

DOY 199 strip 01; Wire was grounded out when this hang occurred but divers were sent to obtain a least depth and report on the bottom composition. A ~~least depth~~ ^{shoalest soundings} of 51.5 feet was obtained with a leadline on a very small (less than 2 ft off the bottom) ledge. Some small coral development was observed in the area.

DOY 212 strip 01; A hang on a large wreck, later identified as a "Tramp Steamer" by the local Power Squadron. Divers were sent to investigate and obtain a least depth. Three dives were spent investigating and searching the area. Position number 63 is the stern of the wreck, where most of the debris was located. A ~~least depth~~ ^{shoalest soundings} of 51 feet was determined using a lead line on the position.

DOY 219 strip 01; A potential hang may have occurred before the wire parted on this drag. The area was later cleared to an effective depth of 44 feet. *See section 7.a.16) of the Evaluation Report.*

DOY 226 strip 02; An accidental hang on the wreck position 63. Excessive sag in the wire caused the hang to occur.

Not indicated in the drag or in the hang section.

DOY 227 strip 01; Drag attempted to deep, grounded wire and a hang developed. No good position was determined. Area was later cleared to an effective depth of 44 feet. (P.A.)

DOY 231 strip 02; An accidental hang on the wreck position 63. Excessive sag in the wire caused the hang to occur.

Not indicated in the drag or in the hang section.

See section 7.a. of the Evaluation Report.

HANG ABSTRACT:

POS #	DOY/STRIP	LAT-LONG	HANG DEPTH	CLEARED	REMARKS
None	192/01	27-37-36 82-56-24	36'✓	38' ⁵	Insignificant
None	198/01	27-36-35 83-01-26	49'✓	none✓	Insignificant
32	199/01	27-37-28.77 83-00-58.14	44' ⁶	44' ⁶	diver LD 51.5'
63	212/01	27-38-56.21 83-03-27.18	50'✓	46'✓	diver LD 51'
None	219/01	None	51' ⁰	44'✓	Wire Parted
63	226/02	27-38-56.21 83-03-27.18	51'✓	46'✓	Hang from 180°
None	227/01	None	46'✓	44'✓	No good position cuts.
63	231/02	27-38-56.21 83-03-27.18	48'✓	46'✓	Accidental hang on wreck attempting to clear.
470	239/02	27-37-14.25 82-59-35.74	28' ⁹	24'✓	Hang on spoil area

See section 7.a. of the Evaluation Report for geographic positions.

Q) STATISTICS

TOTAL STRIPS:	35
TOTAL SQUARE MILES COVERED:	48.06
ACTUAL SQUARE MILES COVERED:	29.44
NUMBER OF HANGS:	9
DIVES:	7

No bottom samples were taken on this project.

R) AUTOMATED DATA PROCESSING

PDP11/34 Computer

PROGRAM NAME

GULP - Grid, Control Station, Lattice Plot
LEDIT - Lattice File Editor

PARC - Parameter File Editor
 PEDIT - Position File Listing
 @PRID - Predicted Tide Corrector Generator
 SEDIT - Station File Editor
 @SMDUMP - Side Scan Sonar and Launch Drag Data Dump
 POCOM - Position Computation
 POLIST - Position File Listing
 DRAFL - Drag Plot Program
 SPOOL - Position File Generator
 STACR - Station and Lattice File Initialization
 @WDGINT - Wire Drag Data Disc Initialization

Hewlett-Packard 9815A Computer

HYDROGRAPHIC CALIBRATION PROGRAM
 GEODETIC PACKAGE — 800610

● GENERAL RECOMMENDATIONS

This wire drag survey is considered complete and adequate for the requirements specified in the Project Instructions. *Concur, except for AWDIS # 2671*

● RECOMMENDED CHARTING ACTIONS - *See section 7.a. of the Evaluation Report.*

Wreck position # 63; This is recommended to be charted as a *sunken* wreck ~~over which the depth is known 51 feet, corrected for predicted tides.~~ A Danger to Navigation has been submitted for this position.

Deep water anchorage area; This should be labeled as wire swept to a minimum depth of 42', ~~corrected for predicted tides.~~ *Smooth*

Shallow water anchorage area; Except for the charted spoil area, it should be labeled as wire swept to a minimum depth of ~~32'~~ ^{23'}, ~~corrected for predicted tides.~~ *Smooth*

Charted spoil area; This area should ~~remain~~ ^{be} charted as reported shoaling to ~~36'~~ _{23'} and wire swept to a minimum depth of 23' ~~corrected for predicted tides.~~

● REFERRAL TO REPORTS

The following reports have been sent to the Atlantic Marine Center.

REPORT	DATE SUBMITTED
ELECTRONIC CORRECTORS	OCT 10, 1986
HORIZONTAL CONTROL	OCT 10, 1986

(VI) LIST OF STATIONS

STATION LIST

OPR-J657-RU/HE-86

STATION	STATION NAME / LAT-LONG	ELEV	CARTO CODE
001	VA Argo (1986) ✓ Lat: 27° 48' 34.55 ⁴ N ✓ Long: 082° 47' 01.88 ⁷ W ✓	0.00	2520
002	<i>Bay Pines Veterans Administration Hospital, 1934</i> VA Hosp Tank Lat: 27° 48' 36.59 ² N ✓ Long: 082° 46' 21.79 ⁰ W ✓	45.72	2520
004	Egmont Channel Range Rear Light (1957) ✓ Lat: 27° 36' 55.84 ³ N ✓ Long: 082° 44' 33.34 ¹ W ✓	0.00	139
005	Egmont Key Lighthouse (1873) ✓ Lat: 27° 36' 01.74 ³ N ✓ Long: 082° 45' 39.08 ³ W ✓ <i>Light List Name: Egmont Key Light</i>	22.19	139
006	Egmont Channel Range Front Light (1957) ✓ Lat: 27° 36' 47.55 ⁰ N ✓ Long: 082° 45' 56.11 ⁰ W ✓	0.00	139
007	Pilots Lookout Tower, 1982 Lat: 27° 35' 09.77 ² N ✓ Long: 082° 45' 41.66 ⁵ W ✓	0.00	139
008	Tampa Pilots, 1981 Lat: 27° 35' 05.08 ² N ✓ Long: 082° 45' 41.15 ³ W ✓	0.00	2520
009	Egmont Key LH ECC, 1981 Lat: 27° 36' 01.78 ⁷ N ✓ Long: 082° 45' 39.03 ⁴ W ✓	22.19	2520

All stations are of Third-order, Class I control accuracy, or better. The station positions are based upon the North American Datum of 1927.

(IX) NON-FLOATING AIDS AND LANDMARKS FOR CHARTING

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

(X) REQUEST FOR APPROVED TIDES

(XI) DANGERS TO NAVIGATION

~~SECRET~~



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
NOAA Ships RUDE & HECK
439 West York St.
Norfolk, VA. 23510

August 4, 1986

TO: Commander, U.S. Coast Guard
7th District
FROM: *Robert K. Norris*
Robert K. Norris, LCDR, NOAA
Commanding Officer

SUBJECT: Local Notice to Mariners

On July 31, 1986, the NOAA Ships RUDE & HECK discovered an uncharted sunken barge located in the vicinity of the deep water anchorage on the northern side of the fairway entrance channel to Tampa Bay. The barge, located in 63 feet of water, is approximately 150 feet in length, 50 feet in width, and has a clearance depth of 51 feet of seawater at mean lower low water (mllw).

The latitude and longitude of this obstruction is:

027°38'56.60" N ✓ 083° 03'27.53" W ✓

This area is currently used primarily as an anchorage for deep draft vessels and although it is unlikely that any of these vessels will hit the obstruction, the possibility of their anchors becoming fouled is very likely.

If you have any further questions, you can reach me at 823-1173 on weekends or through the Office of Marine Operations at 804-441-6440 during the week.



(XII) SUPPLEMENTAL INFORMATION

DIVE INVESTIGATION REPORT
OPR-J657-RU/HE-86
R/H 20-01-86

DIVE NUMBER:

DIVE DATE: JULY 18, 1986

I. AREA OF INVESTIGATION

A. STATE/COUNTRY: FLORIDA

SUB-LOCALITY: TAMPA BAY

B. POSITION: LATITUDE: 27-37-28.77
LONGITUDE: 083-00-58.14

C. METHOD OF POSITIONING: Mini Ranger Falcon, ARGO as backup.

II. PURPOSE OF INVESTIGATION

A. AWOIS ITEM NUMBER: None

B. SOURCE OF ITEM BEING INVESTIGATED (IF OTHER THAN AWOIS LISTING): Wire drag hang.

C. CONTACTS (EG.) USCG, C OF E, HARBOR MASTERS, OWNERS, ETC.): None

D. NAMES, ADDRESSES AND PHONE NUMBERS ETC. OF CONTACTS: None

III. SURVEY PROCEDURES

A. DETERMINATION OF DIVE SITE (EG. WIRE DRAG, SIDE DEVELOPMENT):
Wire Drag Hang.

B. SEARCH PROCEDURE (EG. FOLLOWING A GROUNDWIRE, CIRCLE SEARCH, SWEEP ALONG KNOWN FEATURE, ETC.)

Divers swam along the ground wire to locate and mark the position.

C. KNOWN REFERENCE TO FEATURES NEARBY: None

D. AREA AND DEPTHS COVERED: Swam wire to locate hang, and inspected area for higher developments, none encountered. General depths in the area were 55 - 50 feet of a hard bottom type, and some coral growth.

IV. DIVE DATA

A. DIVERS: J. Lowell, K. Sharack, J. Talbott

B. TIME OF DIVE (IN UTC) - REAL: Time of LD 1550

C. GENERAL BOTTOM DEPTHS (UNITS AND METHOD OF DETERMINATION): The general bottom depths were 55 - 50 feet, determined by diver depth gauges.

D. CURRENT AND CONDITIONS: Light current, warm water.

E. VISIBILITY (NUMBER OF FEET - HORIZONTALLY AND VERTICALLY):
Hor. 25', Ver. 30'

F. BOTTOM TYPE (MUD, SAND, ROCKS, ETC.):
Hard bottom, with some coral, and sand.

V. RESULTS

A. DETACHED POSITIONS NUMBER(S): Pos: 032

TIME OF D.P.'S (UTC); DESCRIBE IF OTHER TIME ZONE: 1550 UTC

LEAST DEPTH AND FIX NUMBERS (RAW DEPTH): 53'

METHOD OF DETERMINING DEPTH (THE RAW SOUNDING SHOULD BE RECORDED. THE REDUCED LEAST DEPTH SHOULD BE PLOTTED ON THE FIELD SHEET.): Lead Line.

B. DESCRIPTION OF FINDINGS: Hard bottom with low coral content. Minimum depth is 1 ft. above the general depth in the immediate area. The small ledge hung was approximately 20' long.

C. DIMENSIONS OF ITEM OR FEATURE (ATTACH SKETCH IF APPROPRIATE):
None

D. UNUSUAL CONDITIONS: None

VI. CHARTING RECOMMENDATIONS

POSITION LAT.: 27-37-28.⁸~~77~~ LONG.: 083-00-5^{7 9}~~8.14~~

REDUCED DEPTH: 51.5'

TYPE OF FEATURE (REFERENCE CHART NO.1): No change to charted data.

DIVE INVESTIGATION REPORT
OPR-J657-RU/HE-86
R/H 20-01-86

DIVE NUMBER:

DIVE DATE: AUG. 1, 1986

I. AREA OF INVESTIGATION

A. STATE/COUNTRY: FLORIDA

SUB-LOCALITY: TAMPA BAY

B. POSITION: LATITUDE: 27-38-56.60
LONGITUDE: 083-03-27.53

C. METHOD OF POSITIONING: Mini Ranger Falcon, ARGO as backup.

II. PURPOSE OF INVESTIGATION

A. AWOIS ITEM NUMBER: None

B. SOURCE OF ITEM BEING INVESTIGATED (IF OTHER THAN AWOIS LISTING): Wire drag hang. DOY 212, STRIP 01

C. CONTACTS (EG.) USCG, C OF E, HARBOR MASTERS, OWNERS, ETC.): None

D. NAMES, ADDRESSES AND PHONE NUMBERS ETC. OF CONTACTS: None

III. SURVEY PROCEDURES

A. DETERMINATION OF DIVE SITE (EG. WIRE DRAG, SIDE DEVELOPMENT):
Wire Drag Hang.

B. SEARCH PROCEDURE (EG. FOLLOWING A GROUNDWIRE, CIRCLE SEARCH, SWEEP ALONG KNOWN FEATURE, ETC.)

Divers swam along the ground wire to locate and mark the position. On the second dive, the divers conducted circle searches of 25 meter radii, to search for any detached wreckage.

C. KNOWN REFERENCE TO FEATURES NEARBY: None

D. AREA AND DEPTHS COVERED: Two 25 meter circle searches, 50 meters apart were conducted. General depths in the area were 60 - 65 feet of a hard bottom type, and some coral growth.

IV. DIVE DATA

A. DIVERS: J. Lowell, A. Francis, K. Sharack, J. Talbott

B. TIME OF DIVE (IN UTC) - REAL: Three dives over a two day period. Please see the dive information sheet for further details.

C. GENERAL BOTTOM DEPTHS (UNITS AND METHOD OF DETERMINATION): The general bottom depths were 60 - 65 feet, determined by diver depth gauges.

D. CURRENT AND CONDITIONS: Light current, warm water.

E. VISIBILITY (NUMBER OF FEET - HORIZONTALLY AND VERTICALLY):
Hor. 20', Ver. 25'

F. BOTTOM TYPE (MUD, SAND, ROCKS, ETC.):
Hard bottom, with some soft coral, and sand.

V. RESULTS

A. DETACHED POSITIONS NUMBER(S): Pos: 063

TIME OF D.P.'S (UTC): DESCRIBE IF OTHER TIME ZONE: 1222 UTC

LEAST DEPTH AND FIX NUMBERS (RAW DEPTH): 53'

METHOD OF DETERMINING DEPTH (THE RAW SOUNDING SHOULD BE RECORDED. THE REDUCED LEAST DEPTH SHOULD BE PLOTTED ON THE FIELD SHEET.): Lead Line.

B. DESCRIPTION OF FINDINGS: Two least depths were taken on the two highest points of the wreck. These locations were at the bow and stern, with the Detached Position taken on the stern position.

C. DIMENSIONS OF ITEM OR FEATURE (ATTACH SKETCH IF APPROPRIATE):
Length: 49 meters
Width: 19 meters

D. UNUSUAL CONDITIONS: None

VI. CHARTING RECOMMENDATIONS

POSITION LAT.: 27-38-56.²~~60~~ LONG.: 083-03-27.⁰~~53~~

REDUCED DEPTH: 51'

TYPE OF FEATURE (REFERENCE CHART NO.1): Dangerous wreck over which depth is known.

DIVER'S ITEM INVESTIGATION REPORT
OPR-J657-RU/HE-86

ITEM: UNKNOWN WRECK	FIELD SHEET: R/H 20-01-86
STATE/COUNTY: FLORIDA,	SUB-LOCALITY: TAMPA BAY
DATE: 7-31 JD: 212	SHIP/LAUNCH: LAUNCH 20
DIVEMASTER: J.LOWELL	DIVERS: J. LOWELL J. TALBOTT K. SHARACK

<u>TIME (UTC)</u>	<u>DIVE 1</u>
IN WATER	1231
UNDER WATER	1232
ON SURFACE	1251
IN BOAT	1254
DIVE DURATION	20
MAXIMUM DEPTH	70'

POSITION (If negative report, center of search area)

LAT: 27-38-56.60 LONG: 083-03-27.53
POSITION NO.: 063 VISIBILITY HOR.: 20' VERT.: 25'
CURRENT: LIGHT

LEAST DEPTH CALCULATIONS

TIME (UTC)/DEPTH		
1. NO LEAST DEPTH TAKEN TODAY	PNEUMO DEPTH	FT.
2.	PNEUMO CORR.	FT.
3.		FT.
PNEUMO S/N:	TIDE CORR.	FT.
TARGET FEATURE: METAL BARGE	LEAST DEPTH:	MLLW

REMARKS

One dive was conducted on this day to identify and mark a hang position. The divers located the hang and marked the location for further investigation. The Detached Position was taken after the divers were out of the water by the NOAA Ship HECK.

REMARKS

DIVE 1 - The first dive was to locate the least depth point and search for any detached wreckage. The divers first measured the length of the wreck using the search line. The total length was determined to be 49 meters. Secondly the divers conducted two circle searches of 25 meter radiuses, with the bow as the center of one search area, and the stern as the center of the other. No significant detached wreckage was located. The stern was determined to be the least depth of the wreck at this time.

DIVE 2 - On the second dive the divers measured the width of the wreck (19 meters), and obtained a least depth on the stern section. Also obtained was a least depth on the bow section, but no Detached Position was obtained.

C. GENERAL BOTTOM DEPTHS (UNITS AND METHOD OF DETERMINATION): The general bottom depths were 30 - 37 feet, determined by diver depth gauges.

D. CURRENT AND CONDITIONS: Light current, warm water.

E. VISIBILITY (NUMBER OF FEET - HORIZONTALLY AND VERTICALLY):
Hor. 20', Ver. 25'

F. BOTTOM TYPE (MUD, SAND, ROCKS, ETC.):
Boulders strewn across hard bottom, with some coral, and sand.

V. RESULTS

A. DETACHED POSITIONS NUMBER(S): Pos: 470

TIME OF D.P.'S (UTC): DESCRIBE IF OTHER TIME ZONE: 1805 UTC

LEAST DEPTH AND FIX NUMBERS (RAW DEPTH): 33.8'

METHOD OF DETERMINING DEPTH (THE RAW SOUNDING SHOULD BE RECORDED. THE REDUCED LEAST DEPTH SHOULD BE PLOTTED ON THE FIELD SHEET.): Lead Line.

B. DESCRIPTION OF FINDINGS: A relatively flat bottom as far as the divers could tell. The bottom was littered with boulders of varying sizes with the wire hung on the largest in sight. The bolder was approx. 2.5' above the general depths.

C. DIMENSIONS OF ITEM OR FEATURE (ATTACH SKETCH IF APPROPRIATE):
None

D. UNUSUAL CONDITIONS: None

VI. CHARTING RECOMMENDATIONS

POSITION LAT.: 27-37-14.25

LONG.: 082-59-35.⁶74

REDUCED DEPTH: 33'

TYPE OF FEATURE (REFERENCE CHART NO.1): The charted spoil area should remain as charted.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

NOAA Ships RUDE & HECK
439 West York Street
Norfolk, VA. 23510
(804) 441-6388

August 11, 1986

TO: Commander, U.S. Coast Guard
Seventh District

FROM: *Robert K. Norris*
Robert K. Norris, LCDR, NOAA
Commanding Officer, RUDE & HECK

SUBJECT: Position on Egmont Key Pilots Lookout Tower

Per your request, you will find enclosed the new position for the Egmont Key Pilots lookout tower. The tower has been positioned to accuracy standards commensurate with current National Ocean Service standards.

If I can be of any further assistance, feel free to contact me at your convenience.

Egmont Key Pilots
Lookout tower

LATITUDE: 027 35 ^{09.766} 05.08397
LONGITUDE: 082 45 41.65918 ✓



CAPTAIN V. W. STRAIGIS
CAPTAIN S. P. WILTSHIRE
CAPTAIN WALTER N. EGAN
CAPTAIN JOHN B. SCHIFFMACHER
CAPTAIN EARL G. EVANS
CAPTAIN ROBERT F. PARK
CAPTAIN HARRY J. WILLIAMS
CAPTAIN THOMAS A. BAGGETT
CAPTAIN J. J. O'CONNELL

CAPTAIN JAMES GALLAGHER
CAPTAIN LAMBERT M. WARE
CAPTAIN FRED F. ENNO JR.
CAPTAIN H. EUGENE KNIGHT
CAPTAIN GARY MADDOX
CAPTAIN GEORGE H. MC DONALD
CAPTAIN FREDRICK D. SMITH
CAPTAIN G. DOUGLAS FERGUSON

Tampa Bay Pilots

TELEPHONE 248-3732
P. O. BOX 381
CABLE ADDRESS: TAMPILOTS

Tampa, Florida 33601

7/1/86
Acc
Project file

April 8, 1986

U. S. Department of Commerce
National Oceanic and Atmospheric Administration
NOAA Ships RUDE and HECK
439 W. York Street
Norfolk, Virginia 23510

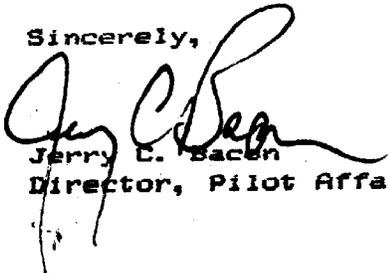
Dear Captain Norris:

In response to your letter of March 19, 1986 and in accordance with a telephone call with your Executive Officer last week, I want to confirm that you have our permission to establish your electronic control station on Egmont Key. As I discussed with Mr. Talbot, my only concern is the lookout tower located next to our main building. I realize that it is an ideal location to place antennas, however we do not allow anyone on it anymore for safety reasons. I might add that, in this time of extremely high insurance premiums, the tower is to be considered a high risk item and is not easily insured for the tower or personal liability of people on it.

We look forward to working with you upon your arrival. Please call me, at your convenience, and we will set up a meeting to work out any details of assistance needed.

Until then, fair winds and keep your feet dry.

Sincerely,


Jerry L. Bacon
Director, Pilot Affairs



**Veterans
Administration**

APR 1 1986

In Reply Refer To: 516/138

Robert K. Norris, LCDR, NOAA
Commanding Officer
United States Department of Commerce
NOAA Ships RUDE & HECK
439 West York Street
Norfolk, VA 23510

Dear Commander Norris:

We have reviewed your letter of March 18, 1986 that requests permission to locate temporarily on the Medical Center grounds a low power electronic control station. We are pleased to cooperate with your work in the Tampa Bay area and agree to your request.

We understand that the control station will be needed during the time of May 28 - July 30, 1986, and that at the conclusion of this time period your agency will remove the control station from the Medical Center grounds.

Please contact Mr. Doyle Young, Assistant Chief, Engineering Service at FTS 826-5599 to coordinate tie-in with appropriate electrical power and any other arrangements.

Sincerely yours,

A handwritten signature in cursive script, appearing to read 'Richard F. McElligott'.

RICHARD F. McELLIGOTT
Director
Medical Center

(XIII) APPROVAL SHEET

APPROVAL SHEET

OPR-J657-RU/HE-86

Field operations contributing to the accomplishment of this survey were conducted under my supervision with daily personal checks of progress and adequacy. This report and field sheets have been closely reviewed and are considered complete and adequate for charting.

for Alan D. Anderson
Robert K Norris, LCDR, NOAA
Commanding Officer
NOAA Ships RUDE & HECK

REFERENCE NO.
MOA23-77-87

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY (Check):
 ORDINARY MAIL AIR MAIL
 REGISTERED MAIL EXPRESS
 SBL (Give number) _____

TO:
Chief, Data Control Branch, N/CG243
Room 151, WSC-1
Hydrographic Surveys Branch
National Ocean Service
Rockville, MD 20852

DATE FORWARDED
9 November 1987

NUMBER OF PACKAGES
three (3)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H-10232WD (R/H-20-1-86)
OPR-J657, GULF OF MEXICO

- Pkg. 1: (Tube)
1 Original Smooth Sheet (A&D)
1 Original Smooth Position Overlay
1 Smooth Field A&D Sheet
1 Original Descriptive Report
35 Office Verified Wire Drag Strips

- Pkg. 2: (Box)
1 Accordion Folder (Vessel HECK - shallow area) containing data for Year Days: 182, 183, 188, 189, 190, 191, 192, 195, 196, 197, 206, 216, 217, 233, 234, 239, and 240.
1 Accordion Folder (Vessel RUDE - shallow area) containing data for Year Days: 181, 182, 183, 188, 189, 190, 191, 192, 195, 196, 197, 206, 216, 217, 234, 239, and 240.
1 Envelope of Data removed from the Descriptive Report
1 Envelope of Smooth Tides
1 Binder of Electronic Control Calibration Data.

DO NOT DISCARD ANY OF THIS DATA.

Page 1 of 2

FROM: (Signature)
Maurice B. Hickson, III
Maurice B. Hickson, III

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:
Chief, Hydrographic Surveys Branch,
N/MOA23
Atlantic Marine Center
439 W. York Street
Norfolk, VA 23510-1114

MOA23-77-87

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU
BY (Check):

- ORDINARY MAIL
- AIR MAIL
- REGISTERED MAIL
- EXPRESS
- SBL (Give number) _____

TO:

Chief, Data Control Branch, N/CG243
 Room 151, WSC-1
 Hydrographic Surveys Branch
 National Ocean Service
 Rockville, MD 20852

DATE FORWARDED

9 November 1987

NUMBER OF PACKAGES

three (3)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H-10232WD (R/H-20-1-86)
OPR-J657, GULF OF MEXICO

Pkg. 3: (Box)

- 1 Accordion Folder (Vessel HECK - deep area) containing data for Year Days: 198, 199, 212, 218, 219, 220, 226, 227, 230, 231, 234, 238, and 239.
- 1 Accordion Folder (Vessel RUDE - deep area) containing data for Year Days: 198, 199, 212, 218, 219, 220, 226, 227, 231, 238, and 239; plus strip chart records.
- 10 Wire Drag Volumes
 - 1 Sounding Volumes
 - 1 Envelope containing Lift Abstracts.
 - 1 Envelope containing the Parameter File.

DO NOT DISCARD ANY OF THIS DATA.

Page 2 of 2

FROM: (Signature)

Maurice B. Hickson, III

Maurice B. Hickson, III

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Hydrographic Surveys Branch,
 N/MOA23
 Atlantic Marine Center
 439 W. York Street
 Norfolk, VA 23510-1114

DATE: 11/26/86

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Atlantic

OPR: J657

Hydrographic Sheet: H-10232WD

Locality: Offshore Tampa Bay, Florida

Time Period: June 30 - August 28, 1986

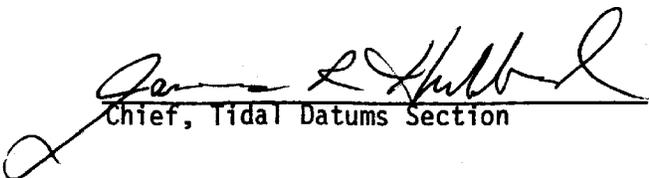
Tide Station Used: 872 6724 Clearwater Beach, Florida

Plane of Reference (Mean Lower Low Water): 1.50 feet

Height of Mean High Water Above Plane of Reference: 2.4 feet

Remarks: Recommended Zoning:

Apply a -15 minute time correction and x0.72 range ratio to all heights.


Chief, Tidal Datums Section

GEOGRAPHIC NAMES

H-10232 WD

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
FLORIDA (title)											1
GULF OF MEXICO											2
TAMPA BAY (title)											3
											4
											5
											6
											7
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											24
											25

Approved:

Charles E. Harrington
Chief Geographer - N/CG2x5

SEP 23 1987

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: H-10232WD

Number of positions	865
Number of soundings	3
Number of control stations	8

	<u>TIME-HOURS</u>	<u>DATE COMPLETED</u>
Preprocessing Examination	41	5 NOV 1986
Verification of Field Data	231	31 AUG 1987
Quality Control Checks		
Evaluation and Analysis	112	29 SEPT 1987
Final Inspection	8	25 SEPT 1987
TOTAL TIME	392	
Marine Center Approval		29 SEPT 1987

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

ATLANTIC MARINE CENTER
EVALUATION REPORT

SURVEY NO.: H-10232WD

FIELD NO.: R/H-20-1-86

Florida, Gulf of Mexico, Approach to Tampa Bay

SURVEYED: June 30 through August 28, 1986

SCALE: 1:20,000

PROJECT NO.: OPR-J657

SOUNDINGS: Wire Drag, Leadline, and Raytheon DSF-6000N
Echosounder

CONTROL: Motorola Mini-Ranger Falcon 484 (Range-Range), and
ARGO DM-54 (Range-Range)

Chief of Party.....R. K. Norris

Surveyed by.....J. C. Talbott
.....A. E. Francis
.....J. E. Lowell

1. INTRODUCTION

a. The purpose of this survey was to investigate two proposed anchorage areas north of the Tampa Bay Safety Fairway. In addition, an adjacent discontinued dump site and a submerged wreck (AWOIS #2671) was to be investigated.

b. This survey is entirely a wire drag survey. No side-scan sonar investigations were accomplished on this survey. No hydrography beyond reconnaissance hydrography (except three leadline soundings) was accomplished on this survey.

c. A smooth sheet (A&D) depicting the results of this survey (areas cleared by wire drag, hangs, conflicting groundings, and accompanying notes) was generated during processing. In addition, a smooth position overlay to accompany the smooth sheet (A&D) was also generated during processing.

d. Corrections and notes made by the evaluator to the Descriptive Report are denoted in red ink.

2. CONTROL AND SHORELINE

a. Horizontal control stations used during this survey are of Third Order, Class I accuracy or better, and are established on the North American Datum of 1927. Positioning methods are adequately discussed in the

Descriptive Report. Calibration methods are not discussed in the Descriptive Report, however, adequate calibration data is recorded in the field records.

b. No shoreline exists within the limits of this survey.

3. HYDROGRAPHY

The only soundings taken on this survey which were intended for charting are three leadline soundings taken on three of the hangs encountered on this survey. These three soundings are deeper than the effective hang depths on the features hung and are not recommended to be charted. Raytheon DSF-6000N echosounders were operated concurrently with the wire drag but the soundings are of reconnaissance value only as necessary sounding correctors were not determined. Hydrography was not required for this project.

EMA
1-5-81

4. CONDITION OF SURVEY

The final field sheet and accompanying overlays, survey records, and reports are adequate and conform to the requirements of the HYDROGRAPHIC MANUAL and the WIRE DRAG MANUAL except as noted by the evaluator in the Descriptive Report and as follows:

a. Conflicting data within the survey (least depths greater than hang depths, groundings or hangs cleared by a deeper depth, the number of conflicting groundings, etc.) indicate the possibility of an error in the upright and/or tester lengths or settings in at least some of the wire drag strips. The hydrographer made no statements indicating that the upright and/or tester wires were measured to verify wire length prior to the field season nor were there any remarks pertaining to the verification of upright and/or tester settings for each drag. There is no information in any of the field records that would indicate an error in upright or tester lengths or settings. The probability of this error existing is very low, however, an error is suspected since in the final compilation of survey data, more than a normal amount of data had to be "forced-fit" for the survey to be acceptable. The smooth tides were examined for errors and none were found. It is doubtful that this degrades the accuracy of this survey.

b. AWOIS Item #02671 was assigned for investigation on this project. This item was common to the present survey but was not specifically investigated or addressed. See section 7.a.1) of this report.

c. This survey was processed and smooth plotted using the final field computer generated rough wire drag strips. The magnetic tapes containing the digital strip data were

not available during processing. The final verified position correctors have not been applied to these final field strips. The positional differences would not be discernible at the plotting scale of the survey.

d. Three hangs and two temporary hangs were not investigated. One hang and one temporary hang were not cleared.

e. Four splits are plotted on the smooth sheet. All four splits are outside the project area.

f. Prior surveys FE-246SS (1983) and FE-273WD (1982) were not considered by the hydrographer during comparisons with prior surveys. See section 6.b. of this report.

g. Prior survey FE-273WD (1982) posed a significant problem during Evaluation and Analysis since the survey was processed (in 1986) under modified processing guidelines (see the Modified Evaluation Report for FE-273WD). All of the survey records were retrieved from archives and it was discovered that the Data Control Section had discarded the verified strips and the field smooth A&D sheets. Therefore, in order to make an adequate comparison, approximately one-half of the survey had to be replotted and processed again.

h. The Project Instructions state that a side-scan sonar unit was available for this project. It is not known if one was available since no side-scan sonar data was obtained on this survey. Side-scan sonar may have been useful in investigating the hangs encountered during this survey.

i. No effective depth diagrams (stamp #18) were drawn in the survey's volumes as required by section 5-4 of the WIRE DRAG MANUAL.

j. The strip chart recordings were not annotated in accordance with section 4.8.6. of the HYDROGRAPHIC MANUAL.

k. The hydrographer submitted a negative report for landmarks. The survey area is 10-20 miles offshore. If no landmarks were visible, it should have been stated in the negative report.

5. JUNCTIONS

There are no junctions on this survey.

6. COMPARISON WITH SURVEYS

a. PRIOR SURVEYS

H-9338 (1975) 1:20,000
H-7793 (1948-50) 1:100,000

These prior surveys cover the entire present survey and are the source of all charted hydrography within the common area. Prior survey H-9338 supersedes prior survey H-7793 within the common area. Comparison with H-7793 was accomplished only in the unsuperseded areas common to the present survey. Bottom clearances were close to the bottom throughout the eastern two-thirds of the survey area as evidenced by the numerous groundings and "tester on bottom" (TOB) tests. Present survey effective clearance depths range from 26 feet shoaler to 4 feet deeper than prior hydrography. No conflicts exist ~~exist~~ between prior survey H-7793 hydrography and present effective depths. Thirteen soundings from prior survey H-9338 are 1 to 4 feet shoaler than present effective depths. These differences are attributed to natural changes occurring over the 11 years between the surveys, the different positioning systems used on the present and prior surveys, and the assumed position of the wire (particularly the computed catenary). Eight groundings on the present survey are significantly shoaler than prior soundings. These groundings have been smooth plotted and are addressed in section 7.a. of this report. These conflicting groundings may be due to some shoaling or possibly erroneous upright and tester settings (see section 4.a. of this report). No wrecks or obstructions were located by the prior surveys within the common area of the present survey. Hangs and groundings occurring on the present survey are discussed in section 7.a. of this report. In section K) of the Descriptive Report, the hydrographer states that a 2-4-foot difference exists between prior hydrography and present uncorrected reconnaissance hydrography. The reconnaissance hydrography was not considered during the processing of this survey.

It is not the intent of the present survey to supersede but only to supplement prior hydrography.

EW
1-5-89

b. WIRE DRAG AND SIDE-SCAN SONAR SURVEYS

FE-273WD (1982) 1:20,000
FE-246SS (1983) 1:20,000

Prior survey FE-273WD covers approximately the south west one-fifth of the present survey. Three hangs and one conflicting grounding on the present survey are common to this prior survey and are as follows:

A hang at 46 feet on a small coral ledge on the present survey in Latitude 27°37'28.8"N, Longitude 83°00'57.9"W, cleared by 46 feet, was cleared by 44 feet by

this prior survey. This small coral ledge was not found by the prior survey.

An uninvestigated hang at 46 feet in Latitude 27°37'23.2"N, Longitude 83°01'01.4"W, PA, cleared by 44 feet, was cleared by 44 feet by this prior survey. This hang was not found by the prior survey.

A grounding at 46 feet in Latitude 27°37'15.7"N, Longitude 83°00'50.8"W, cleared by 44 feet, was cleared by 44 feet by this prior survey.

An uninvestigated hang at 49 feet in Latitude 27°36'35.3"N, Longitude 83°01'26.2"W, not cleared, was cleared by 44 feet by this prior survey. This hang was not found by the prior survey.

On prior survey FE-273WD one hang, two conflicting groundings, and two soundings are common to the present survey. One other prior grounding is only partially covered by the present survey. The prior hang, groundings, and soundings are as follows:

A hang at 44 feet on a coral boulder extending 4½ feet off the bottom in Latitude 27°36'56"N, Longitude 83°00'40"W, not cleared, was cleared by the present survey by 29 feet. This boulder was not found by the present survey. See section 6.a.2) of the Modified Evaluation Report of FE-273WD (1982) for the charting recommendation.

A grounding at 43 feet in the vicinity of Latitude 27°37'30"N, Longitude 83°02'15"W, not cleared, was cleared by 49 feet by the present survey. This grounding is in prior (H-9338) depths of 48-51 feet. However, prior survey H-9338 has a shoal to 45 feet approximately 100-150 meters to the east of this grounding. The present survey disproves this grounding. The field records of FE-273WD were examined and no error pertaining to positioning or effective depth could be found in the questioned strip (strip #2, year day 159). However, it is suspected that the ground wire was set erroneously to a deeper depth. The present survey is adequate to supersede the prior grounding. It is recommended that this prior 43-foot grounding not be charted. ← ERM
1-5-89

A grounding at 41 feet occurred on FE-273WD (strip #3, year day 160) in the vicinity of Latitude 27°36'40 "N, Longitude 83°00'00"W. The present survey cleared only a small portion of this grounding by 23 to 29 feet. This grounding is adequately addressed and the appropriate charting recommendations are made in section 6.b.1) of the Modified Evaluation Report of FE-273WD.

Two shoal soundings were found by FE-273WD that are common to the present survey. Present survey clearance

depths do not conflict with these two soundings. These soundings are adequately discussed in section 6.b.2) and 3) of the Modified Evaluation Report of FE-273WD.

Prior survey FE-246SS (1983) is a side-scan sonar survey of two sunken wrecks, AWOIS Items #00174 and #02671. AWOIS Item #00174 is not common to the present survey but may be relevant. See section 7.a.2) of this report. AWOIS Item #02671 was assigned to be investigated by the present survey. AWOIS Item #02671 was not considered disproved by this prior survey due to a field plotting error and was consequently recommended for reinvestigation. See section 7.a.1) of this report.

The present survey is adequate to supersede one prior grounding and to supplement all other prior data within the common area.

7. COMPARISON WITH CHARTS 11400 (24th Ed., Mar. 16, 1985)
11412 (30th Ed., Nov. 16, 1985)
11414 (29th Ed., Oct. 26, 1985)

a. HYDROGRAPHY

The charted hydrography originates with the previously discussed prior surveys. The previously discussed prior surveys require no further consideration. Attention is directed to the following:

1) AWOIS Item #02671, a dangerous sunken wreck, PD, charted in Latitude 27°36'15"N, Longitude 83°01'15"W, originated with Local Notice to Mariners No. 15 of 1978 and is identified as a 26-foot Trojan cabin cruiser which burned and sank in about 50 feet of water. This wreck was not found by the present survey. The investigation accomplished by the present survey is not sufficient to disprove the wreck since the required search area was not completed and one present survey hang within the search radius was not investigated or cleared (see section 7.a.4) of this report). Also two uninvestigated temporary hangs occurred within the required search radius, one in the vicinity of Latitude 27°36'20"N, Longitude 83°01'25"W which was not cleared, and the other in the vicinity of Latitude 27°37'00"N, Longitude 83°01'30"W which was cleared by 44 feet (see section 7.a.16) of this report). These temporary hangs are not plotted since insufficient information was provided to position the hangs. This wreck has also been investigated unsuccessfully on prior surveys FE-273WD (1982) and FE-246SS (1983). The three surveys combined are not sufficient for disproof. However, it is recommended that this dangerous sunken wreck, PD, be retained as presently charted with a label in parentheses: (cleared to 41 feet 1986). Additional field work would be required to either prove or disprove the existence of this wreck, but is not recommended unless a greater effective depth is required in this area.

41 WK
EWM Applied
1-5-89
Add PD
SRB

2) A present survey hang occurred at 48 feet in Latitude 27°38'56.2"N, Longitude 83°03'27.0"W. This hang was cleared in one direction only by 46 feet. This hang was investigated and is identified as a steel hull barge measuring 49 meters in length and 19 meters in width. This sunken barge lies in prior (H-9338) depths of 59-61 feet. A leadline sounding of 51 feet was obtained on this wreck. This sounding was recorded as a least depth, but proved to be deeper than the hang depth. This wreck is not presently charted. The possibility exists that this sunken barge may be AWOIS Item #00174, a nondangerous sunken wreck, PA, which was charted in Latitude 27°35'00"N, Longitude 83°06'00"W, and was reported to be a 699 gross ton barge sunk on March 1, 1954. This AWOIS Item is considered disproved by FE-246SS (1983) and has been removed from the chart. It is recommended that this uncharted wreck be charted in the position determined by the present survey as a dangerous sunken wreck with a label in parentheses: (cleared to 46 feet 1986). No additional field work is recommended on this wreck. It is recommended that the possibility of this sunken barge being AWOIS Item #00174 be investigated. ✓

3) A grounding occurred at 51 feet in Latitude 27°37'43.4"N, Longitude 83°03'14.1"W and was cleared by 51 feet. This grounding lies in prior (H-9338) depths of 56 feet. It is recommended that this grounding be charted in the position determined by the present survey as a 51-foot depth. ✓

4) A present survey hang occurred at 49 feet in Latitude 27°36'35.3"N, Longitude 83°01'26.2"W and was not cleared by the present survey but is in an area cleared by 44 feet by prior survey FE-273WD. This hang lies in prior (H-9338) depths of 54-60 feet. This hang was not investigated. This hang is approximately 700 meters northwest of the charted position of AWOIS Item #02671 and could possibly be the wreck. It is recommended that this hang be charted in the position determined by the present survey as a dangerous submerged obstruction with a label in parentheses: (cleared to 44 feet 1982). Additional field work is recommended to identify and obtain a least depth on this obstruction. (49ft Rep 1986) SRB
Obstr
(49ft Rep 1986)
Obstr
app 1-5-89
ELM
← AWOIS 7182

5) A hang occurred at 46 feet in Latitude 27°37'23.2"N, Longitude 83°01'01.4"W, PA, and was cleared by 44 feet. This hang lies in prior (H-9338) depths of 51-55 feet. This hang was not investigated. It is recommended that this hang be charted in the approximate position determined by the present survey as a dangerous submerged obstruction, PA, with a label in parentheses: (cleared to 44 feet 1986). Additional field work is recommended to obtain an accurate position and least depth and to identify this obstruction. PA 44
Obstr
app 1-5-89
ELM
AWOIS 7181

6) A hang occurred at 46 feet in Latitude 27°37'28.8"N, Longitude 83°00'57.9"W and was cleared by 46 feet. This hang lies in prior (H-9338) depths of 51-59 feet. This hang was investigated and is identified as a small coral ledge extending 1 foot off the bottom. A leadline sounding of 51 feet was obtained on this feature. This sounding was recorded as a least depth but is deeper than the hang depth. This discrepancy is possibly due to a significant amount of sag occurring in the ground wire prior to hang or shoaling has occurred in this area. This feature is insignificant and is not recommended to be charted. Additional field work is not recommended on this hang, however, an investigation to determine if shoaling has occurred in this area is recommended.

7) A grounding occurred at 46 feet in Latitude 27°37'15.7"N, Longitude 83°00'50.8"W and was cleared by 44 feet. This grounding lies in prior (H-9338) depths of 51-52 feet. It is recommended that this grounding be charted in the position determined by the present survey as a 46-foot depth. Additional field work is recommended to verify or disprove the possible shoaling in this area.

46
← appl 1-5-89
ELM

8) A hang occurred at 29 feet in Latitude 27°37'14.2"N, Longitude 82°59'35.6"W and was cleared by 24 feet. This hang is in a charted spoil area/dump site and lies in prior (H-9338) depths of 47-48 feet. This hang was investigated and was identified as a mound of spoil material and boulders. A leadline sounding of 33 feet was obtained on this hang. This sounding was recorded as a least depth but proved to be deeper than the hang depth. It is recommended that this mound of spoil material and boulders not be charted, but the reported depth within the spoil area/dump site be revised to a note in parentheses: (cleared to 24 feet 1986). See section 7.a.17) of this report.

←
See 7a.17

9) A grounding occurred at 36 feet in Latitude 27°37'08.2"N, Longitude 82°59'29.8"W and was cleared by 24 feet. This grounding is in a charted spoil area/dump site and lies in prior (H-9338) depths of 48 feet. It is recommended that this grounding not be charted but the reported depth within the spoil area/dump site be revised to a note in parentheses: (cleared to 24 feet 1986). See section 7.a.17) of this report.

←
See 7a.17

10) A grounding occurred at 38 feet in the vicinity of Latitude 27°37'25"N, Longitude 82°59'30"W and was cleared by 24 feet. This grounding is in a charted spoil area/dump site and lies in prior (H-9338) depths of 47-48 feet. It is recommended that this grounding not be charted but the reported depth within the spoil area/dump site be revised to a note in parentheses: (cleared to 24 feet 1986). See section 7.a.17) of this report.

← See 7a.17

11) A grounding occurred at 40 feet in Latitude 27°37'03.2"N, Longitude 82°57'22.1"W and was cleared by 35 feet. This grounding lies in prior (H-9338) depths of 45-46 feet. It is recommended that this grounding be charted in the position determined by the present survey as a 40-foot reported sounding. Additional field work is recommended to verify or disprove the indicated shoaling in this area. ✓ KC EUM 1-5-87

12) A hang occurred at 36 feet in Latitude 27°37'36.8"N, Longitude 82°56'23.9"W and was cleared by 35 feet. This hang lies in prior (H-9338) depths of 37-41 feet. This hang was not investigated. A 35-foot shoal lies approximately 250 meters east-northeast of this hang. This hang is not significant. It is recommended that this hang not be charted. ✓

13) A grounding occurred at 37 feet in Latitude 27°36'23.0"N, Longitude 82°56'07.5"W and was cleared by 35 feet. This grounding lies in prior (H-9338) depths of 39-41 feet. A 37-foot shoal lies approximately 175 meters west of this grounding. It is recommended that this grounding not be charted since the 37-foot shoal is charted and the grounding could not be portrayed at the charting scale. This grounding does indicate that the shoal has enlarged or shifted to the west. ✓

14) A grounding occurred at 34 feet in Latitude 27°39'04.6"N, Longitude 82°56'19.8"W was cleared by 33 feet. This grounding lies in prior (H-9338) depths of 40-41 feet. Shoaling to 34 feet is evident approximately 400 meters to the south and southwest. It is recommended that this grounding be charted in the position determined by the present survey as a 34-foot depth. (34) ✓ Appl EUM 1-5-87

15) A grounding occurred at 46 feet in Latitude 27°37'47.4"N, Longitude 83°00'03.5"W was cleared by 41 feet. This grounding lies in prior (H-9338) depths of 48-49 feet. It is recommended that this grounding be charted in the position determined by the present survey as a 46-foot depth. 46 ✓ Appl EUM 1-5-87

16) Two temporary hangs occurred during the present survey. The two temporary hangs could not be smooth plotted as no positional information was provided. One temporary hang was encountered in the vicinity of Latitude 27°36'20"N, Longitude 83°01'25"W at an effective depth of 49 feet and was not cleared by the present survey but is in an area cleared by 44 feet by prior survey FE-273WD and falls in prior survey H-9338 depths of 53-54 feet. The other temporary hang was encountered in the vicinity of Latitude 27°37'00"N, Longitude 83°01'30"W at an effective depth of 50 feet and was cleared by 44 feet and falls in prior survey H-9338 depths of 53-56 feet. These temporary hangs are not recommended to be charted since insufficient position

information exists. Additional field work is recommended to identify and to obtain an accurate position and least depth on these two temporary hangs.

17) The charted spoil area/dump site in the vicinity of Latitude 27°37'N, Longitude 83°00'W exceeds its charted boundaries and is shoaler than its reported depths as evidenced by the results of the present survey and prior survey FE-273WD. It is recommended that a caution note be placed on the chart pertaining to this area. Additional field work is recommended to determine the limits and least depths of this spoil area/dump site.

Portion of
dump site
cleared by 23ft
5/8

add note cleared to 24ft 1986
ELM 1-5-89

18) Two charted fairway anchorage areas were entirely covered by the present survey. These anchorage areas were the purpose of the present survey. The west (deep) anchorage area was cleared by effective depths ranging from 41-52 feet. The entire west anchorage area is considered cleared to 41 feet by the present survey. The east (shallow) anchorage area was cleared by effective depths ranging from 23-44 feet. The entire east anchorage area is considered cleared to 23 feet by the present survey. The charted spoil area/dump site is an active dumping area and it extends beyond the charted limits. Therefore, the clearance depths in the vicinity of charted spoil area/dump site are not considered valid.

19) Forty-six other groundings occurred on this survey which do not conflict with prior hydrography. These groundings require no further consideration and are neither smooth plotted nor addressed in this report.

b. Aids To Navigation

Three fixed aids to navigation were used as visual control stations and are listed in Attachment VI of the Descriptive Report. Fifteen floating aids to navigation were located by this survey. Seven of the floating aids to navigation fall within the limits of the smooth sheet (A&D) and were verified and plotted. These seven floating aids to navigation appear to serve their intended purpose and are adequately charted. The remaining eight floating aids to navigation were not verified. It is recommended that these floating aids to navigation be charted in accordance with the most current available information.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the Project Instructions except as noted in the Descriptive Report and this report.

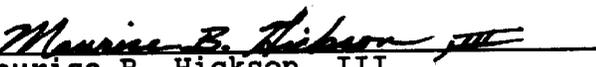
9. ADDITIONAL FIELD WORK

This is an adequate wire drag survey which serves its intended purpose except as previously noted for AWOIS Item #2671.

10. MISCELLANEOUS

a. The smooth sheet (A&D) that accompanies this survey is the final plot for this survey.

b. The smooth position overlay that accompanies the smooth sheet (A&D) is color coded for clarity only and not for effective depth. Only the tracks of the end buoys, their corresponding position numbers and the beginning and ending bights of the strips are plotted on the smooth position overlay. The position numbers were duplicated in the field records with both the deep anchorage area survey (R/H-20-1-86) and the shallow anchorage area survey (R/H-20-2-86) beginning with position #1. Therefore, to avoid confusion and retain continuity with the field records, the positions were also identified by field sheet number. For example, position #127 of R/H-20-1-86 is labeled on the smooth position overlay #127-1 and position #203 of R/H-20-2-86 is labeled on the smooth position overlay #203-2.


Maurice B. Hickson, III
Cartographer
Verification of Field Data
Evaluation and Analysis

INSPECTION REPORT
H-10232WD

The completed survey has been inspected with regard to survey coverage, investigation of hangs and clearance depths, cartographic symbolization, and verification or disproval of charted data. 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

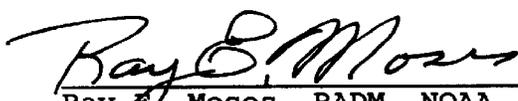


R. D. Sanocki
Chief, Hydrographic Surveys
Processing Section
Hydrographic Surveys Branch



William A. Wert, LCDR, NOAA
Chief, Hydrographic Surveys Branch

Approved September 29, 1987



Ray E. Moses, RADM, NOAA
Director, Atlantic Marine Center

ADDENDUM TO ACCOMPANY SURVEY H-10232WD

The average values for shifting surveyed NAD 1927 positions to NAD 1983 positions for this survey are as follows:

Position shifts (NAD 1983 minus NAD 1927):

Average Latitude shift = 1.077 seconds = 33.1 meters

Average Longitude shift = -0.631 seconds = -17.2 meters

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

Hydrographic Index No. 82 E

