

# FE301

Diagram No. 1249

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT

Type of Survey ... Field Examination.....  
Field No. .... HFP-5-1-85.....  
Registry No. .... FE-301.....

### LOCALITY

State ..... Florida.....  
General Locality .. Atlantic Ocean.....  
Sublocality ..... 2 Miles East of Ragged Keys.....

19 85

CHIEF OF PARTY  
LCDR K.W. Perrin

### LIBRARY & ARCHIVES

DATE ..... July 14, 1988.....

# FE301

ACPG  
CHT  
11465  
11462  
11451A

CHARTS  
SIGN OFF  
ON FM IN BACK

HYDROGRAPHIC TITLE SHEET

FE-301

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.

HFP-5-1-85

State FLORIDA

General locality ATLANTIC OCEAN

Locality 2 MILES EAST OF RAGGED KEYS

Scale 1:5,000

Date of survey 11 JUNE through 20 June 1985

Instructions dated 10 JUNE 1985

Project No. S-H 945-HFP-85

Vessel U. S. COAST GUARD *21-Foot Monark*

Chief of party LCDR, KENNETH W. PERRIN

Surveyed by GLENN D. HENDRIX, GARY L. MERRILL

Soundings taken by ~~echo sounder, hand lead, pole~~ RAYTHEON DE-719B Fathometer

Graphic record scaled by G.D.H., G.L.M.

Graphic record checked by G.D.H., G.L.M.

Protracted by \_\_\_\_\_

Automated plot by SYNETICS PLOTTER  
1201 (AMC)

Verification by HYDROGRAPHIC SURVEY BRANCH *PERSONNEL*

Soundings in ~~XXXXXX~~ feet at ~~MLW~~ MLLW corrected for tides

REMARKS: *NOTES IN THE DESCRIPTIVE REPORT WERE MADE IN RED DURING OFFICE PROCESSING.*

STANDARDS CK'D 7-22-88

*C. Loy*

*AWOIS / SUPP ✓ 11/2/88 55 ✓*

FIELD INVESTIGATION STRIKE TEAM  
 SPECIAL SURVEY  
 S-H945-HFP-85  
 EAST OF RAGGED KEYS, FLORIDA  
 AWOIS ITEM 00499

JULY

An investigation of a reported uncharted pinnacle to 7 feet MLW (AWOIS Item 00499) near the area of Ragged Key Day Beacon No. 7 in Hawk's Channel at approximate position latitude 25° 31' 18.5"N, longitude 080° 08' 17.5"W was conducted from 11 June 1985 to 20 June 1985. It should be noted that the reported depth of 7 feet MLW is incorrect. Captain Ray Mathison, Belcher Towing Company, informed NOS personnel during the survey that at the time his barge went aground he estimated the pinnacle was covered to 10 feet MLW. The pinnacle search was conducted accordingly with respect to this additional information. SEE SECTION 7.A. OF THE EVALUATION REPORT.

The pinnacle search was conducted using U. S. Coast Guard Vessel No. 210478, a 21-foot Monark from Seventh Coast Guard District, Aids to Navigation Branch.

Range/Range control using the Del Norte positioning system was employed throughout this survey. The following components were used:

<u>DMU</u>	<u>Master</u>	<u>Left Remote</u> <u>Fowey Rocks Lighthouse ECC.</u>	<u>Right Remote</u> <u>Triumph Reef Light 2</u>
S/N 189	S/N 912	S/N 1134	S/N 264

On Day Number 163 (1985), Del Norte remote S/N 264 was located at Cape Florida Old Tower Eccentric West. This proved to be too far from the working grounds and Range/Range hydrography could not be run. Range/Visual hydrography was run on this day. The position accuracy of this particular day's data was questionable and therefore was not plotted and was rerun on a later day. The echogram records were carefully scanned and I am confident the pinnacle was not found during this day's hydrography. These records are included with the data.

On Day Number 165 (1985), the station at Cape Florida Tower was moved to Triumph Reef Light 2. This station was closer to the working grounds and the remote functioned properly.

A closing calibration was not obtained on remote S/N 264 since the unit malfunctioned after the end of hydrography. An average of the daily system checks was used in the final plot for the right station at Triumph Reef Light 2. A copy of the Electronic Corrector Abstract accompanies this report. DATA REMOVED FROM DESCRIPTIVE REPORT AND FILED WITH FIELD DATA.

Depths were recorded on a Raytheon DE-719-B, Survey Fathometer (S/N 5784). Lead line comparisons were performed in the survey area on Day Number 165 and 169 to provide data for velocity corrections. A draft correction of 1.1 feet was applied to all soundings. On JD165 the speed of sound and calibrate zero adjustments were not operational and the fathometer bottom depth was adjusted to read near true depth as compared to leadline depths. A separate velocity curve was drawn for this day.

The survey was conducted at a 1:5,000 scale. Position fixes were taken at 60-second intervals and inbetween soundings were scanned at 10-second intervals. Arcs were run from Station 1, Fowey Rocks Lighthouse ECC at 25 meter spacing between sounding lines. The launch was operated at 1,000-1,200 RPM (idle - 1,000 RPM). The soundings were not corrected for settlement and squat. ✓ Settlement and Squat applied to soundings during office processing was zero (0).

Miami Harbor Entrance served as the reference station for predicted tides. Fowey Rocks (Number 2971) was used to furnish time and height correctors for this survey area. A predicted tides print out is enclosed with the survey data.

The following aids to navigation were located during the survey as requested by the Coast Guard. Due to limitation of time, these aids to navigation were located by hydrographic means.

<u>Station</u>	<u>Position</u>	<u>Method</u>
Fowey Rock Daybeacon No. 3	Lat. 25°35'40.29"N Long. 080°06'57.83"W 84	T-2 Intersection
Soldier Key Daybeacon No. 2	Lat. 25°35'45.42"N Long. 080°07'34.31"W 59 28	R/R Del Norte
Soldier Key Daybeacon No. 4	Lat. 25°34'11.94"N Long. 080°07'57.72"W 12.10 84	R/R Del Norte
Biscayne National Mon. Mkr.	Lat. 25°31'11.63"N Long. 080°08'05.28"W 72 81	R/R Del Norte
Bowles Bank Light No. 8	Lat. 25°30'24.92"N Long. 080°08'44.51"W 99 69	R/R Del Norte
Bache Shoal Daybeacon No. 9	Lat. 25°29'46.07"N Long. 080°08'39.55"W 08 62	T-2 Intersection

The following electronic control stations, and calibration stations were surveyed to meet Third Order - Class I specifications:

Fowey Rocks Lighthouse Ecc.	Lat. 25°35'24.708"N Long. 080°05'49.257"W
Triumph Reef Light 2TR	Lat. 25°28'37.370"N Long. 080°06'44.706"W
Bache Shoal Light 11BS	Lat. 25°29'10.408"N Long. 080°08'57.043"W
Ragged Key Daybeacon No. 7	Lat. 25°30'59.781"N Long. 080°08'16.996"W

The above information was forwarded to CWO J. F. Thomas, Aids to Navigation Branch, Coast Guard Group Miami.

A reduced least depth of <sup>12.0</sup>~~11.7~~ feet MLW over a pinnacle was located on Day Number 169 (1985) at 185452 UTC, at Latitude 25° 31' 25.<sup>62</sup>"N, Longitude 080° 08' <sup>27.05</sup>~~26.85~~"W (Position No. 186). This location was 409 meters WNW of the reported position.

This investigation indicated the area in question has numerous uncharted pinnacles which are covered to 12-19 feet MLW. Due to time constraints the two shoalest soundings were developed. These pinnacles were visible from the surface and appeared to be only 5-10 meters in diameter at the top covered with coral growth. It is quite possible that, even with 25-meter line spacing, other shoal pinnacles could exist within the survey area and yet not be evident on the fathograms.

It is not conclusive that the least depth on the pinnacle found during this survey was in fact the pinnacle in question in AWOIS Item 00499. The hydrographer recommends a complete wire drag survey be carried out to further define the extent of pinnacle formation in the vicinity. In the interim, the data obtained by this investigation should be used to update the affected area of Chart 11465. CONCUR See also section 9 of the Evaluation Report.

U.S. Department  
of Transportation

United States  
Coast Guard



Commander  
Seventh Coast Guard District

1985 MAY 28 P 2: 20

NAUTICAL CHARTING DIVISION

850154

Federal Bldg.  
51 S.W. 1st Ave  
Miami, FL 33130  
Staff Symbol: (oan)  
Phone: (305) 350-5621

N/CG-2  
N/CG24  
11465

16500  
Serial: 0745.

MAY 22 1985

Director  
Charting & Geodetic Services  
NCG-2  
National Oceanic & Atmospheric Administration  
Rockville, MD. 20852

Dear Captain Hayes:

An uncharted pinnacle to about 7 feet MLW in approximate position 25-31-18.5N, 80-08-17.7W has been reported by Belcher Towing Company (enclosure 1). I've marked this area on the enclosed chartlet. We've confirmed this report during an interview with Captain Mathison. We request that you survey this area and advise us of your findings. ✓

Sincerely,

A handwritten signature in cursive script that reads "J. V. O'Shea".

J. V. O'SHEA  
Lieutenant Commander, U. S. Coast Guard  
Assistant Chief, Aids to Navigation Branch  
Seventh Coast Guard District  
By direction of the District Commander

Encl: (1) NOS 11465 Charlet  
(2) Belcher Towing Company's ltr dated Mar 15 1985

ENM 24/85  
776 CGD

JUN 1 1 RECD

*Belcher*

March 15, 1985

Commander, Seventh Coast Guard  
District (OAN)  
Federal Building  
51 S.W. 1st Avenue  
Miami, FL 33130

Dear Ms. Taylor:

As you are aware, there are no navigational aids with lights in Hawk's Channel from Hen and Chicken's Light (#40) and East Turtle Shoal Light (#45), a distance of 24.5 miles. I would like to respectfully recommend the installation of a light on Long Key Day Beacon (#44).

In addition I also recommend marking with a buoy the unmarked shoal near marker #7 in Hawk's Channel where barge #35 went aground on July 18, 1984.

I think the above suggestions would be very helpful additions.

Very Truly Yours,

BELCHER TOWING COMPANY



Ray Mathison, Master  
Tug Belcher Pensacola

sp



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

Hydrographic Field Party 1  
General Delivery  
Orange Beach, AL 36561

22 July 1985

TO: Norman E. Banks, Chief  
Chart Information Section, N/CG222

THRU: *Kenneth W. Perrin*  
Kenneth W. Perrin, LCDR, NOAA  
Chief, HFPS, N/MOA233

FROM: *Philip M. Kenul*  
Philip M. Kenul, LTJG, NOAA  
OIC, HFP-1, N/MOA233

SUBJECT: Special Survey, S-H945-HFP-85, East of Ragged Keys, Florida

The enclosed information is being forwarded to provide the latest data on the special survey conducted by the Field Investigation Strike Team (FIST) of an uncharted pinnacle, AWOIS Item 00499, in the vicinity of Marker No. 7 in Hawk's Channel, NOS Chart 11465, 24th ED. Due to time and weather constraints, only three days were spent searching for the pinnacle.

The data for this project has been transmitted to N/MOA2x1 for forwarding to N/CG243. A final Horizontal Control Report will follow at a later date.

The data are unverified, but should be adequate for updating charted information until a complete survey can be accomplished. If additional information is required, please contact me at (205) 981-9193.



2 people

Del Norte

719? — may not be necessary, if CG has <sup>recording</sup> echo sounder  
least depth by lead-line

Discussed w/ Penny 6/4.

Looks doable w/ R/Az & two  
people. Use CG depth sounder, calibrated  
over narrow depth range 7-20 ft in area

A. Armstrong  
Notes

~~Done~~



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration

6/5/85

To : Lt. (jg) Kevin Mc Carron  
Point of Contact (FTS-350-5621)  
From: 7<sup>th</sup> C.G. District

Platform:

- A. 65 FT Side to Navigation vessel available  
- flexible schedule
- B. 160 FT "Hudson" construction tender  
- tight schedule and due for drydock repairs in July  
- capability of permanent platform fixing via four spud legs supporting it on the bottom

Echo Sounder:

Rass?

Positioning Equipment:

- A. Loran - C
- B. Sextant



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL OCEAN SERVICE  
OFFICE OF CHARTING AND GEODETIC SERVICES  
ROCKVILLE, MARYLAND 20852

JUN 10 1985

N/CG241:MJF

TO: N/MOA - Wesley V. Hull  
FROM: N/CG2 - C. William Hayes *C. William Hayes*  
SUBJECT: <sup>Loc</sup> Special Survey, S-H945-HFP-85, East of Ragged Keys, Florida

The Field Investigation Strike Team (FIST) is hereby required to conduct a special survey of a reported uncharted pinnacle to 7 FT MLW in approximate position latitude 25°31'18.5"N, longitude 80°08'17.7"W, as indicated on attached copy of chart 11465, 24th edition. This task shall be conducted in cooperation with the Seventh U.S. Coast Guard District in Miami, Florida, as soon as possible by two personnel from one of your field units presently working closest to this area. The U.S. Coast Guard will furnish a 65-foot platform for survey operations; which includes their on-board echo sounder and LORAN-C unit. However, it is recommended that a Del Norte electronic positioning unit be made available from the Atlantic Marine Center for range/azimuth control. The Seventh U.S. Coast Guard District point of contact is Lt. (jg) Kevin McCarron who can be reached at FTS-350-5621.

The reported pinnacle shall be surveyed to ascertain the extent and least depths as specified in the survey requirements portion of the Automated Wreck and Obstruction Information System listing (copy attached). The survey shall be conducted in depth units of feet and at a scale appropriate to adequately portray positions and sounding data. You are instructed to spend no more than 2 working days of actual search time. Hydrography shall be under the special survey concept and in accordance with the Hydrographic Manual, the Hydrographic Survey Guidelines, and the AMC OPORDERS.

Geodetic control for this project has been provided by N/CG12 to N/MOA233.

Miami Harbor Entrance will serve as the reference station for predicted tides. Fowey Rocks (number 2971) listed in Table 2--Tidal Differences and Other Constants of the "1985 Tide Tables--East Coast of North and South America, Including Greenland," will furnish time and height corrections for the survey area.

The data for this project shall be transmitted to N/MOA2x1 for forwarding to N/CG243 after completion of the work.

Attachments (2)

cc:  
N/MOA2x1  
Seventh U.S. Coast Guard District (J. V. O'Shea)

JUN 12 RECD



NATIONAL OCEAN SERVICE  
 AUTOMATED WRECK AND OBSTRUCTION INFORMATION SYSTEM  
 JUNE 10, 1985

NAME	QUADRANT	REG #	LATITUDE	LONGITUDE	AREA	GP AC	SVY ST	CARTO CODE	CHART
00499 OBSTRUCTION		1 0000000	25/31/18.30	080/08/17.42	H	52	11	0067	11465

HISTORY

CL488/85--UNMARKED SHOAL (7 FOOT PINNACLE) NEAR MARKER NO. 7 IN HAWK'S CHANNEL. REPORTED BY CAPT. RAY MATHISON, MASTER, TUG BELCHER PENSACOLA TO 7TH CGD (BELCHER TOWING COMPANY, P.O. BOX 52550, MIAMI, FLORIDA 33152 PHONE 305-551-5200). RECOMMENDS MARKING WITH BUOY. 7TH CGD TO NOS (N/CG2) REPORTS UNCHARTED PINNACLE COVERED 7 FT. MLW IN APPROX. PCS. LAT. 25-31-18.5N, LONG. 80-08-17.7W. CG CONFIRMED REPORT WITH CAPT. MATHISON DURING INTERVIEW. REQUESTS NOS SURVEY.  
 LNM21/85--REPEATS INFO. ABOVE.

DESCRIPTION

\*\*\*\* TELECON, 6/7/85, CHARLES HUTCHINSON (PORT MANAGER FOR BELCHER TOWING CO., PHONE 305-551-5200) AND S.J. VERRY (NOS, N/CG241). POSITION OBTAINED USING 2 BEARINGS. CAPTAIN RAY MATHISON ORIGINATOR OF REPORT. (HOME PHONE: 904-245-6187). BARGE REPORTED TO HAVE GROUNDED AND SUSTAINED DAMAGE.

SURVEY REQUIREMENTS

FULL--VERIFY OR DISPROVE THROUGH 400% SIDE SCAN SONAR SEARCH OR WIRE DRAG INVESTIGATION 500 METER, MIN. RADIUS. LD REQUIRED.  
 ASSIGNED: S-H945-HFP-85

-----  
 THESE DATA WERE GENERATED FROM AUTOMATED FILES WITHIN THE NATIONAL OCEAN SERVICE. INFORMATION IN THE FILE IS INTENDED TO SATISFY THE NEEDS OF HYDROGRAPHIC SURVEY PLANNERS AND IS NOT CONSIDERED TO BE A COMPLETE RECORD OF WRECK AND OBSTRUCTION INFORMATION WITHIN ANY GEOGRAPHIC AREA. FOR ADDITIONAL INFORMATION OR ASSISTANCE IN INTERPRETING THE DATA PLEASE CONTACT THE HYDROGRAPHIC SURVEYS BRANCH (N/CG241), PHONE 301-443-8752.



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

NOAA Launch 1257  
Hydrographic Field Party-1  
General Delivery  
Orange Beach, Al. 36561

Commander  
7th Coast Guard District  
51 S.W. First Avenue  
Miami, Florida 33130

26 June 1985

Dear Sir:

The Field Investigation Strike Team (FIST) of the National Ocean Service located an uncharted pinnacle on 18 June 1985 at 185500 UTC approximately 0.45 nm north of marker No.7 in Hawk's Channel at latitude 25°31' 25.71" N and longitude 080°08' 26.95" W with a least depth of 11.4 FT. This depth was obtained by echosounder and was corrected for predicted tides and draft. Please include this information in your next Local Notice to Mariners and Broadcast Notice to Mariners. All vessels transiting this area should navigate with caution. This area is covered in NOS Chart 11465.

The pinnacle was reported in NOS Automated Wreck and Obstruction Information Service Listing (AWOIS 00499) and LNM 21/85 as an uncharted pinnacle covered to 7 FT MLW by Captain Ray Mathison, Belcher Towing Company. NOS personnel conducting the survey were informed by Capt. Mathison that the reported 7 FT. sounding is incorrect. He estimated the depth of the pinnacle to be covered to 10 FT. The surveyed position is approximately 0.2 nm WNW of the position reported by Capt. Mathison. The reported area was also surveyed with no indication of a pinnacle or shoaling on the echogram records.

Attached are sections of NOS Chart 11465, 24 th. Edition and a copy of the echogram. If you have any further questions, please contact me at (205) 981-9193.

Sincerely,  
  
LTJG Philip M. Kenul  
Officer-in-Charge



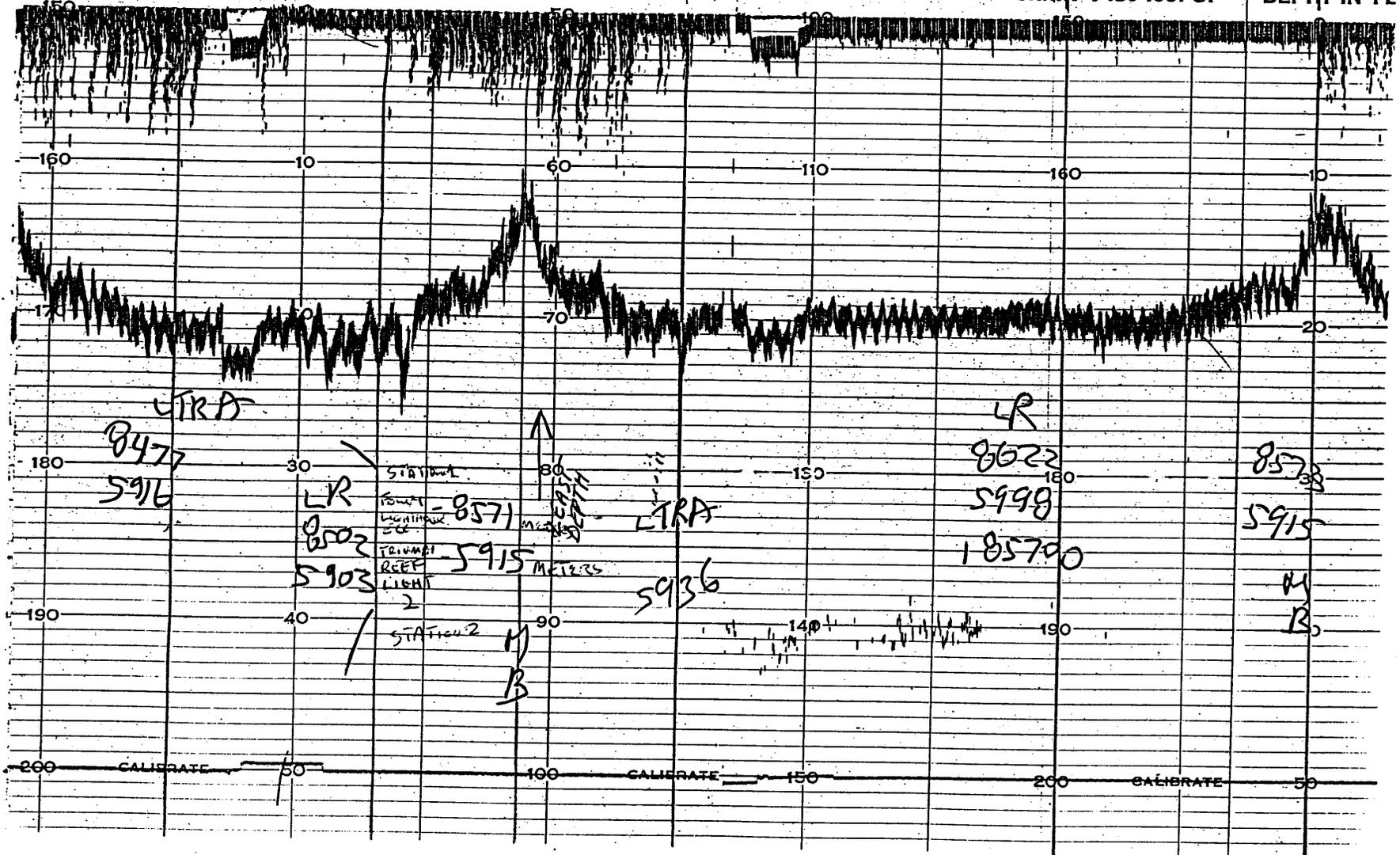
CHART 7430-1001-G1

DEPTH IN FEET

RAYTHEON CO.

CHART 7430-1001-G1

DEPTH IN FEET



SIGNAL TAPE LISTING

S-H945-HFP-85

AWOIS NO. 0499

FIST

VESNO 0478

001 6 25 35 247<sup>17</sup>0<sup>4</sup>8 080 05 492<sup>4</sup>57 250 0012 000000 FOWEY ROCKS LH ECC  
HFP-1, 1985  
QUAD 25080122

002 6 25 28 373<sup>68</sup>7<sup>694</sup>0 080 06 447<sup>694</sup>06 250 0006 000000 TRIUMPH REEF LIGHT  
2TR, HFP-1, 1985  
QUAD 25080211

~~003 0 25 39 50356 080 09 22305 139 0000 000000 CAPE FLORIDA LIGHT  
HOUSE OLD TOWER  
NGS, 1907-1979  
QUAD 25080124~~

~~004 0 25 39 50354 080 09 22372 139 0000 000000 CAPE FLORIDA LIGHT  
HOUSE OLD TOWER  
ECC. WEST  
QUAD 25080124~~

~~005 1 25 35 24871 080 05 49076 139 0000 000000 FOWEY ROCKS LH  
NGS, 1883-1979  
QUAD 25080122~~

~~006 0 25 29 07000 080 10 35678 139 0000 000000 LOG 1900-1979 NGS  
QUAD 25080214~~

~~007 1 25 30 59701 080 08 16996 250 0000 000000 RAGGED KEY DBN 7  
HFP-1, 1985  
QUAD 25080214~~

~~011 6 25 29 10400 080 08 57043 250 0000 000000 BACHE SHOAL LIGHT  
11BS, HFP-1, 1985  
QUAD 25080214~~

✓ pmic

L-721(85)

NOAA FORM 76-40  
(8-74)

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

ORIGINATING ACTIVITY

NONFLOATING AIDS ~~OR LANDMARKS~~ FOR CHARTS

- HYDROGRAPHIC PARTY
  - GEODETIC PARTY
  - PHOTO FIELD PARTY
  - COMPILATION ACTIVITY
  - FINAL REVIEWER
  - QUALITY CONTROL & REVIEW GRP.
  - COAST PILOT BRANCH
- (See reverse for responsible personnel)

Replaces C&GS Form 567.

- TO BE CHARTED
- TO BE REVISED
- TO BE DELETED

REPORTING UNIT  
(Field Party, Ship or Office)

FIST (HFP-1)

STATE

FLORIDA

LOCALITY

EAST OF RAGGED KEYS

DATE  
JUNE  
1985

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

OPR PROJECT NO.

JOB NUMBER

SURVEY NUMBER

DATUM

NAD 1927

METHOD AND DATE OF LOCATION

(See instructions on reverse side)

CHARTS  
AFFECTED

S-H945-HFP-85

POSITION

CHARTING  
NAME

DESCRIPTION

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

LATITUDE

LONGITUDE

OFFICE

FIELD

° / ' //  
D.M. Meters

° / ' //  
D.P. Meters

DAYBEACON (SOLDIER KEY DAYBEACON NO. 2) Triangular red (TR) daymarks on steel I-beam. 10 feet above MLW. LL#1209

25 35  
45.59  
42

080 07  
34.28  
31

DAYBEACON (FOWEY ROCK DAYBEACON NO. 3) Square green (SG) daymarks on steel I-beam. 10 feet above MLW. LL#1209

25 35  
40.29  
12.10

080 06  
57.83  
84

DAYBEACON (SOLDIER KEY DAYBEACON NO. 4) Triangular red (TR) daymarks on steel I-beam. 15 feet above MLW. LL#1209

25 34  
11.94  
72

080 07  
57.72  
51

MARKER (BISCAYNE NATIONAL MON. MKR.) Square white sign saying "Biscayne National Park Boundary Marker" on a steel I-beam. 13 feet above MLW.

25 31  
11.63

080 08  
05.28

DAYBEACON (RAGGED KEY DAYBEACON NO. 7) Square green (SG) daymarks on steel I-beam. 10 feet above MLW. LL#1209 Sig.007

25 30  
59.781  
99

080 08  
16.996  
69

LIGHT (BOWLES BANK LIGHT NO. 8) Triangular red (TR) daymarks with platform on steel I-beam. Red light atop. 18 feet above MLW. LL#1220

25 30  
24.92

080 08  
44.51

DAYBEACON (BACHE SHOAL DAYBEACON NO. 9) Square green (SG) daymarks on steel I-beam. 11 feet above MLW. LL#1220

25 29  
46.07  
08

080 08  
39.55  
62

LIGHT (BACHE SHOAL LIGHT 11BS) Square green (SG) daymarks with platform on 4 wood piles. Green light atop. 35 feet above MLW. LL#1221 Sig. 11

25 29  
10.408

080 08  
57.043

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	G. L. Merrill G. D. Hendrix	<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	G.L. Merrill	FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<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**

**I. NEW POSITION DETERMINED OR VERIFIED**

Enter the applicable data by symbols as follows:

F - Field                      P - Photogrammetric

L - Located                  Vis - Visually

V - Verified

1 - Triangulation      5 - Field identified

2 - Traverse              6 - Theodolite

3 - Intersection      7 - Planetable

4 - Resection          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.

**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

**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

\*\*PHOTOGAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.



RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	G. L. Merrill G. D. Hendrix	<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	G.L. Merrill	FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<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**

**I. NEW POSITION DETERMINED OR VERIFIED**

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	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.

**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

**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

\*\*PHOTOGAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

**DATE:** July 7, 1987

**Marine Center:** Atlantic

**OPR:** S-H945 HFP-85

**Hydrographic Sheet:** Chart Evaluation #11465 (Done by U.S.C.G. and HFP)

**Locality:** East of Ragged Keys, Florida

**Time Period:** June 12 - 20, 1985

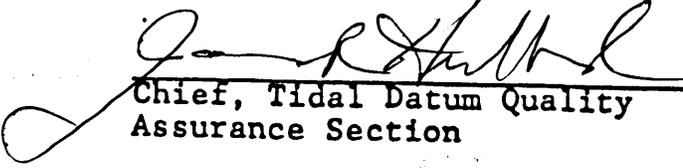
**Tide Station Used:** 872-3165 Miami, Biscayne Bay, Florida

**Plane of Reference (Mean Lower Low Water):** 2.71 Ft.

**Height of Mean High Water Above Plane of Reference:** 2.4 Ft.

**Remarks:** Recommended Zoing;

1. Apply a - 1 hr 00 minute time correction to all heights.

  
Chief, Tidal Datum Quality  
Assurance Section

GEOGRAPHIC NAMES

FE-301

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

ATLANTIC OCEAN (title)											1
FLORIDA (title)											2
RAGGED KEYS (title)											3
											4
											5
											6
											7
											8
											9
											10
											11
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											22
											23
											24
											25

Approved:

*Charles E. Harrington*  
Chief Geographer - W/CG 2x5

MAY 13 1988

06/23/88

HYDROGRAPHIC SURVEY STATISTICS  
REGISTRY NUMBER: FE-301

NUMBER OF CONTROL STATIONS	2
NUMBER OF POSITIONS	198
NUMBER OF SOUNDINGS	962

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	0	/ /
VERIFICATION OF FIELD DATA	110	10/22/87
QUALITY CONTROL CHECKS	72	
EVALUATION AND ANALYSIS	52	06/21/88
FINAL INSPECTION	4	06/03/88
TOTAL TIME	238	
MARINE CENTER APPROVAL		06/22/88

REFERENCE NO.

MOA23-72-88

LETTER TRANSMITTING DATA

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

- ORDINARY MAIL
- AIR MAIL
- REGISTERED MAIL
- EXPRESS
- GBL (Give number) \_\_\_\_\_

TO:

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

DATE FORWARDED

5 July 1988

NUMBER OF PACKAGES  
one (1)

**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.

FE-301 (HFP-5-1-87)  
OPR-S-H-945-HFP-85, FLORIDA, ATLANTIC OCEAN,  
2 MILES EAST OF RAGGED KEYS

- PKG. 1 (BOX)
- ✗ ORIGINAL DESCRIPTIVE REPORT WITH SMOOTH SHEET
  - ✗ FINAL FIELD SHEETS
  - ✗ ENVELOPE containing SUPPLEMENTAL DATA from PRINTOUTS
  - ✗ ENVELOPE containing DATA REMOVED FROM ORIGINAL DESCRIPTIVE REPORT
  - ✗ CAHIER containing FINAL POSITION PRINTOUT and FINAL SOUNDING PRINTOUT
  - ✗ NOAA FORM 77-44 (SOUNDING VOLUME)
  - ✗ ACCORDION FILE containing DATA TAPE PRINTOUTS and FATHOGRAMS for following VESNO CG 0478: JD's: 163, 165, 169; 2 SMOOTH EXCESS OVERLAYS, 1 SMOOTH POSITION OVERLAY, and SUPPLEMENTAL FIELD DATA

FROM: (Signature)

NORRIS A. WIKE

*Norris A. Wike*

RECEIVED THE ABOVE  
(Name, Division, Date)

*Dwayne S. Clark*  
*July 14, 1988*  
*N/CG243*

Return receipted copy to:

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

ATLANTIC MARINE CENTER  
EVALUATION REPORT

SURVEY NO.: FE-301

FIELD NO.: HFP-5-1-85

Florida, Atlantic Ocean, 2 Miles East of Ragged Keys

SURVEYED: 11 June through 21 June 1985

SCALE: 1:5,000

PROJECT NO.: OPR-S-H945-HFP-85

SOUNDINGS: RAYTHEON DE-719B Fathometer

CONTROL: DEL-NORTE Range/Range, DEL-NORTE Range/Visual

Chief of Party.....K. W. Perrin

Surveyed by.....G. D. Hendrix  
.....G. L. Merrill

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

1. INTRODUCTION

a. This survey was conducted under the authority of a letter for Special Survey, S-H945-HFP-85, East of Ragged Keys, Florida, dated 10 June 1985. The purpose of this project was to conduct a special survey of a reported uncharted pinnacle to 7 feet MLW in approximate position Latitude 25°31'18.5"N, Longitude 80°08'17.7"W.

b. No unusual problems were encountered during office processing.

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

2. CONTROL AND SHORELINE

a. Control has been verified by office personnel and is discussed on page 2 of the report submitted by field personnel.

b. Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1927 (NAD 27). Office processing of this survey is based on these values. The smooth sheet has been annotated with ticks showing the computed mean shift between the survey datum and the North American Datum of 1983 (NAD 83). To place this survey on the NAD 83 datum move the projection lines 1.390 seconds (42.8 meters or 8.36mm at the scale of the survey) south in latitude, and 0.826 seconds (23.1 meters or 4.62 mm at the scale of the survey) west in longitude.

c. There is no shoreline within the limits of this survey.

### 3. HYDROGRAPHY

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

b. The standard twelve (12) and eighteen (18) foot depth curves could be drawn in their entirety. A dashed curve was also drawn to delineate bottom relief.

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

<u>Shoal Depths</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Surrounding Depths</u>
18	25°31'19.41"N	80°08'23.51"W	22
14	25°31'16.70"N	80°08'19.19"W	22-23
15	25°31'25.99"N	88°08'10.32"W	16-21
10	25°31'12.17"N	88°08'07.07"W	15-22
18	25°31'15.62"N	88°08'05.27"W	23-24

Additional lines of hydrography in the vicinity of the soundings listed above would have provided a better delineation of the bottom configuration. The lack of developments of the items discussed above does not degrade the overall quality of this survey.

### 4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records and reports conform to the requirements of the HYDROGRAPHIC MANUAL.

### 5. JUNCTIONS

There are no contemporary junctional surveys. There are no junctional requirements.

### 6. COMPARISON WITH PRIOR SURVEYS

#### a. Hydrography

H-5536 (1934) 1:20,000

Prior survey depths from H-5536 (1934) vary plus or minus (+/-) 1 to 2 feet. A 14½ foot sounding in Latitude 25°31'15.5"N, Longitude 80°08'18.2"W was located by prior survey H-5536 (1934). The present survey depths in this area are twenty-three (23) feet. A 14 foot sounding located during present survey operations in Latitude 25°31'16.70"N, Longitude

80°08'19.19"N is approximately 47 meters northwest of the prior survey 14½ foot depth.

The differences between the above prior surveys and the present survey depth can be attributed to natural changes, and improved hydrographic surveying methods and equipment.

Except as noted above the present survey is adequate to supersede the above prior surveys within the common area.

b. Wire Drag

H-5540WD (1934) 1:20,000

The comparison with prior survey H-5540WD (1934) and the present survey revealed one (1) grounding that falls within the common area of the present survey. A ten (10) foot grounding in Latitude 25°31'12.4"N, Longitude 80°08'06.6"W was located by prior survey H-5540WD (1934). The depth was neither cleared nor diver verified by the prior survey. The present survey located a ten (10) foot sounding in Latitude 25°31'12.17"N, Longitude 80°08'07.07"N. The present survey ten (10) foot sounding is 14 meters west of the prior survey depth. It is recommended that the ten (10) foot sounding be revised and charted in present survey location.

There are no conflicts between prior survey effective depths and the present survey soundings.

7. COMPARISON WITH CHART 11465 (24th Edition, Mar. 3/84)  
11465 (25th Edition, Sept. 5/87)

a. Hydrography

The charted hydrography on the 24th edition of chart 11465 originates with the previously discussed prior surveys and requires no further consideration.

The charted 7-ft sounding with the legend Rep 1985, in Latitude 25°31'18.5"N, Longitude 80°08'17.7"W originates with Chart Letter 488 of 1985 (CL 488/85). The chart letter was based on a reported grounding of "barge #35" by the master of the Belcher Towing Company tug "BELCHER PENSACOLA", Ray Mathison. The barge went aground on 18 July 1984. An investigation of the grounding by the 7th Coast Guard District, Marine Safety Office reported a 10-ft in Latitude 25°31'15.4"N, Longitude 80°08'29.0"W. The information was reported to the National Ocean Service (NOS) through Mr. Lee Gudger at NOS headquarters in Rockville, Maryland. The 10-foot depth was subsequently charted as a 10-ft sounding with the legend Rep 1984. As a result of an investigation by NOS, Hydrographic Field Party #1 (HFP-1) personnel and 7th Coast Guard District personnel an 11-ft sounding with the legend obstruction and a danger curve was charted in Latitude 25°31'25.71"N, Longitude

80°08'26.95"W along with other revisions to the chart. The three (3) aforementioned depths/features were charted on the 25th edition of chart 11465. Copies of the correspondence related to the the depths/features are included in this report. Based upon the office processing of the present survey and consideration of the facts stated above the following is noted:

1) The charted 7-ft sounding with the legend Rep 1985, AWOIS Item #000499, charted in Latitude 25°31'18.5"N, Longitude 80°08'17.7"W should be revised to a 10-ft sounding with the legend Rep 1985. This recommendation is based on a letter dated 26 June 1985 from the Officer-in-Charge of HFP-1, and a telephone conversation with Ray Mathison on 18 June 1988. Additionally, the position of the 7-ft sounding should be revised to 25°31'19.6"N, Longitude 80°08'14.3"W. This revision is based on the new position of the boundary marker located by the field party personnel during survey operations (see section 7.a.4) of this report). The present survey did not adequately develop the area of the reported depth to verify or disprove its existence.

2) The charted 10-ft sounding with the legend Rep 1984, in Latitude 25°31'15.4"N, Longitude 80°08'29.0"W, is outside of the the area investigated by the present survey. The 10-ft sounding is based on an uncorrected depth. The depth was obtained by a diver during the 7th Coast Guard District, Marine Safety Office investigation of a 1984 grounding. A telephone conversation between Mr. Lee Gudger of the Aids to Navigation Unit, N/CG2221 at NOS headquarters and the 7th Coast Guard District, Marine Safety Office relayed this information. The depth should be retained until verified or disproved.

3) The charted 11-ft sounding with the legend obstruction and danger curve in Latitude 25°31'25.71"N, Longitude 80°08'26.95"W originates with advance information from the present survey. Present survey depths should be charted.

4) A charted Marker PA in Latitude 25°31'11.63"N, Longitude 80°08'05.28"W on the 25 th edition of chart 11465 was apparently revised from the 24th edition of the chart based on the unprocessed data from the present survey. The marker should be charted in the location shown on the present survey, Latitude 25°31'11.62"N, Longitude 80°08'05.26"W, and the "PA" legend removed from the chart.

5) The location of the barge grounding, shown on the chartlet submitted by the tug's master, is based on two intersecting rays of two (2) ranges observed by the tug's master at the time of the grounding. Because of the present survey location of the marker discussed in section 7.a.4) of this report it becomes apparent that the location of the grounding, based on the new position of the marker, will be revised. Using the same range with the revised position of the marker, the position of the grounding is moved approximately 30

meters to the ENE. The other range used to position the grounding was based on a charted Marker PA, in Latitude 25°31'08"N, Longitude 80°10'00"W. With these two facts taken into consideration, the position of the grounding is questionable.

Except as noted the present survey is adequate to supersede the charted hydrography in the common area.

b. Dangers to Navigation

The hydrographer identified a danger to navigation and submitted information for inclusion in a Local Notice to Mariners to the Commander, Seventh Coast Guard District, Miami, Florida and N/CG222, Chart Information Section. It is recommended the information be revised.

c. Aids to Navigation

The hydrographer verified the positions of 10 aids to navigation during the present survey. These aids appear adequate to serve their intended purpose.

8. COMPLIANCE WITH INSTRUCTIONS

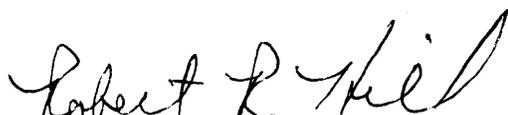
This survey complies with the requirements in the letter for Special Survey, S-H945-HFP-85, East of Ragged Keys, Florida, dated 10 June 1985.

9. ADDITIONAL FIELD WORK

This is an adequate field examination based on the information provided to the hydrographer. Neither the position nor the least depth of the grounding were resolved. Additional field work will be required to resolve the issues discussed in sections 7.a.1), 2), and 5) of this report at an opportune time. It is also apparent from the the results of the present survey that the charted hydrography is based on 1934 NOS survey data and contains inaccuracies. Reconnaissance hydrography should be conducted in the area to determine charting survey needs especially if this area, Biscayne National Park, is being used as a passage for commercial barge traffic.

  
James B. Wilson  
Cartographic Technician  
Verification of Field Data

  
Norris A. Wike  
Cartographer  
Evaluation and Analysis

  
Robert R. Hill  
Senior Cartographic Technician  
Verification Check

Inspection Report  
FE-301

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



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Robert G. Roberson  
Chief, Evaluation and Analysis Group  
Hydrographic Surveys Branch



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

Approved: 22 June 1988



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

80° 08' 30"

80° 08' 15"

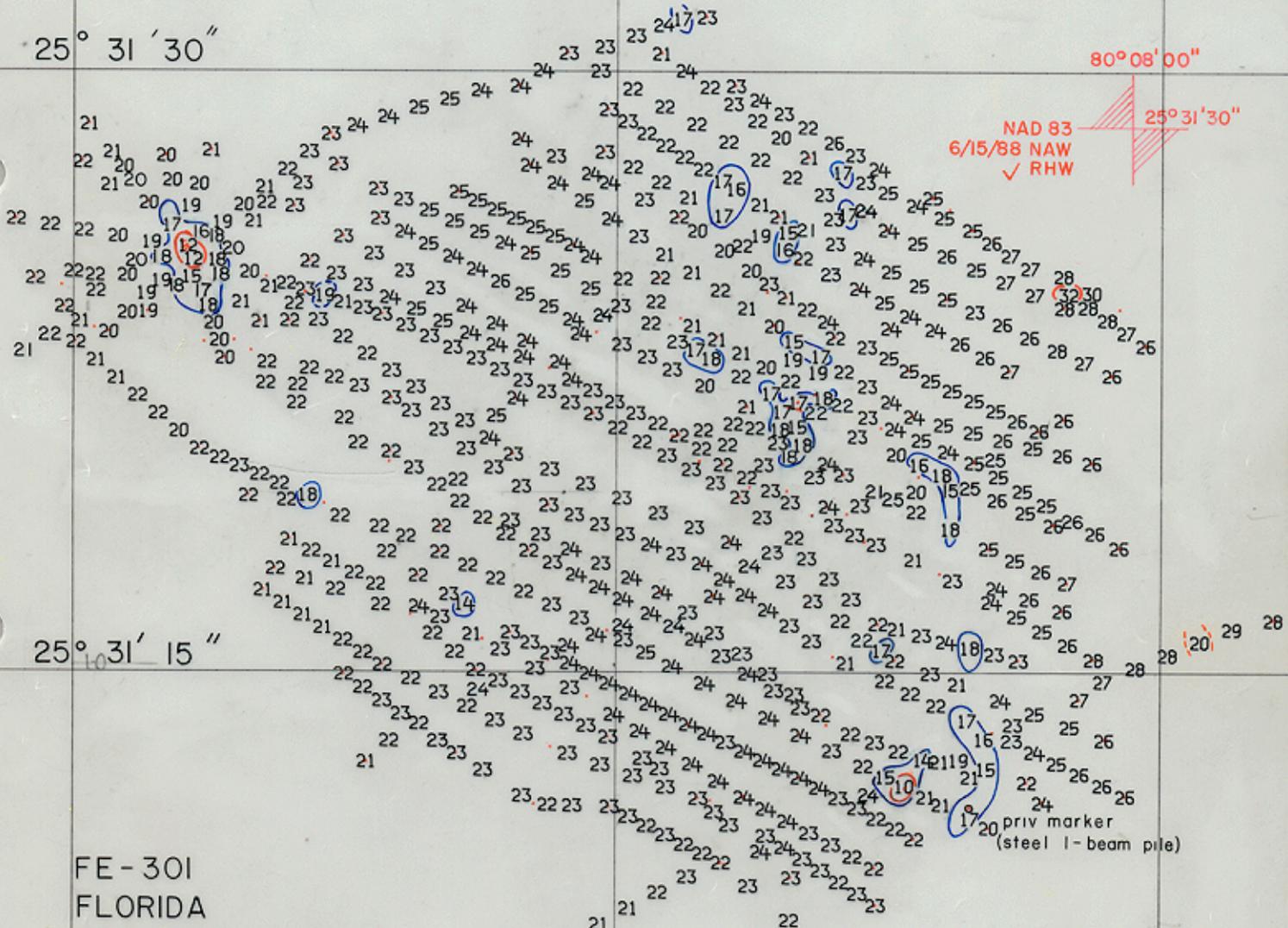
80° 08' 00"

25° 31' 30"

80° 08' 00"

25° 31' 30"

NAD 83  
6/15/88 NAW  
✓ RHW



25° 31' 15"

FE - 301  
 FLORIDA  
 ATLANTIC OCEAN  
 2 MILES EAST OF RAGGED KEYS  
 JUNE 11-20, 1985  
 SCALE 1:5000  
 SOUNDINGS IN FEET AT MLLW  
 SHEET 1 OF 1  
 AWOIS ITEM # 00499  
 HORIZONTAL DATUM NAD 27

25° 31' 00"

80° 08' 30"

007 RAGGED KEY DAYBEACON 7, 1985

pile ▲ (Field position)

25° 31' 00"

80° 08' 00"

80° 08' 15"

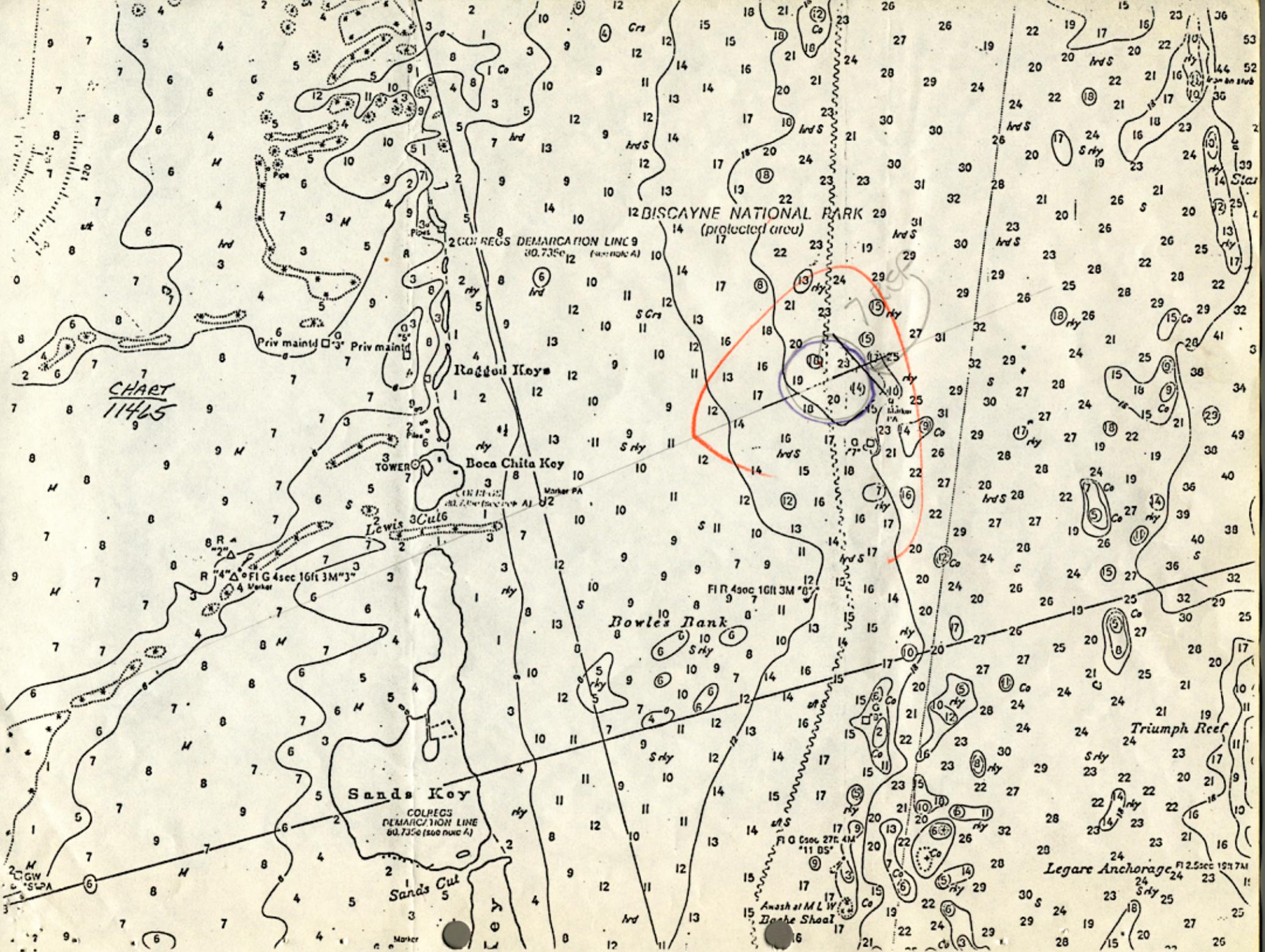


CHART  
11465

12 BISCAYNE NATIONAL PARK  
(protected area)

Raccoon Keys

Boca Chita Key

Sands Key

Bowles Bank

Triumph Reef

Legare Anchorage

COLREGS DEMARCATION LINE  
30.735° (true) (MAG. A)

Priv maint'd

TOWER

Lewis Cul 6

Fl G 4sec 16ft 3M 3

Fl R 4sec 16ft 3M 0

Fl G 27ft 4M  
11 DS

Anashat M L W  
Zooche Shoal

Fl 2.5sec 15ft 7M



FLORIDA

# INTRACOASTAL WATERWAY MIAMI TO ELLIOTT KEY

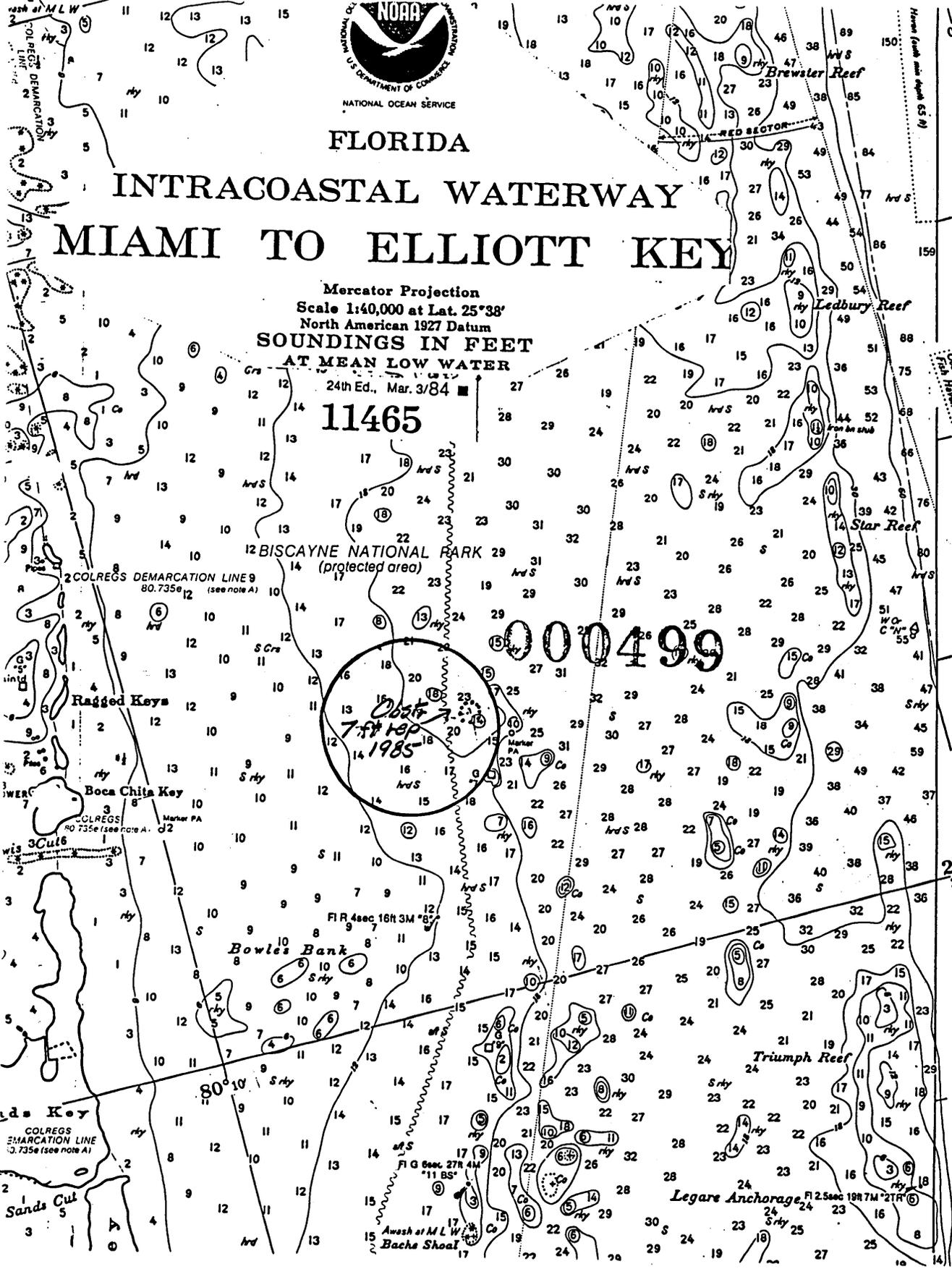
Mercator Projection  
Scale 1:40,000 at Lat. 25°38'  
North American 1927 Datum  
**SOUNDINGS IN FEET**  
AT MEAN LOW WATER  
24th Ed., Mar. 3/84

## 11465

# 000499

*Boats*  
*7 ft deep*  
*1985*

12 BISCAYNE NATIONAL PARK  
(protected area)



(CONTINUED ON CHART 11462)

25°  
30'

COLREGS DEMARCATION LINE  
80.735e (see note A)



DEPARTMENT OF COMMERCE  
 Environmental Science Services Administration  
 U.S. Coast and Geodetic Survey  
 Washington, D.C.

Hydrographic Index No. 78 C

