

original ✓

TP-00433

TP-00433

NOAA FORM 76-35	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Type of Survey Coastal Zone Map	
Job No. PH-7113	Map No. TP-00433
Classification No. Final	Edition No.J.....
Field Edited Map	
LOCALITY	
State Florida	
General Locality ... Dade County	
Locality Elliott Key	
1971 TO 1974	
REGISTRY IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.					
DESCRIPTIVE REPORT - DATA RECORD		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"> TYPE OF SURVEY ☒ ORIGINAL ☐ RESURVEY ☐ REVISED </td> <td style="width:50%;"> SURVEY TP. <u>00433</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final</u> JOB PH. <u>7113</u> </td> </tr> </table>		TYPE OF SURVEY ☒ ORIGINAL ☐ RESURVEY ☐ REVISED	SURVEY TP. <u>00433</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final</u> JOB PH. <u>7113</u>		
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PHOTOGRAMMETRIC OFFICE Rockville, MD		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;"> LAST PRECEEDING MAP EDITION </td> </tr> <tr> <td style="width:50%;"> TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED </td> <td style="width:50%;"> JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__ </td> </tr> </table>		LAST PRECEEDING MAP EDITION		TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED	JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__
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TYPE OF SURVEY ☐ ORIGINAL ☐ RESURVEY ☐ REVISED	JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__						
OFFICER-IN-CHARGE Cdr. James Collins							
I. INSTRUCTIONS DATED							
1. OFFICE		2. FIELD					
General Instructions-OFFICE-NOS Cooperative Coastal Boundary Mapping, Job PH-7000, 12/9/75 Supplement I, 11/4/74 Supplement III, 10/24/74 Note: Office and field edit instructions (1975) incorporate applicable prior operational instructions.		Aerial photography 9/2/69 Supplement I, 1/28/70 Supplement II, 3/26/70 Supplement III, 8/10/72 Field Edit (PH-7000 General Instruc- tions for Florida Coastal Zone Mapping) 1973					
II. DATUMS							
1. HORIZONTAL: ☒ 1927 NORTH AMERICAN		OTHER (Specify)					
2. VERTICAL: ☒ MEAN HIGH-WATER ☒ MEAN LOW-WATER ☐ MEAN LOWER LOW-WATER ☐ MEAN SEA LEVEL		OTHER (Specify)					
3. MAP PROJECTION Transverse Mercator		4. GRID(S) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">STATE Florida</td> <td style="width:50%;">ZONE East</td> </tr> </table>		STATE Florida	ZONE East		
STATE Florida	ZONE East						
5. SCALE 1:10,000		STATE _____ ZONE _____					
III. HISTORY OF OFFICE OPERATIONS							
OPERATIONS		NAME	DATE				
1. AEROTRIANGULATION BY METHOD: Analytic LANDMARKS AND AIDS BY		V. McNeel	5/74				
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: Coradomat CHECKED BY		D. Phillips	6/74				
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY		Inapplicable					
INSTRUMENT: CONTOURS BY SCALE: CHECKED BY		Inapplicable					
4. MANUSCRIPT DELINEATION PLANIMETRY BY METHOD: Graphic CHECKED BY SCALE: 1:10,000 HYDRO SUPPORT DATA BY CHECKED BY		S. Solbeck & R. Rich C. Lewis Inapplicable Inapplicable	7/74 8/74 				
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		C. Lewis	8/74				
6. APPLICATION OF FIELD EDIT DATA BY CHECKED BY		R. Rich J. Battley, Jr.	2/75 2/75				
7. COMPILATION SECTION REVIEW BY		C. Lewis	3/75				
8. FINAL REVIEW BY		D. Brant	1/76				
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY							
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY		D. Brant	4/76				
11. MAP REGISTERED - COASTAL SURVEY SECTION BY		R. CATOR	7/76				

NOAA FORM 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TP-00433

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) Wild RC-8 L&K 6" focal length		TYPES OF PHOTOGRAPHY LEGEND (C) <u>COLOR IR</u> (P) PANCHROMATIC (I) <u>INFRARED B&W</u>		TIME REFERENCE	
TIDE STAGE REFERENCE ☐ PREDICTED TIDES ☐ REFERENCE STATION RECORDS ☒ TIDE CONTROLLED PHOTOGRAPHY				ZONE Eastern	☒ STANDARD
				MERIDIAN 60th-75th	☒ DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
73L 2872R 73L2894R-2898R	3/18/73 3/18/73	0922 0940	1:20,000 1:20,000	The stage of tide is inapplicable for the color photography.	
71L8553R-8559R 72K6400R-6401R 72K6442R-6446R 72K6469R-6470R	8/6/71 2/14/72 2/15/72 2/16/72	1632 1457 1008 1038	1:20,000 1:20,000 1:20,000 1:20,000	Refer to the following page for tide information.	

REMARKS

2. SOURCE OF MEAN HIGH-WATER LINE:

The source of the MHW line is the tide-coordinated black-and-white infrared photography listed in item 1. The rectified color photography was used as an aid for interpreting culture features and compiling the limits of shoal and shallow areas for Nautical Charts.

Where the shoreline is obscured by vegetation, such as mangrove, the apparent shoreline symbol was used.

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

The source of the MLW line is the tide-coordinated black-and-white infrared photography listed under item 1.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

TIDE - COORDINATED PHOTOGRAPHY

TP - 00433

LOCATION AND PHOTOGRAPHY	TIDE STATIONS (In operation at time of photography)	STAGE OF TIDE	MEAN RANGE
ATLANTIC SHORELINE			
72K6442R-6446R	OCEAN REEF	+0.10 MHW	2.33
72K6442R-6446R	RAGGED KEYS *	+0.40 MHW	1.64
72K6469R-6470R	RAGGED KEYS *	+0.40 MHW	1.64
72K6400R-6401R	RAGGED KEYS	+0.13 MLW	1.64
71L8553R-8559R	RAGGED KEYS	-0.30 MLW	1.64
71L8563R-8559R	OCEAN REEF	+0.10 MLW	2.33
INTERIOR WATERS			
72K6442R-6446R	EAST ARSENICKER	+0.20 MHW	0.91
72K6442R-6446R	RAGGED KEYS *	+0.40 MHW	1.64
72K6469R-6470R	RAGGED KEYS *	+0.40 MHW	1.64
72K6400R-6401R	RAGGED KEYS	+0.13 MLW	1.64
71L8663R-8559R	EAST ARSENICKER	0.00 MLW	0.91
71L8553R-8669R	RAGGED KEYS	-0.30 MLW	1.64
*The stage of tide tolerance is greater than +0.30 ft. specified in the instructions for some of the photography used in compiling portions of the MHW and MLW lines. The horizontal position of these lines was verified by field edit.			
REMARKS:			

TP-00433

HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION *1971☒ FIELD EDIT OPERATION 1974

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. R. Wagner	
2. HORIZONTAL CONTROL	RECOVERED BY R.R. Wagner	10/74
	ESTABLISHED BY Inapplicable	
	PRE-MARKED OR IDENTIFIED BY Inapplicable	
3. VERTICAL CONTROL	RECOVERED BY R.R. Wagner	10/74
	ESTABLISHED BY Inapplicable	
	PRE-MARKED OR IDENTIFIED BY R.R. Wagner	10/74
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY None	
	LOCATED (Field Methods) BY R.R. Wagner	10/74
	IDENTIFIED BY R.R. Wagner	10/74
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION ☐ COMPLETE ☐ SPECIFIC NAMES ONLY ☒ NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY R.R. Wagner	10/74
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY Inapplicable	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

All BM's are tidal marks

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
	Refer to field report	73L2872R 73L2897R	BM1, BM2 BM2

3. PHOTO NUMBERS (Clarification of details)

72K6441, 6443 thru 6446, 6470

73L2872R, 2896R, 2897R

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

There are no charted landmarks on this map. Non-floating aids were located by field methods.

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
73L2897R	Elliott Key Part Harbor Lt., (priv.)		

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

Sketchbook with angles submitted with TP-00436.

*Field report is bound with this Descriptive Report.

NOAA FORM 76-36D
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

TP-00433

RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
No copies of this map were submitted for the Marine Chart Division prior to final review.				

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
		11/17/75	One form 76-40 submitted to Marine Chart Division as final report.

2. ☒ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: 11/17/75
 3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
 2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS 567 SUBMITTED BY FIELD PARTIES.
 3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
 ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL	
-THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	MAP CLASS ☐ II. ☐ III. ☐ IV. ☐ V. ☐ FINAL	
FOURTH	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY ☐ REVISED ☐ RESURVEY	

SUMMARY
for
TP-00427 thru TP-00430
TP-00432 thru TP-00436

Coastal Zone Map TP-00433 is one of nine (9), 1:10,000 scale (shoreline type) maps in Job PH-7113. These maps will not be published. Interior detail is limited to a narrow zone of planimetry usually back from the shoreline to and including the first road. Other maps in Job PH-7113 will be published with an orthophoto interior.

A layout for Job PH-7113 (revised since the aerotriangulation operation) will show the location of individual maps. A copy of this layout is included in this Descriptive Report.

These maps are intended for planning purposes for the State of Florida and for the construction and maintenance of NOS nautical charts.

The area is covered by aerial photography taken in 1971, 1972, and 1973 on color and black-and-white infrared film. The black-and-white infrared film was tide coordinated.

The field operations consisted of the following:

1. Premarking of horizontal control for aerotriangulation.
2. Establishment of tidal datums.
3. Field Edit.

Horizontal control was extended by analytical aerotriangulation method using the STK stereocomparator.

The shoreline and alongshore details were compiled from tide-coordinated, black-and-white infrared photography using a B-8 stereoplotter and/or graphic methods. The rectified color photography was used as an aid in interpreting cultural features and compiling the limits of vegetation. The interior details were compiled from a stereoscopic examination of the color photography without field edit.

All line work is scribed, approved symbols are shown in the marginal data of the map.

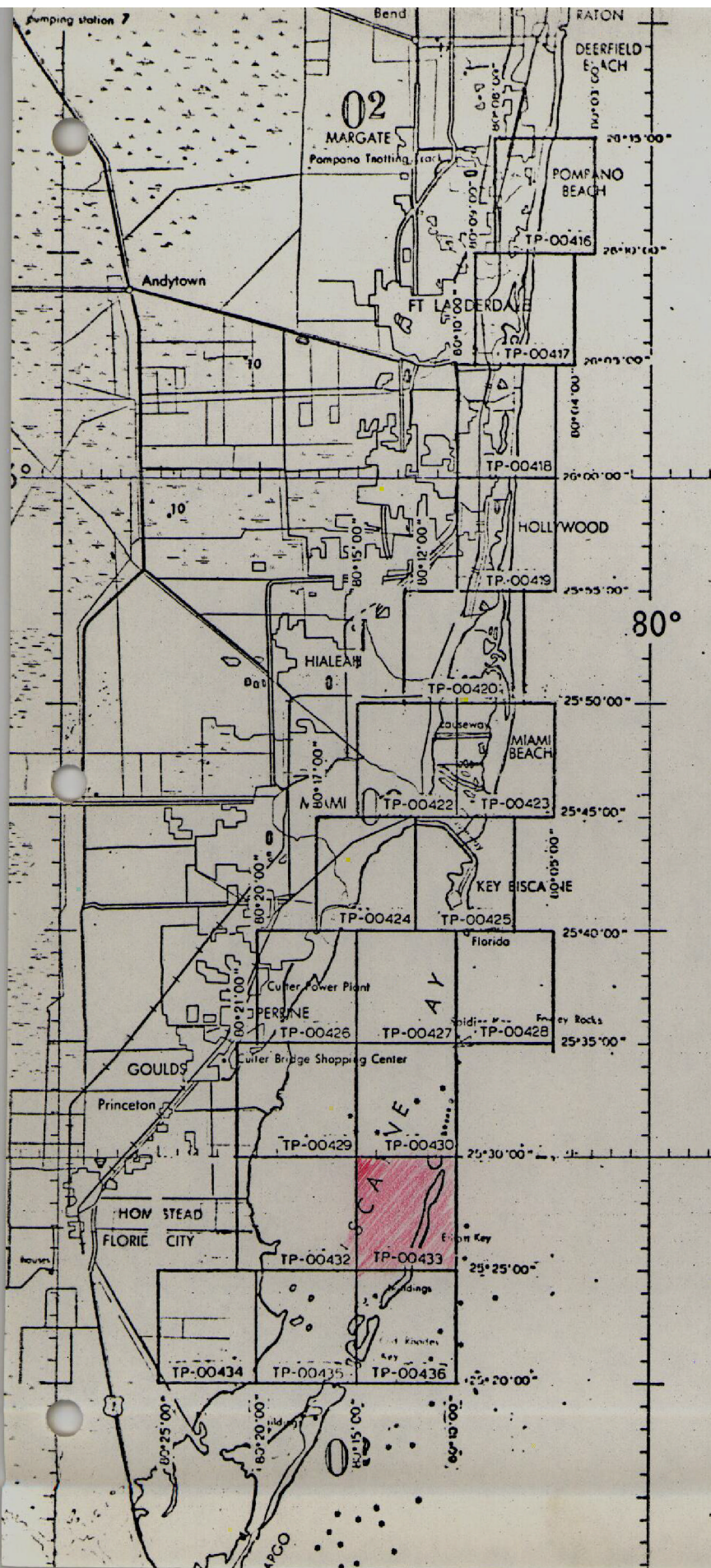
shallow lines used by the Marine Chart Division but not required on the Coastal Zone Maps. This copy of the map is labeled "Registration Copy" in the title block.

The following items will be registered in the NOS Archives:

1. A stable base copy of the Registration Copy.
2. The Descriptive Report.

All negatives are filed in the Reproduction Division.

Field records such as field edit sheets, discrepancy prints, field edit photographs, and other field records are filed in the National Archives.



JOB PH-7113
HILLSBORO INLET to CARD SOUND
FLORIDA
SHORELINE MAPPING
SCALE 1:10,000

MILEAGE FOR COST ACCOUNTS

Sheet No.	Sq. Miles
TP-00416	3
TP-00417	3
TP-00418	3
TP-00419	8
TP-00420	10
TP-00422	4
TP-00423	6
TP-00424	4
TP-00425	6
TP-00426	4
TP-00427	1
TP-00428	1
TP-00429	4
TP-00430	1
TP-00432	4
TP-00433	3
TP-00434	1
TP-00435	5
TP-00436	5

Total 76

REVISED 5-1-75
Revised 7-11-74

The combined field report for Jobs PH-7010 and 7113 and the field report for Job PH-7119 are included in this Descriptive Report in order to account for the foreshore profiles. Refer to the review report for explanation.

FIELD REPORT

JOBS PH-7010 and PH-7113

In accordance with Instructions - FIELD - PH-7010, Aerotriangulation Control, and Instructions - FIELD - Job PH-7113; Horizontal Control for Aerotriangulation and Field Support for Aerial Photography; Coastal Boundary Mapping, Florida, the following report is submitted.

1. HORIZONTAL CONTROL

The two jobs are treated as one for report purposes, targets on Job PH-7010 being replaced in approximately the same positions as they were in November 1970.

Twenty-one stations were premarked for 1:30,000 scale color photography. Where feasible, Array No. 1 was used, being a 9-foot triangle with 3 runners or wing panels of 2 x 20 ft. dimensions. Several variations were used as the area is highly developed, particularly in the southern part, and space was not always available. The CSI cards are believed to be adequate to explain the variations but some discussion is in order.

From north to south the first 8 stations are Array No. 1 with varying degrees of angle between the wing panels.

POMPANO 1928 was marked by a triangle painted on the macadam (station is in a parking area) over the station mark. Paint used was Pittsburg fluorescent TANGERINE (very close to what we call fire orange) and should show well on the color photographs. (This paint was used on two other stations and we would be interested to know how it turns out.) In addition, a white 9-ft. triangle was placed on top of a nearby flat-roofed building approximately 10 feet high, which is a sub-station.

HALLAND 1928 was marked by a painted target substation placed on the light brown sand of a public beach. We used a white plastic target and painted it. No room was available for wing panels at this small beach.

CAPE FLORIDA OLD TOWER FINIAL 1883 was marked by a single white triangle. No room was available for wing panels.

CAUSEWAY 1934 was marked by a painted triangle placed on the west end of a bridge under construction. The bridge is real white and the color should show "like a light".

PAN AMERICAN 1935 was marked by 2 white triangles placed on the lower level of the 3-level, flat-topped building, one on the east side and one on the south. They are approximately 18 to 20 feet above ground. Two triangles were used "to be sure".

BLACK POINT 3 and NARROW POINT are in the water and approximately 50 feet offshore. Triangles were built over the station marks and about 3 feet above estimated mean high-water level. 8-foot squares were used as wing panels believing these would withstand more wind. The Commander of ESSA 88 reported these targets in good condition at time of bridging photography, only one wing panel being damaged.

All targets were taken up after photography except the two in the water. All were found in good condition, although we had to make repairs to a few during the period they were on the ground due to wind damage. Only station CLOISTER was vandalized and it was not bothered after it was replaced. This is rather remarkable considering some of the locations.

USGS quad maps showing approximate locations of targets have been submitted.

We were advised by the Commander of aircraft that Line 30-1, Job PH-7113, was photographed February 24 and the other lines on both Jobs on March 8.

2. TIDE COORDINATED PHOTOGRAPHY

As directed by telephone, the following nine tide

stations were manned.

- (1) Lake Worth, Atlantic Ocean
- (2) Andrews Avenue Bridge, Fort Lauderdale
- (3) Bahia Mar Yacht Club, Fort Lauderdale
- (4) Port Everglades
- (5) Biscayne Creek, North Miami
- (6) Biscayne Bay, Miami
- (7) Biscayne Bay, Cutler
- (8) Biscayne Bay, Turkey Point
- (9) Card Sound

Photography obtained was based on the first seven gages. Lines 30-5 and 30-6 would have been based on TURKEY POINT and CARD SOUND. These lines were not photographed. Also, high-water only was obtained for line 30-4, based on CUTLER.

Recordings entered in the tide volumes, Form 277, were at 5 minute intervals near and during photography; otherwise 15 minute interval. Wet staff readings--crest, trough and mean--were recorded while photography was in progress. Tolerances of ± 0.3 ft. for mean high-water and ± 0.1 ft. for mean low-water were observed. Eastern Standard Time was used.

Photography was obtained on 2 days: Low-water February 24 and high-water March 2. Lines 30-1, 30-2 and 30-3 were flown at low-water. Lines 30-1, 30-2, 30-3, and 30-4 were flown at high.

Low-water photography Feb. 24. (Time furnished by Photographer.)

(1) Segment of Line 30-1 approximately 4 miles north and 4 miles south of Port Everglades inlet (or entrance) 1201 to 1210 hrs. based on PORT EVERGLADES staff reading of 1.7 ft.

(2) Line 30-1, based on LAKE WORTH PIER, photographed in its entirety from 1228 to 1241 hrs. when the tide reading was 1.4/1.3 ft.

(3) An 8 mile segment of line 30-1, based on BAHIA MAR YACHT CLUB, was photographed at 1444 to 1449 hrs. when the tide staff read 1.7 ft.

(4) An 8 mile segment of line 30-1, based on ANDREWS AVENUE BRIDGE was photographed at 1511 to 1515 hrs., when the staff read 1.8 ft.

(5) Line 30-2, based on BISCAYNE BAY, MIAMI, and flown south to north, was photographed at 1259 to 1305 hrs., when the staff read 2.2 feet.

(6) Line 30-3, based on BISCAYNE BAY, MIAMI and BISCAYNE CREEK, NORTH MIAMI, flown south to north, was photographed at 1319 to 1324 hrs, when the BISCAYNE Bay, Miami staff read 2.1 and the BISCAYNE CREEK staff read 3.1, both ends of the line being within tolerance.

(7) Line 30-2 was then photographed again, based on BISCAYNE CREEK, NORTH MIAMI, and flown from north to south at 1330 to 1336 hrs when the staff reading was 3.1.

This ended the low-water photography.

High-water photography, March 2.

(1) Line 30-1, based on LAKE WORTH PIER, was photographed at 1039 to 1055 hrs., when the gage reading was 4.2 feet. However, we were advised that parts of this line were re-photographed at approximately 1144 to 1149 hrs. in the Miami Beach area and at 1242 to 1245 hrs. in the Hollywood area. Tide was within tolerance at all times.

(2) A segment of line 30-1, based on ANDREWS AVENUE BRIDGE (as well as BAHIA MAR and PORT EVERGLADES) was photographed at 1103 to 1106 hrs. with the camera end overlap setting at 80%.

(3) Line 30-2, based on BISCAYNE BAY, MIAMI and BISCAYNE CREEK, NORTH MIAMI, was photographed at 1254 to 1300 hrs. when the BISCAYNE BAY, MIAMI reading was 4.6 ft. and the BISCAYNE CREEK staff read 5.6 ft.

(4) Line 30-3, based on the same stations, was photographed at 1305 to 1311 with the staff readings unchanged from line 30-2.

(5) Line 30-4, based on BISCAYNE BAY, MIAMI and BISCAYNE BAY, CUTLER, was photographed at 1319 to 1325, when the MIAMI staff read 4.5 and CUTLER read 4.8 ft.

This ends the high-water photography.

3. FORESHORE PROFILES

Ten planetable beach profiles were run within the limits of Job PH-7113. They cover a linear distance of approximately 40 miles. The northerly one is at triangulation station PCMPANO and the southernmost one is near the Cape Florida lighthouse on Key Biscayne. Mr. Phil Walbolt ran 7 of the 10 during the period of photography, basing tide stage on a nearby tide gage. The other 3 were similarly accomplished two or three days after photography, with information as to tide level being obtained from the Weather Service's remote recorder in Miami Beach via telephone, in 2 instances.

The procedure was to drive a stake to water level near shore and obtain the tide gage reading at that time by radio from a nearby gage. This elevation thus became the bench mark to determine the horizontal position of mean high- and mean low-water lines from a planetable setup. Points occupied were triangulation stations or recoverable photo-topo points. The planetable was oriented to magnetic north with an azimuth to an identifiable point. One variation from this is at profile No. 7 where no distant azimuth was visible and the profile was laid out to parallel a beach groin that should be clearly visible on the low-water photographs.

No profiles were run in Job PH-7010 since the infrared photography was obtained several months ago.

In addition to sketches at some of the occupied points, USGS quad maps show the approximate locations of the profiles along with premark target locations.

Submitted 3/25/71

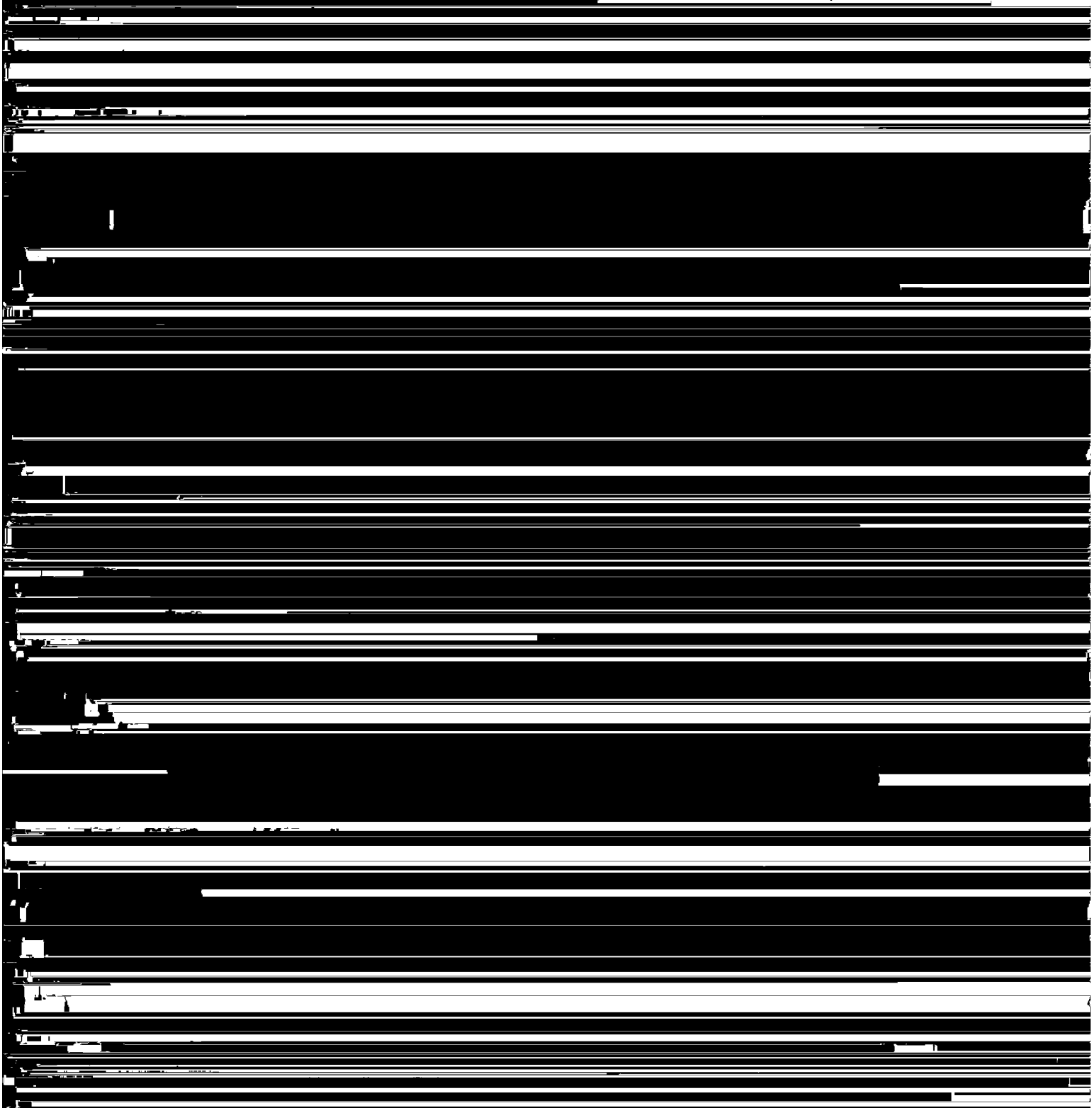
William H. Shearouse
William H. Shearouse
Chief, Photo Party 60

FIELD REPORT

15

JOB PH-7119

This report is on work done in accordance with Instructions-
Field-Job PH-7119; Horizontal Control for Aerotriangulation
and Field Support for Aerial Photography; Coastal Boundary
Mapping, Card Sound to Plantation Key, Florida, dated January



Line 20-2. MHW Flown at 1035-1052 on 16 February when the 16 OCEAN REEF staff read 4.75-4.61. This line was also flown at 1006 on February 15, but the pilot recommended it be rescheduled. MLW Flown at 1338-1350 on February 14 when the staff read 2.31-2.32.

Line 30-1. This line is controlled by three staffs, the MANATEE CREEK staff has a MWL datum and the EAST ARSENICKER and CARD SOUND staffs have mean high and mean low datums. MHW The line was flown at 1120-1142 on 14 February. At this time the EAST ARSENICKER staff read 3.95-3.86 and the MANATEE CREEK staff read 3.54-3.57(MWL). The line was flown again at 1445 on 14 February when the CARD SOUND staff read 3.8 and the MANATEE CREEK staff read 3.60. MLW Was flown at 945-1000 on 20 February when the CARD SOUND staff read 3.2 and the EAST ARSENICKER staff read 2.78-2.81.

Line 30-2. MHW It was completed at 1250 on February 14 when the TAVERNIER, FLA. BAY staff read 3.05 (MWL Range), the BARNES SOUND staff read 3.92, the MANATEE CREEK staff read between 3.6 and 3.5, the CARD SOUND staff read 4.0 and the EAST ARSENICKER staff read 3.65. MLW Completed at 0945 on February 20 when the CARD SOUND staff read 3.20 and the EAST Arsenicker staff read 2.77-2.78.

The BARNES SOUND staff read 0.31 foot higher than its 3.61 Mean Water Level. Since the shoreline in this area is overhung with mangrove this section of the line was not rescheduled.

Line 30-3 (ATLANTIC SIDE). MHW Completed at 1107 on February 16 when the TAVERNIER, HAWK CHANNEL staff read 4.62-4.43. MLW Completed at 1412 on February 14 when the staff read 2.30-2.28.

Line 30-3 (Florida Bay Side). MWL The north side was completed on February 12 at 1150 hrs. when the BARNES SOUND staff read 3.78 and the TAVERNIER, FLA. BAY staff read 2.72. The south end was in range at 1412 on February 14 when 30-3(ATLANTIC SIDE) MLW was flown. The south half was also in range at 1107 on February 16 when 30-3 MHW was flown although the staff was not manned at that time.

4. ADDITIONAL PHOTOGRAPHY

Special photography over Florida's test area was flown between 1005 and 1240 on 20 February with various films. The staff at the EAST ARSENICKER gage was observed and its value recorded at 5 minute intervals during this period. The staff at the

mouth of the northern cut (MANGROVE POINT) was observed and its value recorded at 5 minute intervals from 1135 to 1300 hours. The latter staff values are listed in the EAST ARSENIKER Form 277.

5. FORESHORE PROFILES

Four planetable beach profiles were run within the limits of the job during the photography period of August 1971. The few small beaches found for the profiles were of coral, and since erosion is not considered a problem, these profiles were not rerun.

6. MONITORING OF TEMPORARY TIDE STAFFS IN THE JOB AREA

On February 15 verbal instructions were received from the Chief, Tidal Datum Planes: Temporary staffs were to be put in at 11 selected locations and observed every 12, 15, or 30 minutes through one high and one low water. All 11 need not be observed simultaneously and the actual location could be varied slightly. Four were observed on the 16th., two on the 17th., 1 on the 20th., and four on the 21st. The chart accompanying this report shows the exact location of each staff.

7. FIELD RECORDS

All CSI cards, Form 277's and a copy of the records from the 11 tide staffs were sent to C3413 on 13 March 1972. The original field records for the 11 staffs were forwarded to C3311 on 23 February 1972. Profiles and recovery notes were sent to C3413 on 1 March 1972 with the report for work done on this job in August 1971.

Submitted 14 March 1972

John C. Veselenak
John C. Veselenak
Chief, Photo Party 65

Photogrammetric Plot Report
Hillsboro Inlet to Card Sound, Florida
Job PH-7113
and
Card Sound to Plantation Key, Florida
Job PH-7119

21. Area Covered

This report covers an area on the east coast of Florida immediately south of Hillsboro Inlet to the southwestern end of Plantation Key. Job PH-7113 and Job PH-7119 are combined in this one report because the southern portion of Job PH-7113 is included in the block adjustment of Job PH-7119.

Job PH-7113 consists of twenty (20) 1:10,000 scale sheets: TP-00416 through TP-00420, and TP-00422 through TP-00436.

Job PH-7119 consists of twelve (12) 1:10,000 scale sheets: TP-00444 through TP-00455.

Subsequent to the initial bridging in this area, three small areas were re-bridged using new photography. The reports are attached:

- (1) Port Everglades, Florida
- (2) Miami to Mangrove Point, Florida
- (3) Hollywood to Miami Beach, Florida

22. Method

Eleven (11) strips of photography were bridged using aerotriangulation methods. Tie points were made between strip No. 1 of PH-7113 and strip No. 2 of the Jupiter Inlet to Hillsboro Inlet, Florida report to the north of this area.

Due to the placement of control in relation to flight lines and due to large areas of water coverage, two block adjustments were made. Strip No. 2, No. 3, and No. 4 comprised one block. Strip No. 7, No. 9, No. 10, and No. 11 comprised the other block. Attached is a sketch showing the location of the strips and the blocks.

Image points were located to rectify photographs for orthophoto, nautical, and small craft charts. All points were drilled by the PUG method. Closure to control has been noted on the read-outs. A sketch is attached which shows the control used in the strip and block adjustments. All points were plotted on the Florida East Zone Plane Coordinate System using the Coradomat Plotter or the Calcomp Plotter.

2

Ratio points were located on twenty-eight (28) strips of infrared¹⁹ contact prints. Additional ratio points were located on contact prints which have a large portion of water coverage so that they could be individually enlarged to scale. A sketch showing the location of the infrared photographs is attached.

23. Adequacy of Control

The control was adequate. Horizontal control was pre-marked on strip No. 1, No. 2, No. 3, No. 4, No. 5, and No. 6. Because of the placement of flight lines in relation to control, it was necessary to extend Strip No. 5 one model past its terminal control station in order to have an area of common coverage with strip No. 6. Tie points were located in this area and tie point 544801 was used as a terminal control point for strip No. 6.

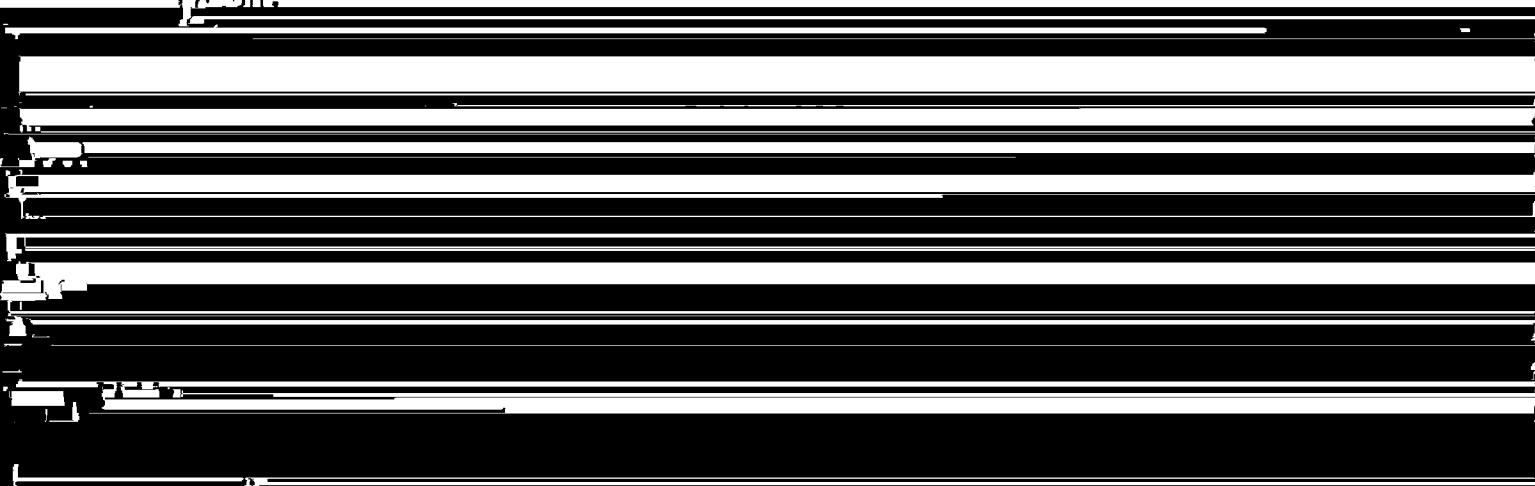
Most of the horizontal control for Strip No. 7, No. 8, No. 9, No. 10, and No. 11 was pre-marked for color photography which was flown on August 4, 1971, and August 11, 1971. This photography was not used for bridging. The positions of the pre-marked control stations were transferred, using PUG methods, to color infrared photography which was flown on March 5, 1973, and March 18, 1973.

The following control station positions were transferred from photographs 71L(C)8370 through 71L(C)8382:

- Irving 1971
- Mangrove (USE) 1930 Sub Point A
- Sands Cut RM2, 1849-1947 Sub station

The following control station positions were transferred from a roll of color photography which was not indexed (Spot No.100-691A)

10-20.



- Angelfish Key RM3, 1853
- Narrow Point, 1854
- Long Sound 1961
- Snipe Pt., 1934, substation
- Knowlson, 1935, substation
- Hull Key, 1852
- Rock Harbor 2, 1961
- Lower Sound Point, 1853 substation
- Sub Station, Key Largo Cable Visions Inc., Taller Mast, 1961
- Largo 1962

The following control station positions were transferred from photographs 72L(C)8691R thru 72L(C)8698R:

Tavernier 1935
Snake 1934 Sub. Sta.

Turkey Pt. 2, RM2 was transferred from photograph 71E(C)9595.

Cape Florida Old Tower Finial Sub Station A was transferred from photograph 71E(C)9201.

Lower Sound Point 1853 sbu. station was not used in the adjustment because the field party advised that it was questionable and should be used with caution. Sub. station Key Largo Visions, Inc., Taller Mast, 1961, could not be used because one of its azimuth stations (Key Largo Cable Visions, Inc. Shorter Mast) appears to have a bad published position. To date, this has not been resolved by the Geodesy Division. Turkey Point 2, RM2 was a very poor point to transfer, and, therefore, it was not used as control in the block adjustment in that area.

Part-way through the compilation phase of this project, it was determined that the published control positions in the area of this report were in error approximately - 4 feet in X and -10 ft. in Y. Therefore, Strip No. 1, No. 2, No. 3, No. 4, No. 5, No. 6, and No. 8 are adjusted to the old published control positions. This area includes T-sheets TP-00416 through TP-00420 and TP-00422 through TP-00432.

Strip No. 7, No. 9, No. 10, and No. 11 are adjusted to new preliminary control positions which were furnished by Geodesy on May 29, 1974. Geodesy Division stated this preliminary control will be within one (1) foot of the final adjustment. They also said to base non-main scheme stations on the nearest main scheme stations. This was approved by the Coastal Mapping Division.

Since stations established in 1971 and later have positions which were determined by a different adjustment than stations which were established before 1971, it was necessary that the corrections for non-main scheme stations of 1971 and later be based on the new preliminary control of the nearest main scheme stations of 1971 and later. In like manner, pre-1971 non-main scheme stations are based on the amount of change of the nearest pre-1971 main scheme station.

The compiler was advised to make a graphic adjustment on TP-00430 so it will junction well with TP-00433. Also, TP-00432 should be graphically adjusted so it will junction well with TP-00433, TP-00434, and TP-00435.

A listing of closures to control is included on an attached sheet of control stations. The station with the largest residual is Narrow Point 1854, with 1.808 feet in X and 1.267 feet in Y.

24. Supplemental Data

USGS Topographic Quadrangles and NOS Nautical Charts were used to obtain vertical control for bridging.

25. Photography

The following RC-8 color photography was used for bridging:

1:20,000 scale

Strip No. 4 71E(C)9201-9215
Strip No. 8 73L(C)2871-2884R
Strip No. 9 73L(C)2893-2924R

1:30,000 scale

Strip No. 1 71E(C)9120-9135
Strip No. 2 71E(C)9562-9574
Strip No. 3 71E(C)9576-9586
Strip No. 5 71E(C)9536-9545
Strip No. 6 71E(C)9588-9602

1:40,000 scale

Strip No. 7 73L(C)2935-2945R
Strip No. 10 73L(C)2952-2968R
Strip No. 11 73L(C)2785-2797R

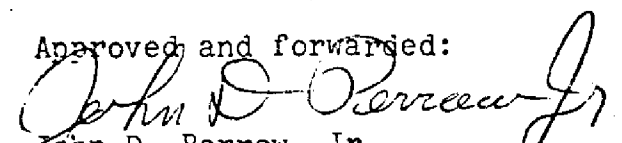
The quality and definition of the photography was adequate.

Respectfully submitted,



Victor McNeel

Approved and forwarded:

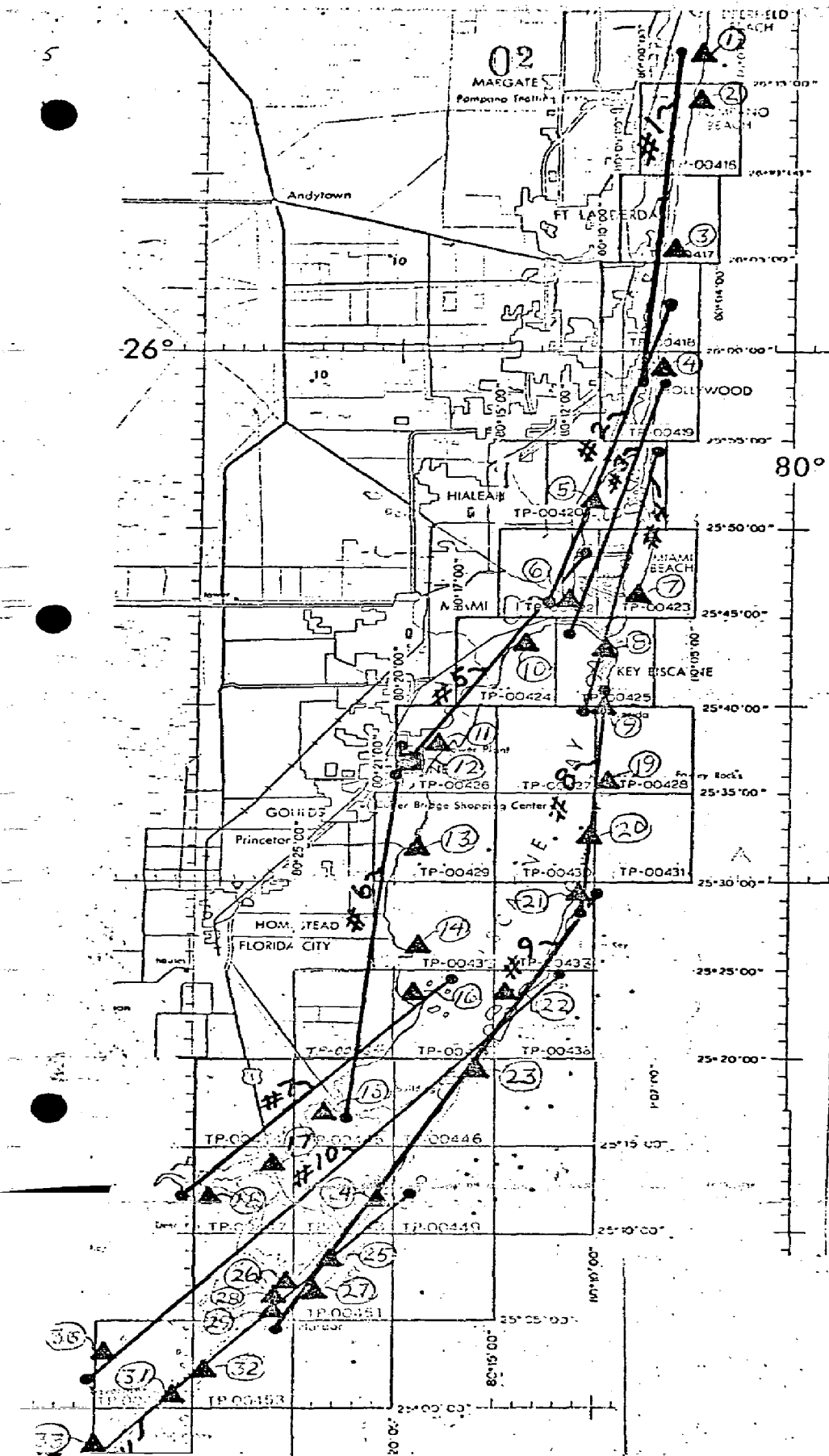


John D. Perrow, Jr.
Chief, Aerotriangulation Section

JOB PH-7113
AND
JOB PH-7119

HILLSBORO INLET
TO
PLANTATION KEY,
FLORIDA

CONTROL STATIONS
USED IN THE
ADJUSTMENTS



CONTROL STATIONSresiduals

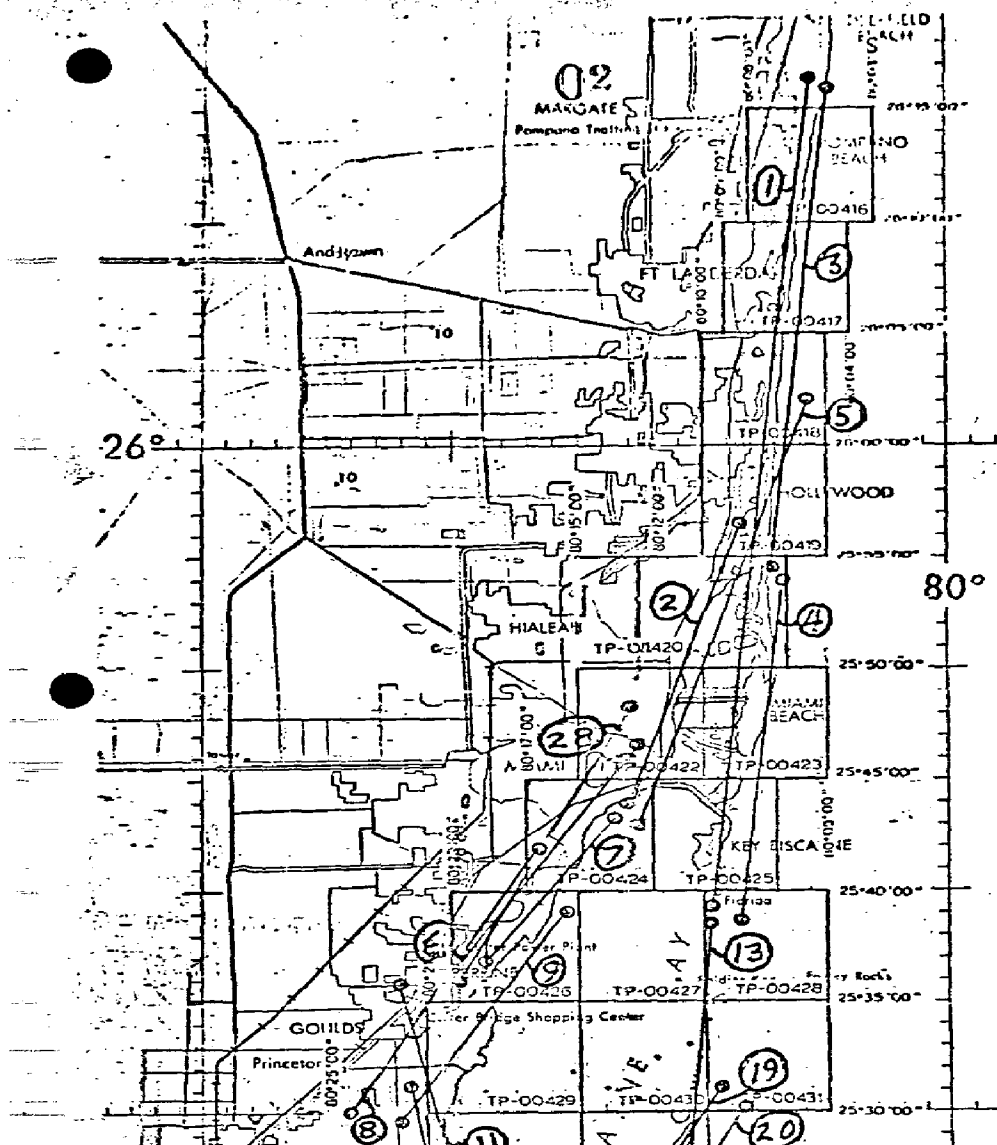
1. (027100) Turtle 1929 -0.706 -0.115
2. (023102) Pompano. 1928. subpoint R 1.488 -0.229

30.	(967101)	Low 2, RM 2, 1934	0.042	0.215
31.	(692100)	Tavernier, 1935	0.308	-1.325
32.	(793101)	Planter 2, RM 4	-1.476	1.087
33.	(695101)	Snake, 1934, subpoint	0.128	0.174

** means not used in adjustments

INFRA-RED CONTACT PRINTS

1. 71K 5632R - 5660R MLW
2. 71K 5662R - 5672R MLW
3. 71K 5750R - 5766R MHW
4. 71K 5795R - 5806R MHW
5. 71K 5815R - 5829R MHW
6. 71L 8501R - 8509R MLW
7. 71L 8512R - 8520R MLW
8. 71L 8571R - 8580R MHW
9. 71L 8523R - 8530R MLW
10. 71L 8783R - 8791R MHW
11. 71L 8584R - 8593R MHW
12. 71L 8532R - 8537R MLW
13. 71L 9067R - 9080R MLW
14. 71L 8337R - 8341R MHW
15. 72K 6287R - 6298R MHW
16. 72K 6572R - 6584R MLW
17. 72K 6546R - 6563R MLW
18. 72K 6311R - 6330R MHW
19. 71L 8544R - 8559R MLW
20. 71L 8648R - 8662R MLW
21. 72K 6480R - 6499R MHW
22. 71L 8697R - 8705R MHW
23. 72K 6344R - 6350R MLW
24. 72K 6253R - 6255R MLW
25. 72K 6420R - 6423R MHW
26. 72K 6501R - 6515R MHW
27. 72K 6368R - 6382R MLW
28. 71K 5847R - 5856R MHW



JOB PH-7113
AND
JOB PH-7119

HILLSBORO INLET
TO
PLANTATION KEY,
FLORIDA

INFRA-RED CONTACT
PRINTS RATIOED FOR
COMPILATION

Horizontal Control

Map TP- 00433

Station	NOS Geodetic Data Reference for Description, Positions, Coordinates and Azimuths
✓ SANDS CUT 1849	Book 424, P. 3, 29, G.P. Fla, Vol. 1, P. 509, P.C. Fla. E. Zone, P. 127
✓ LOG 1908	Book 424, P. 3, 4, 29, G.P. Fla. Vol. 1, P. 380, P.C. Fla. E. Zone P. 97
✓ ELL 2 1972	*
✓ POINT ADELLE 2 1908	Book 424, P. 5, 6, 29, G.P. Fla. Vol. 1, P. 380, P.C. Fla. E. Zone P. C. 98
✓ OTT 2 1972	*
✓ ELLIOTT 1908	Book 424, P. 6, 30, G.P. Fla. Vol. 1, P. 380, P.C. Fla. E. Zone P. 98
	*Copy of unadjusted field horizontal control was used.

Compilation Report
TP-00433
July 1974

31. Delineation

The tidal datum lines on this map were compiled by graphic methods from the tide-coordinated black-and-white infrared photography. This photography was controlled by map points determined by aerotriangulation and planimetric detail compiled from the rectified prints of the color infrared photography.

The rectified prints of the color photography were used for the compilation of manmade shoreline, interior details, and offshore details such as shallow and shoal areas.

32. Control

Horizontal Control was adequate (see Photogrammetric Plot Report).

33. Supplemental Data - None

34. Contours & Drainage

Contours are inapplicable. Drainage was compiled from rectified prints of the color infrared photography.

35. Shoreline and Alongshore Detail

The photography was adequate for the delineation and interpretation of the shoreline and alongshore details. There were no specific features or areas called to the attention of the field editor for verification.

36. Offshore Details

No unusual problems were encountered.

37. Landmarks and Aids

There are no charted landmarks on this map. Non-floating aids that were not visible on the photography will be located by field methods.

38. Control for Future Surveys - None

39. Junctions

Refer to Form 76-36B (Data Record).

40. Horizontal and Vertical Accuracy

The map complies with the accuracy requirements for the Florida Coastal Zone Mapping Program as outlined by project instructions, PH-7000.

41. thru 45. Inapplicable

46. Comparison with Existing Maps

Comparison was made with USGS Quadrangle, Elliott Key, Fla., 1956, 1:24,000 scale, photorevised 1969.

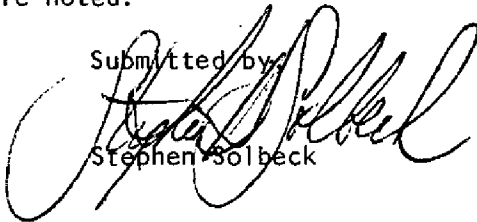
No significant differences were noted.

47. Comparison with Nautical Charts

Comparison was made with Chart 849, 1:40,000 scale, 6th edition, August 1972; Chart 141SC, 1:80,000 scale, 11th ed., Sept. 1973, Chart 1249, scale 1:80,000, 12th ed., April 1973.

No significant differences were noted.

Submitted by


Stephen Solbeck

Approved and forwarded:



J.P. Battley, Jr.
Chief, Coastal Mapping Section

Field Edit Report, Map TP-00433, Job. PH 711351. METHODS

The Shorelines of the Atlantic Ocean and Biscayne Bay were inspected from a small boat while cruising just off shore. Notes regarding apparent and fast shoreline, piers and other shoreline features were made on the rectified and HW photographs.

The MHWL was inked inside of the apparent shoreline in areas where it could be positively identified on the photographs. It is recommended that only the MHWL that is inked be used and not to extend the MHWL even if it appears to follow a photograph image.

There are no landmarks on this manuscript except for a number of small houses along the shoreline.

Four new government aids were located. Elliott Key Daybns 14 and 16 were located by sextant cuts and Elliott Key Daybns 17 and 18 were located by one D and R direction with a T-2. Daybns 17 and 18 were computed in the field for check on directions. Elliott Key Park Light (priv.) was identified on photo 73 L 2897R.

Three tide gages and tidal bench mark for each gage were identified on the rectified photographs. Form, Vertical Control- Geodetic, is not submitted since they are tidal marks only.

Six triangulation stations were recovered.

Field edit notes will be found on the discrepancy print, field edit sheet and the photographs.

52. ADEQUACY OF COMPILATION

Adequate after application of field edit.

53. MAP ACCURACY

No test required.

54. RECOMMENDATION

None.

55. EXAMINATION OF PROOF COPY

Not required.

Submitted By

Robert R. Wagner
Robert R. Wagner

Chief, Photo Party 60

May 1976

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-7113 (Hillsboro Inlet to Card Sound, Fla.)

TP-00433

Atlantic Ocean

Billys Point

Biscayne Bay

Biscayne National Monument

Coon Point

Elliott Key

Elliott Key Marina

Point Adelle

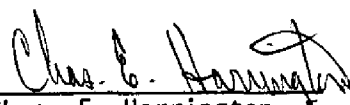
Sands Cut

Sands Key

Sawyer Cove

Sea Grape Point

Approved by:


Chas. E. Harrington
Staff Geographer C51x2

Review Report
Coastal Zone Map TP-00433
April 1976

61. General

The map manuscript for Coastal Zone Map TP-00433 was inspected as a Class III map (compilation, discrepancy print, and report) and reviewed as a Class I map by the Quality Control Group. The review consisted of an examination of the map manuscript, the field edit and its application, the reproduction negatives, and the Descriptive Report.

The proof copy of this map was edited by the Quality Control Group before making final copies. This edit comprised a thorough inspection of map details to verify the accuracy of reproduction with reference to the map manuscript and the quality of reproduction. In addition, the proof copy was examined by the following sections:

- Coastal Mapping - map details
- Staff Geographer - geographic names
- Coastal Surveys - horizontal and vertical control

The combined field report for Jobs PH-7010 and PH-7113 dated March 25, 1971, states that ten (10) planetable beach profiles were run within the limits of Job PH-7113. These profiles were not available to this office during compilation or final review. The four (4) planetable beach profiles referred to in the Field Report for Job PH-7119, dated March 14, 1972, were used and they verified the photo image selected for the tidal datum lines. Two (2) of these profiles are within the limits of Job PH-7113 (TP-00433 and TP-00436) and the two are within the limits of Job PH-7119 (TP-00448 and TP-00452).

62. Cartographic Comparison

Comparison was made with the following USGS quadrangle map at a scale of 1:24,000:

Elliott Key, FL, 1956, photorevised 1969.

No significant changes were found.

Comparison was made with the following Nautical Charts:

C&GS 848(N.O.11173), 15th edition, dated March 30, 1974

114639Formerly C&GS849) 7th edition, dated August 3, 1974

Copies of field notes pertaining to the existence of piers, piling, and wrecks are attached to the Maintenance Print for Nautical Charts.

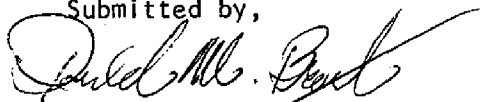
The offshore rocks awash shown on Charts 849 and 11463 (between latitudes 25°25' and 25°30') were not visible on the photography.

63. thru 65. Inapplicable

66. Adequacy of Results and Future Surveys

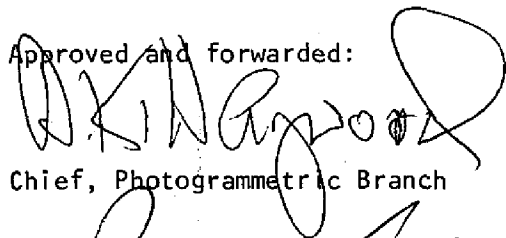
Coastal Zone Map TP-00433 complies with the instructions for NOS Cooperative Boundary Mapping, Job PH-7000, and the National Standards of Map Accuracy.

Submitted by,

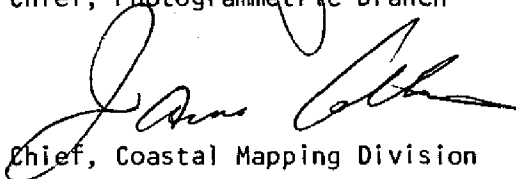


Donald M. Brant

Approved and forwarded:



Chief, Photogrammetric Branch



Chief, Coastal Mapping Division

* SVY TP-00433 * RPT UNIT CMD ROCKVILLE, MD. * PAGE 1 OF 1 *
 * JOB PH-7113 * NONLOADING AIDS FOR CHARIS * STATE FLORIDA * ORIGINATING ACTIVITY *
 * PRJ R * LOCALITY BISCAYNE BAY * * * * *
 * DTM NA 1927 * DATE 11/11/75 * * * * *

THE FOLLOWING OBJECTS HAVE NOT BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS

* CHARTING * RECORD REASON FOR DELETION * POSITION * CODES * METHOD AND DATE * CHARTS *
 * NAME * BUT TRIANGULATION NAMES IN () * LATITUDE DM C-C * OF LOCATION * FIELD * AFFECTED *

* BISCAYNE BAY * * * * *
 * SOUTHWEST POINT * * * * *

* LIGHT * ELLIOTT KEY PARK * 25 27 10.23 314.8 200 * * 73LC2897R * 1249 *
 * HARBOR LIGHT * 80 11 49.72 1389.1 * * * 10/03/74 * 141SC *

* DYBN * HAWK CHANNEL * 25 27 46.42 1428.4 219 * * F-8 * 849 *
 * 14 * ELLIOTT KEY * 80 10 4.99 139.4 1 * * 10/10/74 * DITTO *

* DYBN * ELLIOTT KEY * 25 26 47.12 1445.9 219 * * 73LC2895R *
 * 15 * 80 10 12.46 348.1 2 * * DITTO * DITTO *

* DYBN * DITTO * 25 25 30.76 946.5 219 * * DITTO *
 * 18 * 80 10 43.92 1227.3 3 * * * DITTO *

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* TYPE OF ACTION * NAMES OF RESPONSIBLE PERSONNEL * ORIGINATOR *

* * * * *

* POSITIONS DETERMINED * ROBERT R. WAGNER * FIELD REPRESENTATIVE *

* AND/OR VERIFIED BY * P. DEMPSEY AND VERIFIED BY J. BATTLE * OFFICE COMPILER *

* FIELD AND OFFICE * J. PIRRONE * DIGITIZER *

* ACTIVITIES * J. TAYLOR * DATA PROCESSER *

National Archives Data
TP-00433

- 1 Discrepancy Print
- 1 Field Edit Sheet (stable base)
- 1 Form 76-40
- 1 Form 76-36C

Photography:

73L2872R, 2895R thru 2897

72K6443, 6465, and 6470