

Orig.

T-11795

11795
66211

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	Special Mapping (Hydrographic)
Field No.	PH-6803
Office No.	T-11795
CLASS III MAP	
LOCALITY	
State	Florida
General locality	Florida Keys
Locality	Key West
1966 1967-68	
CHIEF OF PARTY	
Richard H. Houlder	
Chief, Photogrammetry Division	
LIBRARY & ARCHIVES	
DATE	

USCOMM-DC 5087

DESCRIPTIVE REPORT - DATA RECORD
T -11795

PROJECT NO. (II):

PH-6803

FIELD OFFICE (II):

Key West, Florida

CHIEF OF PARTY

R. S. Tibbetts

PHOTOGRAMMETRIC OFFICE (III):

Rockville, Maryland

OFFICER-IN-CHARGE

Richard H. Houlder

INSTRUCTIONS DATED (II) (III):

Field January 8, 1968

Office January 2, 1969

MAP NOT INSPECTED IN QUALITY CONTROL PRIOR
TO REGISTRATION

METHOD OF COMPILATION (III):

B-8 Stereoplotter

MANUSCRIPT SCALE (III):

1:20,000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):

1:20,000

DATE RECEIVED IN WASHINGTON OFFICE (IV):

DATE REPORTED TO NAUTICAL CHART BRANCH (IV):

APPLIED TO CHART NO.

DATE:

0

DATE REGISTERED

AUG 26 1975

GEOGRAPHIC DATUM (III):

NA 1927

VERTICAL DATUM (III):

MEAN SEA LEVEL EXCEPT AS FOLLOWS:

Elevations shown as (25) refer to mean high water

Elevations shown as (5) refer to sounding datum

i.e., mean low water or mean lower low water

REFERENCE STATION (III):

Rock Point 3, 1934

LAT.:

24°33' 33.477

LONG.:

81°41' 06.753

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

STATE

ZONE

= 82,673.63

x = 272,261.54

Florida

East

ROMAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (II) FIELD PARTY, (III) PHOTOGRAMMETRIC OFFICE,
OR (IV) WASHINGTON OFFICE.

WHEN ENTERING NAMES OF PERSONNEL ON THIS RECORD GIVE THE SURNAME AND INITIALS, NOT INITIALS ONLY.

DESCRIPTIVE REPORT - DATA RECORD

T-11795

FIELD INSPECTION BY (III): R. S. Tibbetts		DATE: Feb. 1968
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION): Date of photography.		
PROJECTION AND GRIDS RULED BY (IV): A. Bethea		DATE 11/7/68
PROJECTION AND GRIDS CHECKED BY (IV): L. Van Scoy		DATE 11/12/68
CONTROL PLOTTED BY (III): R. A. Youngblood		DATE 1/6/69
CONTROL CHECKED BY (III): J. F. Battley Jr.		DATE 1/6/69
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): Robert B. Kelly		DATE 12-68
STEREOSCOPIC INSTRUMENT COMPILATION (III): J. C. Richter	PLANIMETRY	DATE
	CONTOURS Sounding	DATE 1/24/69
MANUSCRIPT DELINEATED BY (III): R. A. Youngblood		DATE 1-69
SCRIBING BY (III):		DATE
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): K. N. Maki - J. Battley		DATE 1-69/8-74
REMARKS:		

DESCRIPTIVE REPORT - DATA RECORD

T-11795

CAMERA (KIND OR SOURCE) (III):

"S" C 6" Focal Length

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
67-S(C)-8479 thru 67-S(C)-8487	Feb. 24, 1967	16:03	1:15,000	at MLW
68-L(C)-5886-5893	Nov. 14, 1968	11:43	1:15,000	0.4 ft. above MLW
* 68-E(C)-8326-8333	Nov. 14, 1968	11:43	1:15,000	"

TIDE (III)

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION: Key West, Florida		1.3	1.6
COORDINATE STATION: Boca Chica Channel		1.2	1.5
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV):

DATE:

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):

3

RECOVERED:

3

IDENTIFIED:

3

NUMBER OF BM(S) SEARCHED FOR (II):

RECOVERED:

IDENTIFIED

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

REMARKS:

*Flown for color test - comparison of minus blue filter and conventional - but utilized to update shoreline on manuscript.

"L" photography - minus blue color

"E" photography - conventional color

SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-11795

Topographic map T-11795 is one of two similar maps in project PH-6803. It is the westerly one of the two maps and covers part of the east shore of Key West Island and the south shore of Stock Island, Boca Chica Key and Geiger Key. This is a special mapping project originated for the purpose of completing hydrographic soundings by photogrammetric methods to complete a hiatus in hydrography left by a launch party from the U. S. Navy Ship Tanner in 1962. The field operations preceding compilation included the recovery of sufficient triangulation to satisfy aerotriangulation requirements. One temporary horizontal control station was established. Vertical control was limited to the recovery of bench marks required for leveling to model points. Soundings that served as bottom profiles were also furnished along three pre-determined ranges as added support for reading of water depths by B-8 stereoplotter. The level of water based on predicted tides at time of photography was used as an aid in controlling vertical datum.

The B-8 stereoplotter compilation was compiled at a scale of 1:20,000 on work sheets. The manuscript was prepared from the work sheets at the same scale showing the photogrammetrically determined soundings covering the hiatus area. Shoreline of the date of photography was added including foreshore features such as rocks and piling. The registered copy under T-11795 will consist of the map reproduction on cronaflex.

JOB 111-6803

KEY WEST, FLA

SPECIAL MAPPING

Horizontal Control

Horizontal Control recovery was limited to those stations needed to meet Aerotriangulation requirement, as indicated on a diagram furnished by the Rockville Office.

One new temporary station was established at Battery C, 6th Battalion (Hawk) 65 artillery missile site. The position was determined by a three point fix on verbal instructions from Chief of Photo Party No. 6420.

Sun azimuths were taken at triangulation stations, Rock Point 3, 1934 and B2 Battery 231-232, 1943, as check to natural objects that were used as azimuths, during identification of those stations.

A sun azimuth was taken at Key West Main Channel Rear Range because no other reliable azimuth was available. Photo-identification of horizontal control was completed in accordance with Photogrammetry Instruction 22, revised September 30, 1965.

Vertical Control

Recovery of Bench marks within the project area was limited to those required for the leveling to model points as indicated on the color contact prints. Photo-identification model point was in accordance with Photogrammetry Instructions 22, revised September 30, 1965.

Soundings

Soundings were taken along each of the six ranges as indicated on the contact photographs. The approximate on range angle to another object was computed, distances and angles necessary for these computations were scaled from the contact photographs, although these values are only approximate. It was assumed they were of sufficient accuracy, to maintain a spacing interval of approximately 150 feet.

Range No. 1.

Photo point No. ⁹⁴⁻⁰⁷~~97-04~~ is the front range. Photo point No. 94-08 is the rear range. The spacing of soundings along the range, was determined by measuring the angle to photo point 94-14.

Rear Range No. 2

Rear range No. 2 was located by angle and distance from photo point No. 94-09. Front range No. 2 is the eastly off shore corner of the municipal pier at the foot of White Street, Photo point No. 94-10. The spacing of soundings along this range was determined by measuring the angle to the weather bureau white radar dome that is located by angle and distance from Photo point 94-13.

Range No. 3

Front and rear range No. 3 was located by angle and distance from photo points No's 94-11 and 94-12. The spacing of

soundings along this range was determined by measuring the angle to photo point No. ⁹⁴~~95~~-12.

Range No. 4

Front range No. 4 was located by a Theodolite three point fix, using photo point No's 95-11, 95-12 and 95-13. A check angle was taken to rear range No. 4 from photo point 95-09. The spacing of soundings along range No. 4 was determined by measuring the angle to Key West Radio Station WKWF antenna, 1950.

Range No. 5

Front and rear range No. 5 were located by angle and distance from Photo point No. 95-07. The soundings along range No. 5 were determined by measuring the angle to Photo Point No. 95-08.

Range No. 6

Front and rear ranges No. 6 were located by angle and distance from Photo point No. 95-10. The spacing along range No. 6 was determined by measuring the angle to Btry "C" 65th artillery ROR Tower 1968.

A divergence from the instructions was made in part from paragraph 7-04, this being that the party had an insufficient number of form 152.

Sketchs have been made on the back of C&GS form 526 for all Photo points used as vertical and horizontal control of sounding ranges.

Submitted By

Robert S. Tibbetts

Robert S. Tibbetts

Photogrammetric Plot Report
Key West, Florida
Job PH-6803
December, 1968

21. Area Covered

This report covers T sheets 11794 and 11795 of Key West, Florida.

22. Method

A bridge was run to provide horizontal and vertical control for graphic compilation. The C-5 was used for instrumentation. Photographs 67-S(C)-8479 through 67-S(C)-8493 were used in bridging. The adjustment on the IBM 1620 utilized 5 field-identified control stations, with 13 office-identified stations as checks, and 14 vertical control stations.

23. Adequacy of Control

The horizontal and vertical control provided complied with the instructions and was adequate except for vertical control 9506. The adjustment indicated this point to be +6.28 feet. The reason for this is the narrow spread between the pairs of verticals 9505 and 9506, but there is enough water to level on in setting up models in this area on the B-8.

All other control held well within the accuracy required by National Standards of Map Accuracy at 1:20,000 scale.

24. Supplemental Data

None

25. Photography

Photography was adequate as to coverage, overlap and definition.

Submitted by,

Robert B. Kelly
Robert B. Kelly

Approved by:

Henry P. Eichert
Henry P. Eichert

COMPILATION REPORT
T-11795

Refer to special Mapping Report for project PH-6803 by Mr. R. S. Tibbetts submitted February 1968 and Photogrammetric Plot Report submitted December 1968 included in this Descriptive Report.

31. Delineation

Color models 67-S-8479 through 67-S-8487, dated February 24, 1967, were set on the B-8 stereoplotter for delineation of soundings to complete the hiatus in hydrography left by the launch party from the U. S. Navy Ship Tanner in 1962. Refer to Hydrographic Survey H-8762, dated 1963. In addition color photography was flown on November 14, 1968, for the purpose of testing water penetration characteristics between conventional color photography and color photography taken with minus blue filter. This test photography was used to update the shoreline. Refer to Data Record for listing of test photography. This is not a shoreline survey. Shoreline was delineated primarily to show the relationship of the position of the soundings to fast land as they appear on the map manuscript.

32. Control

Horizontal control was adequate. Refer to Photogrammetric Plot Report.

Vertical control points were located in the middle of every other model and at times these models had to be set up first and vertical points dropped at the outside limits of the model in order to level the adjoining models. Some level points were taken from USGS quadrangles.

It was quite difficult to locate the mean high-water line in the models. Soundings, along ranges, were run by the field party to help evaluate the depths of the water (Field Instructions Paragraph 7-0.1).

33. Supplemental Data

U.S. Engineers (USGS) quadrangle, Boca Chica, Florida, scale 1:24,000 dated 1952 was used to help supplement elevations.

Boat sheet 8762 dated 1963 was used for the limits of soundings.

34. Contours and Drainage

Inapplicable

35. Shoreline and Alongshore Details

No shoreline inspection necessary.

New features or changes along the shoreline were delineated. Shoal lines were delineated from office interpretation. Refer to item 31.

36. Offshore Details

No unusual problems were encountered except from wave action. The sun hitting the tops of the waves made it difficult to see through to the bottom.

37. Landmarks and Aids

Inapplicable

38. Control for Future Surveys

Inapplicable

39. Junctions

Junction to the west has been made with T-11794 and is in agreement.

40. Horizontal and Vertical Accuracy

Refer to Photogrammetric Plot Report December 1968.

41. thru 45

Inapplicable

46. Comparison with Existing Maps

Inapplicable

47. Comparison with Nautical Charts

Comparison has been made between T-11795 and Nautical Chart No. 584, scale 1:30,000, 17th Edition, May 13, 1968 and Chart No. 854, scale 1:40,000, 6th Edition, June 10, 1968. T-11795 is in good agreement with these charts.

-3-

Items to be applied to Nautical Charts immediately.

None

Items to be carried forward.

None

Respectfully submitted,

John C. Richter

John C. Richter
Cartographer (Photo)

Approved and Forwarded,

K. N. Maki

K. N. Maki
Chief, Compilation
Section

Review Report
T-11795
PH-6803
Special Mapping
Hydrographic Soundings
September 1969

61. General Statement

This map is the product of a special mapping project whereby soundings, normally determined by hydrographic survey methods, were determined by photogrammetric methods.

Color photography, taken for its water penetration characteristics, was used in the Wild B-8 stereoplotter to read bottom values along and near shore, left unsurveyed by the hydrographic operation (see instructions and summary).

62. Comparison with Registered Topographic Surveys

Comparison was made with T-11251, scale 1:10,000, dated 1960, revised from field edit to October, 1966.

63. Comparison with Maps of other Agencies

Comparison was made with U.S.G.S. quadrangle, Key West, Florida, scale 1:24,000, dated 1943, and Boca Chica Quadrangle, 1:24,000 scale, dated 1943.

64. Comparison with Contemporary Hydrographic Surveys

A comparison was made with H-8762 to assure satisfactory junction with the hydrography plotted adjacent to the foreshore hydrography determined by this project.

65. Comparison with Nautical Charts

Comparison was made with Chart No. 584, scale 1:30,000, dated May 13, 1968, and Chart 854, scale 1:40,000, 6th edition, dated June 10, 1968.

66. Adequacy of Results and Future Surveys

This special map complies with the project instructions and good results were obtained in defining the foreshore hydrography by photogrammetric methods.

Submitted by.

J. P. Battley, Jr.
J. P. Battley, Jr.

Approved:

K. N. Maki (JB)
K. N. Maki

48. Geographic Name List

Boca Chica Channel

Boca Chica Key

Cow Key

Cow Key Channel

Geiger Key

Key West Island

Safe Harbor

Stock Island

DESCRIPTIVE REPORT CONTROL RECORD

MAP T- 11795 PROJECT NO. 6803 SCALE OF MAP 1:20,000 SCALE FACTOR _____

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y COORDINATE LONGITUDE OR X COORDINATE	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS (1 ft. = 3048006 meter)	
				FORWARD	(BACK)
B2 Battery 231-232, 1943	Page 188	1927	84,314.81 258,074.56		
SS A	Comp	"	84,336.81 258,092.59		
SS B	Comp	"	84,296.30 258,093.53		
Rock Point 3, 1934	Page 81	"	82,673.63 272,261.54		
SS A	Comp	"	82,773.38 272,242.78		
SS B	Comp	"	82,669.28 272,223.79		
Battery C 65th Atry ROR Tower, 1968	3 Pt. Flx	"	88,227.71 280,648.44		
SS A	Comp	"	88,132.31 280,760.28		
SS B	Comp	"	88,617.91 280,762.04		
COMPUTED BY	DATE	CHECKED BY	DATE		