9167

Diag. Cht. No. 1245

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey TOPOGRAPHIC

Field No. ____ Office No. T-9167

LOCALITY

State FLORIDA

General locality EAST COAST

Locality BREVARD COUNTY

1949

CHIEF OF PARTY

G.E.Morris, Jr., Chief of Field Party
R.A.Gilmore, Tampa Photogrammetric

LIBRARY & ARCHIVES

DATE April - 17 - 1951

9-1870-3 (1)

9167

DATA RECORD

T - 9167

Project No. (II): Ph-30(48) Quadrangle Name (IV):

Field Office (II): Titusville, Florida Chief of Party: George E. Morris, Jr.

Photogrammetric Office (III): Tampa, Florida Officer-in-Charge: Ross A. Gilmore

Instructions dated (II) (III): The Director's Instructions, Project Ph-30(48), dated 13 July 1948

Copy filed in Division of Photogrammetry (IV) Office Files

Method of Compilation (III): Graphic

Manuscript Scale (III): 1: 20,000 Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): none

Date received in Washington Office (IV): 10-25-49 Date reported to Nautical Chart Branch (IV): 11-1-49

Applied to Chart No. Date: Date registered (IV): 2-21-51

Publication Scale (IV): 1: 24,000 Publication date (IV):

Geographic Datum (III): N.A. 1927 Vertical Datum (III): MSL

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): CACTUS 1940 ~~ACOSTA 1940~~

Lat.: 28° 39' 58.788 (1809.8m) ~~28° 41' 31.086" (957.0m)~~ Long.: 80° 49' 27.960 (759.2 m) ~~80° 50' 05.179 (1140.6m)~~

Adjusted ~~Unadjusted~~

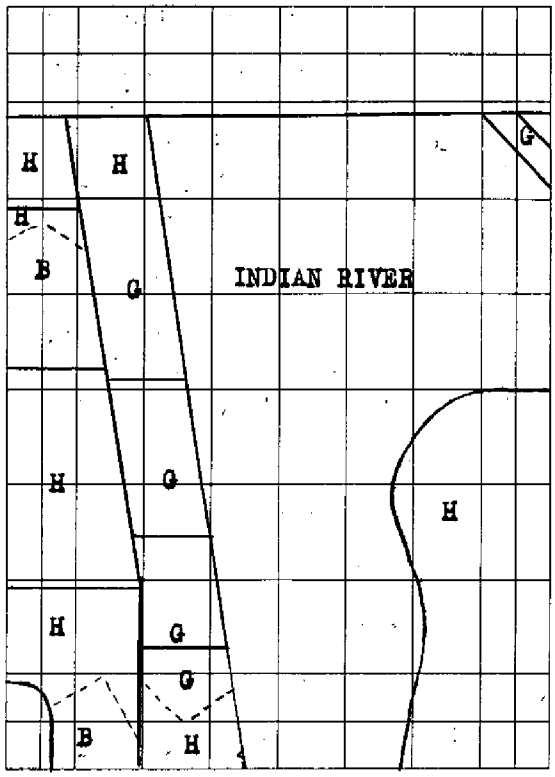
Plane Coordinates (IV): Transverse Mercator State: Florida Zone: East

Y= 1,574,941.68 X= 556,302.42

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.

M-2618-12(4)



Areas contoured by various personnel
(Show name within area)
(II) (III)

H - Contoured by Egmont Horn, Cartographic Survey Aid

G - " " Warren M. Gottschlich, Cartographic Survey Aid

B - " " Jack T. Boesher, Cartographic Survey Aid.

DATA RECORD

Field Inspection by (II): Egmont Horn, Cartographic Survey Aid
Cecil A. Navin, Topographic Engineer (Shoreline Inspection)
Date: 31 January 1949 - 5 April, 1949

Planetable contouring by (II):
Egmont Horn, Cartographic Survey Aid
Warren N. Gottschlich, Cartographic Survey Aid
Jack T. Beecher, Cartographic Survey Aid.
Date: 10 January 1949 - 1 April 1949

Completion Surveys by (II): James E. Hundley
Date: December 1949

Mean High Water Location (III) (State date and method of location): ~~4-22-48~~
~~Aerial Photo compilation~~
Identified on photographs taken April 1948

Projection and Grids ruled by (IV): W.E.W. (W.O.)
Date: Oct. 1948

Projection and Grids checked by (IV): W.E.W. (W.O.)
Date: Oct. 1948

Control plotted by (III): B.F. Lampton
Date: Nov. 1948

Control checked by (III): R.R. Wagner
Date: Nov. 1948

Radial Plot ~~[illegible]~~ by (III): M.M. Slavney
Date: May 1949

Stereoscopic Instrument compilation (III):
Planimetry
Date:
Contours
Date:

Manuscript delineated by (III): J.C. Richter
Date: Aug. 1949

Photogrammetric Office Review by (III): J.A. Giles
Date: Aug. 1949

Elevations on Manuscript checked by (II) (III): R.R. Wagner (III)
Date: Aug. 1949

M-2618-12(4)

Camera (kind or source) (III): U.S.C.&G.S. single-lens

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
48J-454 -458 Inc.	4-19-48	0855-0857	1: 20,000	No periodic tide
477 -481 "	4-19-48	0912-0915	1: 20,000	
546-548 "	4-21-48	1349-1350	1: 20,000	
677-680 "	4-22-48	1138-1140	1: 20,000	

Tide (III)

Ratio of Ranges	Mean Range	Spring Range

Reference Station:
Subordinate Station: No periodic tides
Subordinate Station:

Washington Office Review by (IV): Everett H. Ramey Date: 22 Nov 1950

Final Drafting by (IV): Date:

Drafting verified for reproduction by (IV): Date:

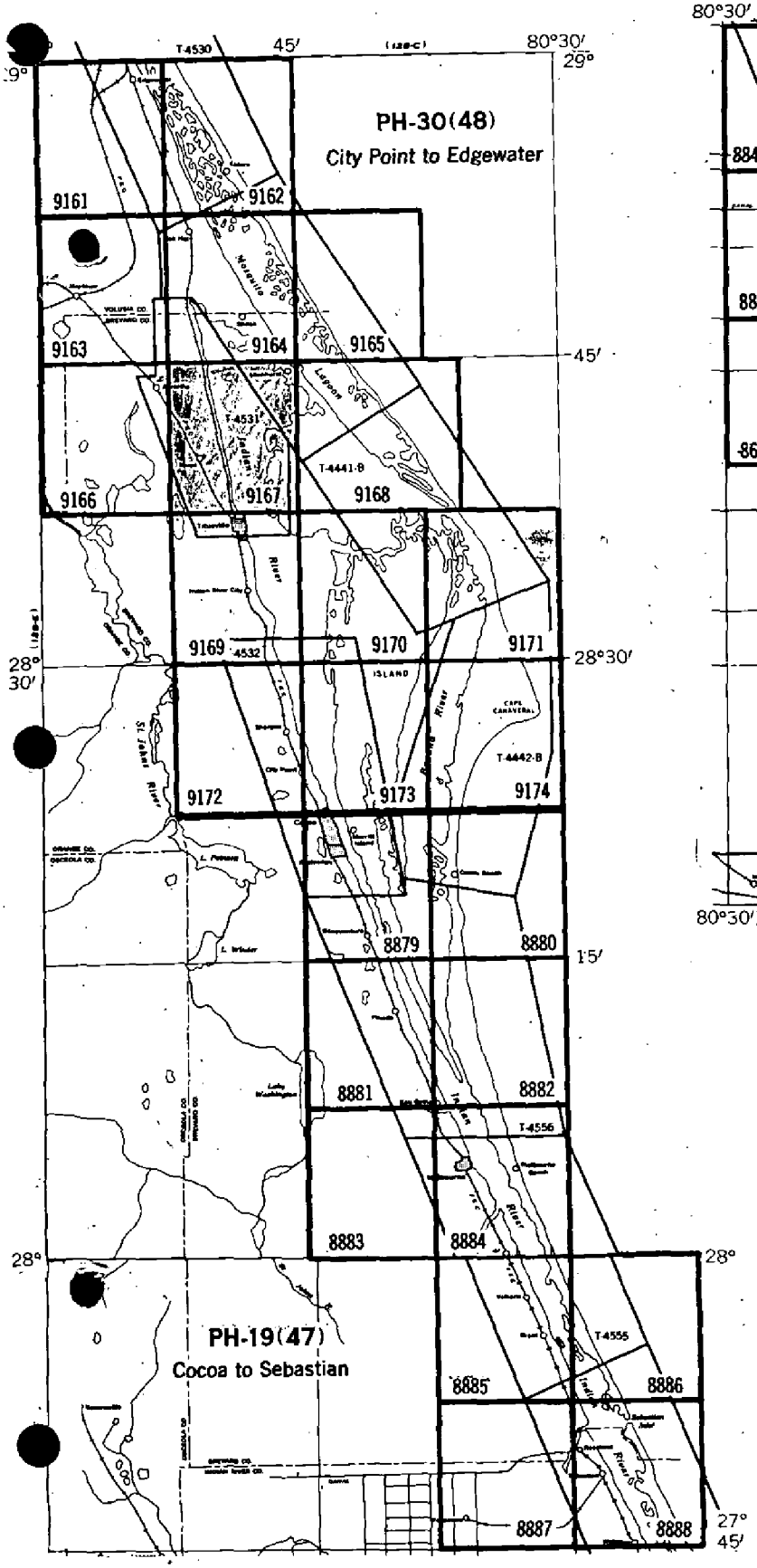
Proof Edit by (IV): Date:

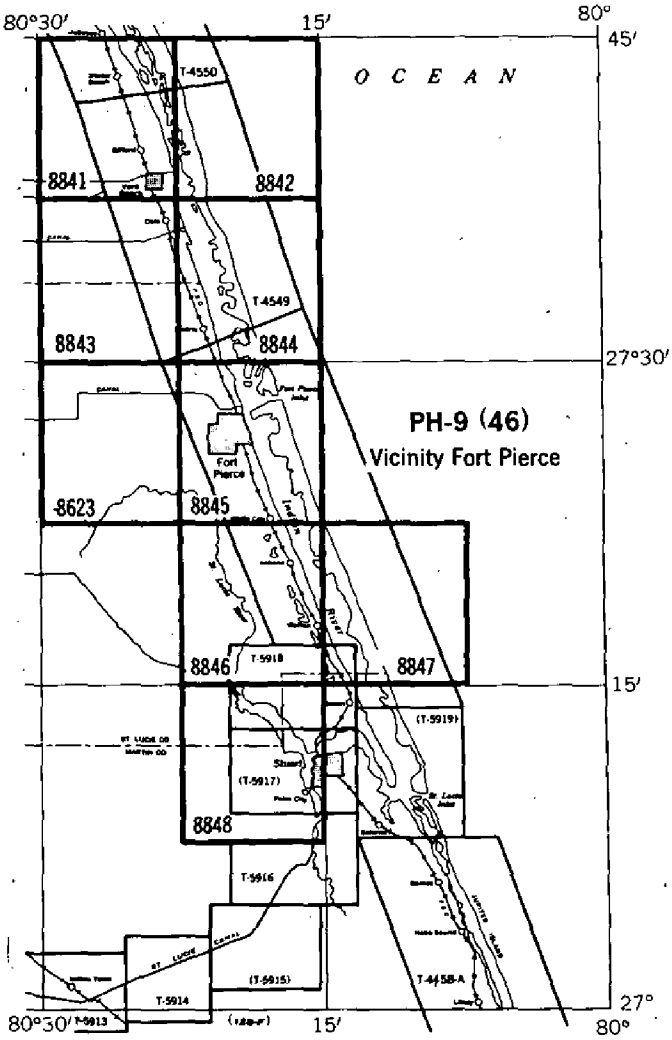
Land Area (Sq. Statute Miles) (III): 50.4
Shoreline (More than 200 meters to opposite shore) (III): 23.3 miles
Shoreline (Less than 200 meters to opposite shore) (III): 6.8 miles
Control Leveling - Miles (II): 36.0 Fourth order
Number of Triangulation Stations searched for (II): 52 Recovered: 41 Identified: 12
Number of BMs searched for (II): 14 Recovered: 8 Identified: 8
Number of Recoverable Photo Stations established (III): ~~12~~ 17
Number of Temporary Photo Hydro Stations established (III): none

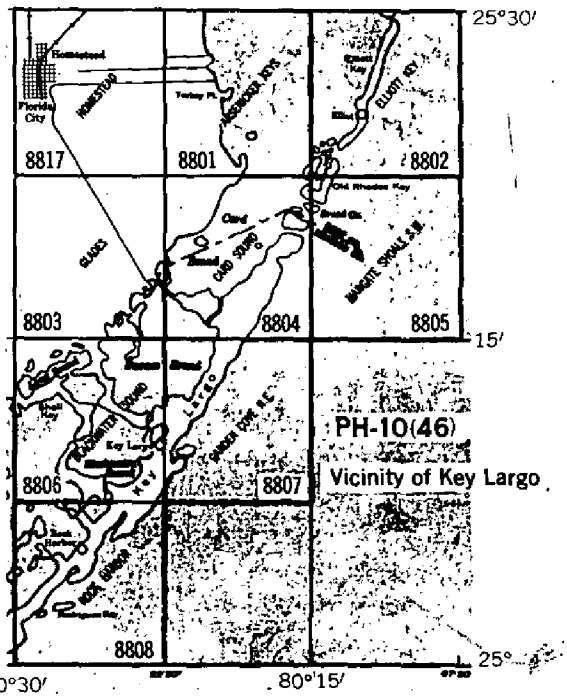
Remarks:

TOPOGRAPHIC MAPPING PROJECTS

FLORIDA EAST COAST







Summary to Accompany T-9167

Topographic map T-9167 is one of fourteen similar maps in project Ph-30(48) and is centrally located in the project. It covers a portion of the Indian River and adjacent land area.

This is a graphic compilation project. The field operations preceding compilation included complete field inspection, the establishment of some additional horizontal control, and the delineation of contours on the photographs by planetable methods.

The manuscript was compiled at a scale of 1:20,000 and covers $7\frac{1}{2}'$ in latitude by $7\frac{1}{2}'$ in longitude. The entire map was field edited. The map is to be published by the Geological Survey at a scale of 1:24,000 as a standard topographic quadrangle. Items registed under T-9167 will include a cloth-mounted color print at a scale of 1:24,000 and a cloth-mounted lithographic print of the manuscript at a scale of 1:20,000 and the descriptive report.

FIELD INSPECTION REPORT
QUADRANGLE T-9167
N 28°37.5' - W 80°45'/7.5
PROJECT PH-30(48)
George E. Morris, Jr., Chief of Party

All phases of the field work were completed in accordance with The Director's Instructions, Project Ph-30(48), dated 13 July 1948, and applicable General Instructions, except for deviation noted in Paragraph 16.

All of the horizontal control recovery and shoreline inspection, along with the bulk of the vertical control recovery was performed by Cecil A. Navin, Topographic Engineer. The remaining vertical control recovery was accomplished by sub-party chiefs in the adjoining quadrangles.

Sixty percent of the fourth order levels; contouring on photographs 48-J-454, 477(50%), 478, 479 and 480 was by Warren M. Gottschlich, Cartographic Survey Aid.

Seventy five percent of the contouring on photograph 48-J-546, and fifty percent on photograph 548 was by Jack T. Beecher, Cartographic Survey Aid.

All other field work was by the writer, Egmont Horn, Cartographic Survey Aid.

The necessity of extended leaves of absence from the field work by the writer was responsible for the use of the extra sub-party chiefs. Limits of contouring by the individual sub-party chiefs have been adequately labeled on the reverse of the contour photographs.

1. DESCRIPTION OF THE AREA

This quadrangle is located in the north central portion of Brevard County, Florida, and extends from the northern limits of Titusville to two miles south of Scottsmoor, and from Allenhurst to two miles west of Mims.

Indian River which runs the entire length of the quadrangle and South Lake in the southwest corner are the most prominent natural features. All land east of Indian River is below five feet, with exception of a small area near Haulover Canal, and is mostly seasonal marsh and pasture.

A ridge parallels Indian River on the west side, and attains a height of forty feet. The areas of greatest relief are east and northeast of South Lake, where peaks rise to over seventy feet.

Small ponds and intermittent ponds are scattered over the quadrangle, and are classified on the field inspection photographs.

All areas under cultivation are drained by small ditches, and spoil banks of these ditches form many of the roads.

The unincorporated towns of Mims and Allenhurst are the only villages in this quadrangle.

Haulover Canal is in the northeast corner of the quadrangle, joining Indian River and Indian River North (Mosquito Lagoon), and is a popular fishing spot.

This quadrangle is well traversed with improved roads, which includes U. S. Highway 1 and three paved Florida State Roads; and by two north-south single track railroads.

Livelihoods in the area come from several sources. Some of the main ones are the growing of citrus fruits, tourist trade, fishing, cattle ranching, truck farming and lumbering operations.

2. COMPLETENESS OF FIELD INSPECTION

Field inspection is believed to be adequate, and is shown on the following photographs: 48-J-454(2 of 2), 48-J-456(1 of 2), 48-J-457(1 of 2), 48-J-458, 48-J-477(2 of 2), 48-J-478(2 of 2), 48-J-479(2 of 2), 48-J-480, 48-J-481, 48-J-545(1 of 2), 48-J-546, 48-J-547, and 48-J-548(1 of 2).

(Field Editor see Paragraph 17.)

3. INTERPRETATION OF PHOTOGRAPHS

Most photographs were adequate. However, much difficulty was experienced in the southwest corner of the quadrangle in getting stereopsis because of a break in the flight line. This was somewhat troublesome in this particular area because of the relatively high relief.

4. HORIZONTAL CONTROL

Eighteen U.S.C.& G.S. stations were searched for, seventeen were recovered, and six were identified.

Fourteen U.S.E. stations were searched for, eleven were recovered, and four were identified.

Twenty Florida Geodetic Survey stations were searched for, thirteen were recovered, and two were identified.

All stations were identified by substitute point method with the exception of U.S.E. "SOUTH LAKE" which was located by intersection method from photographic detail point. This deviation from standard procedure was necessary because cloudy weather prevented using a sun azimuth, and extensive cutting for chaining would have been necessary later if a sun azimuth had been used.

7. MEAN HIGH WATER LINE

Adequately shown on the field photographs.

Shoreline inspection is shown on photographs 48-J-454(1 of 2), 48-J-455, 48-J-456(2 of 2), 48-J-457(2 of 2), 48-J-678, 48-J-679(2 of 2), 48-J-680(2 of 2), and 48-J-681.

8. LOW WATER LINE

In general the low water line along both shores of Indian River is parallel and very close to the mean high water line as the water is practically non-tidal. No attempt was made to show the low water line.

9. WHARVES AND SHORELINE STRUCTURES

All wharves and shoreline structures have been indicated on the field photographs.

10. DETAILS OFFSHORE FROM THE HIGH WATER LINE

One abandoned bomb target has been identified on field photograph 48-J-455(1 of 2). *See also item 36*

11. LANDMARKS AND AIDS TO NAVIGATION

The two previously charted landmarks are recommended for re-charting, and Form 567 is submitted. The one landmark, HOUSE, which is not triangulation, was identified on field photograph 48-J-679(2 of 2). *See Forms 567 (copy) attached and item 54*

All aids to navigation were located by theodolite cuts, and Forms 567 and 24A are submitted.

12. HYDROGRAPHIC CONTROL

No photo-hydro signals were required for this project. *See item 49*

13. LANDING FIELDS AND AERONAUTICAL AIDS

There are no aeronautical aids within this quadrangle.

A small portion of the Titusville Municipal Airport extends across the southern limits of the quadrangle. The airport has been covered in the report for quadrangle T-9169 and in the Special Report on Boundaries for the entire project. *Both reports in General Files, Division of Photogrammetry*.

There is a small un-named, private air strip without definite boundaries, just north of Haulover Canal, and east of Florida State Road 3, used by county-owned mosquito control planes, that has been labeled on photograph 48-J-454 (2 of 2).

14. ROAD CLASSIFICATION

All roads were classified in accordance with Photogrammetry Instructions No.10, and Amendment dated 24 October 1947.

15. BRIDGES

A field investigation of the one bridge over navigable waters, Haulover Canal at Allenhurst, Florida, was made in accordance with Photogrammetry Instructions No.27, dated 7 September 1948, and the field data are tabulated below, along with published data from page 216 in the U. S. Engineers "List of Bridges over Navigable Waters of the U. S.", revised to 1 July 1941.

	Field Data	Bridge Book Data
Type of bridge	Swing	Swing
Navigable Span	South Draw	Right & Left
Horizontal Clearance (ft)	55	55 (R. & L. Spans)
*Vertical Clearance (ft)	7.4	7.4

*The bridge book lists the vertical clearance as being 7.4 ft. above M.L.W. The field measurements were to the water level (estimated M.L.W.) at 11:00 A.M., EST., 28 March 1949. The vertical clearance above M.S.L., as determined by leveling from nearby U. S. Engineers BM-34, is 6.0 ft. See items 57 & 69

The discrepancy in the number of navigable spans as reported in the bridge book, has been reported by letter to the local District Engineer. A copy was forwarded to the Washington Office, and an additional copy of the letter is included with this report.

16. BUILDINGS AND STRUCTURES

Building inspection was in accordance with Photogrammetry Instructions No.29, dated 1 October 1948; except that all buildings to be mapped have been circled on the field inspection photographs in red ink.

17. BOUNDARY MONUMENTS AND LINES

Five section corners, three quarter section corners, and one point on a section line, were recovered, identified, and submitted on Form 524. In addition, one unmonumented section corner has been identified on a field photograph.

An old fence on the south line of the Segui Grant, Brevard County, has been identified on one of the field photographs. A point on the range line between R35E and R36E was located by the photo-station method and Form M-2226-12 has been submitted. These two points are not monumented, but were designated as being true points by the Brevard County Surveyor.

If additional section or grant line control is needed within this quadrangle, it is recommended that the field editor contact the Brevard County Surveyor. See items 58 & 67

Other boundaries will be found in the Special Report on Boundaries for this project.

Section line information is shown on the following photographs: 48-J-457 (2 of 2), 48-J-679(1 of 2), and 48-J-680(1 of 2).

18. GEOGRAPHIC NAMES

This is the subject of a Special Report on Geographic Names by Lowell I. Bass, Cartographic Survey Aid. Filed in Geographic Names Section, Charts Division.

19. TOPOGRAPHIC STATIONS

One monumented topographic station was established in this quadrangle and Form 524 is submitted.

Five azimuth marks were identified for use as topographic stations, and Form 524 submitted for two that can be used with hydrographic surveys. Form M-2226-12's are submitted for the other three.

See items 49 and 68.

Submitted
15 April 1949

Egmont Horn
Egmont Horn
Cartographic Survey Aid

Approved and forwarded
5 May 1949

George E. Morris, Jr.
George E. Morris, Jr.
Chief of Party

PHOTOGRAMMETRIC PLOT REPORT NO. 2 OF 2

21. AREA COVERED

This report is on the photogrammetric plot for quadrangles T-9161, T-9162, T-9163, T-9164, T-9165, T-9166, T-9167 and T-9168 and completes Ph-30(48) (Florida).

The sketch on page 18 of this report shows the arrangement of the quadrangles, junction with other quadrangles of Ph-30(48), part of the project limits, the photograph centers, and the control stations used in this radial plot.

22. METHOD

This plot was laid utilizing hand templets in the radial plot method.

The quadrangles in this radial plot, with the exception of T-9168, are 7' 30" in latitude and longitude. T-9168 is 7' 30" in latitude and 8' 00" in longitude. All are 1: 20,000 scale with the 10,000-foot grid of the Florida East Mercator Grid System ruled on the projections.

The base grids, of vinylite, are ruled with 10,000-foot intervals at 1: 20,000 scale. Sufficient grids were joined to encompass all the control identified for this radial plot and extend into the area covered by Radial Plot No. 1 of Ph-30(48).

All the horizontal control recovered or established by the field party was plotted on the map manuscripts and checked. Substitute stations identified for controlling the radial plot were plotted graphically unless the substitute station was more than 1,000 feet from the main station, or more than one instrument set-up was made. For substitute stations more than 1,000 feet from the main station and, or, more than one instrument set-up, position computations were made and the station plotted conventionally and checked.

Control to be used in the main radial plot was transferred from the map manuscripts to the base grid by matching the plane coordinate grid lines of the quadrangles with those of the base grid. Identified control that fell outside the map manuscript limits was plotted on the base grids in the conventional way and checked.

The photographs used in this plot were enlargements at 1: 20,000 scale from 1: 30,000 and 1: 40,000 negatives.

All of the photographs are printed on water repellent paper and no data was provided to give a check on paper or negative distortion. It is probably that small anomalies in the plot would have been resolved more quickly had it been possible to eliminate film and paper distortion from the templets.

The templets were vinylite.

This photogrammetric plot was continued north from that for T-9169 and T-9170. Development of the plot was conventional; templets rigidly fixed were laid first, then progressing through those with weaker fixes and finally bridging those with no control.

The prints from 1: 40,000 negatives were very helpful in areas where control was meager. The templets from these prints were used to extend control and sometimes were laid last to provide a check on the plot.

In the uncontrolled area of T-9161 and T-9163 the plot was layed several times, each successive laydown diminished triangles of error that appeared in intersections for passpoints in this area. On the final plot all control was held, coincidence of azimuths was maintained, and tight closures obtained on all pass points, including those outside the project limits.

Intersections for all points located by the plot were circled on the plot before transfer to the map manuscripts. The map manuscripts were superposed on the plot with the grid coordinate lines of the map manuscripts matching those of the base grids for transfer of the photogrammetric points and photograph centers. This transfer was checked.

A final check on the plot was made by putting each photograph in place under the map manuscripts. The dates of completion of the plot for the map manuscripts are:

T-9168 on May 20, 1949
T-9165 on May 26, 1949
T-9167 on May 31, 1949
T-9164 on June 3, 1949
T-9166 on June 16, 1949
T-9161, T-9162 and T-9163 on June 30, 1949

Photogrammetric points and centers of ratio prints from 1: 30,000 scale negatives are on the map manuscript in accordance with Photogrammetry Instructions No. 12 of March 17, 1947 and the centers of ratio prints from 1: 40,000 scale negatives are shown on the map manuscripts as three concentric circles.

23. ADEQUACY OF CONTROL

The horizontal control provided for this plot complied with the project instructions and is believed to adequately fulfill the requirements for identification, location, and density. It would have been desirable to have a control station along the western limits of T-9161 in the vicinity of photograph 48J-584 but it is felt that the accuracy of the plot is within the specifications and the additional expense was not justified.

Of the ninety control stations provided for this plot all but three were held. These three were investigated, the discrepancies were resolved, stations finally held, and are discussed here.

1. A discrepancy in the feet and meter distance from J-6A, 1934 on T-9163 (control station No. 49 on the sketch) to Substitute Station J-6A and subsequent refusal to hold resulted in returning the identification card for this station to the field on April 4, 1949.

When returned after field investigation the same point for Substitute Station J-6A was used but the new location gave a distance of 100 feet further than originally from J-6A, 1934.

2. The Photogrammetric plot gave an intersection 0.7mm (14 meters) northeast of the field position for Substitute Station CAT, 1934 on the junction of T-9164 and T-9165 (control station No. 59 on the sketch). Examination of the field photograph revealed a clump of palmetto 0.7mm (14 meters) southwest of the clump identified as the substitute point. The station identification card and field photographs were returned to the field with a letter, May 31, 1949, suggesting that measurement was made to one palmetto clump and another was pricked.

Field investigation corroborated the office conclusion and on June 3, 1949, a new station identification card was transmitted giving the same distance but pricking the other clump of palmetto.

3. A discrepancy in the plot and geographic positions of Substitute Station SHORE (U.S.E.), 1930 on T-9167 (control station No. 67 on the sketch) was resolved as explained in the included copy of a letter to the Chief, Division of Photogrammetry, dated June 8, 1949, copy attached to this report. See item 26.

This office was pleased with the control identification and location for this photogrammetric plot. Only two of the ninety control stations were discovered in error through location or identification, a considerably better average than heretofore, and selection of points for identification was generally very good.

24. SUPPLEMENTAL DATA

No graphic control surveys were used for control of the radial plot but 18 pages of U. S. Engineers 1945 plans of the Intracoastal Waterway were used. Filed in General Files, Div. of Photogrammetry.

25. PHOTOGRAPHY

Photograph coverage generally conformed to specifications on this project. Exceptions to the specifications exist in side lap between flights 48J-586 through 48J-596 and 48J-643 through 48J-655, where it sometimes is 10 per cent and never more than 25 per cent.

The photographs including the ratio prints from the 1: 40,000 negatives were of good scale and definition. All the photographs were of good scale with little tilt observed.

26. DISCUSSION OF U. S. ENGINEERS TRIANGULATION

A considerable number of U. S. Engineers horizontal control stations were recovered on this project. The trouble encountered with Substitute Station SHORE (U.S.E.) 1930 (as discussed under 23. ADEQUACY OF CONTROL) alerted this office to possible further discrepancies in the U. S. Engineers control.

Investigation disclosed that recovery of some U. S. Engineers control did not fit the original descriptions and that the stations in this category were marked but the disks were not stamped. This office was informed some of the U. S. Engineers control had been moved under contract in 1945, and photostat copies of 18 pages of Intracoastal Waterway plans* with horizontal control and plane coordinate positions thereon were received here. These plans are dated September 22, 1945 and are being submitted as supplemental data.

* See item 24

On the basis of our results with SHORE (U.S.E.) 1930 and subsequent investigation we are showing all "unstamped" U.S. Engineers control as 1930, 1945 in year and listing them with the co-ordinate values off the 1945 plans.

To close this investigation a letter was sent to the U. S. Engineers, Jacksonville, District, to clarify all the questions about their control. A copy of this letter and their reply is included in this report.

Some of the original 1930 control was located by the Coast and Geodetic Survey in 1940. Where recovery cards indicate no change from the 1930 description, the 1940 U.S. C. & G.S. position is listed.

Respectfully submitted,

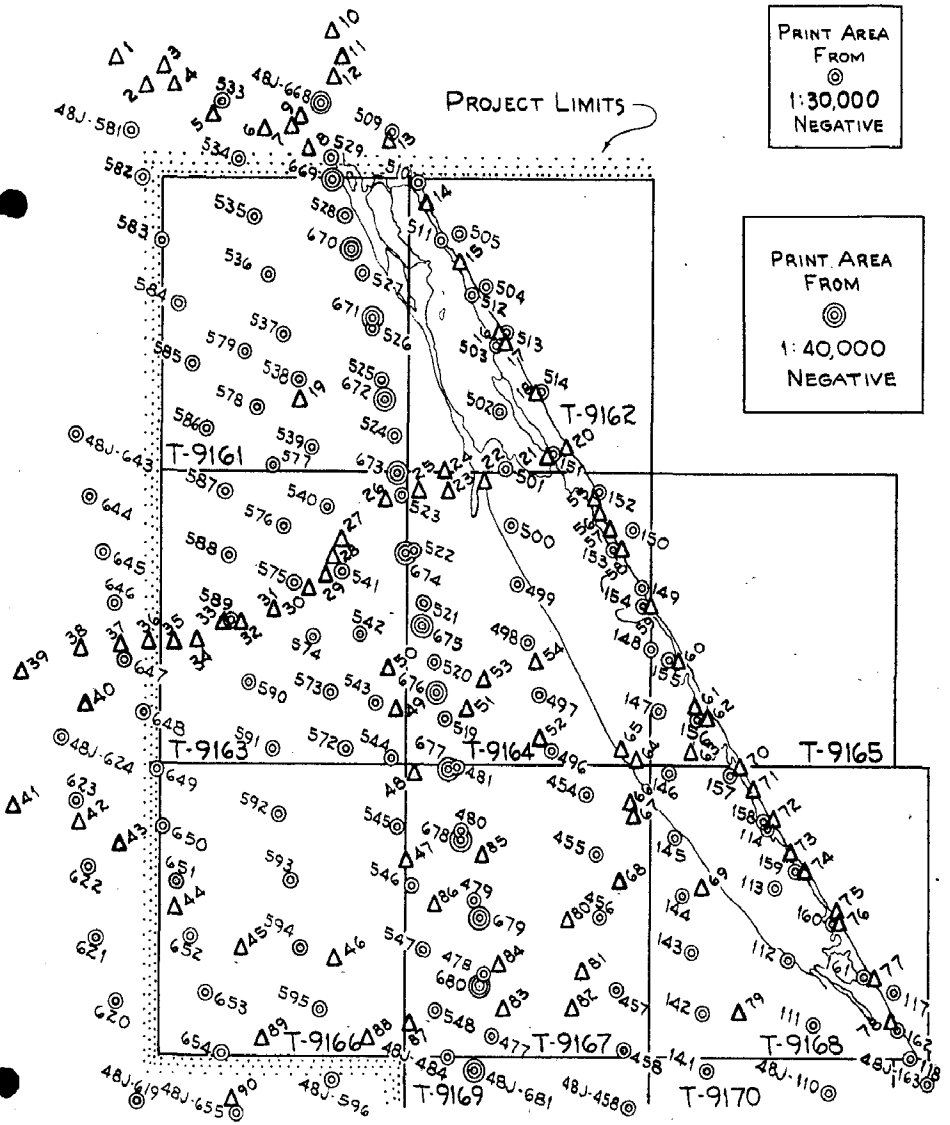
Milton M. Slavney

Milton M. Slavney,
Cartographer

Approved and Forwarded:

Ross A. Gilmore

Ross A. Gilmore,
Chief of Party.



SKETCH TO ACCOMPANY REPORT ON MAIN RADIAL PLOT NO. 2 OF 2 FOR PH-30(48) (FLORIDA)

INDEX TO CONTROL

1. Sub. Pt. K-78, 1934
2. " " K-81, 1934
3. " " Smyrna, 1934
4. " " K-84, 1934
5. " " K-87, 1934
6. " " K-93, 1934
7. K-99, 1934
8. Sub. Pt. New Smyrna Black Water Tank Finial, 1934
9. K-100, 1934
10. Dusa R.M. 1, 1874, 1934
11. Coronado R.M. 1, 1934
12. Coronado Beach Silver Water Tank Finial, 1934
13. Hill R.M. 2, 1934
14. Sub. Pt. Palo Negro, 1874
15. " " Alden R.M. 1, 1874
16. Turtle Mound, 1934
17. Turtle Mound R.M. 3, Az. Mk. 1934
18. Eldora, 1934
19. Sub. Pt. Godfrey, 1934
20. Pt. Opposite Center of Photo-graph 48J-151, 1948
21. Mount, 1934
22. Allens House Chimney, 1906
23. C-O 12, 1948
24. Sub. Pt. Oak, 1934
25. " " C-O 10, 1948
26. " " " 9, 1948
27. " " " 7, 1948
28. " " " 6 R.M.1, 1948
29. " " " 6 , 1948
30. " " " 5 R.M.1, 1948
31. " " " 5, 1948
32. " " No.1 C-O 4, 1948
33. " " No.2 " " "
34. " " C-O 3 R.M. 1, 1948
35. " " " , 1948
36. " " No. 1 C-O 2(A) , 1948
37. " " No. 2 C-O 2(A) , 1948
38. " " C-O 1.M.M.1, 1948
39. " " Osceola, A, 1948
40. " " Underhill(U.S.E.), 1935
41. " " Patch, 1935
42. Lake Harney Draw Span Center Light, 1935
43. Sub. Pt. Pill, 1935
44. " " S.M. 44 R.M.2, 1935
45. " " Buck Lake, 1935
46. Sub. Pt. Sharp, 1935
47. " " Titusville M.M. Base, 1934
48. " " J-4, 1934
49. " " J-64, 1934
50. " " Volusia, 1934
51. " " Scott, 1940
52. " " Bush, 1940
53. " " Extra, 1940
54. " " Shiloh, 1934
55. Pt. Opposite Center of Photo-graph 48J-152
56. Sub. Pt. Lagoon, 1934
57. Bear, 1874
58. Pt. Opposite Center of Photo-graph 48J-153
59. Sub. Pt. Cat, 1934
60. Pt. Opposite Center of Photo-graph 48J-155
61. Sub. Pt. Pardon, 1934
62. Pt Opposite Center of Photo-graph 48J-156
63. Scorpion, 1875
64. Sub. Pt. Edgar, 1934
65. " " South 2(M.S.E.),1934
66. " " Canal(U.S.E.), 1940
67. " " Shore(U.S.E.), 1930
68. " " Bay(U.S.E.), 1940
69. " " Dummit, 1934
70. Pt. Opposite Center of Photo-graph 48J-157
71. Klondike, 1934
72. Pt. Opposite Center of Photo-graph 48J-158
73. Sub. Pt. Club, 1934
74. Pt. Opp. Center of Photo.48J-1
75. Sub. Pt. Goon 2,1934
76. Pt. Opp. Center of Photo.48J-1
77. " " " " " " 48J-1
78. Sub. Pt. End, 1934
79. " " Wilson, 1934
80. Black Point, 1875
81. Nels, 1940
82. Toad, 1940
83. Sub. Pt. Kevin, 1940
84. " " Cactus, 1940
85. " " State, 1940
86. " " J-14, 1934
87. South Lake(U.S.E.), 1934
88. Sub. Pt. Pete, 1935
89. " " Orange(U.S.E.), 1934
90. " " Kyzer(U.S.E.), 1935

MAP T- 9167 PROJECT NO. Ph-30(48) SCALE OF MAP 1: 20,000 SCALE FACTOR ———

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE / LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
	F.G.S. Brevard	N.A.	1,603,252.87	3,252.87 (6,747.13)		991.5 (2056.5)	
J-4, 1934	1	1927	541,783.02	1,783.02 (8,216.98)		543.5 (2504.5)	
	"	"	1,597,753.86	7,753.86 (2,246.14)		2363.4 (684.6)	
J-9, 1934	2	-	543,186.99	3,186.99 (6,813.01)		971.4 (2076.6)	
	"		1,594,634.01	4,634.01 (5,365.99)		1412.4 (1635.6)	
J-10, 1934	2	"	543,742.18	3,742.18 (6,257.82)		1140.6 (1907.4)	
	G.P.	-	28 43 54.802			1687.1 (160.0)	
HOOD, 1875	P.147	"	80 50 22.114			600.1 (1028.1)	
	G.P.	"	28 42 36.776			1132.1 (715.0)	
STATE, 1940	P.558	-	80 50 01.452			39.4 (1589.1)	
	F.G.S. Brevard	"	1,590,817.62	9,817.62 (9,182.38)		249.2 (2798.8)	
J-12, 1934	2	-	544,088.07	4,088.07 (5,911.93)		1246.0 (1802.0)	
	"	"	1,588,233.73	8,233.73 (1,766.27)		2509.6 (538.4)	
J-13, 1934	-	-	544,675.40	4,675.40 (5,324.60)		1425.1 (1622.9)	
	G.P.	"	28 41 31.086			957.0 (890.1)	
ACOSTA, 1940	554	-	80 50 05.179			140.6 (1488.2)	
	F.G.S. Brevard	"	1,583,957.54	3,957.54 (6,042.46)		1206.3 (1841.7)	
J-14, 1934	2	-	545,647.43	5,647.43 (4,352.57)		1721.3 (1326.7)	
	"	"	1,582,149.82	2,149.82 (7,850.18)		655.3 (2392.7)	
J-15, 1934			546,408.30	6,408.30 (3,591.70)		1953.3 (1094.8)	
	G.P.	"	28 41 14.106			434.3 (1412.8)	
N.U.(USE), 1940	P.557	-	80 49 40.832			1108.5 (520.4)	
INDIAN RIVER NORTH LIGHT 77, 1940	G.P. P.568	"	28 40 35.446			1091.2 (755.9)	
			80 48 46.582			1264.7 (364.3)	

1 FT. = .3048006 METER

COMPUTED BY: B.F. Lampton, Jr. DATE Sept. 29, 1948 CHECKED BY: R.R. Wagner DATE Oct. 4, 1948

M-2388-12

Photogrammetry

MAP T- 9167 PROJECT NO. Ph-30(48) SCALE OF MAP 1:20,000 SCALE FACTOR ---------

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
J-16, 1934	F.G.S. Brevard	N.A. 1927	1,577,543.31 548,347.20	7,543.31 (2,456.69) 8,347.20 (1,652.80)		2299.2 (748.8) 2544.2 (503.8)	
J-18, 2. 1934	"	"	1,573,733.19 549,958.42	3,733.19 (6,266.81) 9,958.42 (41.58)		1137.9 (1910.1) 3035.3 (12.7)	
J-19-2, 1934	"	"	1,572,962.21 549,758.05	2,962.21 (7,037.79) 9,758.05 (241.95)		902.9 (2145.1) 2974.3 (73.7)	
J-20 1934	"	"	1,572,193.40 550,098.84	2,193.40 (7,806.60) 98.84 (9901.16)		668.5 (2379.5) 30.1 (3017.9)	
CACTUS, 1940	G.P.S. P.553	"	28 39 58.788 80 49 27.960			1809.8 (37.3) 759.2 (870.0)	
HOLDER (USE) 1934	G.P's P.253	"	28 39 47.645 80 52 23.532			1466.8 (380.3) 639.0 (990.3)	
N.T. (USE) 1945	USE PHOTOSTAT	"	Y = 1,573,920.57 556,615.90	3,920.57 (6,079.43) 6,615.90 (3,384.10)		1195.0 (1853.0) 2016.5 (1031.5)	
INDIAN RIVER NORTH LIGHT 81, 1940	G.P. P.568	"	28 39 38.834 80 48 23.859			1195.5 (651.6) 647.9 (981.4)	
N.S. (USE) 1940	G.P. P. 557	"	28 39 13.987 80 49 13.847			430.6 (1416.5) 376.0 (1253.4)	
HARRELL (USE), 1934	G.P. P.253	"	28 38 41.393 80 50 17.074			1274.3 (572.8) 463.7 (1165.8)	
N.R (USE) 1940	G.P. P.557	"	28 38 52.154 80 49 10.533			1605.6 (241 .5) 286.1 (1343.5)	
J-22, 1934	F.G.S. Brevard	"	1,564,071.81 554,465.99	4,071.81 (5,928.19) 4,465.99 (5,534.01)		1241.1 (1806.9) 1361.2 (1686.8)	

1 FT. = .3048006 METER

COMPUTED BY: B.F. Lampton, Jr. DATE: Sept. 29, 1948 CHECKED BY: R.R. Wagner DATE: October 4, 1948

M-2388-12

Photogrammetry

MAP T- 9167 PROJECT NO. Ph-30(48) SCALE OF MAP 1: 20,000 SCALE FACTOR ---------

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y-COORDINATE / LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
NEVIN, 1940	G.P. P.553	N.A. 1927	28 38 39.509 80 49 12.492			1216.3 (630.8) 339.3 (1290.3)	
SOUTH LAKE (USE), 1934	G.P. P.253	"	28 38 19.791 80 52 20.508			609.3 (1237.8) 557.0 (1072.6)	
N.Q.(USE), 1940	" P.556	"	28 38 03.943 80 49 06.219			121.4 (1725.7) 168.9 (1460.8)	
INDIAN RIVER NORTH LIGHT 86, 1940	G.P. P.568	"	28 37 59.736 80 48 27.476			1839.0 (8.1) 746.3 (883.4)	
CANAL (USE) ~~1931~~ 1940 ~~1945~~	G.P. P.558	"	1,601,201.86 579,523.63	1,201.86 (8,798.14) 9,523.63 (476.37)		366.3 (2681.7) 2902.8 (145.2)	
SHORE (USE) 1931 1945	USE Mims.	"	1,597,037.20 578,619.05	7,037.20 (2,962.80) 8,619.05 (1,380.95)		2144.9 (903.1) 2627.1 (420.9)	
INDIAN RIVER NORTH LIGHT 59, 1940	G.P. 569	"	28 43 24.740 80 46 03.116			761.6 (1085.5) 84.6 (1543.7)	
INDIAN RIVER NORTH LIGHT 74, 1940	G.P. 568	"	28 41 12.639 80 48 45.945			389.1 (1458.0) 1247.3 (381.6)	
BLACK POINT 1875	G.P. 147	"	28 41 01.676 80 47 18.193			51.6 (1795.5) 493.9 (1135.0)	
NELS, 1940	G.P. 553	"	28 39 41.932 80 46 59.707			1290.9 (556.2) 1621.3 (8.0)	
TOAD, 1940	"	"	28 38 46.091 80 47 12.409			1418.9 (428.2) 337.0 (1292.5)	
RAY (USE) 1940	" P.557	"	28 41 57.415 80 45 48.878			1767.5 (79.6) 1326.8 (301.9)	

1 FT. = .3048006 METER

COMPUTED BY: B.F. Lampton DATE Sept. 29, 1949 CHECKED BY: R.R. Wagner DATE October 4, 1948

M-2388-12

Photogrammetry

MAP T 9167 PROJECT NO. Ph-30(48) SCALE OF MAP 1: 20,000 SCALE FACTOR----------

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR φ-COORDINATE / LONGITUDE OR x-COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
TITUSVILLE N.W. BASE, 1934	G.P's. p.125	N.A. 1927	28 42 39.126 80 52 29.853			1204.5 (642.6) 810.3 (818.2)	
NEVIN PACKING SHED, SOUTH GABLE, 1940	" P.568	"	28 38 40.488 80 49 12.798			1246.4 (600.7) 347.6 (1282.0)	

1 FT. = .3048006 METER

COMPUTED BY: B.F. Lampton DATE September 29, 1948 CHECKED BY R.R. Wagner DATE October 4, 1948

M-2388-12

31. DELINEATION

The manuscript was delineated by graphic methods. The photographs and field inspection were adequate for the delineation of this manuscript.

32. CONTROL

The horizontal control was accurately identified and with good coverage for this manuscript. For discussion of control see the Photogrammetric Plot Report incorporated with this report.

33. SUPPLEMENTAL DATA

General Land Office Plats for Project Ph-30(48)

34. CONTOURS AND DRAINAGE

No difficulty was encountered in transferring contours. A few contours in the northwest corner of the manuscript were not delineated because of their placement inside the berm line of intermittent ponds. It is believed that when the ponds have sufficient water the contour would be below the water line.

Spoil banks north of Haulover Canal are believed to be of sufficient height to show spot elevation and some may have contours.

It is requested that a vertical accuracy test be run in the area east and northeast of South Lake. Stereoscopic examination indicates that the contours have been misplaced by going across saddles and valleys. See item 53

35. SHORELINE AND ALONG SHORE DETAIL

All shoreline and alongshore detail were taken from the photographs. The field inspection was very good for delineation.

36. OFFSHORE DETAIL

Shoal areas along the channel of the Intracoastal Waterway were delineated from the photographs with reference to field inspection notes.

37. LANDMARKS AND AIDS

Two landmarks and nine non-floating aids with scaled positions are submitted herewith on Form 567. See item 56

38. CONTROL FOR FUTURE SURVEYS

Twelve Forms 524 with scaled positions are being submitted herewith as part of this report and are as follows:

2 Topographic stations
2 Azimuth marks
5 Section corners
3 1/4 Section corners

One section monument on Form 524, 7/18*, T21S, R35E, is shown on the map manuscript as an accepted corner due to the actual corner not being found. Form 524 is being submitted without the scaled position.

Forms 524 filed in General Files, Div. of Photogrammetry.
* Should be 7/18/17 as per Form 524 by Field Edit. ENR

39. JUNCTIONS

A satisfactory junction has been made to the north with T-9164, on the west with T-9166, and from the east with T-9168. Contour junction on the south does not agree and has been referred to the field editor for correction. See item 53.

40. HORIZONTAL AND VERTICAL CONTROL ACCURACY

No statement. See item 53

46. COMPARISON WITH EXISTING MAPS

Comparison was made with U.S. C. & G.S. Planimetric Map No. T-4531, scale 1: 20,000, dated 1930, and found to be in good agreement except for changes in cultural detail. There are no topographic quadrangles available for this area. See item 6R.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison has been made with U.S. C. & G.S. Nautical Chart No. 844, scale 1: 40,000, published May 1942 (3rd edition) corrected to June 21, 1948, and found to be in good agreement. Planimetric Map T-4531 is the source of the Planimetry on chart No. 844, published May 1942.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

An abandoned bomb target projecting 12 feet above water at latitude 28° 43' 35" and longitude 80° 47' 12" is not shown on the chart.

The spoil area between light 74 and Titusville bridge is not noted on the chart.

The spoil area northwest of Haulover Canal shows some small islands that are now awash at extreme low water.

ITEMS TO BE CARRIED FORWARD

None.

Respectfully submitted,

John C Richter

John C. Richter,
Cartographic Draftsman

Approved and Forwarded

Ross A. Gilmore

Ross A. Gilmore, 10/14/49
Chief of Party.

49. NOTES FOR THE HYDROGRAPHER

There follows a list of topographic stations appearing on this quadrangle pertaining to the hydrographer:

Two Topographic Stations, SLIM 1949 and HOUSE 1949 *

Two Azimuth Marks for triangulation stations HOOD 1934 and BLACK POINT 1934.

* "House" changed to "Chimney" by Field Editor. See item 56.

Form T-2

50. PHOTOGRAMMETRIC OFFICE REVIEW

T-9167

1. Projection and grids RRW 2. Title RRW 3. Manuscript numbers RRW 4. Manuscript size RRW

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy MMS 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) RRW 7. [illegible] 8. Bench marks RRW
9. Plotting of sextant fixes RRW 10. Photogrammetric plot report RRW 11. Detail points RRW

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline RRW 13. Low-water line RRW 14. Rocks, shoals, etc. RRW 15. Bridges RRW 16. Aids to navigation RRW 17. Landmarks RRW 18. Other alongshore physical features RRW 19. Other alongshore cultural features RRW

PHYSICAL FEATURES

20. Water features RRW 21. Natural ground cover RRW 22. Planetable contours RRW 23. [illegible] 24. Contours in general RRW 25. Spot elevations RRW 26. Other physical features RRW

CULTURAL FEATURES

27. Roads RRW 28. Buildings RRW 29. Railroads RRW 30. Other cultural features RRW

BOUNDARIES

31. Boundary lines RRW 32. Public land lines RRW

MISCELLANEOUS

33. Geographic names RRW 34. Junctions RRW 35. Legibility of the manuscript RRW 36. Discrepancy overlay RRW 37. Descriptive Report RRW 38. Field inspection photographs RRW 39. Forms RRW

40. Robert R. Wagner — Reviewer
Russell Giles — Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Compiler _____ Supervisor _____

43. Remarks:

M-2661-12

FIELD EDIT REPORT
T-9167

51. METHODS

The field edit of this quadrangle was accomplished by traversing, via truck, all passable roads, and by walking to other areas in which the reviewer requested information, or for a general check on the adequacy of the map compilation.

Planetable, hand level, sextant and tape methods were used to make corrections and additions.

All deletions have been noted on the field edit sheet. Additions and corrections in planimetry have been noted on the field edit sheet. Some corrections to contours and spot elevations have been shown on the field edit sheet, but the major corrections made in contouring have been shown on photograph 48J-548, print 2 of 2. The reviewer's questions are answered on the discrepancy prints whenever possible. All work shown on the photographs is properly referenced on the discrepancy print on field edit sheet.

A legend appears on the field edit sheet indicating the different colored inks used for the various additions, corrections and deletions.

Field edit information appears on photograph 48J-548, print 2 of 2.

52. ADEQUACY OF COMPILATION

The map compilation is believed to be adequate and complete with the corrections added by the field editor.

53. MAP ACCURACY

The horizontal position of the map detail appears to be good.

One particular area of about 4.1 square miles of contouring between latitude 28° 37' 30" - 28° 40' 00" and longitude 80° 51' 00" - 80° 52' 30" was corrected. In general, the correcting of contours consisted of placing them in their proper horizontal position. A few elevations were erroneous. It appears that a very inexperienced field party was responsible for the deficiencies, including the inability to use the stereoscope.

54. RECOMMENDATIONS

Recommend at least four months training, under supervision of an experienced topographer, for all potential sub-party chiefs, before being given the responsibility of completing a topographic quadrangle.

55. EXAMINATION OF PROOF COPY

It is believed that Frank P. Schuster, County Engineer for Brevard County, Titusville, Florida is best qualified to examine a proof copy of this quadrangle.

56. LANDMARKS

Form 567 is submitted indicating corrections concerning landmarks recommended for charting. Copy attached to this report.

57 BRIDGE CLEARANCES

The vertical clearance of the swing bridge over Haulover Canal was measured and found to be 7.4 feet. There is no appreciable periodic tide in this vicinity, only the winds affect the rise and fall of water here.

58. BOUNDARY MONUMENTS

Four additional ~~boundary~~ Section Ctr mouuments were recovered and identified. Forms 524 are submitted. Information concerning four other boundary monuments was taken from Florida State Road Plans recorded in County Engineer's office, Titusville, Florida.

James E. Hundley

James. E. Hundley, Cart.o. (Photo)
December 13, 1949

Approved and Forwarded:

Ross A. Gilmore

Ross A. Gilmore, 1/10/50
Chief of Party.

Form 567
April 1945

"[T]his copy for Coast Pilot"

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS ~~OR LANDMARKS~~ FOR CHARTS

TO BE CHARTED / ~~TO BE DELETED~~ } STRIKE OUT ONE

Titusville, Florida # February, 1949

I recommend that the following objects which have (~~have not~~) been inspected from seaward to determine their value as landmarks be charted on (~~deleted from~~) the charts indicated.

The positions given have been checked after listing by J.C. Richter, Tampa Photogrammetric Office

George E. Morris, Jr. *Chief of Party.*
Lieut. Comdr.

STATE FLORIDA

CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION LATITUDE ° ′	LAT. D.M. METERS	POSITION LONGITUDE ° ′	LONG. D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
*	INDIAN RIVER NORTH DAYBEACON 56		28 43	1470	80 45	1150	N.A. 1927	Radial Plot T-9167	1949		x		844
*	INDIAN RIVER NORTH DAYBEACON 57		28 43	1408	80 45	1120	"	"	"		x		"
	INDIAN RIVER NORTH LIGHT 59		28 43	761.6	80 46	84.6	"	Triang	1940		x		"
**	" " " " 67		28 42	776.	80 47	412.	"	Radial Plot T-9167	1949		x		"
	" " " " 74		28 41	389.1	80 48	1247.3	"	Triang.	"		x		"
	" " " " 77		28 40	1091.2	80 48	1264.7	"	"	"		x		"
	" " " " 81		28 39	1195.5	80 48	647.9	"	"	"		x		"
	" " " " 86		28 37	1839.0	80 48	746.3	"	"	"		x		"
	TITUSVILLE YACHT BASIN DAYBEACON 2		28 37	936	80 48	577	"	Rad.Plot T-9167	"		x		"

* Positions in agreement with T-6822, 1941 (Stations TAR & PAS). EHR

Note: Structure descriptions as listed in 1948 Light List for Intracoastal Waterway adequate for above aids.

L 866(1949)

** Also positioned by theodolite directions. EHR

This form shall be prepared in accordance with Hydrographic Manual pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

16—51696-1 U. S. GOVERNMENT PRINTING OFFICE

38

Form 567
April 1945

"THIS COPY FOR COAST PILOT"

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED / ~~TO BE DELETED~~ } STRIKE OUT ONE

Titusville, Florida February 3, 1949

I recommend that the following objects which have ~~(have not)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(deleted from)~~ the charts indicated.

The positions given have been checked after listing by J.C. Richter, Tampa Photogrammetric Office

George E. Morris, Jr. *Chief of Party.*
Lieut. Comdr.

STATE FLORIDA

CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION LATITUDE ° ′	LATITUDE D.M. METERS	LONGITUDE ° ′	LONGITUDE D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
CENTER OF IRON BUILDING	Center of 36-foot high, 150 foot-long, metal-roofed gable that is part of a larger L-shaped metal building. (Chart position on gable 75 feet northerly along gable from triangulation station. ~~NEVIN'S PACKIN SHED SOUTH GABLE.~~)		28 38	1268	80 49	345	N.A. 1927	Radial Plot	1949		x	x	844 1245
HOUSE	White frame bungalow with red brick chimney atop center of pyramidal-shaped grey wood shingle roof, 25 feet high.		28 40	1265	80 49	1009	N.A. 1927	Radial Plot	1949		x	x	844 1245

L 866 (1949)

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

16—51696-1 U. S. GOVERNMENT PRINTING OFFICE

Form 567
April 1945

"PHOTOGRAMMETRIC REVIEW SECTION"

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

~~NONFLOATING AIDS TO~~ LANDMARKS FOR CHARTS

TO BE CHARTED / ~~TO BE DISCONTINUED~~ STRIKE OUT ONE

Titusville, Fla. December 13, 1949

I recommend that the following objects which have ~~(have not)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(discontinued from)~~ the charts indicated.

The positions given have been checked after listing by John C. Richter, Tampa Photogrammetric Office

Ross A. Gilmore
Chief of Party.

STATE FLORIDA

CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION LATITUDE ° ′	LATITUDE D. M. METERS	LONGITUDE ° ′	LONGITUDE D. P. METERS	DATUM	METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
SAND	South Gable of large L-shaped metal building, painted red, 46 feet above ground.		28 38	1246.4	80 49	347.6	N.A. 1927	Tri.	1949		x		844 1245
CHIMNEY	Red brick chimney, center of pyramidal shaped gray wood shingle roof of lone white house, west bank of Indian River. 25 feet above ground		28 40	1265	80 49	1009	*	Radial Plot T-9157	Dec. 1949		x		*

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

16—51696-1 U. S. GOVERNMENT PRINTING OFFICE

32

Form 567
April 1945

"PHOTOGRAMMETRIC REVIEW SECTION"

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO ~~BE CHARTED~~ / TO BE DELETED } STRIKE OUT ONE

Tampa, Florida December 21, 1949

I recommend that the following objects which have (~~not been~~) been inspected from seaward to determine their value as landmarks be ~~charted on~~ (*deleted from*) the charts indicated.

The positions given have been checked after listing by J. C. Richter, Tampa Photogrammetric Office

Ross A. Gilmore *Chief of Party.*

STATE FLORIDA

CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION LATITUDE ° ′	LATITUDE D.M. METERS	LONGITUDE ° ′	LONGITUDE D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
CENTER OF IRON BLDG.	Center of 36-foot high, 150 feet long, metal roofed gable that is part of a larger "L" shaped metal building		28 38	1268	80 49	345	N.A. 1927	Radial Plot T-9167	1949		X		844 1245
	(Chart position on gable 75 feet northerly along gable from triangulation station. Nevin's packing shed, south gable.												
	See new Form 567 for different landmark in this vicinity												
HOUSE	White frame bungalow with red brick chimney atop center of pyramidal shaped grey wood shingle roof 25 feet high.		28 40	1265	80 49	1009	N.A. 1927	Radial Plot T-9167	1949		X		844 1245
	See Form 567 for change in charting name for this landmark.												

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column head should be given.

U. S. GOVERNMENT PRINTING OFFICE: 1949 O - 853418

Copy

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

P. O. Box 127
Titusville, Florida

POST OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

29 April 1949

References Item 15

To: District Engineer
Jacksonville District
Corps of Engineers
P. O. Box 4970
Jacksonville 1, Florida

Subject: Bridge Data, Haulover Canal Bridge

The Haulover Canal bridge at Allenhurst was carefully measured on 28 March 1949 for nautical chart purposes and all data as listed on page 216 of the "List of Bridges over the Navigable Waters of the U.S.", dated 1 July 1941, were found to be in good agreement except for the number of navigable spans.

Only the South Draw is used for navigation. The North Draw is approximately 20 ft., and is not a clear span when the bridge is open.

George M. Morris, Jr.
Lt.Comdr.U.S.C.& G.S.
Chief of Party

SJN/c
cc: The Director

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

POST-OFFICE ADDRESS: Tampa Photogrammetric Office
Box 1689, Tampa, Fla.

TELEGRAPH ADDRESS

EXPRESS ADDRESS:

June 8, 1949

Reference : Item 23

To: Chief, Division of Photogrammetry
U. S. Coast and Geodetic Survey
Washington 25, D.C.

Subject: Geographic Position of SHORE, 1930 (U.S.E.) on T-9167
Ph-30(48)

The main radial plot for T-9167 disclosed a control discrepancy which was finally resolved as the result of two different published positions for SHORE, 1930 (U.S.E.).

SHORE, 1930 (U.S.E.) was originally plotted on the projection for T-9167 using the position given on the photostat of the original "Horizontal Control Positions" card of the U.S. Engineers and Substitute Point SHORE was plotted conventionally.

The radial plot gave a position for Substitute Pt. SHORE that was 0.45mm. (9 meters) southwest of the position on T-9167. Field investigation disclosed no error in substitute station location. However, further investigation disclosed a plane coordinate position was available on a U.S. Engineer survey plan for station SHORE, 1930 (U.S.E.) and on conversion to geographic coordinates a difference of minus 0.285 seconds in latitude and plus 0.29 seconds in longitude was found to exist with their geographic position.

When SHORE, 1930 (U.S.E.) and Substitute Station SHORE were plotted on T-9167 using the plane coordinate position the difference with the radial plot position was not plottable; therefore, we are assuming that the plane coordinate position X = 578,619.05, Y = 1,597,037.20 is correct.

(S) Ross A. Gilmore
Lieut. Comdr. USC&GS
Officer in Charge
Tampa Photogrammetric Office

RAG/c
c.c. Lt. Comdr. George
E. Morris, Jr.

COPY

Tampa Photogrammetric Office
Box 1689, Tampa, Florida

September 12, 1949

Reference : Item 26

U.S. Engineers
Corps of Engineers
575 Riverside Avenue
Jacksonville, Florida

Gentlemen: Att: Mr. G.D. Hardy

During the field and office work related to compilation of topographic quadrangles in the vicinity of Titusville we have run into some U.S. Engineer control anomalies that we hope you can help us on.

Lieut. Comdr. Morris' field parties recovered some U.S. Engineers' 1930 and 1930 stations "as described" and "marked." Other stations necessitated new descriptions and were not stamped; the field men informed us that some of your control had been moved or reestablished in 1945. The photostats of your 1945 plans listed all stations by name but did not indicate the date of the station.

When convenient, we would like to be furnished a list of all your horizontal control from latitude 28° 20' to 29° 00 along the Indian River that has been moved since 1930, 1931 along with the new descriptions and new positions.

Yours very truly,

(S) Ross A. Gilmore
Lieut. Comdr. USC&GS
Officer in Charge
Tampa Photogrammetric Office

RAG/c

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
JACKSONVILLE DISTRICT
575 Riverside Avenue
Jacksonville 1, Fla.

COPY 37

Refer.No. SAKGS 812.3

19 September 1949

Lieut. Comdr. Ross A. Gilmore
Officer in Charge
U.S. Coast and Geodetic Survey
Tampa Photogrammetric Office
Box 1689
Tampa, Fla.

Reference : item 2L

Dear Sir:

In response to your letter of 12 September 1949 relative to the anomalies you have found in our control along Indian River, the following information is furnished.

In 1945 a contract was let to a private engineering company to establish the control and make the hydrographic surveys along the Intracoastal Waterway from Melbourne to Haulover canal. This contract was terminated due to shortage of project funds before it was completed, thereby causing the conditions you have found.

The photostatic copies previously furnished you show the results of the control work accomplished. However, no descriptions were ever made of the stations set, therefore itis impossible to determine at the present time which are 1930-31 stations and which are 1945 stations.

It is possible that some 1945 stations were set at approximately the same location as the 1930-31 stations and given the same name, and that stations set in 1930-31 but not properly marked were renamed in 1945. It will be impossible for us to straighten out this situation until additional funds are made available for the project and we can recover, describe, mark, and check the stations now in place.

This office realizes that the above information will not help solve your problems, however, this does explain why the condition you found exists.

If this office can be of further service or if you could have one of your men bring the topographic sheets and other date you are having trouble with to this office, we will be glad to get out all the field books and other data we have and go over it with him.

FOR THE DISTRICT ENGINEER:

Sincerely yours,

(S) LEO L BURNET
Chief, Engineering Division

48 GEOGRAPHIC NAME LIST

State (west edge of sheet, lat 28° 40')
(have no record of such a name: is it triang station?)

Wm Garvin Grant
Domingo Acosta Grant
Bernardo Segui Grant
Brevard Co. Game Refuge

- Allenhurst
- Black Point
- Black Point Creek
- Boggy Pond
- Burkholm Road
- Cow Pen Creek
- Duckroost Cove
- Duckroost Point
- East Mims
- Gator Creek
- Granny Cove
- Haulover Canal
- Indian Mound
- Indian River
- Intracoastal Waterway
- La Grange
- Little Flounder Creek
- Marsh Bay
- Marsh Bay Creek
- Marsh Bay Point
- Mims
- Mosquito Lagoon
- Paces Landing
- Puckett Creek
- Roach Hole
- South Lake b
- Turnhull b
- Turnhull Hammock
- Wiley

Names preceded by • are approved. 11-8-49
L. Heck

On manuscript:

- Dummit Cove
- Catfish Creek
- Jay Jay
- Old Dixie Highway
- Titusville Municipal Airport
- U.S. No. 1 Fla. No. 5
- Fla. No. 3
- Fla No. 46
- Fla No. 402
- Florida East Coast
- Brevard County

Names checked and approved
11-21-50
A.J.W.

Review Report
Topographic Map T-9167
22 November 1950

62. Comparison with Registered Topographic Surveys.-

T-1415	1:5,000	1875
T-1422	1:20,000	1875-76
T-4531	1:20,000	1928
T-6821	1:10,000	1941
T-6822	1:10,000	1941
T-6823	1:10,000	1941

Survey T-9167 supersedes these prior surveys for nautical charting purposes.

63. Comparison with Maps of Other Agencies.- None

64. Comparison with Contemporary Hydrographic Surveys.- None

65. Comparison with Nautical Charts.-

844	1:40,000	3-15-48

66. Adequacy of Results and Future Surveys.-This map meets the National Standards of Map Accuracy and complies with project instructions.

67. Section and Grant Lines.-Most of the section lines in T21S, R34 & 35E, west of the Indian River were positioned by either recovered monuments or by well-defined lines of culture. Also there was general agreement between the mapped lines and the General Land Office plats.

In T20 & 21S, R35 & 36E, east of the Indian River, there was little recovery and the section lines were plotted using General Land Office measurements. The General Land Office plats are so generalized that they were of little value in checking the plotted lines.

The south line of the Bernardo Segui Grant was accurately positioned by holding to one recovered monument and lines of culture. This monument was believed by the field edit party to mark R34E / R35E but it does not plot on the range line as determined by extending accurately located segments of the line on either side of the monument.

Both the Domingo Acosta Grant and the William Garvin Grant had no recovery of lines or monuments on this map, but were plotted by General Land Office measurements. Section line 17/20, T20S, R35E was likewise positioned by plot measurements.

68. Topographic Stations.-Topographic survey T-6822, 1:10,000, 1941 shows several topographic stations which are located by this survey as located objects. The two surveys are in close agreement for the positions of these stations. But since the stations were not field inspected and since there is an adequate number of control stations in the area, these 1941 stations were not shown on the manuscript.

69. Bridges.-There is no appreciable periodic tide for this area of the Indian River but the water level is affected by local winds and by currents through the Hanlover Canal. This may account for the discrepancy in clearance. But since the bridge opens for larger vessels, the discrepancy in clearance between spirit leveling and direct measurement (Items 15 and 57) is of little consequence.

Reviewed by:
Everett H. Ramey
Everett H. Ramey

APPROVED

S. V. Griffith
Chief, Review Section
Division of Photogrammetry

H. R. Edmonston
Chief, Nautical Chart Branch
Division of Charts

O. S. Reading
Chief, Div. of Photogrammetry

Chief, Div. of Coastal Surveys

History of Hydrographic Information

T-9167, Florida

Hydrography was applied to the manuscript of this quadrangle in accordance with Division of Photogrammetry request of 12 December 1950, and with general specifications of 18 May 1949.

The depths are in feet at mean low water and originate with the following surveys and charts:

USC&GS Hydrographic Surveys

H-6676 (1941) 1:10,000
H-6727 (1941) 1:10,000

USC&GS Nautical Chart

844 (1949) 1:40,000

Bottom contours are shown at 6 feet.

The hydrography was compiled by R. E. Elkins and checked by G. F. Jordan.

R. E. Elkins

R. E. Elkins
Nautical Chart Branch