

9165

Diag. cht. No. 1245

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey ..... TOPOGRAPHIC

Field No. Ph-30(118) ..... Office No. T-9165

LOCALITY

State ..... FLORIDA

General locality ..... EAST COAST

Locality ..... BREVARD & VOLUSIA COUNTIES

194 9

CHIEF OF PARTY

G. E. Morris, Jr.

R. A. Gilmore

LIBRARY & ARCHIVES

DATE Mar. 16 - 1951

# DATA RECORD

T-9165

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): 9-19-49

Date reported to Nautical Chart Branch (IV): 9-22-49

Applied to Chart No.

Date:

Date registered (IV): 21 Feb 1951

Publication Scale (IV): 1: 24,000

Publication date (IV):

Geographic Datum (III): N.A. 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): PARDON, 1934

Lat.: 28° 46' 28."079(864.4m)✓

Long.: 80° 43' 36."766 (997.3m)✓

Adjusted  
~~Unadjusted~~

Plane Coordinates (IV): Transverse Mercator

State: Florida

Zone: East

Y= 1,614,317.27

X= 587,496.99

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.

All field contouring by the  
writer, Jack T. Beecher, Cart-  
ographic Survey Aid.

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

## DATA RECORD

Jack T. Beecher, Cartographic Survey Aid 1 March 1949  
 Field Inspection by (II): Cecil A. Navin, Topographic Engineer Date: 20 April 1949

22 March 1949  
 Planetable contouring by (II): Jack T. Beecher, Cartographic Survey Aid Date: 20 April 1949

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

Mean High Water Location (III) (State date and method of location): Feb. 18, 1948  
 Air Photo Compilation

Projection and Grids ruled by (IV): W.E.W. (W. O. ) Date: Oct. 22, 1948

Projection and Grids checked by (IV): " " Date: Oct. 22, 1948

Control plotted by (III): R.R. Wagner Date: Nov. 8, 1948

Control checked by (III): B.F. Lampton Date: Nov. 9, 1948  
 M.M. Slavney May 16, 1949

Radial Plot ~~223 Stereoscopic~~ Date: May 26, 1949  
 Contour ~~223 Stereoscopic~~ by (III): M.M. Slavney

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

Manuscript delineated by (III): J.F. Armstrong Date: July--1949

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

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

Camera (kind or source) (III):

Single Lens, U.S. C. & G.S.

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
48J-115	2-18-48	1324	1:20,000	1.7
48J-147	2-18-48	1356	"	1.7
48J-155	2-18-48	1405	"	1.7
48J-156	2-18-48	1406	"	1.7

Tide (III)

Reference Station: Mayport, Fla.  
Subordinate Station: Ponce DeLeon  
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
1.0	4.5	5.3
0.5	2.3	2.7

Washington Office Review by (IV): *Everett H. Ramey*

Date: *27 Dec 1950*

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 3

Shoreline (More than 200 meters to opposite shore) (III): 16.5 miles

Shoreline (Less than 200 meters to opposite shore) (III): 7.1 miles

Control Leveling - Miles (II): 5.1 4th Order

Number of Triangulation Stations searched for (II): 4

Recovered: 3

Identified: 3

Number of BMs searched for (II): 0

Recovered: 0

Identified: 0

Number of Recoverable Photo Stations established (III): 4

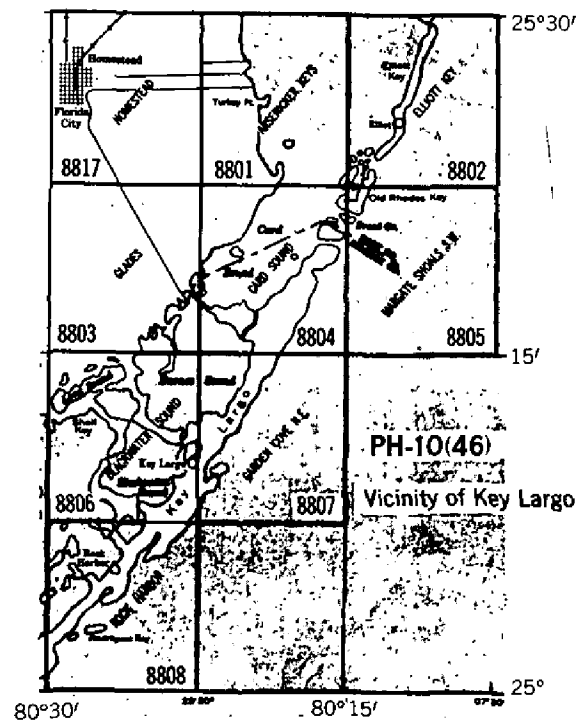
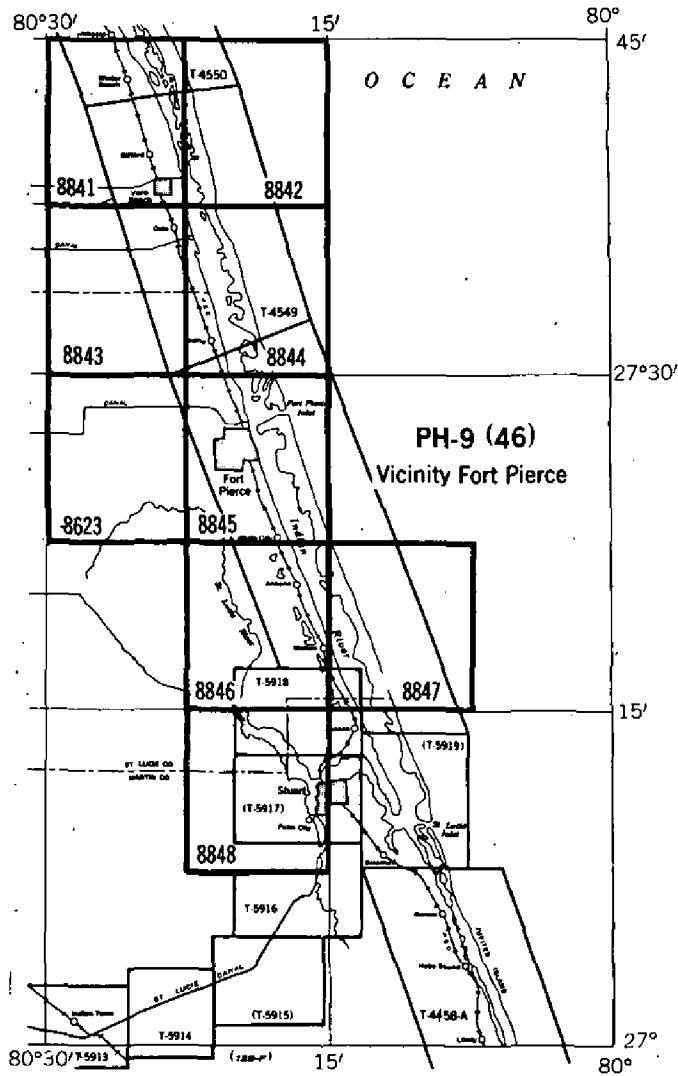
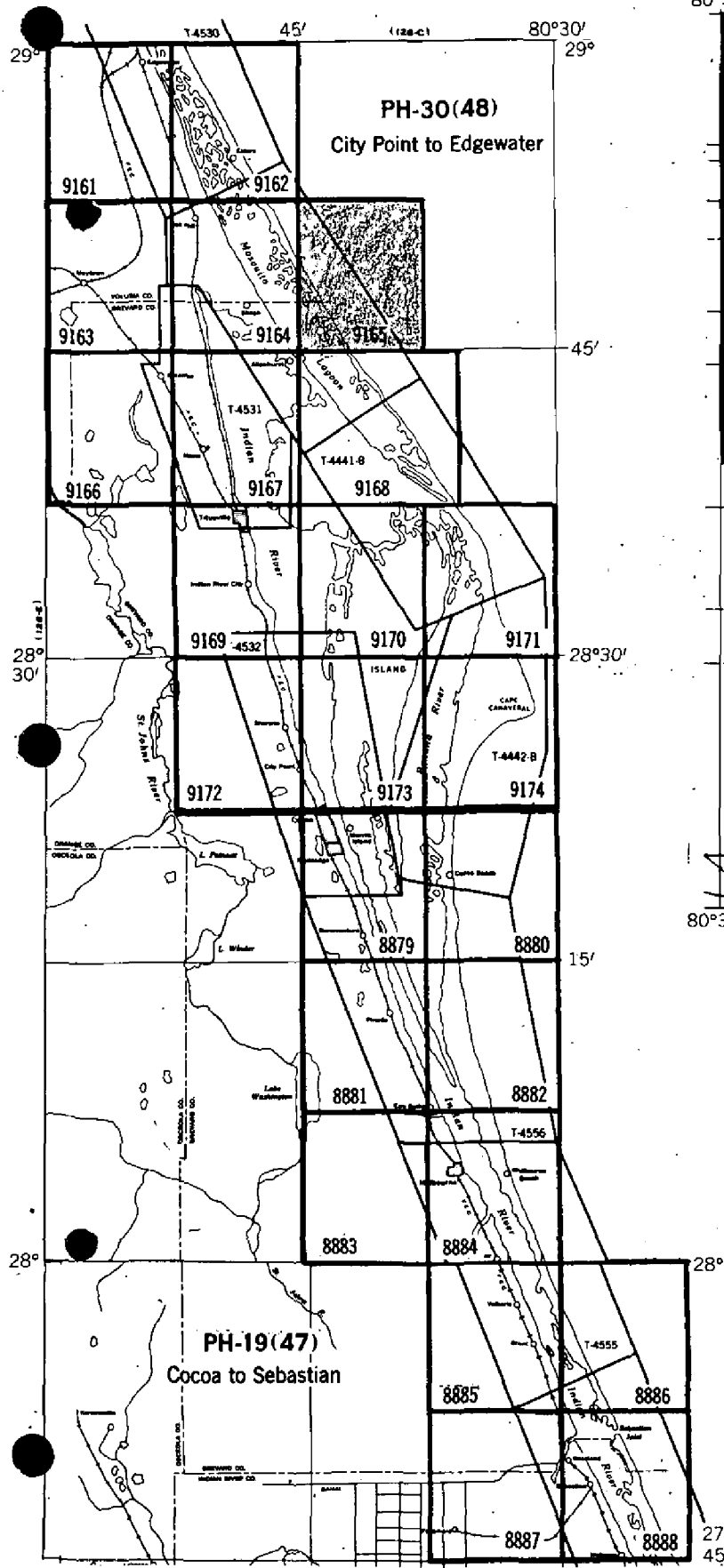
Number of Temporary Photo Hydro Stations established (III): None

Remarks:

# TOPOGRAPHIC MAPPING PROJECTS

FLORIDA EAST COAST

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### Summary to Accompany T-9165

Topographic map T-9165 is one of fourteen similar maps in project Ph-30(48) and is in the northern part of the project. It covers land area bordering the Atlantic Ocean.

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 registered under T-9165 will include a cloth-mounted color print at a scale of 1:24,000, a cloth-mounted lithographic print of the manuscript at a scale of 1:20,000 and the descriptive report.

FIELD INSPECTION REPORT  
QUADRANGLE T-9165  
N 28°45' - W 80°37.5' / 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.

*\* Copy filed in Office Files, Div. of Photogrammetry*

Horizontal control recovery, horizontal control identification, and shoreline inspection, were performed by Cecil A. Navin, Topographic Engineer; vertical control was established by James E. Hundley, Cartographer(Photo). All other work was performed by the writer, Jack T. Beecher, Cartographic Survey Aid. Field work was begun 1 March 1949 and completed 20 April 1949.

1. DESCRIPTION OF THE AREA

The land area is small; consisting of a low, narrow strip (outer beach) in the SW corner of the quadrangle that is bounded along the NE by the Atlantic, and along the SW by Indian River North (Mosquito Lagoon); and of several small, marshy islands in Indian River North that lie just offshore of the outer beach.

The area is uninhabited, and undeveloped except for a poor sand road that traverses the outer beach. This sand road connects with Florida State Road 402  $8\frac{1}{2}$  miles S of the quadrangle, and with Florida State Road 1A 14 miles S of New Smyrna Beach and 8 miles N of the quadrangle. However, part of the connecting road north of the quadrangle is passable only by 4-wheel drive vehicles.

2. COMPLETENESS OF FIELD INSPECTION

The field inspection is believed to be complete and adequate.

Field inspection has been shown on the following photographs: 48-J-154 (1 of 2), 48-J-155(2 prints), and 48-J-156(2 prints).

3. INTERPRETATION OF THE PHOTOGRAPHS

Photographic detail was sharp and no difficulty of interpretation was experienced.

No vegetation growths peculiar to this general area were encountered.

4. HORIZONTAL CONTROL

Four U.S.C. & G.S. stations were searched for, three were recovered and identified.



All photographs were fixed along the flight line by locating an identifiable control station along a line through each photograph center and approximately normal to the flight line by substitute-station methods. (See quadrangle T-9168, Report filed in Gen. Files, Div. of Photogrammetry)

*See item 19.*

#### 5. VERTICAL CONTROL

There are no bench marks within the quadrangle.

Fourth order control was established by running a line of wye levels between bench mark EDM-6 in quadrangle T-9168 along the outer beach to bench mark DA-216 north of quadrangle T-9162, a distance of 37.2 statute miles. Because of the original closure of 1.467 feet, a portion of the line which was run under unfavorable weather conditions was rerun giving a final closure of 0.960 feet. This was adjusted throughout the line.

The line crosses four quadrangles, T-9168, T-9165, T-9164, and T-9162 and is recorded in four level books, one for the portion falling in each quadrangle. The record books are cross-referenced.

Ten temporary bench marks were established along the beach road for control of contours within the quadrangle.

#### 6. CONTOURS AND DRAINAGE

All contouring was done by planetable methods, and there were no appreciable errors of closure in any of the planetable traverses.

Contouring was performed on the following photographs: 48-J-155(2 of 2), and 48-J-156(2 of 2).

#### 7. MEAN HIGH WATER LINE

Ample measurements were taken along the Atlantic from identifiable detail points on the photographs to the MHWL (Elev. 1.8 ft.) while contouring, to prove that the MHWL is positively represented on the photographs by a definite tone change. These reference measurements have been recorded on the photographs and the tone change representing the MHWL has been symbolized at frequent intervals.

The MHWL has also been symbolized along Indian River North (Mosquito Lagoon).

Shoreline inspection has been shown on the following photographs: 48-J-154(1 of 2), 48-J-155(1 of 2), and 48-J-156(1 of 2).

#### 8. LOW WATER LINE

No attempt was made to show the MLWL along the Atlantic <sup>Ocean</sup> and the tide is negligible in Indian River North (Mosquito Lagoon). *See item 67*

9. WHARVES AND SHORELINE STRUCTURES

None.

10. DETAILS OFFSHORE FROM THE HIGH WATER LINE

All of the water area in Indian River North (Mosquito Lagoon) is "shoal water", and is easily discernible as such on the photographs. No other off-shore detail was seen during shoreline inspection.

11. LANDMARKS AND AIDS TO NAVIGATION

None.

12. HYDROGRAPHIC CONTROL

No photo-hydro stations were required for this project.

13. LANDING FIELDS AND AERONAUTICAL AIDS

None.

14. ROAD CLASSIFICATION

The only road in the quadrangle has been classified in accordance with Photogrammetry Instructions No. 10, dated 14 April 1947, and Amendment dated 24 October 1947. *See item 1*

15. BRIDGES

None.

16. BUILDINGS AND STRUCTURES

One structure, an abandoned Coast Guard lookout tower, has been identified on shoreline photograph 48-J-155(1 of 2). *See item 56*

17. BOUNDARY MONUMENTS AND LINES

Several local surveyors were contacted, and they unanimously reported that they had been unable to recover, in the past, any monuments or blazed trees along either the Brevard-Volusia County line or the section lines within the quadrangle.

On the basis of the above information, no systematic search was made by the field inspector for the county line or section lines.

A legal description of the Brevard County line is submitted with a special boundary report for the entire project by Mr. Lowell I. Bass, Cartographic Survey Aid, filed in General Files, Div. of Photogrammetry.

## 18. GEOGRAPHIC NAMES

This is the subject of a special geographic names report for the entire project by Mr. Lowell I. Bass, Cartographic Survey Aid, *filed in Geographic Names Section, Div. of Charts.*

## 19. TOPOGRAPHIC STATIONS

Three monumented topographic stations were established: IDEA, by pricking identifiable detail direct; MARK, by substitute-station method from a traverse between GOON 2 - PARDON that was used in fixing photograph centers; TOAD was set at traverse point PARDON E, and also pricked direct. Forms 524 are submitted. *Traverse report for stations filed in General Files, Div. of Photogrammetry.*

The azimuth mark (RM NO.3 1934) for PARDON 1934 was identified as a topographic station, and form M-2226-12 submitted.

Submitted  
22 April 1949

*Jack T. Beecher*  
Jack T. Beecher  
Cartographic Survey Aid

Approved and forwarded  
22 April 1949

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

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PHOTOGRAMMETRIC PLOT REPORT

This report covering maps T-9161 through T-9168 is part of the Descriptive Report for T-9167 and is filed in the General Files, Division of Photogrammetry.

SCALE FACTOR:

[illegible]

PHOTOGRAMMETRIC PLOT REPORT

This report will be submitted with the Descriptive Report for Survey T-9167. *filed in General Files, Div. of Photogrammetry.*

31. DELINEATION

The graphic method of compilation was used throughout the quadrangle.

All photographs were of good scale and no difficulty was encountered interpreting them. The field inspection was adequate with the exception of those minor details noted on the discrepancy overlay.

32. CONTROL

The identification of horizontal control was excellent with reference to density and placement for the establishment of detail points.

33. SUPPLEMENTAL DATA:

Inapplicable.

34. CONTOURS AND DRAINAGE

Because of the limited area east of the beach ridge the contours are shown as follows:

The 5-foot contour is drafted as close inshore of, and parallel to, the MHWL as possible, except at the areas where it is accompanied by legend and feathered to allow space for the 10-foot contour.

The 10-foot contour is drafted along the vegetation line and is feathered as necessary to allow space for the 15-foot contour.

The 15-foot contour is drafted along the vegetation line, taking precedence over the 10-foot contour, and is feathered to permit space to draft a 20-foot ridge(labeled) located east of the trail at approximate latitude 28° 46.'5, longitude 80° 43.'2.

35. SHORELINE AND ALONGSHORE DETAILS

The MHWL along the Atlantic Ocean is delineated from the definite tone change as described in Item 7 of the Field Inspection Report.

No attempt was made to show the <sup>LWL</sup> ~~MHWL~~ <sup>ENR</sup> as stated in Item 8 of the Field Inspection Report.

The shoreline inspection was adequate.

36. OFFSHORE DETAIL

None.

37. LANDMARKS AND AIDS

None.

*See item 56*

38. CONTROL FOR FUTURE SURVEYS

Four Forms 524 are submitted and accompany this report upon transmittal. A list of these stations are contained in Item 49. There are no photo-hydro stations. *See items 56 & 49*

39. JUNCTIONS

This manuscript joins Survey No. T-9168 on the south and Survey No. T-9164 on the west. There are no adjoining surveys on the north and on the east. The junctions are in agreement.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

41-45. INAPPLICABLE

46. COMPARISON WITH EXISTING MAPS

In comparison with U.S. C. & G.S. Planimetric Map T-4440-B compiled in 1928 at scale of 1: 20,000, this manuscript is in good agreement. *See item 62*

47. COMPARISON WITH NAUTICAL CHARTS

In comparison with U.S. C. & G.S. Nautical Chart No. 1245, scale 1: 80,000; publication date September 1931 and correction date March 15, 1948, the manuscript and chart is in good agreement. *See item 65*

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted by:

*J. F. Armstrong*  
J. F. Armstrong,  
Cartographic Draftsman

Approved and Forwarded:

*Ross A. Gilmore*  
Ross A. Gilmore, *9/14/49*  
Chief of Party.



49. NOTES FOR THE HYDROGRAPHER

There are no photo-hydro stations

Topographic stations are as follows:

TOAD, 1949

IDEA, 1949

MARK, 1949

PARDON R. M. No. 3 (Az. Mk.) 1934

*See also item 56*

50.

## PHOTOGRAMMETRIC OFFICE REVIEW

T- 9165

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 RRW 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) RRW 7. ~~Photo hydrant stations~~ 8. ~~bench marks~~ 9. ~~Plotting of control points~~ 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.~~ 15. ~~Bridges~~ 16. ~~Aids to navigation~~ 17. ~~Landmarks~~ 18. Other alongshore physical features RRW 19. Other along-shore cultural features RRW

## PHYSICAL FEATURES

20. Water features RRW 21. Natural ground cover RRW 22. Planetable contours RRW 23. ~~Stereoscopic instructions~~ 24. Contours in general RRW 25. Spot elevations RRW 26. Other physical features RRW

## CULTURAL FEATURES

27. Roads RRW 28. ~~Buildings~~ 29. ~~Railroads~~ 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. Philip Wagner Jessie Giles  
Reviewer Supervisor, Review Section or Unit41. Remarks (see attached sheet) 10. No report at this time  
31 > To be applied after field edit.  
32

## 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:

## FIELD EDIT REPORT

T-9165

51. METHODS

Field edit was accomplished by traversing, via truck, the one and only trail in this area, 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, sextant, hand level and tape methods were used to make corrections and additions not shown on the photographs. Corrections and deletions have been noted on the discrepancy print. Some corrections and additions have been shown on the photographs. In general the corrections and additions on the photographs consist of corrected contours and the location of a landmark.

On the discrepancy print, violet ink was used to show all corrections and answer all questions, green ink for deletions. Black ink was used for all work on the photographs.

The reviewer's questions are answered on the discrepancy print whenever possible. Other work was shown on the photographs. All work shown on the photographs is properly referenced on the discrepancy print. Field edit information appears on the following photographs:

48J-155 (1 of 2) and 48J-156 (2 of 2)

52. ADEQUACY OF COMPILATION

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

53. MAP ACCURACY

The horizontal position of the map detail appeared to be good. Some corrections in contours were made. It is believed that the map compilation meets standard horizontal and vertical accuracy specifications.

54. RECOMMENDATIONS

None.

55. EXAMINATION OF PROOF COPY

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

56. LANDMARKS FOR CHARTS

The one and only prominent feature in this entire area is a wooden observation tower which has been recommended as a landmark for charting. *Forms 524 and 567 submitted.*

57. BOUNDARY MONUMENTS AND SECTION LINES

A thorough search was made for boundary monuments in this area, but, none were found.

Mr. Frank P. Schuster, County Surveyor for Brevard County, Titusville, Florida was contacted for information concerning the county boundary line monuments. According to Mr. Schuster no monuments exist on this line in this area. However, he stated that sometime in the near future he intended to establish monuments on this line.

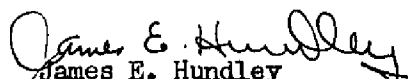
58. CULTURAL FEATURES

In general, a telephone line parallels the east edge of the trail shown in this area.

Approved and Forwarded



Ross A. Gilmore, 12/23/49  
Chief of Party.

  
James E. Hundley  
Cartographer ( Photo )  
October 26, 1949

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

# NON-OUTING-AIDS-OR LANDMARKS FOR CHARTS

~~TO BE DERIVED~~

**STRIKE OUT ONE**

I recommend that the following objects which have ~~(been found)~~ been inspected from seaward to determine their value as landmarks be charted on ~~the charts indicated~~ the charts indicated.

The positions given have been checked after listing by J.F. Lambrong

**Part 3: Culture**

Chief of Party.

[illegible]

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 charts. Information under each column heading should be given.

48. GEOGRAPHIC NAME LIST

- ATLANTIC OCEAN
- MOSQUITO LAGOON
- PARDON ISLAND
- PARDON SLOUGH
- THREE CABBAGE ISLAND
- WIDGEON BAY

- Brevard County
- Volusia County

Names approved  
12-26-50  
A.J.W.

Review Report  
Topographic Map T-9165  
27 December 1950

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62. Comparison with Registered Topographic Surveys.-

T-1415	1:20,000	1875
T-4345	1:20,000	1928
T-4440	1:20,000	1928-29

Survey T-9165 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.-

1245	1:80,000	3-15-48
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A new landmark was located during field edit (item 56).

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

67. Low-Water Line.-The low-water line was not located (item 8) but this item is being referred to the Division of Charts for positioning at the time of the addition of depth curves.

68. Boundary and Section Lines.-Since there was no recovery of lines or monuments, the lines were compiled to agree as closely as possible with the General Land Office plats. All lines are unreliable.

Reviewed by:

Everett H. Ramey  
Everett H. Ramey

APPROVED

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

M. Edmonson  
Chief, Nautical Chart Branch  
Division of Charts

P. S. Reading  
Chief, Div. of Photogrammetry

H. S. ...  
Chief, Div. of Coastal Surveys  
U.S.

# HISTORY OF HYDROGRAPHIC INFORMATION

T-9165, Florida

Hydrography was applied to the manuscript of this quadrangle in accordance with Division of Photogrammetry request of 11 January 1951, 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-1291 (1875)	1:20,000
H-4804 (1928)	1:40,000
H-4935 (1929)	1:40,000

## USC&GS Nautical Charts

844 (1949)	1:40,000
1245 (1949)	1:80,000

Bottom contours are shown at 6, 12, 18, 30, and 60 feet.

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

*R. E. Elkins*

R. E. Elkins - 16 March 1951  
Nautical Chart Branch