

9166

Diagrams 1-10

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-9166

LOCALITY

State FLORIDA

General locality EAST COAST

Locality FRANKFORD, SEMINOLE & VOLUSIA

COUNTIES

1949

CHIEF OF PARTY

Party

G. B. Morris, Jr., Chief of Field

H. A. Gilmore, Tampa Photogrammetric

Office

LIBRARY & ARCHIVES

DATE April - 17 - 1951

9166

DATA RECORD

T -9166

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, Fla.**

Officer-in-Charge: **Ross A. Gilmore**

Instructions dated (II) (III): **The Director's Instructions
Project Ph-30(48), 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): **12-5-49** Date reported to Nautical Chart Branch (IV): **12-7-49**

Applied to Chart No.

Date:

Date registered (IV): **21 Feb 1951**

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

Publication date (IV):

Geographic Datum (III): **NA 1927**

Vertical Datum (III): **M S L**

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): **BUCK LAKE, 1935**

Lat.: **28° 40' 33."392 (1028.0m)** Long.: **80° 57' 23."597 (640.7m)**

Adjusted
Unadjusted

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

Y= **1,578,397.65**

X= **513,931.17**

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.

DATA RECORD

Field Inspection by (II) **Grover B. Torbert, Engineering Aid (Photo)** Date: **28 December 1948**
18 March 1949

Planetable contouring by (II): **Grover B. Torbert, Engineering Aid (Photo)** Date: **28 December 1948**
18 March 1949

Completion Surveys by (II): **James E. Hundley** Date: **Feb 1950**

Mean High Water Location (III) (State date and method of location):

Not applicable.

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

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

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

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

Radial Plot or ~~Stereoscopic~~ **M.M. Slavney** Date: **June, 1949**
~~Control extension~~ by (III):

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

Manuscript delineated by (III): **W.W. Dawsey** Date: **Oct. 1949**

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

Elevations on Manuscript **J.A. Giles (III)** Date: **Oct. 1949**
checked by (II) (III):

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

Number	Date	PHOTOGRAPHS (III)		
		Time	Scale	Stage of Tide
48J-545	4-21-48	1348	1: 20,000	No tide
48J-592-595 Inc.	4-22-48	0925-0927	"	"
48J-649-655 Inc.	"	0956-0959	"	"

Tide (III)
None

Reference Station:
Subordinate Station:
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range

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

Date: *19 Dec 1950*

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

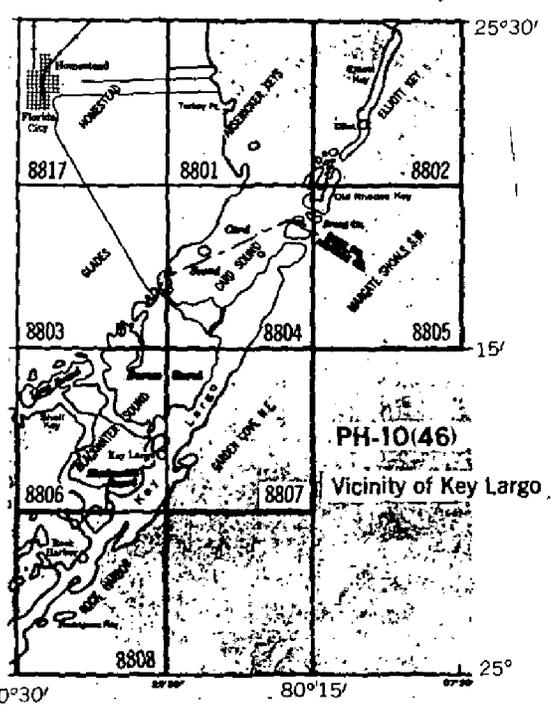
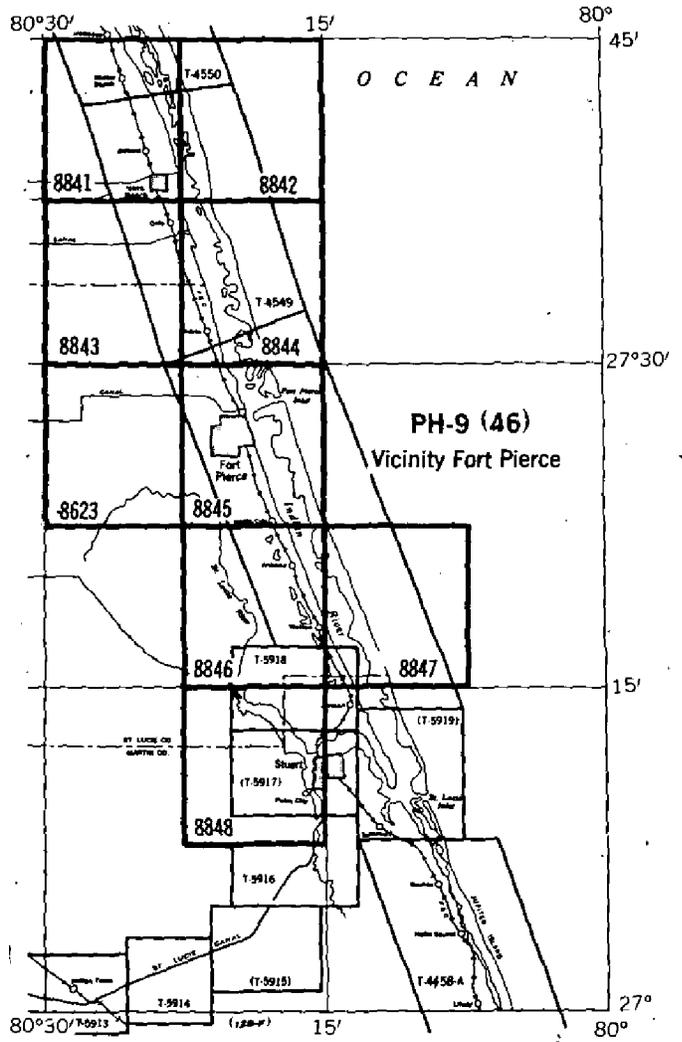
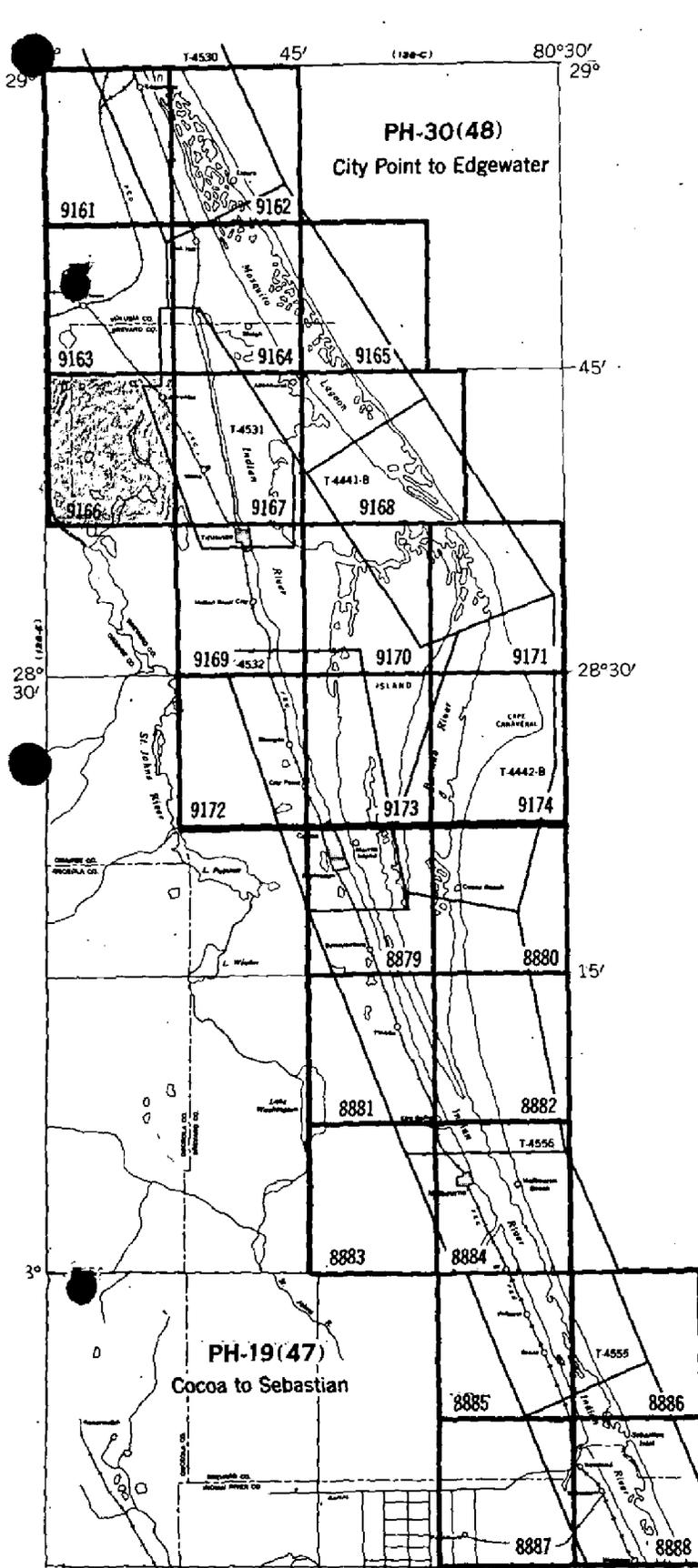
Date:

Land Area (Sq. Statute Miles) (III): *62.3*
 Shoreline (More than 200 meters to opposite shore) (III): *2*
 Shoreline (Less than 200 meters to opposite shore) (III): *1*
 Control Leveling - Miles (II): *43 - 4th Order*
 Number of Triangulation Stations searched for (II): *11* Recovered: *9* * Identified: *9*
 Number of BMs searched for (II): *0* Recovered: *0* Identified: *0*
 Number of Recoverable Photo Stations established (III): ~~*10*~~ *18*
 Number of Temporary Photo Hydro Stations established (III): *None*

Remarks: ** Only 5 Triangulation Stations within map limits.*

TOPOGRAPHIC MAPPING PROJECTS
FLORIDA EAST COAST

5



Summary to Accompany T-9166

This topographic map is one of fourteen similar maps in project Ph-30(48) and is in the west-central part of the project. The map is west of the Indian River and has no navigable water within its limits.

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-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-9166
N 28°37.5' - W 80°52.5'/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 except for deviation noted under paragraph 16.

Field work, with exception of horizontal control recovery by James E. Hundley, Cartographer(Photo), was performed by the writer, Grover B. Torbert, Engineering Aid(Photo), during the period 22 December 1948 to 18 March 1949.

1. DESCRIPTION OF THE AREA

This quadrangle is located in the northwest corner of Brevard County and the southeast corner of Volusia County, Florida. There are no incorporated or unincorporated towns within the limits of this quadrangle.

The St. Johns River runs across the southwest corner of the quadrangle, and Florida State Road 46 extends the full length of the quadrangle east and west.

The terrain rises from 1.5 feet along the water line of the St. Johns River to 46.4 feet along the east limits of the quadrangle. For the most part there is no sudden change in elevation. The area is covered with scattered pine, palm, and scrub oak, except along the St. Johns River, Cabbage Slough, Buck Lake, and Sixmile Creek. These areas are covered with saw grass and are subjected to seasonal inundation making them marshes. However, at the present time it is possible to drive over these areas in a truck.

The principal occupations are: logging, cattle raising, and citrus fruit growing.

2. COMPLETENESS OF FIELD INSPECTION

The field inspection is believed to be complete except for the final delineation by the field editor of woodland cover in an area noted on field photograph 48-J-594 as being "logged over" at the time of field inspection.

Field inspection was performed on the following photographs: 48-J-545, 48-J-546, 48-J-547, 48-J-548, 48-J-592, 48-J-593, 48-J-594, 48-J-595, 48-J-649, 48-J-651, 48-J-652(1 & 2 of 2), 48-J-653, 48-J-654(2 of 2), and 48-J-655.

3. INTERPRETATION OF THE PHOTOGRAPHS

No vegetation growth peculiar to the general area was encountered.

4. HORIZONTAL CONTROL

Six (6) U.S.C. & G.S. stations were searched for, recovered, and identified.

Five (5) U.S.E. stations were searched for, three (3) were recovered, and three (3) were identified.

5. VERTICAL CONTROL

There are no third-order bench marks within the quadrangle. Fly levels were controlled by running between two Florida Geodetic Survey bench marks in the western part of quadrangle T-9167. All errors of closure were within the allowable limits and no adjustment in level lines were necessary.

Approximately forty-three (43) miles of 4th order levels were run, and a total of thirty-five (35) temporary bench marks were established.

6. CONTOURS AND DRAINAGE

All contouring was done by planetable methods. The maximum vertical error of closure was 0.6 of a foot. Contours were checked and shaped under the stereoscope prior to final inking of the photographs. *See items 34 and 53*

The St. Johns River is the only perennial stream in this area. Sixmile Creek and Cabbage Slough flow only intermittently; at which time they usually flood the area around them to a great extent. *See item 67*

A junction was made with quadrangle T-9167 to the east, and with quadrangle T-9163 to the north.

Contouring was performed on the following photographs: 48-J-545, 48-J-546, 48-J-547, 48-J-548, 48-J-592, 48-J-594, 48-J-595, 48-J-649, 48-J-651, 48-J-653, and 48-J-655.

7. MEAN HIGH WATER LINE

Not applicable.

8. LOW WATER LINE

Not applicable.

9. WHARVES AND SHORELINE STRUCTURES

Not applicable.

10. DETAILS OFFSHORE FROM HIGH WATER LINE

Not applicable.

11. LANDMARKS AND AIDS TO NAVIGATION

Not applicable.

12. HYDROGRAPHIC CONTROL

Not applicable.

13. LANDING FIELDS AND AERONAUTICAL AIDS

Not applicable.

14. ROAD CLASSIFICATION

All roads were classified in accordance with Photogrammetry Instructions No.10, dated 14 April 1947, and Amendment dated 24 October 1947.

15. BRIDGES

There are no bridges over navigable waters within the quadrangle.

16. BUILDINGS

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

17. BOUNDARY MONUMENTS AND LINES

Seven (7) full section corners, two (2) quarter section corners (one along Segui Grant), and one (1) point along the south boundary of the Segui Grant, were recovered and identified. Form 524 submitted for the monumented corners.

Two of the recovered section corners are on the Volusia-Brevard County line. In addition one unmonumented point on line was identified and Form M-2226-12 submitted. The county line was delineated on photographs 48-J-651 and 48-J-653.

Other boundaries are the subject of a special report on boundaries for the entire project by Lowell I. Bass, Engineering Aid(Photo).

See items 56 and 68

18. GEOGRAPHIC NAMES

This is the subject of a special report on geographic names for the entire project by Lowell I. Bass, Engineering Aid(Photo).

19. TOPOGRAPHIC STATIONS

One (1) topographic station, END(U.S.E.Harbor Survey)1934, was located by planetable fix on photograph 48-J-652(1 of 2) and Form 524 submitted.

Submitted
21 March 1949

Grover B. Torbert
Grover B. Torbert
Engineering Aid(Photo)

Approved and forwarded
31 March 1949

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

PHOTOGRAMMETRIC PILOT REPORT

This report covering maps T-9161 through T-9168 is part of the Descriptive Report for T-9157 and is filed in the General Files, Division of Photogrammetry.

MAP T-9166

PROJECT NO Ph-30(48)

SCALE OF MAP 1: 20,000

SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR μ -COORDINATE LONGITUDE OR x -COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
				FORWARD	(BACK)		FORWARD	(BACK)	
1935 S.R. 44 (U.S.E.)	G.P.	N.A.	28 41	08.885			273.5	(1573.6)	
	P.236	1927	80 59	32.189			873.9	(755.0)	
BUCK LAKE	"	N.A.	28 40	33.392			1028.0	(819.1)	
			80 57	23.597			640.7	(988.4)	
SHARP,	"	"	28 40	04.010			123.4	(1723.7)	
			80 54	29.517			801.5	(827.7)	
ORANGE (USE)	"	"	28 37	50.801			1563.9	(283.2)	
			80 56	51.076			1387.4	(242.4)	
MERE,	"	"	28 37	58.181			1791.1	(56.0)	
			80 53	38.615			1048.9	(580.9)	
S.P. ORANGE	COMP	"	1,559,176.67				2797.1	(251.0)	
			518,697.70				2651.1	(396.9)	
S.P. FILL	COMP	"	1,591,470.29				448.1	(2599.9)	<i>west of map</i>
			493,538.63				1078.6	(1969.4)	<i>limits</i>
S.P. PATCH	COMP	"	1,592,562.93				781.2	(2266.8)	<i>west of map</i>
			476,720.42				2048.4	(999.6)	<i>limits</i>
S.P. SR 44	COMP	"	1,582,239.51				682.6	(2365.4)	
			502,629.64				801.5	(2246.5)	
S.P. BUCK LAKE	COMP	"	1,577,000.01				2133.6	(914.4)	
			513,905.27				1190.3	(1857.7)	
S.P. SHARP	COMP	"	1,574,949.67				1508.7	(1539.3)	
			528,904.28				2714.0	(334.0)	
S.P. KYZER	COMP	"	1,553,583.06				1092.1	(1955.9)	<i>South of map</i>
			512,316.05				705.9	(2342.1)	<i>limits</i>

PHOTOGRAMMETRIC PLOT REPORT

The Photogrammetric Plot Report was forwarded to the Washington Office with Quadrangle T-9167.

Filed in General Files, Div. of Photogrammetry as part of Report for T-9167. ENR

31. DELINEATION

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

32. CONTROL

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

33. SUPPLEMENTAL DATA

General Land Office Plats, *Filed in Gen. Files, Div. of Photogrammetry.*

34. CONTOURS AND DRAINAGE

No difficulty was encountered in transferring contours. A junction could not be effected in the northwest corner due to differences in elevations submitted by the field party. This has been called to the attention of the field editor. *See item 53*

35. THROUGH 37. INAPPLICABLE

38. CONTROL FOR FUTURE SURVEYS

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

- 1 ENR*
- 2 Topographic Stations
- 7 Section Corners
- 1 1/4 Section Corner } *See item 56*

39. JUNCTIONS

A satisfactory junction has been made with T-9163 to the north and with T-9167 to the east. All differences have been noted for the field editor. There are no contemporary surveys to the west and south.

40. HORIZONTAL AND VERTICAL CONTROL ACCURACY

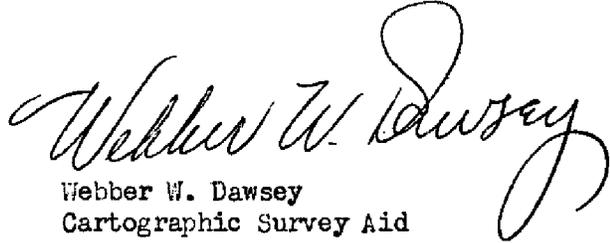
No statement

46. COMPARISON WITH EXISTING MAPS

None available.

47. COMPARISON WITH NAUTICAL CHARTS

Inapplicable.



Webber W. Dawsey
Cartographic Survey Aid

Approved and Forwarded:



Ross A. Gilmore, #125149
Chief of Party.

49. NOTES FOR THE HYDROGRAPHER

Inapplicable

50 PHOTOGRAMMETRIC OFFICE REVIEW

T-9166

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

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy M.M.S. 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) J.G. 7. ~~Photogrammetric stations~~ 8. ~~Benches~~ 9. ~~Points of control~~ 10. Photogrammetric plot report J.G. 11. Detail points J.G.

~~ADDITIONAL DATA~~

(Nautical Chart Data)

~~12. Shoreline~~ ~~13. Low water line~~ ~~14. Rocks~~ ~~15. Shoals~~ ~~16. Highes~~ ~~17. Islands~~ ~~18. Landmarks~~ ~~19. Other along shore physical features~~ ~~20. Other along shore physical features~~

PHYSICAL FEATURES

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

CULTURAL FEATURES

27. Roads J.G. 28. Buildings J.G. 29. Railroads J.G. 30. Other cultural features J.G.

BOUNDARIES

31. Boundary lines J.G. 32. Public land lines WAR

MISCELLANEOUS

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

40. Jesse A. Giles Jesse A. Giles William A. Rasure William A. Rasure
Reviewer 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:

FIELD EDIT REPORT T-9166

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 have been noted on the field edit sheet and field photographs; i.e., 48J546, 548, 593, 649, 651, 652(print2) and 653. All work shown on the photographs is properly referenced on the discrepancy prints or field edit sheet.

The reviewer's questions are answered on the discrepancy prints whenever possible.

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

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 details in general appear to be good.

The horizontal position of the twenty-foot contour, located at latitude $28^{\circ} 45'$, longitude $80^{\circ} 59.8'$ and latitude $28^{\circ} 38'$, longitude $80^{\circ} 52' 30''$ was corrected. The horizontal position of all the contours, beginning with the twenty-foot contour was corrected in the area between latitude $28^{\circ} 41' - 28^{\circ} 41' 30''$, longitude $80^{\circ} 52' 30'' - 80^{\circ} 53'$.

Elevations established in this area, during initial field work were correct, but, had been horizontally displaced to some extent. However, the major error was the inadequate use of the stereoscope.

A corrected junction will be required with T-9167.

54. RECOMMENDATIONS

It is recommended that the supervisor of all topographic field parties be thoroughly convinced of the ability of each sub-party chief in the use of the stereoscope before the field data is transferred to the compilation office.

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. BOUNDARY MONUMENTS

Five additional boundary ^{and section *ENR*} monuments were recovered and identified. Three other believed to be locations were identified. Form 524 is submitted.

See item 68

Approved and Forwarded:

Arthur L. Wardwell
Arthur L. Wardwell,
Chief of Party.

James E. Hundley
James E. Hundley
Cartographer, (Photo)
February 7, 1950

48. GEOGRAPHIC NAME LIST

- AURANTIA ✓
- BREVARD COUNTY ✓
- BUCK LAKE ✓
- CABBAGE SLOUGH ✓
- DELESPINE GRANT ✓
- ELLIS LAKE ✓
- FIA. 46
- FLORIDA EAST COAST R.R. ✓
- FRESHWATER LAKE ✓
- LOUGHMAN LAKE ✓
- SALT LAKE ✓
- SEQUI GRANT ✓ Bernardo Segui Grant (T-9167) ^{ENTR}
- SILVER LAKE ✓
- SIXMILE CREEK ✓
- SOUTH LAKE ✓
- SOUTHMERE ✓
- ST. JOHNS RIVER (EAST BRANCH)
- VOLUSIA COUNTY ✓ - WILLIAM ✓
- WILSON GARVIN GRANT
- SHAD CR. ✓
- BREVARD CO. GAME REFUGE
- BURKHOLM ROAD ✓
- SEMINOLE CO. ✓
- Domingo Acosta Grant ✓

Names approved

12-14-50

A. J. W.

Review Report
Topographic Map T-9166
19 December 1950

- 62. Comparison with Registered Topographic Surveys.- None
- 63. Comparison with Maps of Other Agencies.- None
- 64. Comparison with Contemporary Hydrographic Surveys.- None
- 65. Comparison with Nautical Charts.- None
- 66. Adequacy of Results and Future Surveys.-This map meets the National Standards of Map Accuracy and complies with project instructions.
- 67. Contours and Drainage.-Sixmile Creek and Cabbage Slough were inspected by the field editor as perennial and are shown as perennial on the map manuscript.
- 68. Section Lines and Boundaries.-The positions of all county lines are reliable being marked by recovered monuments and identifiable features. The northern and southern limits of the Segui Grant were reliably positioned by holding to features and recovered points. The western limit was plotted from G.L.O. measurements.

The Domingo Acosta Grant is marked on the western limit by a road while the northern and southern limits were mapped in accordance with the G.L.O. plats.

The William Garvin Grant was mapped in accordance with G.L.O. plats.

Section lines within T 21S, R 34E were for the most part positioned by holding to identifiable features and recovered monuments. All other section lines within the area had no recovery and are shown as unreliable.

The limits of the Brevard Co. Game Refuge were reliably positioned by holding to a county line and an identifiable feature.

Reviewed by:

Everett H. Ramsey
Everett H. Ramsey

APPROVED

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

A. C. Edmonson
Chief, Nautical Chart Branch
Division of Charts

O. S. Reading
Chief, Div. of Photogrammetry

H. W. ...
Chief, Div. of Coastal Surveys