Form 894  
U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE  

DESCRIBITIVE REPORT

<table>
<thead>
<tr>
<th>Type of Survey</th>
<th>Topographic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field No.</td>
<td></td>
</tr>
<tr>
<td>Office No.</td>
<td>T-9166</td>
</tr>
</tbody>
</table>

**LOCALITY**

State: FLORIDA  
General locality: EAST COAST  
Locality: HART, SEVEN, AND VOLUSIA  
COUNTIES:  
1949

CHIEF OF PARTY: S. S. Morris, Jr., Chief of Field
                  H. A. Gilmore, Tampa Photogrammetric Office

LIBRARY & ARCHIVES

DATE: APRIL 17, 1951
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): 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): 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.
All field contouring
by the writer,

Grover E. Torbert
Engineering Aid (Photo)

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

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

Planetary contouring by (II): Grover B. Torbert, Engineering Aid (Photo)  
Date: 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: M.M. Slavney  
Date: June, 1949

Stereoscopic Instrument compilation (III):  
Contours

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

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

Elevations on Manuscript checked by (II) (III): J.A. Giles (III)  
Date: Oct. 1949
Camera (kind or source) (III): Single-lens U.S. C & G.S.

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
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<tr>
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<td>4-21-48</td>
<td>1348</td>
<td>1:20,000</td>
<td>No tide</td>
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<td>Inc. 4-22-48</td>
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<td>48J-649-655</td>
<td>Inc. &quot;</td>
<td>0956-0959</td>
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</table>

Tide (III)

Reference Station: None

Subordinate Station: None

Washington Office Review by (IV): Everett H. Ramsey

Date: 19 Dec 1950

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

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): 18

Number of Temporary Photo stations established (III): None

Remarks: Only 5 Triangulation Stations within map limits.
Summary to Accompany T-9166

This topographic map is one of fourteen similar maps in project Ph-30(49) 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 plotable 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 applic-
cable General Instructions except for deviation noted under paragraph 16.

Field work, with exception of horizontal control recovery by James E.
Handley, 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 incor-
porated 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 St. Johns Creek. These areas are covered with
saw grass and are subjected to seasonal inundation making them marshes. How-
ever, 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,

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 planeritable 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 intermitently; 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.


7. **MEAN HIGH WATER LINE**

Not applicable.

8. **LOW WATER LINE**

Not applicable.

9. **WHARVES AND SHORELINE STRUCTURES**

Not applicable.

10. **DETAILED 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 52¼ 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, EMB(U.S.E.Harbor Survey)1934, was located by plane table fix on photograph 48-J-852(1 of 2) and Form 524 submitted.

Submitted
21 March 1949

[Signature]
Grover E. Torbert
Engineering Aid (Photo)

Approved and forwarded
31 March 1949

[Signature]
George E. Morris, Jr.
Chief of Party
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.
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>LATITUDE OR y-COORDINATE</th>
<th>LONGITUDE OR x-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS</th>
<th>DATUM CORRECTION</th>
<th>N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
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<tbody>
<tr>
<td>1935</td>
<td>G.P.</td>
<td>28 41</td>
<td>08 885</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>S.R. 44(U.S.E.)</td>
<td>P.236</td>
<td>80 59</td>
<td>32 189</td>
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<tr>
<td>BUCK LAKE</td>
<td>&quot;</td>
<td>80 57</td>
<td>23 597</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SHARP,</td>
<td>1827</td>
<td>28 40</td>
<td>04 010</td>
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<tr>
<td>ORANGE (USE)</td>
<td>&quot;</td>
<td>80 54</td>
<td>29 517</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MERE,</td>
<td>&quot;</td>
<td>28 37</td>
<td>58 181</td>
<td></td>
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1 FT. = 304.8006 METER
COMPUTED BY: H.R. Wagner
DATE: January 19, 1949
CHECKED BY: B.F. Lampton
DATE: Jan. 19, 1949
<table>
<thead>
<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
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<th>LONGITUDE OR x-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS</th>
<th>DATEMUM CORRECTION</th>
<th>N.A. 1927-DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. HARNEY, DRAW SPAN, CENTER LIGHT</td>
<td>P1. Co. 1935</td>
<td>N.A. 1927</td>
<td>1,592,280.10</td>
<td>Y</td>
<td>2,280.10 (7719.90)</td>
<td>695.0 (2353.0)</td>
<td>west of map limits</td>
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<tr>
<td>SADDLE, (U.S.E.)</td>
<td>P1. Co. 1935</td>
<td>&quot;</td>
<td>2,561,477.64</td>
<td>Y</td>
<td>1,477.64 (8522.36)</td>
<td>450.4 (2597.6)</td>
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<td>SR/44, RM. 2 KUSEY 1985</td>
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<td>&quot;</td>
<td>1,582,155.32</td>
<td>Y</td>
<td>2,155.32 (7184.78)</td>
<td>502.26/69</td>
<td>X</td>
<td>2,626.26 (7173.21)</td>
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</table>
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.

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. [Form]
2. Topographic Stations
3. 7 Section Corners
4. 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.

Approved and Forwarded:

Ross A. Gilmore, 4/27/49
Chief of Party.

Webber W. Dawsey
Cartographic Survey Aid
49. NOTES FOR THE HYDROGRAPHER

Inapplicable
PHOTOGRAMMETRIC OFFICE REVIEW
T. 9166


CONTROL STATIONS

ADVISED REVISION
(Nautical Chart Data)

PHYSICAL FEATURES

CULTURAL FEATURES

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

MISCELLANEOUS

40. Jesse A. Giles
Reviewer

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.

43. Remarks:

Compiler ___________________________ Supervisor ___________________________

M-2661-12
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.

Planimeter, 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., 483546, 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° 45', longitude 80° 59.8' and latitude 28° 38', longitude 80° 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° 41' - 28° 41' 30", longitude 80° 52' 30" - 80° 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 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, Chief of Party.

James E. Hundley
Cartographer, (Photo)
February 7, 1950
48. GEOGRAPHIC NAME LIST

- AURANIA
- BREVARD COUNTY
- BUCK LAKE
- CABBAGE SLOUGH
- DELESPINE GRANT
- ELLIS LAKE
- FIA. IA
- FLORIDA EAST COAST R.R.
- FRESHWATER LAKE
- LOUGHMAN LAKE
- SALT LAKE
- SEGUI GRANT
- SILVER LAKE
- SIXMILE CREEK
- SOUTH LAKE
- SOUTHERRE
- ST. JOHN'S RIVER (EAST BRANCH)
- VOLUSIA COUNTY
- WILSON GARVIN GRANT
- SUGAR CR.
- BREVARD CO. GAME RESERVE
- BURKHELM ROAD
- SEMINOLE CO.
- DOMINGO ACOSTA GRANT

Names approved
12-14-50
A. H. 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:

[Signature]

Everett H. Ramsey

APPROVED

[Signature]

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

[Signature]

H. E. Smoother  
Chief, Nautical Chart Branch  
Division of Charts

[Signature]

S. J. Pinkney  
Chief, Div. of Photogrammetry

[Signature]

Chief, Div. of Coastal Surveys