

5617

Diag. Cnt. No. 688

Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, Director

DESCRIPTIVE REPORT

Topographic } Sheet No. T-5617
~~#####~~

August 8, 1941

State FLORIDA

LOCALITY

St. Johns River

Lake Harney

Southern Part

Photographs taken Feb. 16, 1939

193 9

CHIEF OF PARTY

Riley J. Sipe

U. S. GOVERNMENT PRINTING OFFICE: 1934

August 8, 1941

5617

before review

Applied to Chart Comp. 68P April 26, 1940 H. MacLusau
Fully " " " " June 20, 1946 P. H. Benson

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 44

REGISTER NO. T-5617

State FLORIDA

General locality St. Johns River

Locality Lake Harney, Southern Part

Scale 1:2615 Date of Photographs Feb. 16., 1939

Vessel A. P. No. 2-A

Chief of party Riley J. Sipe

Surveyed by See notes on compilation.

Inked by " " " "

Heights in feet above --- to ground to tops of trees

Contour, Approximate contour, Form line interval --- feet

Instructions dated March 4, 1935, 19

Remarks: Nine Lens Photographs.

Field Inspection in July 1937 & March 1939.

TIME SHEET

Field Sheet No. 44
 Register No. T-5617

This is the first sheet of nine lens photographs used by this office. It was also the first sheet completed by Arthur C. Oliver.

Pricking points for plotting	8 hrs.
Making templates	32 "
Radial plot	36 "
Pricking additional points for detail	19 "
Plotting all control	53 "
Detailing roads, bldgs, fences, trails, etc.	33 "
Detailing symbols	128 "
Detailing shoreline	34 "
Field inspection	40 "
Triangulation (computing and pricking points)	30 "
Instruction	11 "
Inspection	4 "
Layout of work	3 "
Correspondence	4 "
Report (writing and typing)	40 "
Field review of sheet	25 "

Total Time - - - - - 500 hrs

$23 \overline{) 71}$
 3 months

NOTES ON COMPILATION

Sheet No. 44 (Field)

Register No. T-5617

PHOTOGRAPHS:

<u>Nine</u>	<u>Lens</u>	<u>Flight No.</u>	<u>No.</u>	<u>03246 to 03251</u>
_____	"	"	"	"
_____	"	"	"	"
_____	"	"	"	"

SCALE PLOT: R. J. Sipe

SCALE FACTOR USED: 1.04

PROJECTION BY: Washington Office

CONTROL PLOTTED BY: A. C. Oliver

CONTROL CHECKED BY: H. O. Fortin & R. J. Sipe

SMOOTH RADIAL PLOT BY: R. J. Sipe

TOPOGRAPHY TRANSFERRED BY: A. C. Oliver

TOPOGRAPHY CHECKED BY: H. O. Fortin

SHORELINE INKED BY: A. C. Oliver

DETAIL INKED BY: A. C. Oliver

OVERLAY SHEET BY: A. C. Oliver

DESCRIPTIVE REPORT BY: A. C. Oliver

REVIEWED BY: H. O. Fortin

AREA OF DETAIL INKED: 11.0 sq. stat. miles

LENGTH OF SHORELINE (Over 200 m): 6.3 Stat## Miles.

LENGTH OF SHORELINE (Under 200 m): 26.5 Stat## Miles.

LENGTH OF SHORELINE OF SMALL LAKES: 21.0 Stat## Miles.

Reference Station: Alderman, U.S.E., 1935

Latitude: 28° 44' 00.737" (22.7 meters)

Longitude: 81° 02' 19.868" (539.1 meters)

(Adjusted)

X coordinate: 487,548.46

Y coordinate: 1,599,337.97

Note: Date of Survey - Photos taken 2/16/39
F.I. - July 1937 March 1939
Details on T-5617 are of the date of the photographs.

DESCRIPTIVE REPORT

Field Sheet #44
Register T-5617

June 29, 1939.

GENERAL

This drawing was compiled from air photographs taken by the U. S. Army Air Corps using a nine lens camera designed by the Coast and Geodetic Survey. Air photographs from No. 03246 to No. 03251 inclusive were used.

All visible buildings on photographs are shown.

CONTROL

A total of 23 control points were plotted on this sheet, 14 of which fall within the tracing limits. Of these 14, 3 were triangulation stations established by this party in 1935, 8 were triangulation stations established by the U. S. Army Engineers in 1934 and 1935. (Station "Harney" is listed as a U. S. C. & G. Survey station in the list of geographic positions but the original description lists it as a U. S. E. station). The remaining 3 stations were Local Supplemental Control furnished by the topographic party of the M. V. Mikawe, 1939.

RADIAL PLOT

Templates were made on clear acetate sheeting and these were adjusted to the triangulation plotted on a regular control sheet. After the best adjustment of all templates was obtained the templates were securely fastened to the control sheet with scotch tape. The smooth projection was then placed on top and the radial points pricked at the intersection of the radial lines.

Due to insufficient overlap of the air pictures the radial points could not be pricked on the extreme east and south limits of the sheet. Therefore the detail could not be inked out as far as the tracing limit of the air photographs.

INTERPRETATION OF AIR PHOTOGRAPHS

The mean high water line was indefinite therefore a light line was used to define the outer limits of shore line at the time the air photographs were taken.

The areas marked flooded along the shore line should be interpreted as being flooded at high water. All other areas marked flooded should be interpreted as meaning flooded during high water or rainy season.

Due to a clouded area practically covering Gopher Slough on air picture 03247 it was necessary to trace slightly beyond the tracing limits on 03246.

The power line following along State Highway #44 is slightly offset to allow for clearness.

On the southwest corner of the sheet several radial points were used with only two radial lines. However they were found to be acceptable and it is believed that the drafting of this area is within a few meters as accurate as the remainder of the sheet.

FIELD INSPECTION

Field inspection was made by boat and truck in July 1937 and by truck in March 1939.

GRAPHIC CONTROL SURVEYS

This area is covered by Graphic Control Sheets "AAAA" and "BBBB" 1939, F. L. Gallen, Chief of Party. This office has only a tracing of the above sheets.

At several points the Graphic Control Sheets have shown mean high water line but as the map drawing shows only the outer edge of low water line at the time the air photographs were taken it was impossible to make any comparison.

All details on the above graphic control survey tracings within the area of this map drawing are shown except the Magnetic Declination and Temporary Stations for the control of hydrography.

HYDROGRAPHIC SURVEYS

The shoal line on this map drawing is a little inside of the one foot curve as shown on Boat Sheet #60, 1939, F. L. Gallen, Chief of Party. The soundings check favorably with the shore line of the St. Johns River at the south end of the sheet.

The shore line has not been furnished the hydrographic party for the smooth sheet covering this area.

COMPARISON WITH SURVEYS OF OTHER ORGANIZATIONS

Sheets #8, #9 & #10 of the U. S. Engineers Survey, Sanford to Titusville, 1935, compared very well with the exception of the shoreline which evidently represents Mean High Water. The datum of the control stations also differ from this map drawing. The shore line as shown on this map drawing represents the low water line as interpreted from the air photographs at the time they were taken.

COMPARISON WITH COAST SURVEY CHARTS

Comparison was not possible due to the large difference in scale between the map drawing and Charts #458 & #509.

BRIDGES

The bridge at triangulation station Lake Harney D. S. is not in the Army Engineers List of Bridges over Navigable Waters. However the following field measurements were taken:

"Steel and Concrete Swing Bridge"
Vertical Clearance - 13.0 Ft. (Noon Mar. 20, 1939)
Horizontal " 93.5 " (Between piling guards)

not on 485

TIDES

The air photographs were taken when the lake level at Lake Monroe was approximately two feet below mean lake level.

PREPARATION FOR INKING

The surface of this sheet was rubbed with dry Carbonate of Magnesia before inking. It was found that this absorbed the grease and removed the dirt and other foreign matter from the sheet. It was found that the ink flowed more uniformly after preparing the sheet in this manner.

There was little retouching to do as the completed parts of the sheet were kept covered with clear celluloid. The clear covering made the entire area of the drawing visible and protected the inked surface.

Respectfully submitted,

Arthur C. Oliver
Arthur C. Oliver

Forwarded:

Peter J. Sipe
Peter J. Sipe
Chief of Party

SOURCES OF GEOGRAPHIC NAMES

Field Sheet 44

Register # T-5617

	Local Usage	U.S.C.&G.S. Chart #459 #509	G.C. Sheet	Coast Pilot	Light List	U.S.G.S. State of Florida, 1932	Boat sheet #61	Malwa 1939	Dept. of Agric. Sec. Map of Florida	U.S.E. Sanford to Titusville #9, 10, 11.
Cow Island ✓	6						X			
Cow Head ✓	1									
Big Run ✓	1									
Gopher Slough ✓	5						X			
Jordan Slough ✓	2						X			
Lake Harney ✓	5	X	X			X		X	X	
Little Run ✓	1									
Still Lake ✓	4									
St. Johns River ✓	5	X		X	X	X	X	X	X	
Stone Island ✓	5									
Raulerson Cove ✓	3						X			
Underhill Slough ✓	5						X			

- (1) R. L. Borden, O. E. Allen & M. Alderman of Geneva Florida.
- (2) O. R. Morgan & R. L. Borden of Geneva, Florida.
- (3) R. L. Borden, O. R. Morgan & M. Alderman of Geneva, Florida.
- (4) G. R. Mathieux, J. E. Mathieux & Mrs. K. W. Culpepper of Geneva, Florida.
- (5) O. R. Morgan, M. Alderman, Jack Geiger, O. F. Allen & Chas. Rea of Geneva, Fla.
- (6) R. L. Borden of Geneva, Florida.

T-5617

Remarks

Decisions

	Remarks	Decisions
1		287810
2		"
3		"
4		"
5		"
6		"
7		"
8		"
9		" U.S.G.B.
10		"
11		"
12		"
13		
14		
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GEOGRAPHIC NAMES

Survey No. **T-5617**

Name on Survey	Source										
	A. On Chart No.	B. On previous survey No.	C. On U. S. Quadrang. Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map.	G. Rand McNally Atlas	H. U. S. Light List	K.		
<u>Cow Island</u>											1
<u>Cow Head</u>											2
<u>Big Run</u>											3
<u>Gopher Slough</u>											4
<u>Jordan Slough</u>											5
<u>Lake Harney</u>											6
<u>Little Run</u>											7
<u>Still Lake</u>											8
<u>St. Johns River</u>											9
<u>Stone Island</u>											10
<u>Raulerson Cove</u>											11
<u>Underhill Slough</u>											12
											13
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											25
											26
											27

Heck on 4/14/41

GEOGRAPHIC NAMES

COW ISLAND.

Located on the west bank of the St. Johns River about $\frac{1}{2}$ mile south of where the river empties into the south end of Lake Harney.

COW HEAD.

The vicinity where the St. Johns River empties into the south end of Lake Harney.

BIG RUN.

A small stream about 0.3 mile southeast of Little Run.

GOPHER SLOUGH.

A slough on the east side of Lake Harney approximately $\frac{1}{4}$ mile south of triangulation station "Beach".

JORDAN SLOUGH.

This slough is just east of triangulation station "Harney". Different spellings are, Jorden, Jurden and Jurdan. As Jordan appeared to be the most common spelling it is recommended for charting.

LAKE HARNEY.

Appears on all maps the same.

LITTLE RUN.

A small stream running into the southwest corner of Lake Harney about 0.8 mile northwest of triangulation station "Harney".

STILL LAKE.

This is a lake in the southwest corner of this map drawing, approximately one mile north of triangulation station "Patch". It is joined on each end by an old abandoned Indian canal. This lake is also called Wisteria Lake and Friday Lake, but the name Still Lake is recommended as it is more widely used.

STONE ISLAND.

This is an island on the east side of Lake Harney between Underhill and Gopher Sloughs.

RAULERSON COVE.

A cove located in the southeast end of Lake Harney.

UNDERHILL SLOUGH.

This slough is located on the north east side of Lake Harney directly north of triangulation station "Underhill".

REVIEW OF AIR PHOTO COMPILATION NO.

Chief of Party: Riley J. Sipe

Compiled by: A.C. Oliver

Project: HT-168

Instructions dated: 3/4/35

1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b, c, d, e, g and i; 26; and 64)
Yes
2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g, n)
Yes
3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d, e)
Yes
4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)
None
5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.
Yes
6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 12b; 44; and 66 c, h, i)
Yes
7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44)
H.W.L. not shown

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs." M-67

8. The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)

Yes

9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)

None

10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60)

None

11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c)

Yes

12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k)

Yes

13. The geographic datum of the compilation is N. A. 1927 and the reference station is correctly noted.

Yes

14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)

Yes

15. The drafting is satisfactory and particular attention has been given the following:

Yes

1. Standard symbols authorized by the Board of Surveys and Maps have been used throughout except as noted in the report.
2. The degrees and minutes of Latitude and Longitude are correctly marked.

3. All station points are exactly marked by fine black dots.
4. Closely spaced lines are drawn sharp and clear for printing.
5. Topographic symbols for similar features are of uniform weight.
6. All drawing has been retouched where partially rubbed off.
7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground.

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

16. No additional surveying is recommended at this time.

None

17. Remarks:

As there was not overlap enough to accurately locate radial points the whole of Lake Harney could not be compiled from the latest nine lens pictures.

18. Examined and approved;


Chief of Party

19. Remarks after review in office:

Reviewed in office by:

Examined and approved:

Chief, Section of Field Records

Chief, Section of Field Work

Chief, Division of Charts

Chief, Division of Hydrography
and Topography.

PLANE COORDINATE GRID SYSTEM

Positions of grid intersections used for fitting the grid to this compilation were computed by Division of Geodesy and the computation forms are included in this report.

Positions plotted by S. Kass

Positions checked by S.K. (on ruling machine)

Grid inked on machine by S.K.

Intersections inked by S.K.

Points used for plotting grid:

Minute intersections,

ϕ $28^{\circ} 46'$
 λ $81^{\circ} 05'$

ϕ 28-44
 λ 81-04

ϕ 28-46
 λ 81-02

ϕ _____
 λ _____

ϕ 28-43
 λ 81-05

ϕ _____
 λ _____

ϕ 28-43
 λ 81-02

ϕ _____
 λ _____

Triangulation stations used for checking grid:

1. Patch 1935 5. _____
2. Underhill USE 1935 6. _____
3. Alderman USE 1935 7. _____
4. Harney 1935. 8. _____

DIVISION OF CHARTS

Section of Field Records

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-5617

Graphic Control Surveys

CS-177-M (1:10,000) 1939

CS-178-M (1:10,000) 1939

These graphic control surveys show only the location of temporary signals for hydrography with the exception of one landmark, a windmill, on CS-178-M which has been transferred to T-5617.

Previous Topographic Surveys

T-1215 (1:80,000) 1883

T-5617 supersedes the area of T-1215 which it covers.

Contemporary Hydrographic Surveys.

H-6435 (1:10,000) 1939

The hydrographic review and comparison with T-5617 have been previously completed by the hydrographic reviewing unit with the exception of minor adjustments in low water line which has been taken care of during the review of T-5617.

Chart 688

T-5617 has been applied to Chart 688 prior to this review. No changes have been made in T-5617 which affect the chart with the exception of the addition of a landmark (windmill) from CS-178-M. This landmark has been reported to the nautical chart standards 1-30-41.

*added to ch 688
Nov 21, 1945*

Mean High Water Line

The fringe of marsh shoreline around the south and lower east sides of Lake Harney is partly ~~flooded~~^{Flooded} at high water but has been delineated by the field party with a solid light line. No field inspection notes were made regarding this shoreline. It is accepted as the best delineation of the particular condition on the assumption that the field party ~~would~~ examine this area and had first hand information regarding its appearance. A narrow sand beach exists back of the marsh and is indicated on the drawing by a sand symbol.

Reviewed in office by - F. H. McBeth, 1/41

Inspected by - B. G. Jones, 1/41

Thos O Reed
Chief, Section of Field Records.

K.T. Adams
Chief, Topography Section.

Examined and Approved:

J. S. Borden
Chief, Division of Charts.

G. H. Hude
Chief,
Division of Coastal Surveys.