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FORM 504 Rev. Dec. 1933 DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	<u> </u>
DESCRIPTIVE REPORT Topographic Sheet No. T-5797	
	<u></u>
,	
Florida LOCALITY	
Florida West Coast	
Vicinity of Crystal River	<u>*</u>
hotos taken in 1939 and 1941 supplemented by other surveys 1714	
OHIEF OF PARTY	<u> </u>
 Lieut. Kenneth G. Crosby	
 U.S. GOVERNMENT PRIKTING OFFICE: 1934	
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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.

SHEET NO. Fixe No. T-5797

REGISTER NO.

StateFlorida
General locality Florida West Coast
Locality Vicinity of Crystal River Photos. December 4 1939
Scale 1:20,000 Date of snower May 20 , 1941.
PRESENT Air Photographic Party No. 1
Chief of party <u>Lieut. Kenneth G. Crosby</u> Field Inspected **Example by Lieut. (j.g.) E.L. Jones; H.A. Duffy, Photo. Aid
Inked by James H.S. Billmyer
Heights in feet above to ground to tops of trees
Contour, Approximate contour, Form line interval feet
Instructions dated April 3 , 19 40
Remarks:
6 P O

PHOTOGRAPHS

Number	: Date .	Time :	Stage of Tide
3819	December 4, 1939	10:43	1.2
3820	December 4, 1939	10:44	1.2
3821	:December 4, 1939	10:45	1.2
3871	December 4, 1939		0.7
3872	:December 4, 1939		0.7
3882	:December 4, 1939		0.6
3883	December 4, 1939	12:58	0.6
	December 4, 1939	13:00	0.6
3884 * 63,64,65,71,80,81,82		14:30 approx.	0.8 (approximately

* 1:10,000 Single Lens: Flown by U.S. Army Air Corps, Mac Dill Field, Tampa, Fla.

Tide from predicted tables for: Homosassa Islands, Reference Station, Tampa Bay.

Camera: U.S. Coast and Geodetic Survey Nine-Lens (focal length 8t inches)
Negatives on file at Washington Office.

SCALE

Mean scale of Photographs	1:20,000 :	0.9995
Scale of Surrey Sheet	1:20,000	

STATISTICS

Area (land)	85.5	Square statute miles
Shoreline (more than 200 m. from opposite shore)	155.1	Statute miles
Shoreline (creeks)	263.0	Statute miles
Roads, streets, trails, and railroads	121.9	Statute miles

REFERENCE STATION

Station: CRYSTAL, 1934

Latitude: 28° 53' 14.304" (440.3 m)

Datum: N.A. 1927

Longitude: 82° 34' 55.619" (1507.lm)

Florida System of State

coordinates Zone 2 (west) $\chi = 313,712.67$ ft.

pate of Surrey: Details on T 5797 are of the dat

of the photographs of Dec. 4 1939 except for the

islands at S. W. corner which were taken from the

islands of May 20, 1941. The field inspection added

photographs of may 20, 1941. The field inspection added

no obtails later than the photographs.

SUPPLEMENTARY SURVEYS

	Mame	2 Date	t Roure
Control Surveys	E.L.J.	Dec. 3,1940	1
		Total	1
FIELD INSPECTION			
Preparation of Photographs	ELJ. WHS	July & Aug.	11
Field Work		sept. & Oct.	: 77
Inking Notes		sept. & Oct.	11
Coast Pilot Notes	ELJ, HAD, KGC	Oct. & Dec.	3
Geographic Name Report		Oct. & Dec.	18
Landmarks for Charts			
Recovery Notes	ELJ, HAD, KWS	Jan. 1941	26
		Total	146
MAIN RADIAL PLOT			
Scale Plot	KGC	* Nov. 1940	2
Projection on Base Sheet		1	
Projection on Survey Sheets		•	
Control Plotted		* December	2
Control Checked		December	A STATE OF THE PARTY OF THE PAR
Control Trans. to Base Sheet		December	1 2
Control Picked on Photographs		Detober	11 3/4
Control Checked on Photographs		Nov. & Dec.	12
Hydro. & Topo. Stations Picked:		November	18½
Radial Points Picked:	ELJ	November	: 4
Adjacent Centers Picked		: October	6
Templates		November December	8
Radial Points Transferred	KGC, JHSB, WHS	December	
Transfer Checked		December	3 3
H & T Stations Scaled & Grecked		June, 1941	3
Additional Radial Points		Feb. & June	52
		Total	136
DETAILING			
Rough Draft		Feb. & June	469
Smooth Braft		1	160
COMPILATION		Total	469
Name Overlay:	JHSB	June, 1941	25
Descriptive Report		June, 1941	182
Field Review	KGC KGC	June, 1941	26½
		Total	70
Total Time Spent on Sheet			* 822 Hours

DESCRIPTIVE REPORT TO ACCOMPANY SHEET NO. T---5797

GENERAL

This sheet was compiled from nine and single lens aerial photographs in accordance with "Instructions for Drafting Air Photographic Surveys, Project H.T. 242", dated April 3, 1940.

The general locality of the area covered by this survey sheet is Florida, West Coast, in the vicinity of the town of Crystal River.

The area along the shoreline is composed of numerous marsh and mangrove islands of various sizes. Most of the larger islands have patches of heavily wooded cedar, pine and palm. The vegetation of the mainland along the shore is mostly marsh and swamp with some areas of heavily wooded cedar, pine and palm. Further back from the shore the area is largely pine and scattered oak land with grass and palmettos, and some swamp and cultivation.

Practically all of the swamp on this sheet contains scattered pine and palm.

All of the islets adjacent to the marshy areas are also marshy unless otherwise shown.

A large part of the dry vegetation areas were detailed with symbols where the vegetation was not uniform in density.

Approximate M.L.W. is shown by a dotted line, and approximate limits of shoal areas are shown by a dashed line. These features are shown for the use of the hydrographer only.

All roads are to be shown 0.6 m.m. wide, as none of the roads on this sheet are more than 12 meters wide.

Due to poor scale of some of the photographs, a great many additional radial points were necessary.

As the centers of the photographs on the outside flight fell too far inland, great difficulty was experienced in the detailing of most of the islands. The land and water areas appeared greatly different on different photographs. Much of the shoreline of the islands was changed on the drawing two and three times before the compiler was satisfied that it was delineated correctly. Naturally a great amount of additional time was spent in the detailing which would not have been necessary had the outside flight followed the outer coast more closely.

The group of islands shown on the chart as "Homosassa Islands" fell on the extreme edge of several of the photographs. This made it practically impossible to pick accurate radial points and obtain more than two "cuts" to them. As there was no possibility of detailing these islands accurately with the nine lens photographs, the U.S. Army Air Corps at Mac Dill Field, Tampa, Florida, was requested to obtain some single lens photographs of the islands for us. These pictures were taken on May 20, 1941 at an altitude of 10,000 feet, with an Air Corps camera having a focal length of 12". These photographs were

taken at approximately 2:30 P.M. The predicted tide tables gave the height of tide as approximately 0.8 foot at this time.

The following method for compfling these photographs is given in detail. A projection was made on celluloid on a scale of 1:10,000 for the area covered by the island group. Two triangulation stations, BIRD KEY, 1857, and HOMOSASSA POINT, 1858, were plotted on the photographs and were used for control. The two cut radial points obtained from the nine lens main radial plot were transferred to the 1:10,000 sheet to assist in the approximate orientation of the single lens photographs.

A radial plot was run on the 1:10,000 sheet direct. By holding on the triangulation control and on the existing radial points, a good mean of the radial intersections was obtained and new radial points pricked. The plot was then relaid with satisfactory results and no further adjustment of the plot was necessary to obtain good agreement.

The detailing was then done on a 1:10,000 scale and pantagraphed from the celluloid to a scale of 1:20,000 on paper. The islands were then traced directly from the paper onto sheets T-5797 and T-5798.

The photographs and negatives, the 1:10,000 celluloid sheet, and the 1:20,000 pantagraphed detail will be sent to the Washington Office with the completed sheets T-5797 and T-5798.

The furthest western islet of the group, as shown on the chart, could not be found on the photographs although the area was well covered by the pictures. It is believed that the islet has been washed away since the last survey, 1858-9, was made. This should be investigated and verified by the hydrographic party.

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MAIN RADIAL PLOT

A continuous radial plot was run on December 5-6, 1940 for the location of radial points, marked hydrographic and topographic stations, bench marks and azimuth marks. The plot covered the southern part of T-5793 and all of sheets Nos. T-5794 - T-5798, inclusive, comprising the area between Cedar Keys and the Chassahowitzka River. All photographs within this area were used including photographs in the vicinity of Cedar Keys, namely; Nos. 3858, 3859, 3837, 38384, 3839, 3703, 3704, and 3705. Of these latter pictures, all had been used in the previous radial plot involving sheet T-5793 except photographs Nos. 3858 and 3859, which had not been furnished at the time the previous plot was laid. Good agreement was obtained for the location of radial points at the junction of this and the previous main plot.

This plot comprised of 41 templates and extended along the coastline for a distance of approximately 40 miles (nautical). Practically all templates were controlled by three or more triangulations and/or traverse stations, there being only one template with no control on it, namely; 3877. All templates were made in accordance with "Notes on Radial Plotting of Nine-lens Air Photographs", dated April 9, 1940 with the exception that many more radial points were located than recommended and that mask lines were not placed on the survey sheet.

The templates which were rigidly controlled were laid first, followed by those not so rigidly controlled. Agreement along the flightline was very good

and most of the locations determined by the radial plot resulted in the common intersection at a point of three or more radial lines.

The usual practice was followed which consisted of plotting the control on the survey sheet and transferring it to the grid sheet, the latter being securely taped to the plotting table for running the plot. There was only a very slight amount of adjustment necessary when transferring the control by matching the individual grid squares. Upon completion of the plot, the radial points were picked and circled on the upper layer of templates and then transfetred to the survey sheet by again matching grid squares.

Points determined by three or more radial lines intersecting at a common point were circled by 2.5 millimeter circles. Where a small triangle of error resulted, the point was picked in the center of gravity of the triangle giving due regard to the strength of the intersections resulting from the radial lines. In cases where the triangle of error was large, the radial lines were transferred directly to the survey sheet for additional study by the compiler to obtain a common point of intersection. It is believed that all points located by three or more radial lines on this plot are within .25 m.m. of their correct position.

On the extreme edges of the sheets, it was possible in some areas to obtain but two radial lines. Such points are to be used with caution and are indicated by 2.5 millimeter blue circles on the back of the survey sheet with tick marks to show number and direction of radial lines at that point. No large or unusual adjustments were necessary in any part of the plot.

Various colored inks were used on the photographs and the survey sheet to designate triangulation stations, topographic and hydrographic stations, and radial points. The following key is furnished for future reference.

Photograph Centers......double red circle

Survey Sheet

Triangulation & Traverse Stations...........3.5 mm high black triangle Radial Points (Main Plot).................2.5 mm blue circle on back of sheet Radial Points (Additional)..................3.5 mm blue circle on back of sheet Radial Points (Questionable)......2.5 mm blue circle on back of sheet with tick marks showing number and direction of cuts

CONTROL

The following eight triangulation stations fall on the sheet, and all but

one, NEWTOVN, Black Water Tank, 1934, are within the tracing limits.

Name of Stations	Year	Established by
BEAR ISLAND	1857	G.H. B.
BIRD KEY	1857	G.H. B.
CRYSTAL	1934	G.L. Anderson
CRYSTAL RIVER, Municipal Water Tk.	1933	H.C. Warwick
MULLET	1934	G.L. Anderson
NEWTOWN, Black Water Tank	1934	G.L. Anderson
RAGGED ISLAND	1858	G.H. B.
SHELL POINT	1857	G.H. B.

No stations established by other organizations were used for control for detailing on this sheet. Traverse stations, established by the Florida Mapping Project, were used to control the main radial plot but none fell within the area covered by this sheet.

INTERPRETATION OF PHOTOGRAPHS

Field notes were adequate. The photographs on the inshore flight were clear and no difficulty was experienced in the interpretation of the inshore areas. The interpretation of the shoreline areas has already been discussed in paragraph "GENERAL".

FIELD INSPECTION

The field inspection was made by Lieut. (j.g.) E. L. Jones and H.A. Duffy, Photogrammetric Aid, by truck and skiff during the months of September and October, 1940. The legend used by the field inspection party is made a part of this report.

DETAILING

Before any inking was done, the entire sheet was rubbed with dry magnesium carbonate and then washed off with water. No additional cleaning was necessary during the inking. The ink has adhered to the celluloid exceptionally well and only a small amount of retouching has been necessary.

The scale of the photographs was fair.

JUNCTIONS

This sheet joins T-5796 on the north and T-5798 on the south. Both junctions are in very good agreement.

COMPARISONS WITH OTHER SURVEYS

Comparisons were made with map of survey of Crystal River Harbor made by the U.S. Engineers in May and June 1940 and with U.S. Coast and Geodetic Topographic Sheets Nos. 705 (1858) and 779 (1858-9).

Although the U.S. Engineer's survey is on a scale of 1:10,000, it agrees very closely with T-5797. This survey was checked in the field by Lt. Jones. This map will be submitted to the Washington Office with T-5797.

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The surveys made in 1858-9 agree quite well in general with the air photographic compilation of the area, although naturally the shorelines of the islands have changed slightly in numerous places due to their marshy unstable character.

GEOGRAPHIC NAMES

The investigation of geographic names on this sheet is the subject of a special report entitled "Investigation of Geographic Names - Horseshoe Point to Anclote Keys", submitted to the Washington Office by Lieut. E. L. Jones. A name overlay accompanies this sheet.

LANDMARKS

There are no prominent landmarks on this sheet.

Respectfully submitted,

James H.S. Billmyer, Sr. Engr. Draftsman.

Forwarded,

Chief of Party.

	GEOGRAPHIC NAMES Survey No. T-5797 Of No. 3. Name on Survey A, B, C, D E F G	Head Hard Hard Hard Hard Hard Hard Hard Ha	K K	15/
/	· Head Creek			1
~	. Greenleaf Bay			2
~	- Mud Creek			3
V	- Double Bars			4
-	· Game Creek			5
	Game Creek Bay			6
1	Halls River			7
	· Homosassa Springs (town)			28
, 4	Gulf of Mexicos			9
/	Pine Island (west of Little Coon Gap, No. 25, page 1)			10
				11
				12
	Names underlined in red approved			13
	by L. Heck moly			14
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	- Salt Creek										2
* 1	· Mangrove Point										3
	· Shark Point										4
-	· Berd Keys										5
*	Mullet Key									4.	6
	' Sandy Hook										7
1	· Bear Island	/									₹8
	Chair Island										9
	Long Point										10
-	Green Point									4	11
/	Grey Mare Pass										12
	Fish Creek										13
1	· Fish Creek Bay										14
/	Rock Island										15
, ,	Brd Keys										16
Homo	St. Martins Keys										17
1	Roack Key										18
1	Fish Creek Pass										19
1	.St. Martins River										20
	Paradise Island										21
/	. Ozello										22
*	Black Ceek										23
/	· Bear Ford				11 40 2						24
	Pipe Island										25
	'Dog Island										26
	. Pea Pass										27
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Remarks

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Remarks

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, 1 / /	GEOGRAPHIC NAMES		/	/ / \$	S. W. S. W.	The /	/	o dideo	Mad Andrews	ANIOS /	4/
V=aharted	Survey No. T+5797		not ,	To de C.	5. 100	or to the land	Or och Mod	Guide	McHall	7. Jake	//
W.1 8/24/43	No. 1 Name on Survey	10	Chor of	40. Q	2 /4	OL MOL!	000	0.	2010	25	/
	Name on Survey	/ A,	/ B,	/ C,	D	E	F	G	H	/ K	(
1	Crystal Bay										1
,	Crystal Reefs									-	2
1.	Crystal River (stream)										3
1.	Cedar Creek										4
/.	Shell Island									6	5
. 1.	South Pass										6
✓•	Little South Pass								-9 2 () 2 () () ()		7
1.	Fort Island										8
	Gomez Creek										9
/.	Wash Island										10
	Dolphin Creek										11
/	Kings Creek									-	12
	Sheephead Creek										13
	Deer Creek										14
1	The Rocks										15
,	Indian Mound										16
1.	Bagley Cove										17
· .	Millers Creek										18
1	Kings Bay										19
	· Buzzard Island										20
/	Crystal River (town)										21
4	Hunters Spring Run										22
	Salt River	7.								-,	23
	Big Coon Gap										24
	Little Coon Gap										25
	Spice Key							***************************************			26
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TEVIEW OF HER PHOTO CONTINUED NO. T- 5797

Chief of Party: Kenneth G. Crosby Compiled by: James H.S. Billmyer

Project: HoTo - 242

Instructions dated: April 3

19 40

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. (Para 16a,b,c,d,e,g and 1; 25; and 64)

Yes

2. Change in position, or non-existence of wherfs, 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

5. Ground surveys by plane table, sextent, 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. 56; and 66 d, e)

None used.

4. Blue prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charte. (Pero 28)

Yes. U.S. Engineer's map of Crystal River waterfront.

8. Difference 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 reports

Yes

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. (Parolib; 46; and 65 c.h.;)

Yes

7. High writer line or marshy and mangrove coast is clear and adequate for chart compilation. (Per. 16a, 43, and 44)

Yes

- 8. The representation of low water lines, recis, coral racis and rocke, and legends partaining to them is satisfactory. (Pare 56, 37, 38, 39, 40, 41) Yes. Shoal areas are outlined approximately as an aid for the hydrographer.
- To Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1935, circular letter of March 30 1985, and circular 31, 1954. (Par. 29, 30, and 57)

10. A list of landwarks was furnished on Form 557 and instructions in the Director's latter of July 16, 1934, Landmarks for Charts, complicat with (Paro 160, e; and 60)

No landmarks.

- 11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, elegrance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c)
 No bridges of navigational importance. Fixed span bridge across SALT RIVER at Bear Ford has clearance for small boats.
- 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 the source of information and a specific statement when adviceable. Complete discussion of place names differing from the charts and from the UoSo Go So Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 65k) Yes. See special report mentioned in paragraph entitled

"Geographic Names".

- 15. The geographic datum of the compilation is N.A. 1927 reference station is correctly moted.
- 14. Junctions with adjoining compilations have be remained and are in agreement. (Par. 661) Yes
- The drafting is satisfactory and particular attention has been given the following:
 - lo Standard symbols suthorised by the Board of Surveys and Maps have been used throughout except as noted in the report. Yes, legend also used.
 - 20 The degrees and minutes of latitude and longitude are correctly marked.

- 34 All station points are exactly excited by fine black dots. Yes
- 40 Closely spaced lines are drawn sharp and clear for printing. Yes
- 5. Topographic symbols for similar features are of uniform weight. Yes, legend also used.
- 6. All drawing has been retouched where partially rubbed off. Yes, slightly in one or two small areas.
- 7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground.

 Yes

(Pero 34, 35, 86, 57, 38, 39, 40, 41, 42, 45, 44, 45, 46, 48)

- 16. No additional surveying is recommended at this time.

 No additional topographic survey required.
- The light line around marsh and mangrove areas defines the outer limits of vegetation visible at high water. The mean high water line is shown only on fast land and is represented by a heavy solid line.
- 18. Examined and approved:

Kenneth G. Crosby.

19. Romarks after review in office:

Reviewed in office by: Examined and approved:

Chief, Section of Field Resords

Chief, Division of Charts

Chief, Section of Field Work

Chief, Division of Hydrography

DIVISION OF CHARTS

Surveys Section

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-579%

Contemporary Surveys

None.

Previous Topographic Surveys

T-705 (1858) Scale 1:10,000 T-779 (1858-59) Scale 1:10,000

T-579% is much more complete in detail and supersedes for charting purposes the sections of the older surveys which it covers.

Field Inspection

The field inspection is thorough and complete and the notes made on the photographs are adequate for correct interpretation.

Radial Plot and Detail

The plot was well controlled and is discussed in detail in the descriptive report. It is accepted as of standard accuracy without checking in this office. The detail is complete.

Low Water and Shoal Lines

Low water details will be inked and shown on the published copies of T-579%. Shoal lines will not be shown on the published copies but are available on the celluloid drawing for use in preparing hydrographic sheets.

Topographic Stations

A number of objects such as points of marsh and points of mangrove located for hydrographic control are of a semi-permanent nature and will not be shown on the published map. The positions are available on the celluloid drawing for transfer to the hydrographic boat sheets.

Air Photo Survey T-5792 - 2

Comparison with Chart 179 (Printed 7-17-1940)

T-5792 shows much more complete interior details than are on the existing chart.

No land marks were recommended in this area.

Preparation of Hydrographic Boat Sheets

In addition to the celluloid drawing the sample drawings on mounted paper will be held in the Air Photo Unit until after completion of the hydrographic surveys. These blue-line prints than the celluloid and carried on the published map.

Reviewed by F. H. McBeth and B. G. Jones B.J. Junes in Dec. 1941

Examined and approved:

19 Jores 8/46 Technology Assistant to Chief

Chief, Surveys Section

Chief, Section of Photogrammetry

Chief, Division of Charts Branch

ef, Division of

Coastal Surveys