

5819

5819

HYDRO.

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

DESCRIPTIVE REPORT

~~Hydrographic~~
Hydrographic

Sheet No. 7.

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

JUN 27 1935

Acc. No. -----

State Florida

LOCALITY

St. George Sound.

~~Gulf Coast.~~

Pilots Harbor to Cat Pt.

1935

CHIEF OF PARTY

C. A. Egner.

5819

5819

Boat 12-17

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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

Field No. 7

REGISTER NO. **5819**

State Florida

General locality ~~Gulf Coast~~ St. George Sound

Locality ~~St. Georges Sound.~~ Pilots Harbor to Cat Point

Scale 1/20,000 Date of survey Mar.-Apr.-May, 1935

Vessel Field Party No. 23.

Chief of Party C. A. Eger.

Surveyed by M. G. Elliott, Jr., Surveyor.

Protracted by M. C. Burr, V. F. Simmons.

Soundings penciled by G. C. McGlasson.

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by _____

Inked by B. Schlaichman

Verified by C. P. Bush Jr.

Instructions dated Nov. 30, 1934., 19

Remarks: _____

REPORT
TO ACCOMPANY
HYDROGRAPHIC SHEET
NO. 7.

Instructions

The work on this sheet was done as a part of the combined operations called for by Instructions dated Nov. 30, 1934, on Project HT-194.

Purpose

To revise existing surveys.

Limits

This sheet covers the western portion of St. Georges Sound from a junction with Sheet 8 near the east end of St. Georges Id. in Longitude 84 42.7, and extends westward to Cat Point in Longitude 84 53.2, where it overlaps Sheet 5.

The hydrography covers all of this sound from the beach of St. Georges Id. on the south to the mainland on the north.

Methods

All hydrography was done with the hand lead in the usual manner, operating from the 45' houseboat "Rambler", or from an out-board motor driven gondola type of large skiff. The sounding was entirely controlled by fixed sextant positions with angles taken on shore signals, or on aids to navigation located by triangulation. In general, the lines were run on compass courses or on natural ranges in an east and west direction spaced about 200 meters apart. In important areas, channels, and in spots of unusual irregularity split lines were run to give closer development. A shore line at high water was run along the beach to approximate the low water curve, but due to the small range of tide this zero curve was not overlapped throughout. Cross lines were run in a N & S direction spaced one mile apart.

Control--horizontal

A first-order scheme of triangulation spanning the Sound was established in 1934. This was this year broken down

into 2nd and 3rd order figures, which, in addition to numerous 4th order intersection stations, furnished comprehensive control for the location by topographic methods of the numerous smaller signals required for the hydrography. In most cases these smaller signals were located by short traverses and resections since the sound was too wide for location by intersection by shots across the wide expanse of water. Traverses were in all cases short; these were aided materially by the location by triangulation of several beacons.

Transfer of these signals from the topographic sheets (bristol boards) was made by direct tracing.

Control--Vertical

The hydrography was reduced to M. L. Water by reference to two tide gauges maintained throughout the work (1) Dog Id. in the bight at the western end of Dog Id. (2) at Cat Point. An arbitrary line was drawn dividing the area between these gauges. This line is shown on the boat sheet and runs from Marsh to Day Mk.2 and thence to Sandy. This line roughly divided the area in half; no time nor height correction was applied as the range is so small in this locality as to introduce no error by their omission.

A recomputation of the plane for these two gauges recently made from a series of some length in each case shows that the original height of M. L. W. on the staffs was correct.

Description of the area

This area is comparatively flat, shoal and regular. Depths increase uniformly from the beaches to a maximum of three fathoms or so, though the greater part of the Sound has less than 12 ft. of water. It is all tidal area, and currents flow SW on the flood and NE on the ebb, reaching appreciable strength at times of spring tides. Bars have been built up by this tidal action which are long and finger-like and quite regular. It appears that the tides must meet at about the western limit of the sheet where an extensive shoal known as Bulkhead Shoal extends across the sound. Dredging has been required through this shoal to provide a channel for navigation. This shoal is roughly a half mile wide and extends from Cat. Point to St. Georges Id. directly across the Sound.

This tide and current influence is effective as far east as Gap Id. opposite which other extensive shoals make out from both shores with a comparatively deep passage between. This has been taken advantage of by the establishment of a beacon known as Porter Bar Lt. to mark this passage between Porter Bar and the shoal (nearly bare) off Gap Id.

Eastward of this area the Sound becomes more regular and somewhat deeper as East Pass is approached.

Being so shoal, the water becomes exceedingly rough on short notice. This causes some shifting of the bars and shoals, and at times of heavy storms the lashing which the north beach receives has caused a steady receding of the shoreline, a condition readily noticed from the trees, stumps, and snags along the beach.

The beaches are generally firm enough to walk upon, being slightly more swampy along the south shore.

This is not a prolific oyster bed area, though some patches are located near Bulkhead Shoal. Immediately westward of this shoal, however, are found some of the most important beds,

Shoreline

This area was covered and well controlled by aerial photography. The shoreline shown is entirely aerial photographic, though a high percentage of the shoreline was rodged in by the topographer to give a check thereon. Much of this rodging, however, was done while uncertainty still existed as to whether the photography would be available in time.

Comparison with Previous Surveys, and discrepancies.

Depths, in general, seem to be slightly greater than those charted. Shoals and channels, while in approximately the same positions, are altered as to shape and depth.

Bulkhead Shoals Cut seems to have altered the current flow over this shoal. It is probable that now the tide, instead of meeting in this area, flows through the cut on the ebb and tends to deepen the channel somewhat. Greater depths are found on the range than the project depth calls for. This channel is very narrow.

Depths over Bulkhead Shoals remain somewhat the same.

Eastward of Bulkhead Shoal the Sound is quite broken and irregular as to depths as far east as Gap Id. Shoals and natural channels follow the charted locations fairly well but shapes and sizes have been radically altered in places.

Porter Bar remains much as charted.

The deep hole between Turn Light and Porter Bar Light now shows 20 to 25 ft. where 11 and 12 are charted.

The long finger-like shoal leading off from near Green Point (1 ml. west of it) remains much the same in shape and location but has a foot or more water on it than is charted.

In the vicinity of Gap Id. the zero curve southeast of the island has broadened somewhat, and now no channel is found behind it. Irregular shoals and channels west of the island have changed in shape.

Whereas seven ft. is the least charted depth on the course ~~K~~ between Day Mark 2 and Turn Light, $8\frac{1}{2}$ ft. is now available. *

Off Marsh Point a seven ft. channel can be followed roughly a half mile off the beach. This area is shown closed on the chart. Shoals in this area now show greater depths than those charted.

The open area north and east of Day Mark 2 shows depths similar to the chart, though the southwestern part is apparently not so deep. Some silting may have resulted here from the tidal action after the dredging of Bulkhead Shoals Cut. Depths seem to be about a foot or more less than formerly.

A fifteen ft. sounding $\frac{3}{4}$ mile SW of Turn Light now shows 13 ft.

A deep area $\frac{1}{2}$ mile east of Porter Bar Lt. which is charted as 23 ft. now has a small patch of a depth of 28 ft.

* There is ^a small 8 foot sounding in lat. $29^{\circ}43.7'$ long. $84^{\circ}47.7'$ that falls among $8\frac{1}{2}$ foot soundings + should be given consideration for least depth determination on this course.

R.

Dangers

There are no dangers to navigation within the confines of this sheet. ✓

Anchorage

Anchorage may be had most anywhere in the open areas where there is sufficient water. Currents, however, run fairly swift, and the bottom does not afford very good holding ground. Likewise, the Sound can become very rough in times of sudden squalls. ✓

An anchorage much used by fishermen is that immediately west of the NE end of St. Georges Id. Here a depth of from 12 to 20 ft. with sticky black mud affords good holding ground only 300m. from the beach. This is exposed to westerly and northerly weather. ✓

There is insufficient water behind either Gap or Pilot Ids. to make these protected spots available.

Channels.

The Inside Route traverses this sheet from East Pass to Bulkhead Shoals Cut. This route is marked by ~~XXXXXXXXXX~~ beacons through the sound and by a range through Bulkhead Shoals Cut. Ten feet may be carried through this cut on the range which is slightly deeper than the project depth of 8ft. (Coast Pilot, page 63); however, $8\frac{1}{2}$ ft. is the controlling depth eastward of this range on the course which passes just south of a line between Turn Light and Day Mk. #2 and about one mile east of Turn Light. ✓

* $9\frac{1}{2}$ feet is shallowest through cut. ± 8 feet should be the controlling depth.

Fairly strong currents are found in the locality of Bulkhead Shoals Cut. This channel is quite narrow and is probably filling in from the sides. It is marked by buoys indicating the channel and points of turn off and on the range. ✓

There are no other channels on this sheet. ✓

Buoys

These have been located by 3-pt. sextant fixes, with check. Information for the Lighthouse Bureau, as called for by general instructions are included in the Coast Pilot Notes.

Coast Pilot Information

This forms a part of a general report. ✓

List of Signals Used

The original of this list forms a part of this report; the

duplicate is found under the cover of Sounding Volume #1.

Statistics

Table is included herewith. ✓

Geographic Names

Those charted have been retained. ✓

Respectfully,


C. A. Egner.

LIST OF SIGNALS

SHEET 7

<u>Triangulation</u>	<u>Topographic</u>		
<u>Cat Pt. 3</u> 1934.	Bar	Daf	Hawk
Bran 1935	Gab	Diz	Nest
Green 1935	Pull	Trip	Nut
Marsh 1935.	Rim	Dew	Fin
Saint 1935	Tank	Dot	Mac
Royal <u>Bluff</u> 1934	Gus	Pon	Tan
It 1935.	Pal	Hit	Gut
Carrabelle L. H. 1934	Big	Nib	Tree
Front L. H. 1935	Bet	Pie	Why
<u>Dog Id. West</u> 1934	Mis	Theta	Dro
George 1934	Old	Rho	Sin
Pilot 1935	How	Gin	Man
Sandy 1935	Nog	Meg	Hog
Isle 1935	Flo	Alf	Chop
<u>Gap Id.</u> 1934	Col	Pray	On
Shell 1935	Car	Use	
Two 1935	Key	Let	
Bulk 1935	Mon	Joy	
Bn. "K" 1935. (<u>Con</u>)	Al	Owe	
Bn. "J" 1935 (<u>J</u>)	Chip	Fel	
Bn. "I" 1935 (<u>I</u>), also <u>Ibex</u>	Cham	Bog	
Day Mk. 2 1935 <u>Duo</u>	Cham	Bog	
Day Mk. 1 1935 <u>Uno</u>	Met	Aim	
Bn. "H" 1935 <u>Have</u>	Tuf	Got	
	Pid	Way	
	Mud	The	
	Skunk	Of	
	Cat	End	
	Pol	Last	
	Rain	Lask	
	Sno	Sec	
	Win	Ant	
	Blo	Fly	
	Sun	Sat	
	Rat	Up	
	Tom	We	
	Fox	Go	
	Snob	Well	
	Nut	Pen	
	Gam	Fox	
	Kap	In	
	No	Clo	
	Lat	Monk	

Hydro.
Salt. (Vol. 9 p. 62)
R

"Monk" in Seq. Vol. + T 6311 b

S T A T I S T I C S -- S H E E T 7.

Date	Day	Letter	Boat	Soundings	Positions	Miles	Volume
Mar. 28		A	Rambler	785	191	32.1	1
29		B	"	827	208	43.9	1
Apr. 5		C	"	207	51	11.0	1
5		C	"	953	234	48.0	2
8		D	"	522	97	19.0	2
16		E	"	391	96	21.0	2
16		E	"	686	171	33.0	3
17		F	"	1138	283	60.0	3
17		F	"	276	64	11.9	4
19		G	"	781	200	35.4	4
25		H	"	660	165	31.9	4
25		H	"	321	75	15.0	5
26		J	"	1030	251	48.0	5
May 16		K	"	317	79	15.0	6
17		L	"	121	34	7.6	6

May 6		a	Gondola #1	648	160	21.1	1
7		b	"	558	150	21.3	1
8		c	"	595	142	21.0	1
8		c	"	575	159	25.3	2
9		d	"	924	250	34.2	2
10		e	"	176	48	7.0	2
10		e	"	457	138	17.8	3
14		f	"	801	211	28.5	3
15		g	"	384	98	17.0	3
15		g	"	793	193	29.9	4
16		h	"	243	66	7.3	4
17		j	"	495	155	21.5	4
22		k	"	346	92	11.8	5
23		l	"	172	54	6.6	5
Total:				16162	4115	703.1	

HYDROGRAPHIC SURVEY NO. 5819

Smooth Sheet 1

Boat Sheet 1

Sounding Records 11 Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes in Vol. 1

Landmarks for Charts (Form 567) Yes ✓

Statistics Yes

Approved by Chief of Party C. A. Egner

Recoverable Station Cards (Form 524) Yes

Special Chart for Lighthouse Service No
(Circular Nov. 30, 1933)

Remarks _____

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO.5819

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	.4115.
Number of positions checked	..90.
Number of positions revised9.
Number of soundings recorded	.16162
Number of soundings revised	..335
Number of signals erroneously plotted or transferred

Date:

Verification by

Review by

Schloerman
Chas R O Bush Jr
B. Pizzari

Time:

Time:

12 Days 4 hrs
6 Days 16 hrs
34 hrs.

Survey No. H5819

Date July 1, 1935

GEOGRAPHIC NAMES FLORIDA

Chart No. 182:183

Diagram No. 182:183

Approved by the Division of Geographic Names, Department of Interior. ✕

Referred to the Division of Geographic Names, Department of Interior. R

Under investigation. Q

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	-----	<u>Cat Point</u>			140
	-----	<u>Green Point</u>			
	-----	<u>Marsh Point</u>			
	-----	<u>St. George Sound</u>			
	-----	<u>Royal Bluff</u>			140
	-----	<u>Piloty Harbor</u> ✓			100
	-----	<u>St. George Island</u>			
	-----	<u>The Gap</u> ✓			100
	-----	<u>Gap Island</u> ✓			100
	-----	<u>Shell Point</u> ✓			120
		<u>BULKHEAD SHOAL</u>			
		APPROVED NAMES UNDERWRITTEN IN RED H-L-Plemer			

200

TIDE NOTE FOR HYDROGRAPHIC SHEET

July 9, 1935.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis

Tide Reducers are approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET 5819

Locality Pilots Harbor to Cat Point, St. George Sound, Florida.

Chief of Party: C. A. Egner in 1935
Plane of reference is mean low water reading
2.0 ft. on tide staff at Cat Point
4.8 ft. below B.M. 1
2.0 ft. on tide staff at Dog Island (West)
5.3 ft. below B.M. 1

Height of mean high water above plane of reference is 1.4 feet at Cat Point; 1.5 feet at Dog Island (West).

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Partial Report on H-5819

- 1) Begin on Vol. 8, Page 42
- 2) Have not compared with air photo compilations
- 3) The following positions were off:

67 B	40 meters
96 B	30 "
67 C	60 "
180 C	70 "
86 E	50 "
204 E	40
221 E	30 "
340 F	20 "
60 G	60 "

4) 331 soundings were revised

(however, 301 of these soundings were revised because tide reducers were changed in the office.

Otherwise soundings plotted were good.

Field drafting was good except the day letters were too close to positions, hence were obscured by soundings. The signal Pol was misspelled as Pol, but was changed by the verifier.

The number positions protracted = 90

" " " Revised 9

Junctions:

On West by 5794 (1935)

On ~~West~~ West by 5818 (1935)

On East by 5795 (1934-1935)

~~There~~ There was no note in the volume about ~~buoy~~ "N4" *
even when soundings were taken close by.

* Vol. No. 10 gives location of Buoy N4. + N6. Q

Ben Schladman

Supplemental Report on #5819

The soundings which had not already been verified and inked were accomplished, the depth curves drawn and junctions with adjacent sheets made. Comparisons were also made with T 6311b, T 6312, T 5509, T 5510 and T 5514.

The junctions with H 5818, H 5794 and H 5795 were satisfactory except on H 5795. Here the junction was somewhat irregular due to soundings being a bit deeper on H 5795.* This may be due to tidal reductions.

The work insofar as was verified by the undersigned, was ample and satisfactory.

Chas. P. Bush Jr.

* Junction is satisfactory. R.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5819 (1935) FIELD NO. 7.

Pilots Harbor to Cat Point, St. George Sound, Florida
Surveyed in Mar. - May, 1935.
Instructions dated Nov. 30, 1934 (Egner).

Hand Lead Soundings.

3 Point fixes on shore signals.

Chief of Party - C. A. Egner.
Surveyed by - M. G. Elliott, Jr.
Protracted by - M. C. Burr, V. F. Simmons.
Soundings penciled by - G. C. McGlasson.
Verified and inked by - B. Schlachman, C. R. Bush, Jr.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except that due to the use of erroneous tide reducers about 300 soundings had to be revised in the office.

2. Compliance with the Instructions for the Project.

The survey is well executed and complies with the instructions for the project.

3. Shoreline and Signals.

The shoreline originates with Air Photo Compilation Surveys T-5509 (1934), T-5510 (1934), and T-5514 (1934).

The signals are from Graphic Control sheets T-6311b (1935) and T-6312 (1935).

4. Sounding Line Crossings.

The soundings at crossings are in good agreement.

5. Depth Curves.

The usual depth curves can be satisfactorily drawn including portions of the low water curve.

6. Junctions with Contemporary Surveys.

The junction with H-5795 (1935) on the east is satisfactory.

The junction with H-5818 (1935) and H-5794 (1935) on the west is satisfactory.

7. Comparison with Prior Surveys.

- | | | | |
|----|-----------------|---------------|------------------|
| a. | Misc. 13 (1853) | H-747 (1860) | H-2265 (1895-96) |
| | H-655 (1858) | H-1092 (1871) | |

Comparison with the above surveys reveals numerous changes in depths and shapes of channels and shoals, as well as some changes in the shoreline. Because of the time elapsed between the earlier surveys and the present survey, the general character of the area, and the nature of the bottom, it is unnecessary to consider in detail, from the standpoint of information to be carried forward, the various changes noted. (See Descriptive Report, page 3 and 3a for detailed comparison). The present survey is in greater detail and should supersede all of the above surveys for charting purposes because of the changeable character of the area.

8. Comparison with Chart Nos. 182 (New Print dated Feb. 11, 1935) and No. 183 (New Print dated Apr. 16, 1935).a. Hydrography.

Within the area of the present survey, the chart is based on surveys discussed in the preceding paragraphs, U. S. Bureau of Fisheries Survey of 1915 (blue print No. 15,748), and U. S. Engineers' survey of 1924 (blue print 18,842).

The soundings on the Fisheries survey are very open and widely spaced. The depths are in fair agreement with the present ones. However, the limits of shoals and channels are not well defined and are not in close agreement with the present survey. This survey should be superseded by the present survey.

The 5 foot shoal charted in lat. 29°41.7', long. 84°53.7', originates with the Engineers' survey of 1924 (blue print 18,842), and falls among 8 foot soundings at the junction of the present survey with H-5794 (1935). There is no indication of a shoaling in this area, and the present soundings indicate a flat regular bottom. The 5 foot sounding should be disregarded in future charting, and blue print 18,842 should be superseded by the present survey.

b. Controlling Depths.

The controlling depth of 9 feet charted in Bulkhead Shoals Cut originates with chart letter No. 460, 1933. This cut is maintained by the U. S. Engineers, who survey the area periodically. The present soundings are consistent with this depth. Since the execution of the present survey, chart letter No. 960, 1935, also gives 9 feet as the controlling depth.

c. Aids to Navigation.

a. The aids to navigation were located in substantially the same positions as charted, with the following exceptions:

- (1) The beacon in approximate lat. $29^{\circ}44.5'$, long. $84^{\circ}46'$, was located about 340 meters southwest of its charted position. The charted position originates with Notice to Mariners, No. 20, of 1913. The position as shown on the present survey undoubtedly marks the best water through the sound.
- (2) The lighted beacon, in approximate lat. $29^{\circ}43.5'$, long. $84^{\circ}48.3'$, was located about 260 meters west of the charted position. The charted position originates with Notice to Mariners, No. 22 of 1913. The present triangulation location should supersede the charted position.
- (3) Red buoy "N 4", in approximate lat. $29^{\circ}41.8'$, long. $84^{\circ}51.4'$, was located about 360 meters east of the charted position. The position of the buoy was charted from Notice to Mariners, No. 156 of 1907. In its position as shown on the present survey it properly marks the entrance to the dredged cut.

b. The day beacon, charted at lat. $29^{\circ}43.1'$, long. $84^{\circ}48.3'$, is apparently breaking down. All that remains at this time is some old piling.

9. Field Plotting.

The protracting of positions and the plotting of the soundings were satisfactory

10. Additional Work Recommended.

This survey is complete and no additional work is required.

11. Superseding Old Surveys.

Within the area covered, the present survey supersedes the following surveys for charting purposes:

Misc. 13 (1853) in part	H-1092 (1871) in part
H-655 (1858) in part	H-2265 (1895-96) in part
H-747 (1860) in part	

Reviewed by - G. Risehari, Nov. 27, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

L. O. Robert
Chief, Division of Charts.

H. Borden
Chief, Section of Field Work.

G. H. H. H.
Chief, Division of H. & T.

Applied to Chart Cor. 1114 June 14, 1938. H.E. MacSwan
of critical edge, + few lesser important edge with changes in depth curves.
applied to ^{correction} drawing of Ch. 182. July 1938. B.R.

Partially applied to Ch. 183 - Oct. 1939. J.H.S.
applied to Ch. 1263 - June, 1940. J.H.S.

U. S. COAST & GEODETIC SURVEY
LIBRARY DIVISION
JUN 2. 1950
Acc. No. _____