

7173

Diag'd. on Diag. Ch. No. 1263

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. HY-1146 Office No. H-7173

LOCALITY

State Florida

General locality St. Andrew Bay

Locality East Entrance

194 6-'47

CHIEF OF PARTY

F.L. Peacock

LIBRARY & ARCHIVES

DATE

7173

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H-7173

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

REGISTER NO. H-7173

Field No. HY-1146

State FLORIDA

General locality ST. ANDREW BAY

Locality EAST ENTRANCE

Scale 1:10,000 Date of survey DEC. 14, 1946-JULY 21, 1947

Instructions dated 26 September 1946 and 6 November 1946

Vessel HYDROGRAPHER

Chief of party FRED. L. PEACOCK

Surveyed by ECTOR B. LATHAM and JAMES D. THURMOND

Soundings taken by fathometer, graphic recorder, hand lead, wire Fathometer and pole

Fathograms scaled by Ships personnel

Fathograms checked by Ships personnel

Protracted by V. Maggadino and Betty Myers

Soundings penciled by A.G. Atwill

Soundings in ~~feet~~ feet at MLW ~~MLW~~ MLW

REMARKS: This sheet was processed in the Hydrographic Section of the S.E. District, Norfolk, Va.

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY H-- 7173 FIELD NO. HY-1146

SCALE 1 : 10,000

CAPTAIN FRED. L. PEACOCK, CHIEF OF PARTY, C. & G. S.

COMMANDING SHIP HYDROGRAPHER

HYDROGRAPHERS

LIEUT. COMMANDERS ECTOR B. LATHAM AND JAMES D. THURMOND

A. Project-- The survey was executed in accordance with the Instructions Project CS-328, dated 26 September, 1946, to the Commanding Officer, U. S. C. & G. S. S. HYDROGRAPHER. Paragraph 9 of the Instructions directs a resurvey of Survey No. H-5024, St. Andrew Bay, Florida, East Entrance. High priority was given this work on receipt of the Director's letter dated 6 November, 1946, reference 222/MEK S-1-HY.

B. Project-- Survey limits and dates. The Eastern limit is Meridian $85^{\circ} 39' 7''$ W, and on the inside to a satisfactory junction with Sheet Registry No. H-5783, ⁽¹⁴³⁵⁾ Scale 1 : 10,000, survey executed by a party under the charge of Commander W. D. Patterson in 1935.

H-7173
HY-1146 is a complete Resurvey of ^{Survey} Sheet Registry No. H-5024

Scale 1 : 10,000 executed by Commander R. D. Horne in 1930 except for some work to the west of Meridian $85^{\circ} 39' W$ and on the south side of Hurricane Island.

The field work was executed by launch parties from the Ship HYDROGRAPHER at such times between 14 December, 1946 and 11 March, 1947, as directed by the Commanding Officer.

C. Project-- Launches and Equipment. Launch CS-115, Lieut. Commander

Ector B. Latham in charge, surveyed the Western part of the project. Launch CS-117, Lieut. Commander James D. Thurmond in charge, surveyed the Eastern part of the project. Dinghies were used for pole soundings where sufficient water was not available for the floating of the launches. All launches and dinghies used on the project are equipment of the Ship HYDROGRAPHER. The turning radius of the launches is 20 yards.

Fathometers 808J, serial Nos. 103S and 101S, Submarine Signal Co., Boston, Mass., Manufacturer, were used interchangeably, the range of depths covered was $\frac{1}{2}$ to 55 feet during the survey.

D. Project-- Tide and Current Stations. The tide gauge located on Rear Cut Range Beacon 1930 off Beacon Branch, St. Andrew Bay, Florida, and the records from this gauge were used in reducing the soundings.

No current Stations were occupied.

F. Project-- Control Stations.

Triangulation Station	Established by	Year	Hydro-name
Front Bay Range	R. D. Horne	1930	Jet.
Laguna 2	USED	1910	Lag.
Lands End	R. D. Horne	1930	End.
Rear Bar Range	R. D. Horne	1930	Pot.
Rear Cut Range	R. D. Horne	1930	Hot.
Spanish Shanty	USED	1910	Pan.
Spring 2	R. D. Horne	1930	Ret.
Weiley 2	G. L. Anderson	1934	We.
Topographic Sheet Registry No. T-5520 (1935)			Jug.
Topographic Sheet Registry No. T-5517 Tank (Elev)			Sam.
	Tank (Elev)		Tan.

Control Stations by Graphic Control:

Hat *	Nip	Try
Hur *	Old	Win
Lip	Red	

* subsequently located on T-7069 (1947)

The Control Stations located by graphic control were accomplished by taking the Whatman boat sheet in the field and executing the graphic control direct on the boat sheet, before hydrography was started. (boat sheet subsequently destroyed)

One day was spent in the field in training the men in their duties on a hydrographic survey. While giving this training it was found that the stations located by the Air Photo Compilation were inadequate for carrying on the survey.

G. Project-- Shoreline and Topography.

The shoreline was taken from the Air Photo Compilation ^{Surveys} Sheets Nos. T-5517 and T-5520, executed in 1935, and was found to be in agreement with present conditions except the shoreline at the East End of Hurricane Island has extended a little as shown on the boat sheet by a ^{smooth sheet} ~~dotted~~ ^{red} ~~line~~ ^{dashed}. Subject shoreline was located by sextant fixes taken along the shore, (ref. page 3 Soundings, volume 4).

The low-water line as delineated on the Air Photo Compilations is confirmed by the Hydrography. (L.W. line adjusted to fit present hydrography.)

H. Project-- Sounding.

The depths were measured both by direct and indirect methods, namely with fathometers, lead line and pole.

Bar checks were made of the Fathometers twice daily in accordance with the Hydrographic Manual. Lead line and poles were checked for length and any discrepancies found were noted in the Sounding Volumes. All bar checks have been compiled and echo corrections tabulated by days, depths, and times

* With corrections as shown on correction sheet #325⁽¹⁹⁴⁵⁾ on file in Div. of Photogrammetry
Corrected portions of shoreline are shown in green ink on smooth sheet.

(Corr. Sheet 325 is also filed as Bp. 41647) (1945)

of day. Subject compilation is a part of this report.

A continuous profile of the bottom was obtained with the fathometer and all soundings were with the fathometer operating at feet speed.

I. Project— Control of Hydrography.

The Hydrography was controlled with three point fixes taken in the launches, with the two angles being simultaneously taken with sextants, by two different observers, and plotted with a three arm Protractor as the work progressed. The signals used for controlling the Hydrography are enumerated under Section F, Control Stations, of this report.

J. Project— Adequacy of Survey.

This survey is believed to be complete and is adequate in all respects, superseding prior surveys for charting.

The junctions with the adjoining surveys are satisfactory; no humps or excessive differences exist. Depth curves can be adequately drawn at the junctions and over the entire area.

K. Project— Crosslines.

The percentage of crosslines run were 10.6 per cent, the crossings are in very close agreement, any small discrepancies that exist will probably be cleared up on the smooth plotting of the sheet.

L. Project— Comparison With Prior Surveys.

The survey in the inner part of the harbor is in excellent agreement with work on ^{Survey} Sheet Registry No. H-5024 Scale 1 : 10,000 surveyed by Commander R. D. Horne in 1930.

Since 1935 when the new dredged Cut was opened for the entrance to St. Andrew Bay, no further maintenance work has been done to keep up the East Entrance Channel by the U. S. Engineers, so the changes have been

considerable.

The channel has shifted to the North, openings on the East End of Hurricane Island have closed up and the channel, according to the U. S. Engineers, shifts after each storm.^{*} In the January 18, 1947, Notice to Mariners, Note 177, shipping was cautioned not to use this channel without local knowledge, and that the buoys would be expunged from the charts, although the Coast Guard will continue to try to keep the channel marked. At present the only traffic using the channel are small local fishing boats. The Front Bar Range is now on the North Side of the present channel.

* Cmdr. Bowie of Coast Pilot Section has stated that this channel has again shifted since the present survey was made.

No recent surveys by the U. S. Corps of Engineers are available for comparison. Some changes appear to have taken place in the shoal area in the vicinity of Lat. $30^{\circ} 07'$ Long. $85^{\circ} 42'$ as a result of sedimentation and erosion. Considerable change in the depth curves in the bight Lat. $30^{\circ} 06.4'$ Long. $85^{\circ} 42.0'$ are noted. These changes in depth curves result from the superior detailing of bottom features made possible by the use of the launch fathometer and cannot be considered a failure of agreement with the previous survey.

Diff's. of 1-2 ft. are noted

The shoal at Lat. $30^{\circ} 06.70'$ Long. $85^{\circ} 41.05'$ now ^{bare} bears at low water. It is believed that this decrease is a result of sedimentation.

M. Project— Comparison with Chart U. S. C. & G. S. 489 Issued 1943

Corrected 6-1-46.

Submerged pipe at Lat. $30^{\circ} 04.95'$ Long. $85^{\circ} 37.12'$ was found to be gone by dragging on February 1, 1947, for 1-10 blue "f" day. Recommended expunged from the chart. Deleted from chart

Submerged pile at Lat. $30^{\circ} 04.59'$ Long. $85^{\circ} 37.31'$, was found to be gone by inspection on 1 February, 1947, pos 11-17 blue "f" day.

L-61 (1947)

Recommended expunged from the chart. Deleted from chart

Submerged piles at Lat. 30° 05.68' Long. 85° 39.10' were found to be gone by dragging on February 1, 1947, pos 20-28 blue "f" day.

Recommended expunged from the chart. Deleted from chart

Submerged pile at Lat 30° 06.23' Long. 85° 40.21' should be shown on chart as pile only as it extends 5 feet above water surface.

L. 61 (1947)

Expunge "Submerged" from the chart. Recommendation followed

Submerged piles at Lat. 30° 07.1' Long. 85° 42.07' should be shown as submerged pipes, pos 24 blue "h" day March 10, 1947. Other pipes and wreck found as charted and in correct position, as noted in the record books. The dinghy work on January 31, 1947 green "a" day located all piles and docks on the North side of the channel. A letter was forwarded to the Washington office February 1, 1947 with reference to the submerged objects.

charted as submerged poles

chart Letter 61, 1947

The charted depths for the entrance will all have to be revised in accordance with this latest survey, as the depths are much less. 12 feet can be carried through the channel.

30° 04.00'
85° 37.38'

N. Project— Dangers and Shoals.

The East Entrance is no longer maintained by the U. S. Corps of Engineers, changes after every storm, and can be used only by persons having thorough local knowledge. Special note should be continued on the chart "St. Andrew Bay's East Entrance Channel Shifting".

All charted dangers and shoals were found as charted or shoaler depths were found except for those listed in paragraphs L., M., and N.

P. Project— Aids to Navigation.

Floating aids to navigation were to be expunged from the chart in accordance with the Notice to Mariners, #3, 18 January, 1947, Note No. 177. (Buys retained on chart; channel depth deleted and present charted note resulted from N. to M. No. 3, 1947).

O. Project-- Coast Pilot Information.

Complete Coast Pilot Information of St. Andrew Bay and Panama City has been accomplished by Lieut. Commander W. J. Chovan and has been submitted previously.

No recommended anchorages are included inasmuch as good anchorage in St. Andrew Bay is outside the area of the sheet.

The ship anchored outside the limits of this sheet during progress of the work.

Tides and currents in the area are principally due to the wind. Southerly winds produce high waters and Northerly winds produce low waters.

Flood currents set NW'ly and ebb currents set SE'ly over most of the area.

Q. Project-- Landmarks for Charts.

No prominent landmarks exist in the area of this survey.

R. Project-- Geographic Names. 214 ✓

Geographic names as charted are locally known and used.

U. Project-- Miscellaneous: Oscillator Mounting, Settlement and Squat Correction.

Prior to the execution of the Survey experiments were conducted to determine the most desirable mounting for the oscillators or fish ("transducers"). It was found that the oscillators mounted inside the hull in cans failed to give satisfactory recordings and it was concluded that the most satisfactory method was to bolt the oscillators to the keels of the launches.

In order to secure satisfactory protection of the oscillators, in case of grounding, it was necessary to mount the fish aft of the

fore and aft center of the boat. With this mounting a correction for settlement and squat was indicated.

Determinations of settlement squat correction was made on December 28, 1946 and was found to be as follows:

Speed(rpm)	Tide staff	level reading	Correction
0	1.40	10.60	0
800	1.40	10.70	0.1
1200	1.40	10.80	0.2
1600	1.40	11.03	0.42

Corrections for settlement and squat are applied as follows:

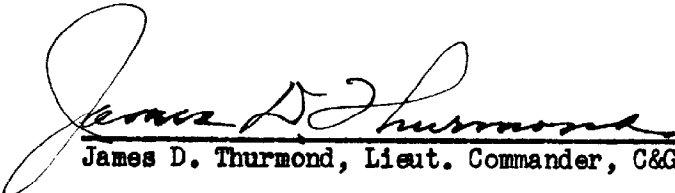
+ 0.0	to	500 rpm
+ 0.1	to	1100 rpm
+ 0.2	to	1450 rpm
+ 0.3	to	1500 rpm
+ 0.4	to	above 1500 rpm

Maximum speed is approximately 1750 rpm and the launches are never run above 1500 r p m when sounding.

Corrections are identical for the two launches.

Respectfully submitted.


 Ector B. Latham, Lieut. Commander, C&GS.,


 James D. Thurmond, Lieut. Commander, C&GS.,

Tide Note.

The tide station was located at Lat. $30^{\circ} 05' 46.5''$ N Long. $85^{\circ} 39' 11.6''$ Beacon Beach, St. Andrew Bay, Fla. The plane of reference on the tide staff is 1.8 feet for MLW. and no difference of time or height corrections were applied to the observed tides. No hourly heights were supplied by the Washington office. Previous approval of plane reference had been obtained from the Washington office. ✓

STATISTICS FOR HYDROGRAPHIC SURVEY H--- 7173

FIELD NO. HY-1146

Ship HYDROGRAPHER

CS-328

Launch 115

Color Blue

Vol No	Day letter	Date	No of Sdg's	No of Positions	No of Stat. Miles of Sdg's
4	a	12/16/46	CP	108	32.3
4&7	b	12/17/46	CP	251	Rejected used Nk-7 Fathometer
7	b	1/6/47	CP	154	26.9
7&8	c	1/7/47	CP	175	28.9
8	d	1/8/47	CP	85	8.4
10	e	1/31/47	CP	21	5.2
10	f	2/1/47	Dragging for obstructions		
10	g	2/7/47	CP	37	4.5
10	h	3/10/47	CP	24	3.2

Launch 117

Color Red

1	a	12/14/46	CP	201	29.9
1&2	b	12/15/46	CP	202	39.3
2	c	12/17/46	CP	226	43.6
2	d	12/19/46	CP	75	13.7
3	e	1/6/47	CP	195	33.3
3	f	1/7/47	CP	64	11.6
3&5	g	1/8/47	CP	138	20.9
5	h	2/1/47	Dragging for obstructions		
5	j	3/7/47	CP	65	8.5
5	k	3/9/47	CP	129	21.6
6	l	3/10/47	CP	138	21.1
6	m	3/11/47	CP	137	14.1

Eleven

Dinghy 455

Color Purple

Vol No	Day letter	Date	No of Sdg's	No of Positions	No of Stat. Miles of Sdg's
9	a	1/31/47	145 pole	76	8.7
9	b	2/1/47	196 pole	49	7.7
9	c	3/10/47	78 pole	23	1.7

Dinghy 454

Color Green

11	a	1/31/47	484 pole	132	8.9
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Total Statistics CP & 903 pole Sdg's 2815 394.0

Total area surveyed 7.2 Square miles.

APPROVAL SHEET

Survey: Register No. H- 7173 Field No. HY-1146

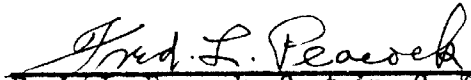
Survey Field No. Hy-1146 was the first post World War II hydrographic survey completed by the Ship HYDROGRAPHER Party. It was made before anglemen, recorders and fathometer attendents had become thoroughly experienced and before all the requirements of the revised Hydrographic Manual had been thoroughly assimilated. In spite of these circumstances, the survey is believed to be complete and adequate.

It is noted that the bar checks are not as clear-cut as is desirable. They are however deemed adequate for providing accurate echo reducers. We are continuing our efforts to design bar check apparatus that will assure better bar checks.

Graphic control work for location of additional hydrographic signals on Whatman boat sheets does not have this Chief of Party's approval as a general practice.

The Chief of Party examined the field records and consulted with the hydrographers frequently during the progress of work on this survey. The records submitted to the Norfolk Processing Office, including sounding volumes, fathograms, boat sheets and descriptive report, are hereby approved.

6 May, 1947


Fred. L. Peacock, Captain, C. & G. S.,
Chief of Party, Commanding Ship HYDROGRAPHER

LIST OF SIGNALS
H-7173

TRIANGULATION

HOT (REAR CUT RANGE, 1930-35)
JET (FRONT BAY RANGE, 1930-35)
LAGUNA 2, (U.S.E.), 1910-35
LANDS END 2, 1930-35
POT (REAR BAR RANGE, 1930-35)
RET (SPRING 2, 1930-35)
SPANISH SHANTI, 1910-35
WILLET 2, 1934

TOPOGRAPHIC

From T-5520

Jug

From Graphic Control (Whatman Sheet.) (Boat sheet of present survey)

Hat

Hur

Nip

Old

Red

Sam

Tan

Try

Win

} also located on Corp. Sheet 325 (Bp. 41647)

HYDROGRAPHIC

Lip

A D D E N D U M

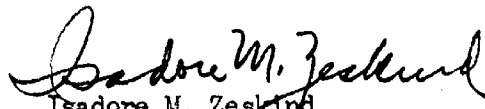
to accompany

HYDROGRAPHIC SURVEY H-7173 (Field No. HY-1146)

This survey was processed in the Hydrographic Section of the S.E. District at Norfolk, Va.


The corrections shown in red in the main body of this report were made at this office.

Respectfully submitted,


Isadore M. Zeskind
Cartographic Engineer

Norfolk, Va.
November 7, 1947

Approved & Forwarded


George L. Anderson
Supervisor S.E. District

OCT 4 1948

Form 537
(Ed. Nov. 1941)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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.

H-7173
REGISTER NO. ~~H-6694-Add~~

Field No. HY-2447

State FLORIDA

General locality ST. ANDREWS BAT

Locality SOUTH SIDE, EAST END HURRICANE ISLAND

Scale 1:20000 ¹⁰⁰⁰⁰ Date of survey 22 July 1947

Instructions dated 26 Sept. 1946

Vessel Launch CS-115 of the ship Hydrographer

Chief of party Fred L. Peacock

Surveyed by James D. Thurmond

Soundings taken by fathometer, ~~graphic recorder~~, hand lead, ~~wire~~

Protracted by Betty Myers

Soundings penciled by A.G. Atwell

Soundings in ~~fathoms~~ feet at MLW ~~MLW~~

REMARKS: Smooth Sheet was plotted by the Norfolk Processing Office.

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY--H-⁷¹⁷³~~6694~~ Add. FIELD NO. HY-2447

Scale 1: 20,000

CAPTAIN FRED. L. PEACOCK, CHIEF OF PARTY, C. & G. S.

COMMANDING SHIP HYDROGRAPHER

HYDROGRAPHER

LIEUT. COMMANDER JAMES D. THURMOND

A. Project--

The survey was executed in accordance with the Instructions Project CS-328, dated 26 September 1946, to the Commanding Officer, Ship Hydrographer.

B. Project-- Survey Limits and dates..

The Eastern limit of the survey is the junction of of sheet HY- 1146 completed by the Ship Hydrographer in the winter of 1946 and the spring of 1947 on meridian 85-39' West, extending South about 1.2 miles from Hurricane Island to a junction with sheet HY- 4347 done in the summer of 1947, by the Ship Hydrographer, Westward to a junction with sheet Registry No H-6694 executed in 1941, with revision work done on sheet Registry No. H-6694 in the summer of 1947 by the Ship Hydrographer, around meridian 85-41.5' West.

The field work was executed by launch parties working in Launch CS- 115 from the Ship Hydrographer on the 2nd and 21st of July 1947.

C. Project-- Launch and Equipment.

Launch CS-115, Lieut. Comdr. James D. Thurmond, incharge, surveyed the entire area. Launch CS-115 is part of the equipment of the Ship Hydrographer.

Fathometer 808-J serial No. 1018, Submarine Signal Company, Boston, Mass., manufacturer was used, the range of depths covered were 3 to 60 feet during the survey.

D- Project- Tide and Current Stations.

The tide gauge was located on the Army Pier, Grand Lagoon, St. Andrew Bay, Fla., the records from this gage were used to reduce the soundings.

No current stations were occupied.

F. Project-- Control Stations.

Triangulation Station	Established by	Year	Hydro-Name
Rear Bar Range	R.D. Horne	1930	POT
Rear Cut Range	R.D. Horne	1930	HOT
Front Bay Range	R.D. Horne	1930	JET
Lands End 2, 1930, 1935	R.D. Horne	1930	END

Topographic Sheet Registry No- T- 5517.

Name of object.

Hydro-Name

Tank (Elev)

SAM } from Corr. Sheet 325
(Sp. 41647)

Tank (Elev)

TAN

Topographic Sheet Field No. HY- C- 1947. (T-7057, 1947)

Name of Object.

Hydro-Name

Lookout Tower

ARM

Topographic Sheet Field No. Hy- D- 1947 (T-7069, 1947))

Hydro Name

BUM	HUR
GUS	LIZ
HAT	WED

G. Project-- Shoreline and Topography.

The shoreline was taken from Air Photo Compilation Sheet Registry No. T- 5517 executed in 1935, and was found to be in good agreement with present conditions.

The low water line as delineated on the Air Photo Compilation is confirmed by the hydrography.

H. Project-- Sounding.

The depths were measured by the indirect method, namely with an 808 Fathometer.

Bar Checks were made of the Fathometer daily and as often as required in accordance with the Hydrographic Manual.

All bar checks have been compiled and echo corrections tabulated by days, depths and times of day, the compilation is a part of this report. *Filed with logs*

A continuous profile of the bottom was obtained with the fathometer, and all soundings were taken with the fathometer operating at feet speed.

I. Project-- Control of Hydrography.

The hydrography was controlled with three point fixes taken in the launch, with the two angles being simultaneously taken with sextants, by two different observers,

and plotted with a three arm Courts protractor as the work progressed. The signals for controlling the hydrography are enumerated under Section F, Control Stations of this report.

J. Project-- Adequacy of Survey.

This survey is believed to be complete and is adequate in all respects, superseding prior surveys for charting.

The junctions with the adjoining surveys are satisfactory, no holidays or excessive differences exist. Depth curves can be adequately drawn at the junctions and over the entire area.

L. Project-- Comparison with Prior Surveys.

The survey is in excellent agreement with work on Sheet Registry No. H- 5024, scale 1:10,000, surveyed under R.D. Horne, Chief of Party in 1930, except for the passages that have been closed up due to storm action on the Eastern end of Hurricane Island. As the East entrance channel to St. Andrew Bay is no longer maintained by the U.S. Army Corps of Engineers, the channel has shifted to the North and there has been some filling in to the South resulting from this shift in the channel. According to the best local information there is always some changes in this area after every severe storm in the vicinity.

Review,
par. 5 b

M. Project-- Comparison with U.S.C. & G.S. Chart No. 489.

The survey is in close agreement, except for the

inshore areas where the passes have filled in, and no recent surveys were available for charting purposes.

P. Project-- Aids to Navigation.

There are no aids to navigation ^{within} in the limits of this survey.

Q. Project-- Coast Pilot Information.

Tides and currents in this area are due principally to the wind. Southerly winds produce high waters and Northerly winds produce low waters.

Flood currents set Northwesterly and ebb currents set Southeasterly over the area.

O. Project-- Landmarks for charts.

No prominent landmarks exist in the area of this survey.

R. Project-- Geographic Names.

Geographic names as charted are locally known and used.

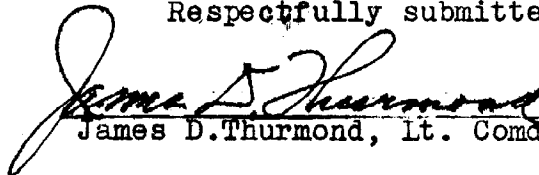
U. Project-- Miscellaneous Information: Settlement and Squat of Launch CS 115.

Determination of settlement and squat corrections were made on Launch CS-115 on 28 Dec. 1946, and were found to be as follows, the corrections all being additive.


Corrections to be added	R.P.M.
0.0 feet to	500
0.1 feet to	1100
0.2 feet to	1450
0.3 feet to	1500
0.4 feet to	1750

Maximum speed is approximately 1750 RPM, however the launch was never ran above 1500 RPM when sounding.

Respectfully submitted,


James D. Thurmond, Lt. Comdr. C&GS,

Respectfully forwarded and approved:



Fred. L. Peacock, Captain, C&GS.
Comdg., Ship Hydrographer.

STATISTICS FOR HYDROGRAPHIC SURVEY H 7173

FIELD NO. HY-2447

SHIP HYDROGRAPHER

CS 328

LAUNCH CS - 115.

Vol. No.	Day Letter	Number of sdgs.	Number of Positions	Number of Miles of sdgs. STAT.	Date
1	a	CP	138	33.2	2 July 1947
1	b	CP	63	17.3	21 July 1947
TOTAL			201	50.5	

Area 5.3 square miles.

Tide Note.

Tide data from the automatic portable tide gauge *(not on sheet)* at Army Pier, Grand Lagoon, St. Andrew Bay, Florida, Latitude 30-08.0' Northh, Longitude 85-43.9' West were used ✓ in reducing the soundings of this survey. A value of 1.5 feet on the staff was used for mean low water, no difference of time or height corrections were applied to the observed tides. Previous approval of the plane of reference had been obtained from the Washington Office.

TOPOGRAPHIC POSITIONS TO ACCOMPANY SHEET HY*-2447

Topographic Sheet Hy- D- 1947 T-7069 (1947)

Name	Latitude	DM	Longitude	DP
BUM	30-04	1807.0 (40.5)	85-39	1474.0 (133.0)
GUS	30-04	1532.0 (315.5)	85-39	805.0 (802.0)
HAT	30-05	1111.5 (736.0)	85-41	320.7 (1285.8)
HUR	30-04	1507.5 (340.0)	85-39	333.0 (1273.0)
LIZ	30-05	482.0 (1365.5)	85-40	997.0 (610.0)
WED	30-05	302.5 (1545.0)	85-40	534.0 (1073.0)

Topographic Sheet Field No. Hy-C-1947 T-7057 (1947)

ARM	30-06	1346.0 (501.5)	85-43	311.0 (1295.2)
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Topographic Sheet Registry No. T-5517

SAM	30-03	1806.4 (41.1)	85-35	320.4 (1286.9)
TAN	30-04	636.1 (1211.4)	85-35	1461.1 (145.9)

Scaled by: James D. Thurmond

Checked by: Walter J. Chovan

copy - *off*

Bar Check Corrections to be applied.
808 Fathometer- 101 S.

2 July 1947

0 correction for all day.

21 July 1947

Correction Depth of Water.
Additive.

A- SCALE

0 to	38 feet
0.5 to	50 feet

B- Scale

1.0 foot to all soundings on the B- Scale.

LIST OF SIGNALS

H-6694 Add.

TRIANGULATION

(HOT) REAR CUT RANGE, 1900-35
(POT) REAR BAR RANGE, 1900-35

TOPOGRAPHIC

Arm	Topo. Sheet	Field #	Hy-C-1947	T-7057 (1947)
Bum	Topo. Sheet	Hy-D-1947	T-7069 (1947)	
Gus	"	"	"	
Hat	"	"	"	
Hur	"	"	"	
Liz	"	"	"	
Tan	Topo Sheet	Reg. #	T-5517 (Corr. Sheet 325, Bp. 41647)	
Wed	Topo Sheet	Hy-D-1947	T-7069 (1947)	

ADDENDUM

To Accompany

Hydrographic Smooth Sheet H-⁷¹⁷³~~6694~~ Add-(Field No. Hy-2447)

⁷¹⁷³
H-~~6694~~ Add. was smooth plotted by the Hydrographic Section
of the Norfolk Processing office,

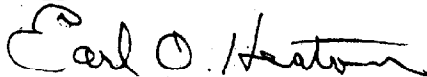
Replotted
in Wash.
Office to
H-7173.

Respectfully submitted,


Hugh L. Proffitt
Engr. Draftsman

Norfolk, Va.
Oct. 1, 1948

Approved and Forwarded



Earl O. Heaton
Supervisor, S.E. District

GEOGRAPHIC NAMES

Survey No.

N7173

Name on Survey

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. Quadrangle 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>Florida</u>			(for title)					USGB	1	
<u>St. Andrew Bay</u>			" "					"	2	
<u>East Entrance</u>			" "						3	
<u>Lands End</u>									4	
<u>Hurricane Island</u>									5	
<u>Beacon Beach</u>			(location of tide staff)						6	
Davis Pt.									7	
<u>Spanish Shanty Pt.</u>									8	
			Names underlined in red are approved. 2/19/48							9
									10	
									11	
									12	
									13	
									14	
									15	
									16	
									17	
									18	
									19	
									20	
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									22	
									23	
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									25	
									26	
									27	

Kum

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

21st November 1947

Division of Charts: H. W. MURRAY

Plane of reference approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET 7173

Locality - St. Andrews Bay (East Entrance), Florida, Gulf of Mexico

Chief of Party: F. L. Peacock on 1946 - 1947
Plane of reference is Mean low water, reading
1.7 ft. on tide staff at Beacon Beach
17.5 ft. below B. M. 3

Height of mean high water above plane of reference is 0.9 feet.

NOTE: Tide reducers for Jan. 6, 1947, ("e" day) have been revised as indicated in red pencil; tide reducers for Jan 7, 1947 ("f" day) and Jan 8 ("g" day) were obtained from Pensacola predicted tides with time allowance of -1^h45^m. for place of soundings.

Condition of records satisfactory except as noted below:

E. C. McKay
Section
Chief, ~~Division of Tides and Currents.~~

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 4 November 1948

Division of Charts: R. H. Carstens

Plane of reference approved in
1 volume of sounding records for

HYDROGRAPHIC SHEET 7173

Locality - Off St. Andrew Bay, Florida

Chief of Party: F. L. Peacock in 1947
Plane of reference is mean low water, reading
1.5 ft. on tide staff at Grand Lagoon, St. Andrew Bay, Florida
4.0 ft. below B. M. 1 (1947)

Height of mean high water above plane of reference is 1.3 feet.

Condition of records satisfactory except as noted below:

Oct 19

E. C. McKay
Section
Chief, ~~Division of Tides and Currents.~~

Note: All information in this verifier's report applies to additional work fastened after these sheets, as well as to regular work. - W.K.

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7173....

Records accompanying survey:

Boat sheets .3...; sounding vols. ~~1~~²....; wire drag vols. 0....;
bomb vols. 0....; graphic recorder rolls
special reports, etc.
.....

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

Number of positions on sheet	27.68
Number of positions checked	95.9
Number of positions revised	4.9
Number of soundings revised (refers to depth only)	0
Number of soundings erroneously spaced	* 33.5
Number of signals erroneously plotted or transferred	0
Topographic details	Time 25
Junctions	Time 3
Verification of soundings from graphic record	Time 6.5

Verification by *William Klein*..... Total time 820.... Date 2-18-49

Reviewed by *J.A. Dinsmore*..... Time 35 hrs. Date 5/1/49

* This figure includes the replotting of sdgs. resulting from revised positions and ~~should~~^{does} not reflect excessive carelessness on the part of the smooth plotter.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7173

HY-1146

FIELD NO. HY-2447

Florida, St. Andrew Bay, East Entrance
Surveyed in Dec. 1946 - July 1947 Scale 1:10,000
Project No. CS-328

Soundings:

808 Fathometer
Hand lead
Pole

Control:

Sextant fixes on shore signals

Chief of Party - F. L. Peacock
Surveyed by - E. B. Latham, J. D. Thurmond
Protracted by - V. Maggadino, B. Myers
Soundings plotted by - A. G. Atwill
Verified and inked by - W. Klein
Reviewed by - T. A. Dinsmore, May 4, 1949
Inspected by - R. H. Carstens

1. Shoreline and Signals

The source of the shoreline and signals is given in the Descriptive Report. The shoreline revision shown in broken red line at the point of Lands End is from present survey information.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

Except for the incomplete delineation of the low-water line, the depth curves are complete and adequate. It was impracticable for the hydrographer to determine the low-water line throughout the area because of its proximity to the shoreline and the low range of tide (1 ft.).

The bottom throughout the passage to St. Andrew Bay is generally uneven. Depths along the axis of the channel range from 12 ft. in lat. $30^{\circ} 04.0'$, long. $85^{\circ} 37.38'$, to 46 ft. in lat. $30^{\circ} 05.28'$, long. $85^{\circ} 38.80'$. Prominent shoals closely border the narrow channel at several places. In the area south of Hurricane Island, the bottom is relatively smooth.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-6694 (1941-47) on the west (south of Hurricane Island). Charted depths from H-5783 (1935) at the northwest limits of the present survey are in harmony with present depths. Project surveys on the east and south are not registered in this office at the present time.

5. Comparison with Prior Surveys

a.	H-514 (1855) 1:20,000	H-1373b (1877) 1:40,000
	<u>H-518 (1856) 1:20,000</u>	H-1375 (1877) 1:20,000
		<u>H-2589 (1902) 1:10,000</u>

These prior surveys have been compared with and are superseded by H-5024 (1930) and H-5783 (1935) except for a narrow strip of offshore hydrography along the southwest limits of the present survey. In this offshore area, a comparison between the prior and present surveys reveals no appreciable differences in depths. The present survey is adequate to supersede these prior surveys within the common area.

b.	<u>H-5024 (1930) 1:10,000</u>	<u>H-5783 (1935) 1:10,000</u>
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Except for the offshore area mentioned in the preceding paragraph, these two prior surveys cover the area of the present survey. A comparison between the prior and present surveys reveals several radical changes in both shoreline and depths. The greatest shoreline changes have occurred in the vicinity of Lands End on Hurricane Island. In this vicinity, two passages which previously connected the Gulf and the inland waterway have filled-in. Several small islands have washed away while others have been created. The east end of Hurricane Island has moved about 500 meters northeastward. Other shoreline changes of note have occurred in lat. $30^{\circ} 05.4'$, long. $85^{\circ} 38.8'$, where the present shoreline shows an accretion of 130 meters since 1930. Conversely, major shoreline erosion has taken place immediately southeastward where a prominent peninsula (in 1930) has subsequently washed away to present depths of 3 to 10 feet.

An important change in bottom has occurred in lat. $30^{\circ} 04.1'$, long. $85^{\circ} 37.7'$, where prior mid-channel depths of 32 feet are now superseded by 2-ft. depths. In this vicinity, the channel has moved about 300 meters northeastward. The bottom in this general vicinity is reported to be very unstable and changes usually occur during severe storms. Attention is directed to a recommendation by the hydrographer (Descriptive Report, page 6) that the charted note "Channel is constantly shifting" be retained on the chart. Except for the changes that have taken place throughout the entrance area, only minor differences in depths were noted elsewhere on the survey. With the addition of a few bottom characteristics which have been carried forward, the present survey is adequate to supersede these prior surveys within the common area.

6. Comparison with Chart 489 (Latest print of 6/9/47)

A. Hydrography

Charted information originates with the previously discussed surveys supplemented by advance information of the present survey (Blueprint 41775, 1947). Many of the depths shown on Bp. 41775 have been revised during verification of the smooth sheet. The present survey therefore supersedes the charted information.

The 11- and 13-ft. soundings charted in lat. $30^{\circ} 05.60'$, long. $85^{\circ} 40.38'$, and lat. $30^{\circ} 05.73'$, long. $85^{\circ} 39.30'$, respectively, should be disregarded. Originating with Bp. 41775, indistinct 17- and 18-ft. soundings were misread as 11 and 13. The present smooth sheet shows 18-ft. depths at both locations.

B. Aids to Navigation

Buoy "2" located during the 1946 work of the present survey in lat. $30^{\circ} 02.92'$, long. $85^{\circ} 37.30'$, has been removed from the chart (H.O. Notice to Mariners 3, 1947).

Buoys C "3" and C "5" are charted 170 meters southward and 400 meters southeastward, respectively, from their survey positions.

All other aids on the present survey are in substantial agreement with the charted aids and adequately mark the features intended.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was adequate.

8. Compliance with Project Instructions

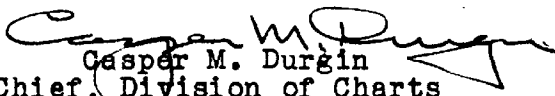
The survey adequately complies with the Project Instructions.


9. Additional Field Work


This is a basic survey and no additional field work is required.

Examined and approved:


H. R. Edmonston
Chief, Nautical Chart Branch


Casper M. Durgin
Chief, Division of Charts


K. G. Crosby
Chief, Section of Hydrography


W. M. Scaife
Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. 17173

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12/12/47	489	J. A. McGann	Before After Verification and Review <i>Partially</i>
9-9-49	1263	McGlasson	Before After Verification and Review <i>Critical</i>
10-31-49	489	McGlasson	Before After Verification and Review <i>Completely Appl.</i>
2-21-50	1115	McGlasson	Before After Verification and Review <i>Critical</i> <i>Examined - no critical corrections.</i>
4-3-50	868	McGlasson	Before After Verification and Review <i>Completely Appl.</i>
4-23-50	869	McGlasson	Before After Verification and Review <i>Completely Appl.</i>
11-10-53	1115	Earl W. Bogoy	Before After Verification and Review <i>Completely appl.</i> <small>see 3-7-67</small>
12/27/54	1263	Chesley	<i>Fully applied thru Chart 489</i> Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.