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Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: Florida

11-5613

DESCRIPTIVE REPORT.
"2"

Sheet No. 4578

LOCALITY:

Tampa Bay

Entrance to Tampa Bay

1926

CHIEF OF PARTY:

R. P. Eyman

January 4, 1927.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide reducers are approved in
11 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4576

Locality: FLORIDA WEST COAST.

Chief of Party: R. P. Eymann

Plane of reference is
2.9 ft. on tide staff at Egmont Key.

For reduction of soundings, condition of records satisfactory
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A. M. or P. M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

H. H. Hammer
Chief, Division of Tides and Currents.

U.S. SURVEY
U. S. A.
DEC 20 1926
Ass. No.

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SHEET "a" 4578
SURVEY OF ENTRANCE TO TAMPA BAY

INSTRUCTIONS OF JUNE 3, 1924
RAYMOND P. EYMAN, H. & G. E.
Chief of Party

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET "a"

1. Authority. Instructions from the Director, June 3rd, 1924.
2. General Description of the Channels.

The area embraced on this sheet is the inshore hydrography at the mouth of Tampa Bay, and the development of Egmont Channel, Southwest Channel, and Passage Key Inlet.

The shore line is adequately described in the report to accompany topographic sheets No. 1 and No. 2. The entire area at the mouth of the Bay is filled with shifting fingers of sand which have a tendency to curve west north westward in general.

Egmont Channel, the largest and deepest of the three channels is the most important commercially and is well marked by buoys and a range with the Light House on Egmont Key. A pilot lookout is maintained on Egmont Key and pilotage is compulsory for most vessels. The pilots board vessels entering the North Channel near the gas and whistling buoy, and entering Southwest Channel, near the lighted bell buoy in the red sector of Egmont Light.

Southwest Channel was buoyed by the Light House Service in the summer of 1926 according to marker buoys placed by the hydrographic party of the "Hydrographer" which was at the time in this vicinity. These buoys marked a 19 ft. channel about 50 meters wide at the narrowest part. As originally placed these buoys were dependable for a draft of 19 ft at mean low water, but during the storm of September 1926 they were all moved and due to the lack of natural signals, they were probably not replaced accurately. The maximum draft should not be attempted, and it is recommended that nothing drawing more than 16 ft. be taken in. The second location was made by the Light House Tender "Ivy". Due to the

nature of the bottom, which is loose shifting sand and shell, buoys are not stable in this vicinity.

Passage Key Inlet should not be attempted with any boat drawing more than ⁸ ft. The soundings in this section show a least depth of ~~13~~¹³ feet, but the shifting nature of the bottom makes the channel most uncertain even for those who use it daily, and there are no aids to navigation in this channel. Passage Key, formerly a sizeable island and covered with mangroves is now only a sand spit and its wandering nature is well shown by a comparison between the topographic location in February 1925, and the hydrographic location in May 1926. A small sand spit a-wash at high water, lies about 1000 meters south by east of the remains of Passage Key. It is most unstable and moves about at a lively rate. The northwest point of Anna Maria key is disintegrating rapidly and the eddy from strong ebb tide currents is washing out a bight in the seaward side. In general the area between Egmont Key and Anna Maria Key, with the exception of Southwest Channel, should be avoided by all except shallow draft boats, as the entire bottom is most undependable.

The soundings in the vicinity of the South West point of Mullett Keys show a least depth of ⁹ feet in the swash channel close in-shore. This channel seems fairly stable and with proper marks could be used to advantage in fair weather by boats running between Tampa Bay and ports up the coast of Florida. The long narrow bar on the north side of Egmont Channel is made up of moderately loose sand and shell, but does not shift position to a marked degree. A wide ⁿ shaped shoal, the southern edge of which comes on this sheet, lies at the mouth of the channel at the north end of Mullett Keys. It has been developed by a hydrographic party of the Str. "Bache".

3. Dangers.

With the exception of the bars mentioned in the preceding section no natural dangers exist. There were however two wrecks in shoal water which were a menace to small boats. One of them a small two mast schooner is located in approximately Lat. 27-37.2 N, Long. 82-46.5 W. In August 1926 it was mostly submerged only the part of one spar showing above water. It is in 9 feet of water.

A large Pensacola fishing smack foundered in the storm of September 1926 and was sunk in ten feet of water in Lat. 27-31.7 N, Long. 82-45.2 W. One of the masts and part of the rigging showed above the water in October 1926.

A large pile of rocks, ^{presumably} ballast dumped by some ship lies about (100) meters east by north of the Quarantine Station dock. It has a least depth of 3 ft. at mean low water and is in a critical position for vessels landing at this dock with a strong flood tide as the rocks are almost in line with the face of the dock. They can be seen on a clear day and a tide rip always shows except at slack water. 200?
ROR.

4. Breakers.

With a moderate swell from a westerly direction, breakers usually occur in the general vicinity of the 9 foot curve. With abnormal currents against wind and swell, breakers are sometimes found in 3 and 4 fathoms at the entrance to Tampa Bay.

5. Tides.

In the section of Egmont Channel shown on this sheet the flood tide current follows the general curve of the channel setting about east by north until it reaches the vicinity of longitude 82-47 when it curves to the Southward along the axis of the channel, with a

tendency to set slightly southerly across the channel.

The ebb tide seems to make a sharper curve than the flood tide in longitude 82-46.5 and at this point bends decidedly to southward.

No current observations have been made in the channel but currents as high as 3 knots have been measured from the ship when lying alongside Egmont Key Dock about 200 meters north of the Light House. The direction and force of the wind affects the tides considerably and with a northeasterly breeze blowing on an ebb tide, currents as high as 4 knots can be expected in the channel.

Both ebb and flood tides in Southwest Channel follow a generally West-south-westerly - East-north-easterly direction.

6. Land Marks.

A list of prominent objects on this coast accompanies ^{the} ~~this~~ report. *for Topographic Sheets No. 1 & No 2.*

7. Survey Methods.

With the exception of the deep water in Egmont Channel and the shoal areas behind Mullett Keys, the hydrography was done in the customary manner with the 20 ft. launch of the "Hydrographer". The "Hydrographer" was used in the Egmont Channel, and the skiff with out-board motor used behind Mullett Keys. It will be noticed that the lines have not been extended to the high water mark along the southeast shore of Mullett Keys. This work was done with the launch and the remaining shoal area did not warrant ^{waiting on a tide to complete} ~~the additional time necessary to complete~~ the lines inshore. It is all shoal and grassy between the launch work and shore.

8. Recommendation.

Considerable inconvenience was experienced with the launch used in this hydrography due to the design. It could not be used in depths less than $2\frac{1}{2}$ feet in calm weather, and it is not sufficiently sea-worthy to be used as far off shore as was necessary on these lines, during the squally season. It is accordingly recommended that for these waters a type of boat similar to those used by the local fishermen be built. These boats are of a semi-flat bottom type with high free board and a dry bow. They scarcely draw more than 12 inches and are equipped with Cleveland motors 20 H.P. which drive them at a speed of 8 knots. The hulls of these boats are built by several local shipbuilders, and can be had for approximately \$ 750.00. On a number of occasions I have had these fishermen land on the beach with their boats where it was necessary for my party to use our skiff. These boats, with their high free board seem especially sea-worthy and I have observed them running comfortably in a chop which would have swamped our launch. They could be equipped with detachable canopy and would carry a good cargo of signal lumber.

St. Petersburg, Florida.

November 16th, 1926.

Paul C. Smith
Lieut [U.S.]

ADDITIONAL NOTES FOR SHEET "a".

There are several docks shown on this sheet namely: quarantine dock on Mullet Key; Coal Dock, Light House Dock, Q.M. Dock, and Pilot's Dock, on Egmont Key. An enlarged subplan of these docks is penciled on the sheet with the soundings taken alongside them showing the best water that can be carried alongside. The Dock at the Quarantine Station is in excellent condition and large enough to accomodate some of the largest ships entering Tampa Bay. The Light House Dock on Egmont Key is in excellent condition but is very small and ships longer than about 150 ft would have difficulty in making fast. The coal dock has been very well constructed but is fast going to ruin at present, is very small and difficult to tie up to. The Q.M. dock is in very poor condition and boats seldom try a landing there. The Pilots have a new dock that is fairly substantial and can accomodate small sized gas boats, etc.

At one time, ^(while) the Hydrographer was anchored about 1/4 mile W.N.W. of Southwest Channel beacon a cable was picked up on the anchor; this cable appeared to extend from this point in a general N.N.W.-S.S.E. direction. The only cables in this vicinity that were known about left the southern end of Egmont Key towards Anna Maria and another leaving in the vicinity of the Q.M. dock towards the S.W. end of Mullet Key.

Several discrepancies in sounding were found and developed. A 27 foot spot was recorded $1\frac{1}{4}$ mile W.N.W. of tri. sta. Palm which was known to be an error in recording and was checked by lines run on e' day showing 13 to 15 ft in this area. A sounding of 15 ft was also recorded at a point 2 miles S.W. of tria. sta. Palm. Lines in this area on this sheet and on Ship Sheet "A" show this to be an error of recording as a general depth of 23 to 26 ft is shown here.

The bottom in Egmont Channel was found to be very irregular and abrupt, especially near the N.E. end of Egmont Key and along the north side of the channel near the very shoal water. Extreme care was taken in making these soundings and several spots where discrepancies appeared likely were developed, only to find that the bottom was very irregular and that the soundings were very probably entirely correct.

STATISTICS SHEET NO. a

Date (1925)	Letter	Volume	Positions	Soundings	Miles Statute	Vessels
March 16th.....	a	1	75	418	18.7	Launch
March 17th.....	b	1	62	382	13	Launch
March 18th.....	c	1-2	156	1001	38.3	Launch
March 19th.....	d	2	180	817	36	Launch
March 20th.....	e	2	101	602	27	Launch
April 17th.....	f	3	37	181	5.2	Launch
April 20th.....	g	3	50	312	6	Launch
April 21st.....	h	3	134	1014	35.4	Launch
May 5th.....	j	4	67	396	16	Launch
May 6th.....	k	4	151	792	27	Launch
(1926)						
January 15th...	l	4	49	315	9.3	Launch
January 25th...	m	5	28	212	5.5	Launch
January 26th...	n	5	29	205	6.9	Launch
April 15th.....	p	5	59	272	9.5	Launch
May 24th.....	q	5	54	208	7.1	Launch
May 25th.....	r	5	61	285	8.0	Launch
May 26th.....	s	6	205	1000	34.1	Launch
May 27th.....	t	6	167	969	32	Launch
May 28th.....	u	7	46	237	5	Launch
June 2nd.....	v	7	183	871	30.5	Launch
June 3rd.....	w	8	155	715	25.2	Launch
June 4th.....	x	9	184	883	23	Launch
June 7th.....	y	9	94	418	11.4	Launch
June 8th.....	z	9	32	104	4.5	Launch
June 8th.....	A	9-10	225	603	33.1	Ship
June 9th.....	a'	10	18	58	1	Launch
July 22nd.....	b'	10	47	507	9.5	Skiff
July 23rd.....	c'	10	56	629	13	Skiff
Sept. 7th.....	d'	11	104	370	13.8	Launch
Sept. 30th.....	e'	11	39	129	1	Launch
Sept. 30th.....	B	11	10	10	--	Ship
October 1st....	f'	11	29	126	3	Launch
October 1st....	G	11	19	19	--	Ship
Totals	33	11	2856	15,062	509.0	

Hydrographic Sheet No. 4578.

Entrance to Tampa Bay, Florida.

Sheet covers surveys made at different periods during 1925-6 and shows a good development.

Shoals and Channels clearly defined.

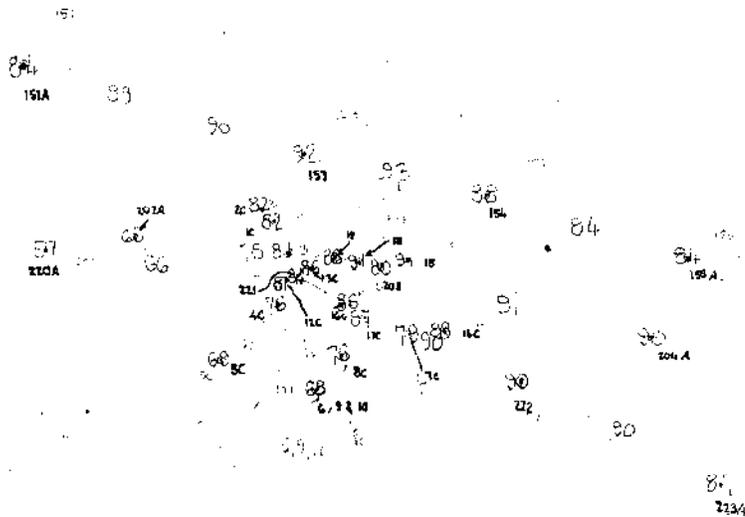
A few open areas appear but apparently are covered on adjoining sheet No 4584.

Field plotting quite accurate but field plotting not so good.

Records well kept and easily followed.

Additional work not required unless changes have taken place since dates of surveys.

John D. Torrey
3/29/27

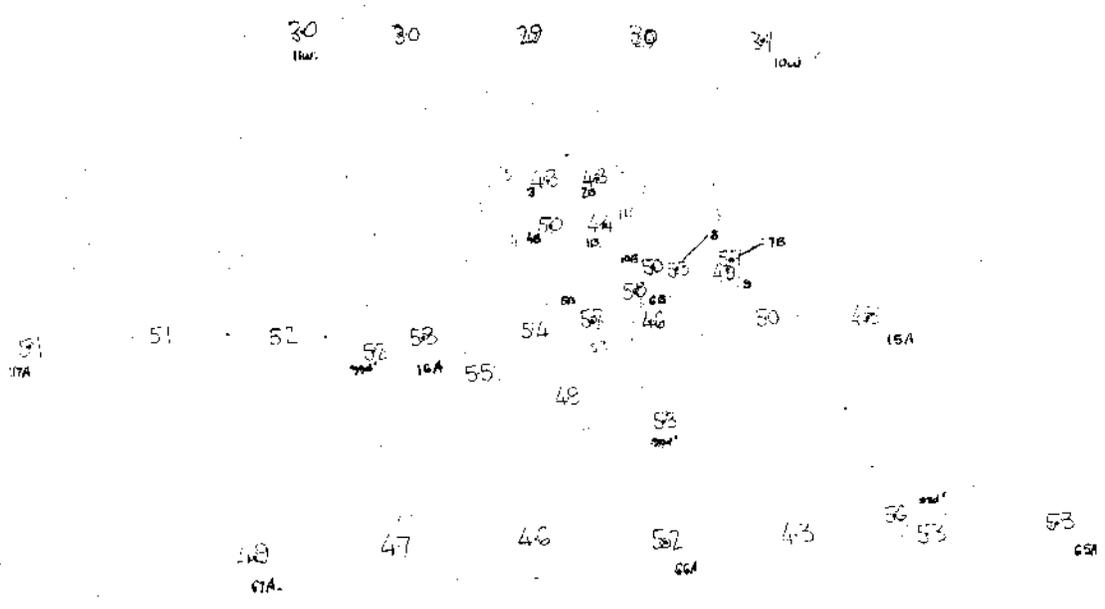


Sketch of Ship Development

1C - 19C.

~
4578

To accompany H-4578



Sketch of Ship Development

1B- 10B.

4579

To accompany H-4578

84
1834

100A

74
84

68
8

64
8

64

84

78
84

72
82

70
84

68
84

62
84

54

1834

90
206

89

156A

68
84

68
84

68
84

68
84

66
84

66
84

66
84

62

69

84
206A

157A

62

62

61

1834

79

74
206A

61

61
207A

sketch of Launch Development

78d' - 93d'

"a"

4578

To accompany H-4578

E. O. S.

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

AND REFER TO NO. 11-VEC

May 19, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4578

Tampa Bay Entrance, Florida

Surveyed in 1925-1926

Instructions dated June 3, 1924 (HYDROGRAPHER)

Chief of Party, R. P. Eyman.

Surveyed by R. P. Eyman, W. T. Combs, L. M. Zeskind, P. A. Smith, and
R. C. Wilson.

Protracted by W. T. Combs, P. A. Smith.

Soundings plotted by W. E. Strohm, P. A. Smith.

Verified and inked by J. D. Torrey.

1. The sounding records conform to the requirements of the General Instructions.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. The sounding line crossings are adequate.
5. The usual depth curves can be completely drawn.
6. Field plotting was completed to the extent prescribed in the General Instructions.
7. In the office it was occasionally necessary to respace and replot soundings which had been incorrectly plotted in the field.
8. The junctions with adjacent sheets are satisfactory.

9. Additional surveying is not required unless changes have occurred since the date of the survey.
10. In the descriptive report a submerged pile of rocks is mentioned as being 100 meters east by north of the Quarantine Station dock. A submerged rock is shown on the smooth sheet about 200 meters from the dock in the direction indicated. This is probably the pile of rocks mentioned in the report, since no mention is made of any other danger in the vicinity.

In the descriptive report it is stated that lists of the signals used in the survey appear in the reports for the topographic sheets (Nos. 4210 and 4211) covering this area. Upon inspection of these reports it was found that not all the necessary signals were listed. Also upon inspection of the sounding records only a few cuts to signals were discovered, which are by no means adequate. It is therefore assumed that the locations of these signals on the hydrographic sheet as turned in are correct.

11. Character and scope of surveying -- excellent.
Field drafting - - - - - good.
12. Reviewed by R. C. Rowse, May, 1927.

Approved:

Chief, Section of Field Records (Charts)

L. O. Gilbert

Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.
4578

HYDROGRAPHIC TITLE SHEET

G & G. SURVEY
L. & A.
DEC 20 1926
Acc. No.

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. "a"

REGISTER NO. 4578

State Florida

General locality Tampa Bay, ~~Gulf Coast of Florida.~~

Locality Entrance to Tampa Bay

Scale $\frac{1}{20,000}$ Date of survey ^{Mar} Feb. 1925 to ^{Oct} Aug. 1926

Vessel Hydrographer

Chief of Party Raymond P. Eyman

Surveyed by Raymond P. Eyman, W. T. Combs, L.M. Zeskind, Paul A. Smith, R.C. Wilson

Protracted by W. T. Combs, Paul A. Smith

Soundings penciled by W. E. Strohm, Paul A. Smith

Soundings in ~~Orthometric~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by

Inked by J. D. Torrey

Verified by J. D. Torrey

Instructions dated June 3rd, 1924

Remarks: