

JAN 21 1943

6686

Acc. No. _____

6686

| | |
|---|---------------------------|
| Form 504 | |
| U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE | |
| DESCRIPTIVE REPORT | |
| Type of Survey | Hydrographic H6686 |
| Field No. 2641 | Office No. H-6686 |
| LOCALITY | |
| State | ALABAMA |
| General locality | Gulf of Mexico |
| Locality | Mobile Bay Entrance |
| <u>194 1</u> | |
| CHIEF OF PARTY | |
| C. K. Green | |
| LIBRARY & ARCHIVES | |
| DATE | January 21, 1943 |

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H-6686

H6686

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. 2641

REGISTER NO. H-6686

H6686

State ALABAMA

General locality Gulf of Mexico

Locality Mobile Bay Entrance

Scale 1:20,000 Date of survey Oct. - Nov., 19 41

Vessel Launches FARIS & HIGGINS

Chief of Party C. K. Green

Surveyed by Ship's Officers

Protracted by D. D. Coker

Soundings penciled by D. D. Coker

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by _____

Inked by A. R. STIRNI

Verified by A. R. STIRNI

Instructions dated June 24 and October 13, 1939 - Jan 31, 1940

Remarks: This sheet was processed at the Norfolk Processing Office.

H6686

DESCRIPTIVE REPORT

to accompany

SHEET NO. H - 6686

This is one of a series of hydrographic sheets which were sent to this office by the Pensacola Processing Office for processing. Since no descriptive report was written by the field party or the Pensacola Processing Office, the following report is written in lieu of same.

INSTRUCTIONS:

This survey was executed under authority of the Director's Instructions for Project HT-236, dated June 24, 1939 and Supplemental Instructions dated October 13, 1939. - Jan 31, 1940

LOCALITY:

This is an inshore survey at the Entrance to Mobile Bay in the Gulf of Mexico.

CONTROL & SIGNALS:

Triangulation previously established furnished the primary control. The secondary control consisted of hydrographic signals which were determined by sextant cuts. The following named hydrographic signals were plotted on H-6685 and then transferred to H-6686.

| | |
|-----|--------------|
| COW | <u>TOWER</u> |
| DOK | RED |
| NAV | RAN |
| MOB | STY |
| RAT | JON |
| | MAN |

No sextant cuts could be found in the sounding records for the following named hydrographic signals and their location as shown on the smooth sheet was gotten from the boat sheet for this survey.

| | |
|-----|-----------------------|
| PEL | BEACON # 1 |
| TIP | SIG |
| SIG | HTN |

Hydrographic signals STUMP and NAV as plotted on the smooth sheet do not agree with the location as shown on the boat sheet. These signals are approximately 40 meters west of the position shown on the boat sheet.

*Smooth sheet
positions agree
as correct*

SURVEY METHODS:

The usual method of three-point fixes was used throughout this survey. The soundings were obtained by the 808 type Submarine Signal Corporation Fathometer and by hand lead. The launch

FARIS obtained their soundings by means of the fathometer, while the launch HIGGINS obtained its soundings by means of hand lead or sounding pole. ✓

SMOOTH PLOTTING:

The sounding records show no entries for barchecks or initial settings. No barcheck corrections were therefore made in the sounding records. The initial setting shown on the fathometer at the beginning of each day was taken to be correct, and corrections were made for any variation from the original setting. Corrections to soundings were also made for fathometer speed variations. ✓

Comparison of pole depth and fathometer depth of bottom served to check satisfactory operation of fathometer

Attention is directed to shoals appearing near the shoreline. ✓

No bottom characteristics are shown on that portion of this sheet which was surveyed by the launch FARIS, as none were recorded in the sounding records. ✓

The shoreline of Pelican Island shown on Chart No. 1266 was not delineated on this survey by the field party. The shoreline along the coast is not shown on this survey as no bromides of topo sheets were available at this office. ✓

Shoreline of coast transferred to survey in Washington Office

DISCREPANCIES:

No apparent serious discrepancies appear on this survey. The crossings are in good agreement. The maximum discrepancies of crossings are 2 ft. ✓

DANGERS:

Except for shoals which may be delineated by depth curves, no dangers appear on this survey. ✓

CHANNELS:

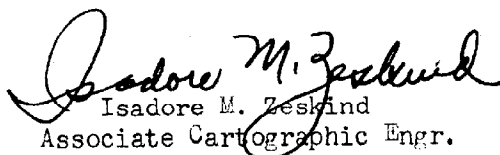
The Main Ship Channel to Mobile Bay was developed on this survey. This channel shows an effective depth of 38 ft. The Sand Island Channel was also developed on this survey and shows an effective depth of 14 ft. ✓

83

JUNCTIONS WITH CONTEMPORARY SURVEYS:

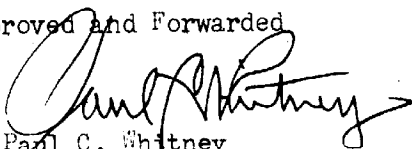
This survey joins H-6685 on the ⁽¹⁹⁴¹⁾ *North* west.

Respectfully submitted,


Isadore M. Zeskind
Associate Cartographic Engr.

January 18, 1943
Norfolk Processing Office

Approved and Forwarded


Paul C. Whitney
Supervisor, SE District

STATISTICS

H6686

SHEET H - 6686

| Date 1941 | Day | Vol. | Positions | Stat.Miles |
|--------------|----------|-------|-----------|------------|
| Oct.29 | A(Green) | 1 | 5 | 2.0 |
| Oct.30 | B " | 1 | 10 | 2.8 |
| Oct.31 | C " | 1 | 11 | 4.5 |
| Nov. 1 | a(red) | 4 | 101 | 21.0 |
| Nov. 6 | b " | 4 | 13 | 2.0 |
| Nov. 6 | D(Green) | 1 | 42 | 15.6 |
| Nov. 7 | c(red) | 4 & 5 | 160 | 36.8 |
| Nov.10 | E(Green) | 1 | 60 | 24.9 |
| Nov.10 | d(red) | 5 | 33 | 6.6 |
| Nov.11 | F(Green) | 1 | 214 | 63.6 |
| Nov.12 | e(red) | 5 | 47 | 6.6 |
| Nov.12 | G(Green) | 2 | 150 | 45.9 |
| Nov.13 | H " | 2 | 189 | 78.7 |
| Nov.14 | J " | 2 | 20 | 6.8 |
| Nov.20 | K " | 2 | 11 | 0.5 |
| Nov.22 | L " | 2 | 5 | 1.7 |
| Nov.25 | f(red) | 5 | 149 | 36.2 |
| Nov.26 | M(Green) | 2 & 3 | 159 | 72.0 |
| Nov.27 | N " | 3 | 169 | 65.5 |
| Nov.28 | P " | 3 | 127 | 53.3 |
| Total | | | 1675 | 547.0 |

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6686**

Records accompanying survey:

Boat sheets 2...; sounding vols. 5....; wire drag vols. 0...;
 bomb vols. ...⁰...; graphic recorder rolls 7... There are also
 4 fathogram rolls which include work from
 special reports, etc. 6686 and 6685, --Filed with H 6686.....

.....

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

| | |
|---|--------------------|
| Number of positions on sheet | .1675 |
| Number of positions checked | ..110. |
| Number of positions revised | ..2.. |
| Number of soundings recorded | ..12000 (estimate) |
| Number of soundings revised (refers to depth only) | ..21.. |
| Number of soundings erroneously spaced | ..16.. |
| Number of signals erroneously plotted or transferred | |
| Topographic details | Time ..8.. |
| Junctions | Time ..7.. |
| Verification of soundings from graphic record | Time ..8.. |

Verification by... *A. A. STIANI* Total time *.93* Date *May 17, 1943*

Review by *R. H. Carstens* Time *22 1/2 hrs* Date *June 9, 1943*

H6686

Remarks.

Decisions

| | Remarks. | Decisions |
|----|------------------------|-----------------|
| 1 | | |
| 2 | | |
| 3 | | 301880 |
| 4 | | 302880 |
| 5 | | " |
| 6 | | " |
| 7 | | 302884 U.S.G.B. |
| 8 | | 301880 |
| 9 | | " |
| 10 | | 302880 |
| 11 | | " |
| 12 | | |
| 13 | | 302881 |
| 14 | | |
| 15 | | |
| 16 | | |
| 17 | | |
| 18 | Location of tide staff | |
| 19 | | |
| 20 | | |
| 21 | | |
| 22 | | |
| 23 | | |
| 24 | | |
| 25 | | |
| 26 | | |
| 27 | | |

GEOGRAPHIC NAMES
 Survey No. **H6686**

| Name on Survey | Source | | | | | | | | | | | |
|----------------------------|-----------------------|---------------------------------|-----------------------------------|---------------------------------|---------------------|--------------------------|--------------------------|------------------------|----|--|--|----|
| | 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>Alabama</u> | | | | | | | | | | | | 1 |
| <u>Gulf of Mexico</u> | | | | | | | | | | | | 2 |
| <u>Mobile Bay Entrance</u> | | | | | | | | | | | | 3 |
| <u>Mobile Pt.</u> | | | | | | | | | | | | 4 |
| <u>West Bank</u> | | | | | | | | | | | | 5 |
| <u>Dauphin I. Spit</u> | | | | | | | | | | | | 6 |
| <u>Dauphin I.</u> | | | | | | | | | | | | 7 |
| <u>Sand I.</u> | | | | | | | | | | | | 8 |
| <u>Main Ship Channel</u> | | | | | | | | | | | | 9 |
| <u>Sand I. channel</u> | | | | | | | | | | | | 10 |
| <u>Pelican I.</u> | | | | | | | | | | | | 11 |
| <u>Pelican Bay</u> | | | | | | | | | | | | 12 |
| <u>Pelican Passage</u> | | | | | | | | | | | | 13 |
| | | | | | | | | | | | | 14 |
| | | | | | | | | | | | | 15 |
| | | | | | | | | | | | | 16 |
| | | | | | | | | | | | | 17 |
| <u>Fort Morgan</u> | | | | | | | | | | | | 18 |
| | | | | | | | | | | | | 19 |
| | | | | | | | | | | | | 20 |
| | | | | | | | | | | | | 21 |
| | | | | | | | | | | | | 22 |
| | | | | | | | | | | | | 23 |
| | | | | | | | | | | | | 24 |
| | | | | | | | | | | | | 25 |
| | | | | | | | | | | | | 26 |
| | | | | | | | | | | | | 27 |

Names underlined in red approved
 by H. Heck on 6/14/43

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT }
PHOTOSTAT OF }

No. H **H6686**
No. T

received Jan 21, 1943
registered Jan 21, 1943
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

| ROUTE | | Initial | Attention called to |
|-------|------|---------|---------------------|
| 20 | | | |
| 22 | | | |
| 24 | | | |
| 25 | | | |
| 26 | | | |
| 30 | | | |
| 40 | | | |
| 62 | | | |
| 63 | | | |
| 82 | | | |
| ✓ 83 | Pg 2 | | Comdr H.E. Finnegan |
| 88 | | | |
| 90 | | | |
| | | | |
| | | | |

RETURN TO

| | |
|----|-----------------|
| 82 | R.W.Knox |
|----|-----------------|

P.A.C.
HMC

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 24, 1943.

~~Division of Hydrography and Topography;~~

✓ Division of Charts: Attention: Mr. H. R. Edmonston.

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 6686

Locality Mobile Bay Entrance, Gulf of Mexico

Chief of Party: C. K. Green in 1941
Plane of reference is mean low water reading
2.4 ft. on tide staff at Fort Morgan
5.4 ft. below B.M. 1

Height of mean high water above plane of reference is 1.1 ft.

Condition of records satisfactory except as noted below:

C K Green

Chief, Division of Tides and Currents.

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-6686

Field No. 2641

Alabama, Gulf of Mexico, Mobile Bay Entrance
Surveyed October - November 1941; Scale 1:20,000
Instructions dated January 24 and October 31, 1939;
January 31, 1940

Soundings:

Control:

Hand lead
808 Fathometer
Sounding pole

Three-point fix on shore signals

Chief of Party - C. K. Green
Surveyed by - Ship's Officers
Protracted by - D. D. Coker
Soundings plotted by - D. D. Coker
Verified and inked by - A. R. Stirni
Reviewed by - R. H. Carstens
Inspected by - H. R. Edmonston Date: June 8, 1943

1. Shoreline and Signals

The shoreline and signals originate with T-5535, T-5536 and T-5537 of 1934 and with sextant fixes recorded in the sounding records of the present survey and of H-6685 (1941). Since no information regarding the position of some of the hydrographic signals was recorded in the sounding records (see page 1 of Descriptive Report), the boat sheet position of these signals was used in plotting the smooth sheet.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves

Satisfactory.

4. Junctions with Contemporary Surveys

The junction with H-6685 (1941) on the north will be considered in the review of that survey. There are

no contemporary surveys on the south and it was not considered expedient to make a junction in such a changeable area with the previous survey.

5. Comparison with Prior Surveys

| | | |
|----|------------------|----------|
| a. | H- 192 (1847-48) | 1:20,000 |
| | H- 261 (1851) | 1:20,000 |
| | H- 361 (1853) | 1:20,000 |
| | H- 467 (1855) | 1:20,000 |
| | H-2124 (1892) | 1:20,000 |
| | H-2939 (1908) | 1:20,000 |

These surveys reveal the bottom to be very changeable. Pelican Passage has varied in width from 0.2 mile to 1.7 mile and in depth from 4 feet to 12 feet. The islet in Lat. $30^{\circ}12.0'$; Long. $88^{\circ}02.0'$ from the 1892 survey has washed to a depth of 6 feet on the present survey. Sand Island has shifted northwestward a distance of about $3/4$ mile. The 12-ft. sounding from the present survey in Lat. $30^{\circ}11.8'$; Long. $88^{\circ}03.0'$ reported in Chart Letter 792 (1941) as being possibly an old foundation, is in the same position as Sand Island Lighthouse, on H-192. The shoal on the east side of the main channel in Lat. $30^{\circ}11.4'$; Long. $88^{\circ}02.5'$ has moved westward 0.2-0.3 mile, and in Lat. $30^{\circ}09.5'$; Long. $88^{\circ}02.8'$ there are now depths of 17 feet in the former ship channel where depths were 28-30 feet. Because of the changeable nature of the bottom the present survey should supersede these earlier surveys within the common area.

| | | |
|----|------------------|----------|
| b. | H-4023 (1917-18) | 1:40,000 |
| | H-4171 (1920) | 1:80,000 |

Considerable change in the bottom has taken place since these prior surveys were accomplished. The shoal on the east side of the main channel has washed deeper in spots as, for example, in Lat. $30^{\circ}11.3'$; Long. $88^{\circ}02.1'$ where former depths of 9 feet fall in present depths of 16 feet. In Lat. $30^{\circ}09.9'$; Long. $88^{\circ}02.1'$ the present 11-ft. shoal is 300 meters southeast of its former position and in Pelican Passage 4-ft. spots have developed in former depths of 13 feet. The present survey adequately reveals the configuration of the bottom and except for additional bottom characteristics should supersede the prior surveys within the overlapping area.

6. Comparison with Chart 1266 (latest print date 12-26-42)

a. Hydrography

The charted hydrography originates with the previously mentioned surveys which need no further consideration and with soundings from blueprints 36259 and 36260 taken subsequent to the present survey.

b. Controlling Depth

The present survey value of the controlling depth in the main ship channel is in harmony with the charted value.

c. Aids to Navigation

Many of the buoys have been changed with respect to number and color of light since the present survey was accomplished. The charted position of some of the buoys is of a later date than the present survey and, consequently, should be retained. The charted position of other buoys differs from the present survey position by as much as 450 meters as, for example, whistle buoy "1" in Lat. $30^{\circ}08.3'$; Long. $88^{\circ}03.8'$ but still satisfactorily marks the feature intended.

The charted position of Bn. 1 in Lat. $30^{\circ}13.7'$; Long. $88^{\circ}04.4'$ is about 100 meters north of the present survey position and Bn. 2 in Lat. $30^{\circ}14.0'$; Long. $88^{\circ}06.6'$ is about 800 meters northwest of the present survey position. The charted position of Bn. 2 no longer satisfactorily marks Pelican Passage.

7. Condition of Survey

Satisfactory, except that the Descriptive Report was written by the processing office rather than by the hydrographer.

8. Compliance with Instructions for the Project

Satisfactory, except that few bottom characteristics were taken; no sextant angles were recorded for five hydrographic signals, and no information was given concerning the size and shape of Pelican Island or the bar in that vicinity.

9. Additional Field Work Recommended

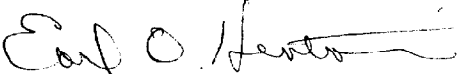
The location and size of Pelican Island and of any islets in that vicinity would be desirable for charting purposes.


10. Superseded Surveys


| | |
|------------------|----------|
| H- 192 (1847-48) | in part |
| H- 261 (1851) | " " |
| H- 361 (1853) | entirely |
| H- 467 (1855) | " " |
| H-2124 (1892) | in part |
| H-2939 (1908) | " " |
| H-4023 (1917-18) | " " |
| H-4171 (1920) | " " |

Examined and approved:


Chief, Surveys Branch


Chief, Section of Hydrography


Chief, Division of Charts


Chief, Division of
Coastal Surveys

applied to chart 1266 before review. F.M.A. June 3, 1943

Examined after review and a few minor changes made to 1266 F.M.A. 7/20/43

applied to Chart 873 AK