

8560

Diag. Cht. 1266-2

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT
(HYDROGRAPHIC)

Type of Survey ... HYDROGRAPHIC
Field No. ... ECFP 10-4-60
Office No. ... H-8560

LOCALITY

State ... ALABAMA
General Locality ... MOBILE BAY
Locality EAST OF CEDAR POINT

19 60-61

CHIEF OF PARTY

S. L. Hollis

LIBRARY & ARCHIVES

DATE Nov. 6, 1961

8560

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.

REGISTER NO. H-8560

Field No. ECFP 10-4-60

State ALABAMA

General locality MOBILE BAY

Locality EAST OF CEDAR POINT
SOUTH-WESTERN MOBILE BAY

Scale 1:10,000 Date of survey 12 AUG 1961 - 20 JULY 1961

Instructions dated 22/MEK ECFP 18 SEPT 1959

Vessel LAUNCH C.S. 183 SKIFF #758 SKIFF #2 (ECFP)

Chief of party CDR. H.S. COLE - LCDR. J.R. PLAGGMIER - LCDR. S.L. HOLLIS Jr.

Surveyed by ENS. Melvin E. Jones ENS. L.S. Brown

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

Fathograms scaled by Party Personnel

Fathograms checked by Party Personnel

Protracted by ENS. L.S. Brown G.F. Trefethen

Soundings penciled by G.F. Trefethen

Soundings in ~~fathoms~~ feet at MLW ~~MEBW~~ are true depths

REMARKS: _____

See

DESCRIPTIVE REPORT
TO ACCOMPANY

Hydrographic Survey H-8560 Field No. ECFP 10-4-60
South-Western Mobile Bay
Mobile Bay, Alabama

PROJECT: OPR 410
EAST COAST FIELD PARTY

SCALE: 1:10,000
LCDR. STEVEN L. HOLLIS

A. PROJECT

Original instructions dated 18 Sept 1959 addressed to officer in charge, EAST COAST FIELD PARTY. ✓

B. AREA SURVEYED

This sheet extends from N. 30°18'.00 to N. 30°21'.80 ✓ and from W. 88°00'.30 to the Western shore of Mobile Bay. This survey makes junction with contemporary survey H-8524 (ECFP-10-1-60)(1:10,000) at its southern limits and H-8561 (ECFP-10-5-60)(1:10,000) at its northern limit and with H-8563 (ECFP 20-1-60)(1:20,000) at its eastern limit.

~~Junction is made with prior survey H 4023 (1:40,000) 1918 at the southern and eastern limits of this sheet.~~

Work on this sheet commenced on 12 AUG 1960 and ended on JULY 1961. ✓

20

C. SOUNDING VESSELS

Launch C.S.183 indicated by (Violet) day letters was used for hydrography in depths of six feet or over. ✓

Skiff #758 indicated by (Red) day letters was used in depths of less than six feet.

Skiff #2 (ECFP) indicated by (Green) day letters was used only one day. The days work consisted of wire drag operation on preliminary review item No. 12. This work is not shown on the sheet because the results of the drag was negative and no soundings were taken.

D. SOUNDING EQUIPMENT

The EDO 255c No. 13 and No. 16 Depth Recorder with static inverter were used on Launch C.S. 183 in depth over six feet.

Depth Recorder No. 16 was used from "a" day thru "f" day.

Depth Recorder No. 13 was used from "g" day thru "ga" day.

Depth Recorder No. 16 was installed on Skiff #758 on "a" day only. Skiff #758 was used in shoal water only. ✓

The 808 #113s Depth Recorder was used on Skiff #758 on "b" day and "c" day. A 12' sounding pole was used when ever soundings were too shallow for the Depth Recorder. An armed lead was used for all bottom samples and least depth on Detached Positions. All echo sounding corrections were obtained by Bar check and simultaneous comparison. ✓

E. SMOOTH SHEET

The projection was made in the Washington office by a projection ruling machine.

F. CONTROL

Horizontal control was obtained by standard visual three point fix methods as described in the Hydrographic Manual.

The launch crew established 7 Hydro-signals on the East and West side of the ship channel to control the Hydrography in that area. The Hydro-signals were located by a three-point fix and check angles. It was found that in the center of this sheet the line spacings were erratic, due to weak fixes. The erratic spacing could be an accumulation of errors. For instance, distortion in the sheet, error in sextant, and angles that do not change or Anglemen not stopping at the same time.

On the crosslines that run East to West and West to East there were jumps in the center of the sheet when changing control from the ship channel to the shore and from the shore to the ship channel. Due to the even bottom the above error didn't affect the depth curves or crosslines.

Appendix A of this report contains a complete list of controls used and the quality and sources of the controls. All topographic control was located on Advance Manuscripts T-10758 and T-10757.

G. SHORELINE

The shoreline was transferred from the blue-line print of Advance Manuscript. The transfer of the shoreline and Topographic details have been verified. (See stamp No. 42 on Smooth sheet). The low-water line wasn't defined due to small tide range and extended shoal area.

H. CROSSLINES

The crosslines are more than sufficient with a coverage of 15% to 20%. No discrepancies at crossings were noted.

I. JUNCTIONS

The depths at the junctions with the surveys listed in section B are in agreement and Depth curves can be adequately drawn at the junctions.

J. COMPARISONS WITH PRIOR SURVEYS

* There are three pre-survey review items on this sheet. Items 11, 12, & 13. Pre-survey item 11 is a wreck at Lat. $30^{\circ}18'.90$ - $88^{\circ}06'.25$. The existence of this item has been disproved by the Hydrographic Party by sounding lines run over the area on "m" day Launch CS-183, and wire drag operation on "ha" day Launch CS-183. It is recommended that it be deleted from the chart. *deleted 873*

* Pre-survey item 12 is a snag at Lat. $30^{\circ}20'.70$ - Long. $88^{\circ}06'.60$. This item has been disproved by the Hydrographic Party on "b" day Skiff # 758 and by wire dragging the area on "a" day Skiff #2 (ECFP). It is recommended that the item be deleted. *deleted 873*

* Reviewer concurs, disposed of by Hydrographic party, and has been deleted from Charts.
Items 11, 12, 13

J. CONT.

*Pre-survey item 13, is the wreck of the tug ARGO at Lat. 30°20'.75-Long. 88°01'.20. Item 13 was investigated on "fa" day Launch C.S.183, and by wire dragging on "ha" day Launch C.S.183. The results were negative. The item should be deleted. *See preceding page.* Deleted 873 ✓

A comparison was made with prior survey H-4023 (1918-1:40,000). There is general agreement between the two surveys with the exception of the Mobile Ship Channel which has been dredged to a controlling depth of 36 feet. *See review par 6.* ✓

K. COMPARISON WITH THE CHART

The examination of C&GS chart 1266 16th edition, JAN. 30, 1961 (1:80,000) show a good comparison with this survey. *See review par 7.* ✓

L. ADEQUACY OF THE SURVEY

This survey is complete and is considered adequate to supersede all prior surveys. ✓

M. AIDS TO NAVIGATION

There are 9 fixed aids to navigation on this sheet and they have been submitted on form #567 JULY 15, 1960 by A.L. Wardwell. There are no new landmarks to report. A comparison has been made with the Light List and with the largest scale chart of the area. And all aids are adequate to serve the purposes for which they were established. ✓

The following is a list of aids to navigation.

AID NAME	LIGHT LIST NO.
Mobile Channel Light 6	6627
Mobile Channel light 8	6629
Mobile Channel Light 10	6630
Mobile Channel Light 11	6631
Mobile Channel Light 12	6632
Mobile Channel Light 14	6633
Lighted Buoy 7	6628
Buoy 9	Page 790
Pass Aux Herons Leading Light B, 1958	8074
Pass Aux Herons Range "A" Rear Light, 1958	8072
Pass Aux Herons Range "A" Front Light, 1958	8071
Pass Aux Herons Approach Dump Buoy 2	Page 791
Buoy 13	Page 791
Buoy 1	Not show in Light List.

N. STATISTICS

VESSEL	NO. OF POSITIONS	NAUTICAL MILES OF SOUNDINGS
Launch C.S.183	1977	312.4
Skiff #758	233	24.7
Skiff #2(ECFP)	8	0.0
	<u>2218</u>	<u>337.1</u>

Total area of survey, 23.0 square Nautical Miles. One Tide Station was used for control of the entire survey. This was a portable automatic Tide gage located in Fowl River, ✓

(north of survey)

N. CONT.

Lat. $30^{\circ}27'.00$ -Long. $88^{\circ}06'.60$. Mean-low water corresponds to 0.4 feet on the staff. There was no time or range corrections. 90th. time Meridian was used. (Central Standard Time.)

There were no current stations within the limits of this survey. ✓

There were 84 bottom samples obtained on this survey. ✓

O. MISCELLANEOUS

None.

Respectfully submitted,



Guy F. Trefethen
Surveying Technician USC&GS

APPENDIX ATTACHMENTS

- A. LIST OF SIGNALS
- B. ABSTRACT OF CORRECTIONS TO ECHO SOUNDINGS
- C. APPROVAL SHEET

APPENDIX A

LIST OF SIGNALS
Hydrographic Sheet H-8560 (ECFP 10-4-60)

TRIANGULATION STATIONS

OBI Mobile Channel Light 6, 1960

DAV Mobile Channel Light 8, 1960

MOB Mobile Channel Light 10, 1959

NEL Mobile Channel Light 11, 1960

HAN Mobile Channel Light 14, 1960

LIG Mobile Channel Light 12, 1960

↖ Destroyed; for new ^{Temporary} position. See Hydro-Signal BIL.

DIN Pass Aux Herons Leading Light B, 1958

EAR Pass Aux Herons Range "A" Rear Light, 1958

FRO Pass Aux Herons Range "A" Front Light, 1958

SKY Dauphin Island Bridge North Aero Obstruction Light, 1960

ABE Dauphin Island Bridge South Aero Obstruction Light, 1960

PHOTO-HYDRO STATIONS

MANUSCRIPTS T-10757 and T-10758

BOB	HOW	RAD
BUS	LAG	RAT
CAR	LEO	REX
CAT	NIX	SAM
COW	NOR	SOT
FOX	NOW	SOW
GAB	OWL	

HYDROGRAPHIC STATIONS

BIL- Mobile Channel Light 12

CAT

COP

KEN

OLD

RED

SAX

TOM

APPENDIX B

ABSTRACT OF CORRECTIONS TO ECHO SOUNDINGS

Hydrographic Sheet H-8560

Field No. ECRP 10-4-60

LAUNCH C.S. 183

DEPTH RECORDER EDO 255c # 16

"a", "b", "c", days

DEPTH	CORRECTION
0.0 to 6.0ft.	-1.2
6.1 to 9.0 ft.	-1.0
9.1 to 12.0 ft.	-0.8
12.1 to 15.0 ft.	-0.6

"d", "e", "f", days

0.0 to 6.0 ft.	-0.2
6.1 to 9.0 ft.	0.0
9.1 to 12.0 ft.	+0.2
12.1 to 15.0 ft.	+0.4

DEPTH RECORDER EDO 255c # 13

DEPTH	"g" thru "ga" days	CORRECTION
0.0 to 11.0 ft.		+0.2
11.1 to greater		+0.4

SKIFF NO. 758

DEPTH RECORDER 808 113s

DEPTH	CORRECTION
0.0 to 7.5 ft.	+0.2
7.6 to 9.8 ft.	0.0
9.9 to 18.0 ft.	-0.2

APPENDIX C

APPROVAL SHEET TO ACCOMPANY
Hydrographic Sheet H-8560 (ECFP 10-4-60)
Project OPR 410

The records, corrections, and all field and office work was supervised by LCDR. John R. Plaggmier and LCDR. Steven L. Hollis, Jr.

The descriptive report was written by Guy F. Trefethen.

The report and records for this survey are complete and adequate to the best of my knowledge.

Approved and forwarded,

Steven L. Hollis
Steven L. Hollis, Jr.
LCDR., USC&GS
Officer-in-charge

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

December 14, 1961

Division of Charts: R. H. Carstens

Plane of reference approved in
15 volumes of sounding records for

HYDROGRAPHIC SHEET 8560

Locality Lower Mobile Bay, Alabama

Chief of Party: J. R. Plaggmier (1960-61)
Plane of reference is mean low water, reading
0.4 ft. on tide staff at Fowl River
10.7 ft. below B. M. 1 (1960)

Height of mean high water above plane of reference is: 1.5 feet

Condition of records satisfactory except as noted below:

J. M. Symons
Chief, Tides and Currents Branch

~~Division of Tides and Currents~~

GEOGRAPHIC NAMES

Survey No. H-8560

Name on Survey	On Chart No. 873		On previous survey No.	On U. S. Quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
	A	B								
<i>Cedar Point</i>	✓									1
<i>Mobile Bay</i>	✓									2
<i>Louis Men Louis Island</i>	✓									3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

George M. Beece
Geographic Names
29 Nov 1961

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8560

Records accompanying survey: Smooth sheets .1...;
 boat sheets .1...; sounding vols. 15...; wire drag vols.;
 Descriptive Reports 1...; graphic recorder envelopes 11...;
 special reports, etc.

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

Number of positions on sheet	2218
Number of positions checked	9
Number of positions revised	0
Number of soundings revised (refers to depth only)
Number of soundings erroneously spaced
Number of signals erroneously plotted or transferred
Topographic details	Time 5
Junctions	Time 32 hrs
Verification of soundings from graphic record	Time 23 hrs
Special adjustments	Time

Verification by *Jasper McMillan* Total time 37 hrs Date 1/23/63
Allan Schugeld 134 hrs

Reviewed by *Oscar Chapman* Time 143 hrs Date 6/2/70

Inspection *DR Engle* 16 hrs 1-9-75

OFFICE OF MARINE SURVEYS AND MAPS
MARINE CHART DIVISION
HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8560

FIELD NO. ECFP-10-4-60

Alabama, Mobile Bay, East of Cedar Point

SURVEYED: August 12, 1960 - July 20, 1961

PROJECT NO.: OPR-410

SCALE: 1:10,000

SOUNDINGS: EDO Depth Recorder, Leadline,
808 Fathometer, Sounding Pole

CONTROL: Sextant Fixes
on Shore Signals

Chief of Party	H. S. Cole
.....	J. R. Plaggmier
.....	S. L. Hollis, Jr.
Surveyed by	M. E. Jones
.....	L. S. Brown
Protracted by	L. S. Brown
.....	G. F. Trefethen
Soundings Plotted by	G. F. Trefethen
Verified and Inked by	A. K. Schugeld
.....	J. S. McMillan
Reviewed by	O. Chapman
	Date: 5/27/70
Inspected by	D. R. Engle

1. Description of the Area

This survey covers an area in southwestern Mobile Bay from approx. lat. 30°18' to 30°22' and from the shoreline out to the center of the bay, including Mobile Bay Channel. The muddy bottom is generally smooth and gently sloping except in the spoil areas and channels, and on the western quarter of the survey where three 5 to 6-foot shoal ridges extend from $\frac{1}{4}$ to $1\frac{1}{4}$ miles out beyond the normal 6-foot curve.

2. Control and Shoreline

The source of control is given in the Descriptive Report. Unresolved jogs exist on the east-west crosslines near the

center of the survey, apparently because of faulty control. However, because of the nearly flat bottom, no crossing discrepancies exist.

The shoreline originates with reviewed photogrammetric manuscripts T-10757, T-10758, and T-10761 of 1957-61.

3. Hydrography

- A. Depths at crossing are in good agreement.
- B. The usual depth curves are adequately delineated with the exception of the low water line which was not determined.
- C. The determination of least depths on the shoals and the development of the bottom configuration are considered adequate.

4. Condition of Survey

The field plotting, sounding records, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual.

5. Junctions

Adequate junctions were effected with H-8561 (1960-61) to the north, H-8524 (1960) to the south, H-8642 (1961) to the west, and H-8563 (1960) to the east.

6. Comparison with Prior Surveys

- A. H-193 (1848) 1:20,000
- H-215 (1849) 1:20,000
- H-2220 (1894) 1:40,000
- H-2125 (1892) 1:20,000

These early prior surveys cover the area of the present survey. A comparison between the prior and present surveys reveals the present survey generally to be 1-3 feet shoaler except in an area extending about one mile west and paralleled to Mobile Bay Channel, where the present survey is as much as 5 feet shoaler than the prior surveys because of the deposition of spoil.

- B. H-1613b (1885) 1:20,000
H-2128 (1892) 1:20,000

These prior surveys cover only the Mobile Bay Channel and show a controlling depth of 13.5 ft. in 1885 and 16 ft. in 1892. The present survey shows a controlling depth of 36 ft.

- C. H-4020 (1917-18) 1:40,000
 H-4023 (1917-18) 1:40,000
H-6685 (1941) 1:20,000

Comparison with these more recent prior surveys reveals changes of 1 to 4 feet, generally shoaling, within the survey limits. Probable causes of shoaling in this area are the deposit of sediment from natural causes and spoil from extensive dredging of nearby channels. It was also noted that the bottom characteristic has changed from light blue mud to black and brown mud. A 7-foot sounding has been carried forward from H-6685 in lat. $30^{\circ}19.02'$, long. $88^{\circ}02.07'$ to supplement present survey depths.

The present survey, together with the indicated addition, is adequate to supersede all of the above prior surveys in the common area.

7. Comparison with Charts 872-SC (latest print date 8/30/69)
 1266 (latest print date 9/6/69)

A. The charted hydrography originates with the prior surveys previously discussed, which need no further consideration, supplemented by surveys by the Corps of Engineers and by the partial application of the present survey boat sheet and the smooth sheet before review.

Attention is called to the following:

(1) The two piles charted at lat. $30^{\circ}20.30'$, long. $88^{\circ}07.70'$ originate with letters 603 (1965) and 1002 (1965) subsequent to the date of the present survey and should be retained on the chart.

(2) The two piers shown at lat. $30^{\circ}21.87'$, long. $88^{\circ}06.72'$ on the present survey have not been charted. *No corr scale to small*

(3) The low water area in lat. $30^{\circ}18.3'$, long. $88^{\circ}07.95'$ charted from the boat sheet of the present survey should be revised to reflect the final corrected soundings in this area which are $\frac{1}{2}$ foot depths. *Applied*

With the exception of item (1) above, the present survey is adequate to supersede the charted hydrography within the common area.

B. Controlling Depths

The charted controlling depth of the Mobile Bay Channel is 36.5 to 39 feet. This information originates with Corps of Engineers surveys and reports made subsequent to the present survey and supersedes the present survey information in the channel.

C. Aids to Navigation

The aids to navigation as charted adequately mark the features intended.

Mobile Channel Light "12" in lat. $30^{\circ}20.63N$, long. $88^{\circ}01.49W$ was destroyed at the time of the survey and replaced by a temporary light (signal BIL) about 380 meters to the south of its charted position. Subsequently it was rebuilt in its charted position according to Notice to Mariners 16 of 1966.


8. Compliance with Instructions

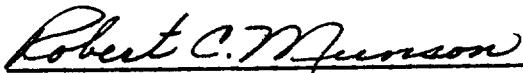
This survey adequately complies with the Project Instructions except as noted in par. 3B.

9. Additional Field Work

This is a good basic survey and no additional field work is recommended.

Examined and Approved:


 Chief
 Marine Chart Division


 Associate Director
 Office of Marine Surveys and Maps

H-8650

Information for Future Pre-Survey Reviews

None

Resurvey Cycle Information

<u>Position</u>	<u>Index</u>	<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
301	881	3	5	25 Years
302	881	3	5	25 Years

