8561

Diag. Cht. No. 1266-2.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ECFP-10-5-60ffice No. H-8561

LOCALITY

State Alabama

General locality ____Mobile Bay_

Locality East of Point Judith

1960-61

CHIEF OF PARTY

H.S.Cole, J.R.Plaggmier & S.L.Holli

LIBRARY & ARCHIVES

DATE September 21, 1961

USCOMM-DC 5087

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-8561

Field No. **ECFP 10-5-60**

State	<u>ALABAMA</u>
General locality	MOBILE BAY
Locality	MOBILE BAY East of Pt Judith SOUTH-WESTERN MOBILE BAY
	Date of survey 15 Aug, 1960-21 Mar, 1961
Instructions dated	22/MEK, ECFP 18 September 1959
	CS-1177, Launch CS-183, and Skiff 758
	Howard S. Cole, LCDR. John R. Plaggmier, LCDR Steven L. Holli
	. Melvin E. Jones and Mr. Robert A. Lewis
Soundings taken by fa	thometer, graphic recorder, hand lead, wire Sounding Pole
Fathograms scaled by	Party Personnel
Fathograms checked by	y Party Personnel
Protracted by	Richard I. Greene
Soundings penciled by	Richard I. Greene
Soundings in xxxxxxx	max feet at MLW warm and are true depth 3
REMARKS:	,
·	

U. S. GOVERNMENT PRINTING OFFICE 16-66520-1

DESCRIPTIVE REPORT TO ACCOMPANY

Hydrographic Survey H-8561, Field No. ECFP 10-5-60 Entrance to Mobile Bay Mobile Bay, Alabama

PROJECT: OPR 410

SCALE: 1:10,000

EAST COAST FIELD PARTY

LCDR. STEVEN L. HOLLIS, CMDG.

A. PROJECT

Work on Project OPR 410 was executed in accordance with Instructions 22/MEK, ECFP, dated 18 September, 1959.

B. AREA SURVEYED

The general locality of this survey is south-western Mobile Bay. The area surveyed extends from Lat. 30°21'30" to Lat. 30°26'00", and from Long. 88'00'00" to the western shore of Mobile Bay, and the part of Fowl River between Lat. 30°24'15" and Lat. 30°27'00".

This survey makes junction with the following contemporary surveys; H-8573 (10-7-60, Scale 1:10,000) to the north, H-8562 (10-6-60, Scale 1:10,000) to the east, and H-8560 (10-4-60, Scale 1:10,000) to the south. H-8563 (1960) 1:20,000 South east

Junction is made with prior survey 4024 (1:40,000, 1918) at the northern and eastern limits, and with prior survey 4023 (1:40,000 1918) at the southern limit.

Field work on this sheet commenced on 15 August, 1960, and was completed 21 March, 1961.

C. SOUNDING VESSELS

Launch CS-1177 was used for approximately one-half the hydrography performed on this sheet. Work by CS*1177 is indicated by blue day letters (a-w day).

Launch CS-183 was used for approximately one-forth the hydrography performed on this sheet. Work by CS*183 is indicated by violet day letters (a - p days).

Skiff 758 was used for approximately one-forth the hydrography performed on this sheet, including Fowl River. Work by Skiff 758 is indicated by red day letters (a - f day).

All sounding vessels were based in Fowl River for the period of work on this sheet, excepting "f" day by Skiff 758, which was based in Dog River on that date.

D. SOUNDING EQUIPMENT

The EDO 255c No.15 Depth Recorder was used for all work by Lch. CS-1177 excepting "u" day, when 255c No. 16 was used.

Lch. CS-183 used the EDO 255c No.16 Depth Recorder for "a"-"f" days and EDO 255c No.13 Depth Recorder for "g"-"p" days.

The Skiff 758 used the EDO 255c No.16 for all hydrography excepting "f" day, when the 808 Fathometer No.113s was used.

Echo sounder corrections were determined from daily bar checks and simultaneous comparisons. These corrections are tabulated in Appendix B, "Abstract of Corrections to Echo Soundings", attached to this report. (also leadline)

E. SMOOTH SHEET

The projection was made in the Washington office by a projection ruling machine. The shoreline and control signals were transferred in the usual manner and were verified in accordance with 757 of the Hydrographic Manual.

COMTROL

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

Triangulation dated 1960 was performed by Party 603, Lcdr. Herbert R. Lippold, Chief of Party, and by the East Coast Field Party, Cdr. Howard S. Cole, Chief of Party.

Appendix A of this report contains a complete list of control used and the quality and source of the control.

SHORELINE

The Mobile Bay shoreline was transferred from blue-line prints

of Advanced Manuscripts T-10943 and T-10758.

The Fowl River shoreline was transferred from blue-line prints of Advanced Manuscripts T-10941, T-10942; and in part from Advanced Manuscript T-10940, as no blue-line print of T-10940 was available.

No notable change in shoreline was observed in either Mobile Bay or Fowl River.

CROSSLINES

Crosslines were run to the extent of 6 to 8 percent of the regular system of sounding lines. Favorable crossings were found.

I. JUNCTIONS

The depths at the junctions with the surveys listed in Section B are in good agreement and depth curves can be adequately drawn at the junction.

Review

1500

J. COMPARISON WITH PRIOR SURVEYS

There are no presurvey review items on this sheet.

A comparison was made with proor surveys 4024 and 4023 (1:40,000, 1918). There is general agreement between the prior survey and contemporary survey with the following exception:

see P6 Review

1. The maximum depth of the Mobile Bay ship channel has been increased from 29 feet to 38 feet.

H-2/5 (1849) 1:20,000 H-16136(1885) 1:20,000 H-2/28 (1892) 1:20,000 H-2220(1894) 1:40,000

K. COMPARISON WITH THE CHART

The examination of C&GS Chart 1266, 15th Edition, 16 Nov., 1959, Revised 18 April, 1960 (1:80,000) indicated a good comparison with the contemporary survey.

L. ADEQUACY OF THE SURVEY

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

M. AIDS TO NAVIGATION

There are eight fixed aids to navigation on this survey. They are listed on Form 567 attached to this report.

There is one floating aid to navigation within the limits of this survey:

AID NAME	LAT.& LONG.	DATE LOCATED	DEPTH (ft.)	VOL.	ros.	LIGHT LIST NO.
Can Buoy #17#	30° 23!87 88° 01.17	10/25/60	15	6	lv	6635

There is one bridge, the Fowl River Bridge, within the limits of this survey. That bridge is shown on the insert near the mouth of East Fowl River. The ship clearance was not measured on this survey.

An overhead power cable is adjacent to and runs almost parallel with the bridge. The ship clearance was not measured on this survey. The poles for this cable are used as signals NAP and PAN.

N. STATISTICS

VESSEL	NO. OF POSITIONS	NAUTICAL MILES OF SOUNDINGS
Launch CS*1177 Launch CS-183 Skiff 758	1221 467 472	188.3 81.3 68.0
Total	2160	337.6

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 im Fowl River.

Data for reduction of the soundings was taken directly from the station records without time or range corrections. See Appendix C, "Tidal Note", for additional information on this station.

Thirty-nine bottom samples were obtained on this survey.

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

O. MISCELLANEOUS

The Mobile Bay Ship Channel is maintained by the U.S. Corps of Engineers to a controlling depth of 38 feet.

Bubmitted By,

Richard I. Greene

Lt.(jg) USC&GS

INDEX OF APPENDIX

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

APPENDIX A

LIST OF SIGNALS Hydrographic Sheet H-8561 (ECFP 10-5-60)

TRIANGULATION STATIONS

BIL Mobile Channel Light 19, 1960

FOX Mobile Channel Light 15, 1960

JOE Mobile Channel Light 18, 1960

KID Mobile Channel Light 14, 1960

LOG Mobile Channel Light 16, 1960

MOB Mobile Channel Light 20, 11960

USE Mobile Bay Lighthouse, 1960

HYDROGRAPHIC SIGNALS

ABE Vol. 5 pg. 19

BAT Vol. 6 pg. 5

EBB T-10940

FOP Vol. 9 pg. 3

GAS Vol. 2 pg. 9 & 13 - Black Beacon No. 21, 1960

JAR Vol. 9 pg. 3

LIP Vol. 9 pg. 3

PIE T-10942

SUE Vol. 6 pg. 49

APPENDIX A (con't)

TOPOGRAPHIC SIGNALS

		Manuscr	ipt T-109	41		
D00	GAD	NAP	PAN	RIR		
,						
		Manuscr	ipt T-109	40		
DEB	LUX	OFF	RIG	SOW	TOY	WIT
EGG	MAL	OHM	RIO	SUE	WEN	WOO
IVY	NUT	POT	SET	TAB	WHO	YAK
						Z00
		Manuscr	ipt T-109	42		
ABE	CAM	ELM	GIG	JAY	ORA	ROT
ACE	CAR	EMO	GIN	MAN	ORB	ROY
ACT	COM	END	GOO	MAX	OUT	RUB
ADD	DER	GEM	GUY	MET	PAR	SEE
ADO	EGO	GEO	JAP	OIL	RED	TRA
CAB	ELF	GET	JAR	OLD	RIP	TUB
						ZON
		Manuscr	ipt T-109	43		
BAG	BUM	CAT	FIG	LEM	PUP	ZAG
		Manuscr	ipt T-107	58		
BOB	NIX	SAM				

APPENDIX B

ABSTRACT OF CORRECTIONS TO ECHO SOUNDINGS

Field No. ECFP 10-5-60

Hydrographic Survey H-8561

Project OPR-410		Mobile	e Bay	
East Coast Field	Party	1960 1	Field Season	
Annual Control of the	LAUI	NCH CS-1177		
,	DEPTH RECORDER	EDO 255, C-15		
FATHOMETER DEPTH (ft.)	_	4	TER CORRECTION ft.)	
7.0 to 10.0 10.1 to 14.0 14.1 to 18.0 18.1 to 24.0 24.1 to 27.5 27.6 to 30.0 30.1 to 32.5 32.6 to 35.0 35.1 to 37.0 37.1 to 38.5 38.6 to 39.5		cheu "k" day (blue	-0.6 -0.4 -0.2 0.0 +0.2 +0.4 +0.6 +0.8 +1.0 +1.2 +1.4	
5.0 to 10.0 10.1 to 19.5 19.6 to 23.0 23.1 to 26.0 26.1 to 29.0 29.1 to 33.0 33.1 to 37.0 37.1 to 42.0	255, C-16 was u	thru "u" day (blue sed on "u" day. Co	0.0 -0.2 0.0. +0.2 +0.4 +0.6 +0.8 +1.0)
3.0 to 13.0 13.1 to 16.0 16.1 \$6 26.0 26.1 to 33.0 33.1 to 39.0 39.1 to 45.0		and "w" day (blue)	-0.6 -0.4 -0.2 0.0 +0.2 +0.4	

APPENDIX B (con't)

ATHOMETER DEPTH (ft.)	FATHOMETER CORRECTION (ft.)
LAUNCH CS-183	
"A" day thru "b" day (violet)	Depth Recorder EDO 255, C-16
6.0 to 9.0	1.0 0.8 0.6
"c" day thru "f" day (violet) Depth	n Recorder EDO 255, C- 16
up to 12.0 12.1 and greater	+0.2 +0.4
"g" day thru "p" day (violet) Dept	h Recorder EDO 255, C-13
up to 11.0	+0.2 +0.4
SKIFF 758	
"a" and "b" days (red) Depth Reco	order EDO 255, C-16
up to 5.0	0.0 +0.2 +0.4
"c" day thru "e" day (red) Depth B	
"f" day (red) Depth Recorder	

APPENDIX C

TIDAL NOTES

Hydrographic Sheet H-8561 (ECFP 10-5-60)

GAGE LOCATION: Key Fowl River, Mobile Bay, Alabama

Lat. 30° 27.0' N Long. 88°06.6' W

STAFF:

Mean low water corresponds to 0.4 ft. on the

staff.

CORRECTION:

No time or height correction was applied to the results obtained from the gage in reducing

soundings.

The 90th meridian was used at this tide station.

APPENDIX D

APPROVAL SHEET TO ACCOMPANY
Hydrographic Sheet H-8561 (ECFP 10-5-60)
Project OPR-410

The records, corrections, and all field and office work was supervised by CDR. Howard S. Cole and LCDR. John R. Plaggmier.

The descriptive report was written by Lt.(jg) Richard I. Greene.

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

Approved and Forwarded,

Steven L. Hollis LCDR., USC&GS Officer in Charge

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8561

FIELD NO. ECFP 10-5-60

Alabama, Mobile Bay, East of Pt. Judith

SURVEYED: August 1960-March 1961 SCALE: 1:10,000

PROJECT NO. OPR-410

SOUNDINGS: EDO Depth Recorder

808 Depth Recorder

CONTROL: Sextant Fixes

on shore signals

leadline

J. R. Plaggmier

S. L. Hollis

Surveyed by-----M. E. Jones

R. A. Lewis

Protracted by-----R. I. Greene

Soundings Plotted by-----R. I. Greene

Verified and Inked by-----A. K. Schugeld

Reviewed by------H. Radden

Inspected by-----R. H. Carstens

Date: 3/10/64

1. Description of the Area

This is a survey of the southwestern portion of Mobile Bay, Fowl River and East Fowl River.

The bottom in Mobile Bay is smooth. Depths here range from 1-12 ft., except in the vicinity of the Mobile Bay Channel, where greater depths are found. The bottom in depths less than 6 ft. is characterized by fine sand, and by mud in greater depths.

The bottom in Fowl River and East Fowl River is muddy. The controlling depth of the sinuous natural channels in these rivers is 4 ft. which is found in the vicinity of the highway bridge at the entrance to East Fowl River.

2. Control and Shoreline

The source of the control is adequately described in the Descriptive Report.

The shoreline originates with unreviewed photogrammetric surveys T-10940, T-10941, T-10942 and T-10943 of 1957-59 and T-10758 of 1957-58.

3. Hydrography

Depths at crossing are in very good agreement. The usual depth curves were adequately delineated, except the low-water curve which was not determined. In 1849 the low-water curve was about 150-200 meters offshore in this area.

4. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was accurately done, except that it was necessary to make numerous changes and additions to shoreline during the review of the present survey.
- c. The depth curves were shown in colored pencil by the smooth sheet plotter. The verifier spend considerable time erasing these depth curves.

5. <u>Junctions</u>

Adequate junctions were effected with H-8560 (1960-61) on the south, with H-8562 (1960) on the east, with H-8563 (1960) on the southeast, with H-8574 (1960) on the northeast. The junction with H-8573 (1960) on the north will be considered in the review of that survey.

6. Comparison with Prior Surveys

A. H-215 (1849) 1:20,000 H-1613 (1885) 1:20,000 H-2128 (1892) 1:20,000 H-2220 (1894) 1:40,000

These early prior surveys cover the area of the present survey, except for that part of Fowl and East Fowl Rivers between Lat. 30°24.25' and Lat. 30°27.00'. A comparison between the prior and present surveys reveals the present survey generally to be 1-2 ft. shoaler in depths, except in an area extending about one mile west and parallel to Mobile Bay Channel, where the present survey is as much as 4 ft. shoaler in depth. The shoreline between Lat. 30°21.7' Long. 88°06.80' and Lat. 30°26.27' Long. 88°06.

B. H-4023 (1917-18) 1:40,000 H-4024 (1918) 1:40,000

These small-scale prior surveys together cover the area of the present survey, except for that part of Fowl and East Fowl Rivers between Lat. 30°24.25' and Lat. 30°27.00'. A comparison between the prior and present surveys reveals the present depths to be 1-2 ft. shoaler in random areas, except in the vicinity of Lat. 30°22.70', Long. 88°02.00", where prior depths of 13 ft., fall in present depths of 7-10 ft. Also in the vicinity of Lat. 30°23.40', Long. 88°00.60', where prior depths of 13 ft. fall in present depths of 9-10 ft. Erosion generally of less than 50 meters has occurred in several sections of shoreline since the prior surveys.

The present survey is adequate to supersede the prior surveys within the common area.

7. Comparison with Chart 1266 (Latest print date 7/8/63)

A. Hydrography

The charted hydrography east of Point Judith originates principally with the previously discussed prior surveys which need no further consideration, and with U. S. Corps of Engineers Surveys of 1930 (Bps 23668-70). A comparison between the charted and present survey soundings reveals only minor differences The following of 1-2ft. in random areas. discrepancies in hydrographic information between the chart and present survey were noted: the platforms in the vicinity of Lat. 30°22.00', Long. 88°06.50' and Lat. 30°26.00' - Long. 88° 06.00'; the stake in Lat. 30°25.45' - Long. 88° 05.70', and the duckblind in Lat. 30°25.28' -Long. 88°05.97' which originates with the present survey are not shown on the chart. The 6 ft. soundings in Lat. 30°25.40' Long. 88°01.17' and Lat. 30°25.70' - Long. 88°01.12 from U. S. Corps of Engineers Surveys of 1930 (Bps 23668-70) are not disproved by the present survey and should be retained as charted.

The charted hydrography in Fowl and East Fowl Rivers between Lat. 30°24.25' and Lat. 30°27.00' originates with the present survey.

The present survey is adequate to supersede the charted information in the common area, except for the 6 ft. soundings noted above.

B. Controlling Depth

The Charted controlling depth of that portion of the Mobile Bay Channel which falls within the limits of the present survey is 36 ft. This information originates with Chart Letter 531, 1963, from surveys of the U. S. Corps of Engineers accomplished subsequent to the present survey.

C. Aids to Navigation

The present survey positions of the aids to navigation are in substantial agreement with their charted locations, and adequately mark the features intended.

8. Compliance with Instructions

This survey adequately complies with the project instructions.

9. Additional Field Work

The present survey is considered to be a very good basic survey and no additional field work is necessary.

Examined and Approved:

Associate Director,

Hydrography and Oceanography

Acting Chief,

Marine Chart Division

Wallace a. Bruder

Information for Presurvey Reviews

Present shoaler depths may in part be due to survey methods. In view of the fact that the area on each side of the Mobile Bay Channel are spoil areas, shoaling in the adjacent areas may be anticipated in the future. Considerable erosion of the shoreline is noted. Numerous piers, platforms and a duckblind have been built north and south of Point Judith and in future years may deteriorate and become hazzards to small crafts.

PARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

NONFLOATING AIDS CHARTS

TO BE CHARTED

STRIKE OUT ONE

EAS T COAST FIELD PARTY

SEPTEMBER 1960

charted on (dictaval x from) the charts indicated. I recommend that the following objects which have (ATOMENT) been inspected from seaward to determine their value as landmarks be

The positions given have been checked after listing by

Richard I. Greene

Lcdr. StevenL. Hollis

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				Ę	LATITUDE *		ONG	LONGITUDE *		>C	NON	
CHARTING	DESCRIPTION	SIGNAL		•	D. M. METERS	•	_	// D. P. METERS	DATUM		NO.	No. LOCATION
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	Mobile Channel Light #20	MOB	33	25	1348.4	88	8	1213.7	1927	٦,	lation	1960 1960
									N.A.	1-3	Triang-	
	Mobile Channel Light #19	BIL	33	25	150.8	88	8	1591.2	1927	\vdash	lation	ation 1960
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	Mobile Channel Light #18	JOE	83	24	707.3	88	8	1524.5	1927	ساد	letion	etion 1960
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	Mobile Channel Light #16	LOG	છ	23	242.8	88	2	205.7	1927	3 1-	lation	ation 1960
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individual field survey sheets. Information under each column heading should be given. aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating Comm-DC 61327

* TABULATE SECONDS AND METERS

FORM 197 (3-16-55)

GEOGRAPHIC NAMES Survey No. H-8561	L	Char 12	of such or	CS. West	oca ator	Or local Mag	O. Guide of	Mac McHall	J.S. John	į,
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Name on Survey	/ A	<u></u>	<u>/ c</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>/ H</u>	/ K V	_
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FONE RIVER	/		ļ	ļ					/	2
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MON LOUIS ISLAND										4
										5
Pt. Judith	ļ	<u> </u>								6
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Hydrographic Surveys (Chart Division)

Records accompanying survey: Sm	ooth sh	eets	•••••
boat sheets .2; sounding vols14; wi	re drag	vols.	•••••
Descriptive Reports; graphic recor	der env	elopes	.15;
special reports, etc	• • • • • •	• • • • • •	••••
	• • • • • •	•••••	••••
The following statistics will be submitted wit rapher's report on the sheet:	the c		
Number of positions on sheet		2160	
Number of positions checked		14	
Number of positions revised		9.	
Number of soundings revised (refers to depth only)		•••••	
Number of soundings erroneously spaced		•••••	
Number of signals erroneously plotted or transferred		• • • • •	
Topographic details	Time	•••••	
Junctions	Time	••••	
Verification of soundings from graphic record	Time	15 hou	15
Special adjustments	Time	••••	
Verification by flant skingeld. Total time	15 days	Date 6	118/13
Reviewed by H. Shendon Radden. Time (Radden)	80 hrs.	Date /0	-31-63

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Coastal Surveys:

3 November 1961

Division of Charts: R. H. Carstens

Plane of reference approved in 14 volumes of sounding records for

HYDROGRAPHIC SHEET 8561

Locality South-western Mobile Bay, Alabama

Chief of Party: S. L. Hollis (1960)
Plane of reference is mean low water reading
O.4 ft. on tide staff at Fowl River

9.7ft. below B. M. 1 (1960)

Eeight of mean high water above plane of reference is: 1.4 ft.

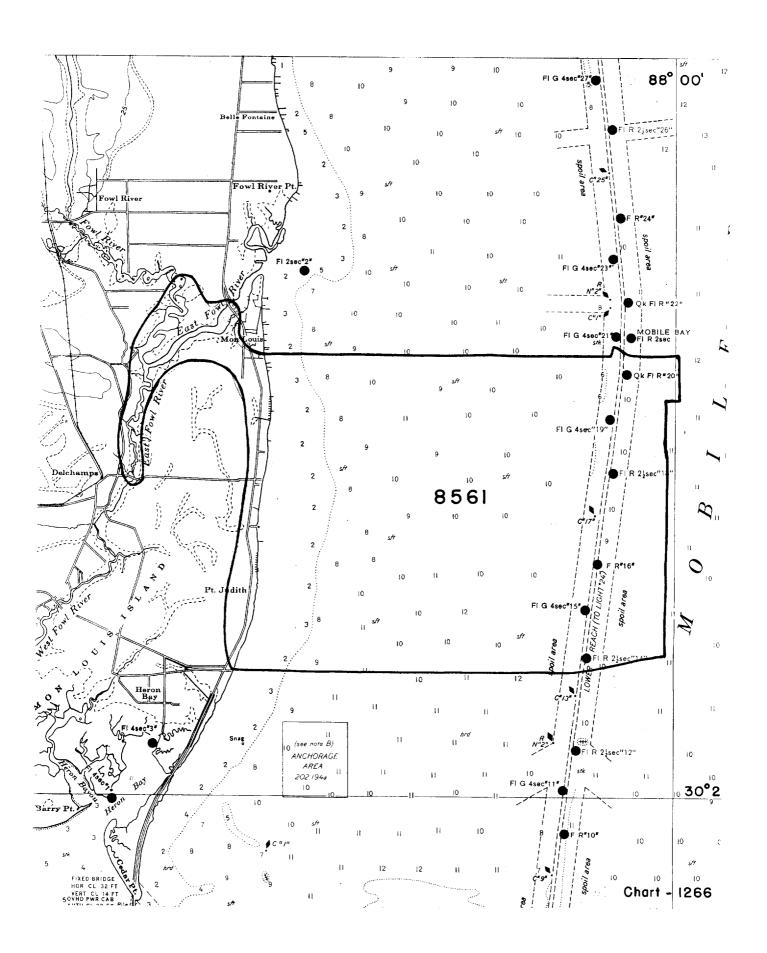
Condition of records satisfactory except as noted below:

NOTE: Tide reducers for the positions listed below have been revised in red and verified.

Vol. Positions

J to 22J

U. S. GOVERNMENT PRINTING OFFICE 87798



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8561

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
10/17/61	1266	Heaton	Exam - No Crut Con . Before ** Verification and Review
2/23/63	1266	John P. Wein	Before -After Verification and Review Part. Applied
11/30/64	1266	John P. Wein	Before After Verification and Review Fully Applied
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1