

8642

Diag. Cht. No. 1266-2.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ECFP-10-10-61 Office No. H-8642

LOCALITY

State Alabama

General locality Mississippi Sound

Locality Vicinity of Pass Aux Herons

1961

CHIEF OF PARTY

S. L. Hollis, Jr.

LIBRARY & ARCHIVES

DATE Apr. 30, 1963

USCOMM-DC 37022-P66

8642

HYDROGRAPHIC TITLE SHEET

H-8642

INSTRUCTIONS - 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.

ECCP-10-10-61

State ALABAMAGeneral locality MISSISSIPPI SOUNDLocality VICINITY OF PASS AUX HERONS
EASTERLY END OF MISSISSIPPI SOUNDScale 1:10,000Date of survey 26 July thru 17 Oct. 1961Instructions dated 18 Sept. 1959 & 11 April 1961 Project No. 410Vessel Launch CS-183, Skiff 758 and Skiff # 2Chief of party LCDR. STEVEN L. HOLLIS, JR.Surveyed by ROBERT A. LEWIS, D.W. GEORGE (CIVILIANS)

Soundings taken by echo sounder, hand lead, pole _____

Graphic record scaled by PARTY PERSONNELGraphic record checked by PARTY PERSONNELProtracted by GEORGE BRAGG and GEORGE L. FERNANDESSoundings penciled by GEORGE L. FERNANDESSoundings in 10 fathoms feet at MLW 10 fathoms

REMARKS:

DESCRIPTIVE REPORT
TO ACCOMPANY HYDROGRAPHIC SURVEY H-8642
(Field No. ECFP 10-10-61)
PROJECT OPR-410

SCALE: 1:10,000

1961

EAST COAST FIELD PARTY

CHIEF OF PARTY:

LCDR. STEVEN L. HOLLIS, JR.

* * * * *

A. PROJECT

Work on Project OPR-410 was executed in accordance with instructions 22/MEK, ECFP, dated 18 September 1959 and 22/MMY, ECFP, dated 11 April 1961. ✓

B. AREA SURVEYED

This is a survey of the eastern end of Mississippi Sound, including Heron Bay and the small bayous to the north. The area covered by this survey extends from latitude 30°15'00" to latitude 30°22'00" and from longitude 88°07'00" to longitude 88°11'30". ✓

The survey was conducted from 26 July 1961 thru 17 October 1961.

This survey makes junction with contemporary surveys ECFP 10-1-60 H-8524(1960) on the southeast, ECFP 10-4-60 on the northeast, ~~ECFP 10-12-61 on the northwest~~ and ECFP 10-11-61 on the west.
H-8643 (1961) does not junction this survey

C. SOUNDING VESSELS

Vessels used for sounding were Launch CS-183, Skiff 758, and a 14-foot aluminum skiff designated as Skiff No. 2. The following colors were used: ✓

Launch CS-183
Skiff 758
Skiff #2

Violet
Red
Green

D. SOUNDING EQUIPMENT

The EDO 255C, No. 15, Depth Recorder was used on Launch CS-183 for all depths over six feet. ✓

The 808j, No. 154 Depth Recorder was used on Skiff 758 for all days except "e" day. A 12-foot sounding pole was used for "e" day.

On Skiff #2, Depth Recorder 808j #154 was used.

A 12-foot sounding pole was used when soundings were too shallow for the Depth Recorders. An armed lead was used for bottom samples and least depths 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 list of signals used and their sources are shown in Appendix A of this report.

G. SHORELINE

Shoreline detail was taken from blue line tracings of Advance Manuscripts T-10756, T-10757, T-10761, T-10762, and T-10771. Since photography, numerous small changes in the shoreline have occurred along the south shore from the eastern limit of the sheet to longitude 88°09'00" W. The changes were verified by the hydrographer.

field edit
Date of final revision for T-10756 and T-10757, December-1962: RS-sheets compiled from photographs 1962. The shoreline changes were evident on this updated source.

H. CROSSLINES

Crosslines were run to the extent of 7% of the main scheme of hydrography. Soundings at crossings were in satisfactory agreement.

I. JUNCTIONS

Adequate junction was made with contemporary survey H-8643 (ECFP 10-11-61) to the west. Contemporary surveys H-8560 (ECFP 10-4-60) and H-8524 (ECFP 10-1-60) to the east ~~were not available for comparison.~~ No other contemporary survey makes junction with this survey in areas of hydrography.

J. COMPARISON WITH PRIOR SURVEYS

This survey is in good agreement with prior survey H-4020, 1917-1918, with the exception of the Intercoastal Waterway. The controlling depth is now 12 feet.

There is one Pre-survey Review Item within the limits of hydrography. Item #5, submerged pile, was searched for with wire drag for one hour with negative results. It is recommended this item be deleted from the chart.

K. COMPARISON WITH CHART

This survey is in good agreement with C&GS Charts ~~873 and 874~~ revised 16 May 1960. 872 SC (4th Ed, corr thru NM 38, Sept 21, 1968) and 1266 (22nd Ed, Oct 14, 1968)

L. ADEQUACY OF THE SURVEY

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

M. AIDS TO NAVIGATION

There are thirteen fixed aids to navigation on this survey. For listing of aids, see Form 567 submitted by Photo Party 720 and the Form 567 attached to this report.

There are twenty-six floating aids along the Intracoastal Canal and they adequately mark the channel.

M. AIDS TO NAVIGATION (Continued)

There are six privately maintained buoys and two privately maintained channel markers on this survey. The aids located by Skiff 758, positions 28 "c", 29 "c", 126 "d", 127 "d", 128 "d", 77 "l", 84 "l" and a location relative to position 86 "l" were established in April 1961 by the Alabama Department of Conservation - Division of Seafood, Bayou LaBatre, Alabama. The department will continue to maintain the aids year around until they are no longer necessary or until they are replaced by federal aids.

The aids located at positions 77 "l", 84 "l", and relative to 86 "l" do not adequately mark a defined channel. *Adequate for small craft passage.*

N. STATISTICS

<u>Vessel</u>	<u>No. of Positions</u>	<u>Nautical Miles of Soundings</u>
Launch CS-183	502	77.6
Skiff 758	1678	272.2
Skiff #2	<u>31</u>	<u>3.2</u>
TOTALS	2211	353.0

Total area surveyed - 15.0 square miles.

One tide station was used for control of the entire survey. This was a portable automatic tide gage located at Fort Gaines on Dauphin Island. Data for reduction of the soundings was taken directly from the station records without time or range correction.

There were 46 bottom samples taken on this survey. The samples were spaced and taken in accordance with the specifications of the Hydrographic Manual.

Within the limits of this survey, one 100-hour current station was observed from the Dauphin Island Bridge using the Price Current Meter and a current pole and log line.

Submitted by

Wesley V. Hull
Wesley V. Hull
LT., C&GS

INDEX OF APPENDICIES

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

APPENDIX A
LIST OF SIGNALS

Hydrographic Survey H-8642

TRIANGULATION STATIONS

PASS AUX HERONS RANGE D REAR LIGHT	1958	- - - - -	RON
PASS AUX HERONS RANGE A REAR LIGHT	1958	- - - - -	AUX
NORTH TOWER	1958	- - - - -	TOW
SOUTH TOWER	1958	- - - - -	WER
DAUPHIN ISLAND WATER TANK	1958	- - - - -	TAN

PHOTO-HYDRO SIGNALS

<u>From T-10756</u>	<u>From T-10757</u>	<u>From T-10761</u>	<u>From T-10762</u>
AGO*	CRY*	ANT	AVE
NIG	DUN	COO	BEE
	EAT	CUT	DAY
	EMO*	DIM	FOG
	FLY	DIP	KIM
	GUS	EAR	NEO
	LEO	FED	
<u>From T-10771</u>	NOR	INK	
	OUT	JOE	
SET	SAD	KEN	
PUP	SOW	LIP	
	WAS	MOO	
		PET	
		PRO	
		SIS	

* Located by Theodolite cuts plotted on Advance Manuscripts.

HYDRO SIGNALS

- (1) Located by sextant cuts from photo points:

DOC KID TIT

- (2) Located by three-point fix and check angle(s)
by hydrographer:

ABE

APPENDIX B

ABSTRACT OF CORRECTIONS TO ECHO SOUNDINGS

Launch CS-183

<u>Date & Day Ltr.</u>	<u>Recorder No.</u>	<u>Fath. Depth (ft.)</u>	<u>Correction (ft.)</u>
8/21/61 a	EDO 255C #15	All depths	0.0
8/22/61 b	"	"	0.0
8/23/61 c	"	"	0.0
8/24/61 d	"	"	0.0
8/25/61 e	"	"	0.0
8/28/61 f	"	"	0.0
8/29/61 g	"	"	0.0
8/30/61 h	"	"	0.0
9/1/61 j	"	"	0.0
9/18/61 k	"	"	0.0
9/25/61 l	"	"	0.0

Skiff 758

7/26/61 a	808j # 154	"	0.0
7/27/61 b	"	"	0.0
8/1/61 c	"	2.8 to 5.0	+0.4
		5.1 to 6.2	+0.2
		6.3 to Deeper	0.0
8/2/61 d	"	All depths	0.0
8/4/61 e	"	"	0.0
8/8/61 f	"	"	0.0
8/9/61 g	"	"	0.0
8/10/61 h	"	"	0.0
8/11/61 j	"	"	0.0
8/14/61 k	"	"	0.0
8/15/61 l	"	"	0.0
8/16/61 m	"	"	0.0
8/21/61 n	"	"	0.0

Skiff #2

10/17/61 a	"	"	0.0
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APPENDIX C

TIDAL NOTE

Gage location: Fort Gaines, Dauphin Island, Alabama

Latitude 30°15.02'

Longitude 88°04.51'

Gage Type: Portable Automatic

Staff: Mean Low Water corresponds to 0.7 feet on the staff.

Correction: No time or height correction was applied to the results obtained from the gage in reducing soundings.

The 90th meridian time was used at this tide station.

APPENDIX D

APPROVAL SHEET TO ACCOMPANY

Hydrographic Sheet H-8642 (ECFP 10-10-61)

Project OPR-410

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

The descriptive report was written by Lt. Wesley V. Hull.

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

Approved and forwarded,

P. G. Stark

For Steven L. Hollis, Jr.
LCDR, C&GS
Officer-in-Charge
East Coast Field Party

GEOGRAPHIC NAMES

Survey No. H-8642

Name on Survey	Source										No.
	A	B	C	D	E	F	G	H	K		
	On Chart No.	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			
Barron Point	✓								✓	1	
Barry Point	✓									2	
Bayou Aloe	✓									3	
Cedar Point	✓									4	
Dauphin Island	✓								✓	5	
Grants Pass	✓									6	
Heron Bay	✓									7	
Heron Bayou	✓									8	
Mississippi Sound	✓									9	
Pass aux Herons	✓									10	
Point Isabel	✓									11	
										12	
Graveline Bay	✓									13	
(added from chart)										14	
										15	
										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

George M. Ball
Geographic Names
8 May 1963

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8642....

Records accompanying survey: Smooth sheets ¹.....;
 boat sheets ¹.....; sounding vols. ¹².....; wire drag vols.;
 Descriptive Reports ¹...; graphic recorder envelopes ⁸...;
 special reports, etc.

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

Number of positions on sheet	2211..	✓
Number of positions checked	150..	8
Number of positions revised	None..	0
Number of soundings revised (refers to depth only)	342..	18
Number of soundings erroneously spaced	42..	0
Number of signals erroneously plotted or transferred	None..	0
Topographic details	Time 40 hrs	3
Junctions	Time 8 hrs	0
Verification of soundings from graphic record	Time 12 hrs	1
Special adjustments	Time 4 hrs	0

Verification by J.S. McMillan..... Total time 400 hrs Date 11-25-64

Reviewed by George A. Kojewczak..... Time 88 hrs Date Dec-16-68

OFFICE OF HYDROGRAPHY AND OCEANOGRAPHY

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8642

FIELD NO. ECFP 10-10-61

Alabama, Mississippi Sound, Vicinity of Pass Aux Herons

SURVEYED: July 26, 1961 to October 17, 1961

SCALE: 1:10,000

PROJECT NO: OPR-410

SOUNDINGS: EDO Depth Recorder
808 Fathometer, 12
Foot Sounding Pole

CONTROL: Sextant angles
on shore signals

Chief of Party.....	S. L. Hollis, Jr.
Surveyed by.....	R. A. Lewis
.....	D. W. George
Protracted by.....	G. Bragg
.....	G. L. Fernandes
Soundings Plotted by.....	G. L. Fernandes
Verified and Inked by.....	J. S. McMillan
Reviewed by.....	G. A. Kozemczak
.....	Date: 12/16/68
Inspected by.....	R. H. Carstens

1. Description of the Area

This survey is in the eastern end of the Mississippi Sound, including Heron Bay and the small bayous to the north. The eastern limits of this survey is the Dauphin Island Causeway to Cedar Point, with a highway bridge over Pass Aux Herons Channel. The southern portion of this survey is bordered by Dauphin Island.

Diagonally across the middle of this survey in a N.E. and S.W. direction is Pass Aux Herons Channel with a project depth of 11.5 feet, connecting the eastern end of the Mississippi Sound with the southwestern corner of Mobile Bay. This channel is part of the Intracoastal Waterway. In the southeast corner is a channel with a controlling depth of 6 feet from the Mississippi Sound through Bayou Aloe to Dauphin Island Village.

Except in Pass Aux Herons Channel, depths are less than about nine feet. The bottom is largely flat or gently sloping except for shoals in the eastern portion of the survey and along Dauphin Island.

2. Control and Shoreline

The source of control is given in the Descriptive Report. The shoreline originates with T-10756, T-10757 of 1957-62 and revision sheets RS-888, RS-889, and RS-890 compiled from photographs of 1962. The revision sheets are for surveys T-10761, T-10762, and T-10771 of 1957-60.

A correction in shoreline was added by the hydrographic party in lat. $30^{\circ}15.5'$, long. $80^{\circ}07.3'$. This change is shown on the present survey by dashed red lines.

3. Hydrography

- A. Depths at crossings are in good agreement.
- B. The usual depth curves were adequately delineated.
- C. The development of the bottom configuration and the investigation of least depths is considered adequate.

4. Condition of Survey

The field plotting, sounding records, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual except that the shoreline had been applied from photogrammetric surveys of 1958 rather than from contemporary revision sheets. The necessary revisions were made by the reviewer.

5. Junctions

Adequate junctions were effected with H-8524 (1960) on the southeast, H-8560 (1960-61) on the northeast, and H-8643 (1961-62) on the west. This latter junction was considered in the review report of H-8643.

6. Comparison With Prior Surveys

- A. H-191 (1847) 1:20,000

This prior survey covers the entire area of the present survey. A comparison between the prior and present survey reveals a general shoaling from 1 to 2 feet, which is attributed to natural causes.

B. H-2125 (1892) 1:20,000

This prior survey covers the present survey along the eastern portion between Cedar Point and Dauphin Island. A comparison between the prior and present survey reveals a general shoaling of approximately 1 foot. Since the time of this prior survey, Pass Aux Herons Channel and the channels in the southeast portion of the present survey have been dredged.

C. H-2220 (1894) 1:40,000

This is a small-scale reconnaissance survey showing the location of the natural oyster beds and covers the area of the present survey. Remnants of the early oyster shoals still exist.

D. H-4020 (1917-1918) 1:40,000

This prior survey covers the entire area of the present survey. A comparison between the prior and present survey reveals a shoaling of 1 foot over much of the area. Deposition of spoil along both sides of Pass Aux Herons Channel has shoaled these areas as much as 2 feet. This channel appears to have a controlling depth of 9 feet on the prior survey compared to a controlling depth of 12 feet on the present survey. The channels in the southeast portion of the present survey were dredged subsequent to the prior survey.

The present survey shows Dauphin Island as one continuous island approximately 700 feet wide compared to the prior survey which shows a gap in the shoreline of Dauphin Island for approximately 4 miles between long. 88°08.5' and long. 88°14.0'.

The larger scale and more completely developed present survey is adequate to supersede all the above mentioned prior surveys within the common area.

7. Comparison With Chart 872-SC (4th Ed., Corr. thru N.M. 38, September 21, 1968)

A. Hydrography

The charted hydrography originates with prior surveys previously discussed, supplemented by surveys by the Corps of Engineers and by the partial application of the present survey before and after verification.

1. The pile charted in lat. $30^{\circ}18.47'$, long. $88^{\circ}08.32'$ from T-7018b (1946) was not determined on the present survey and is not visible on photos. Inasmuch as it was not specifically investigated it has been carried forward as a submerged pile.

2. The submerged obstruction charted at lat. $30^{\circ}17.2'$, long. $88^{\circ}08.05'$ originates with N.M. 46/1967. A fishing vessel reported striking a submerged object about 25 feet west of Pass Aux Herons Buoy 25. This information is subsequent to the present survey and the obstruction should be retained on the chart.

3. The submerged piling charted in lat. $30^{\circ}16.1'$, long. $88^{\circ}10.90'$ originate with N.M. 2/61, reporting that the light was rebuilt in 1960 at a new location. The hydrographer searched for the old structure for one hour with a drag, with negative results. The charted submerged piling is considered nonexistent.

4. The island charted in lat. $30^{\circ}17.15'$, long. $88^{\circ}07.9'$ from ^{CS-384}(Bp-42437) uncovers only $\frac{1}{2}$ ft. at MLW as shown on the present survey and should therefore be charted as a low water feature.

B. Controlling Depth

The charted controlling depth of Bayou Aloe Channel is 7 feet. The charted controlling depth of Pass Aux Channel is 11.5 feet, October 1968. This information originates with Corps of Engineers surveys, Weekly Notice to Mariners 49/68, and Chart Letter 1789(1968). These reports are subsequent to the present survey and supersede the present survey for charting the controlling depths.

C. Aids to Navigation

The aids to navigation located on the present survey are in agreement with the chart with the following exceptions:

1. Bayou Aloe Entrance Light No. 2 located on the present survey at lat. $30^{\circ}16'15''$, long. $88^{\circ}08'36''$ was moved subsequent to the date of the present survey and reported in N.M. 27/68. The new position of Light No. 2 is in lat. $30^{\circ}16'15''$, long. $88^{\circ}08'32''$.
2. Heron Bay Light No. 1 located on the present survey at lat. $30^{\circ}19'56''$, long. $88^{\circ}08'37''$ has been discontinued. The structure remains as Heron Bay Channel Daybeacon No. 1. The change was made subsequent to the date of the survey and was reported in N.M. 24/64.
3. Heron Bay Light No. 3 located on the present survey at lat. $30^{\circ}20'42''$, long. $88^{\circ}08'00''$ has been discontinued. The structure remains as Heron Bay Channel Daybeacon No. 3. This change was made subsequent to the date of the survey and was reported in N.M. 24/64.
4. Heron Bay Channel Daybeacon No. 3 was moved from its prior position on the basis of N.M. May 20/61 which gave an amended position of lat. $30^{\circ}20'39''$, long. $88^{\circ}08'00''$. The present survey was started 2 months subsequent to the date of the Notice to Mariners and used the Daybeacon as a signal in lat. $30^{\circ}20'42''$, long. $88^{\circ}08'00''$. The survey position agrees with the photogrammetric position on T-10757 (1957-62). The hydrographer confirmed the original photogrammetric position by an estimated distance from a sounding line. It is therefore recommended that the position of the charted Daybeacon No. 3 be revised to agree with the survey position.

Except as previously noted, the charted positions of aids to navigation adequately serve the purpose intended.

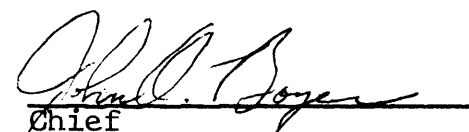
8. Compliance With Instructions

The survey adequately complies with the Project Instructions.


9. Additional Field Work

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

Examined and Approved:



Chief
Marine Chart Division



Associate Director
Hydrography and Oceanography

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 13, 1963

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
12 volumes of sounding records for

HYDROGRAPHIC SHEET 8642

Locality Mississippi Sound, Alabama

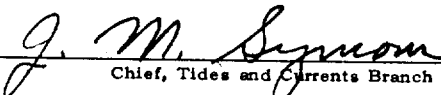
Chief of Party: S. L. Hollis 1961

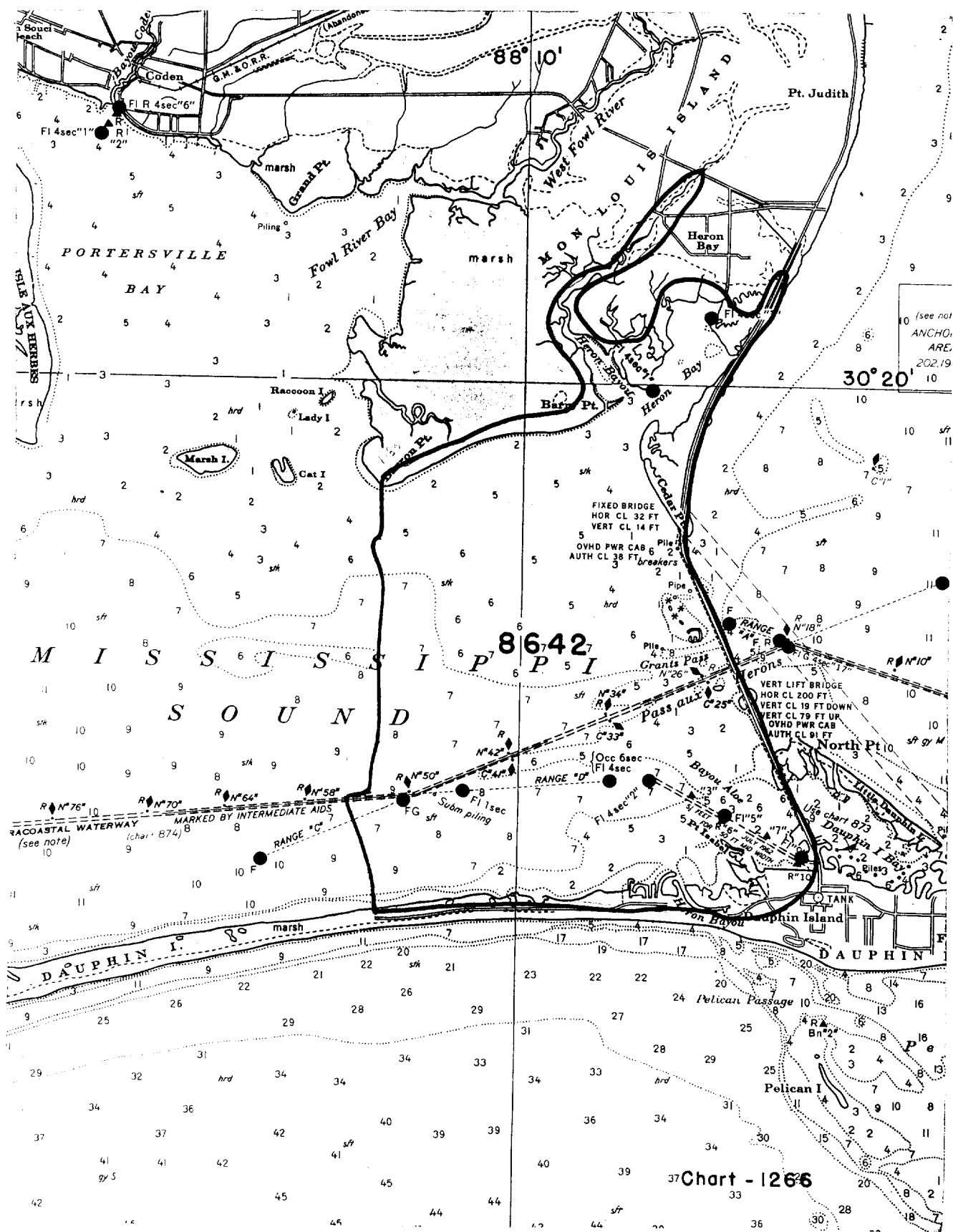
Plane of reference is mean low water, reading
0.7 ft. on tide staff at Fort Gaines, Alabama
18.3 ft. below B. M. 1 (1960)

Height of mean high water above plane of reference is 1.7 feet.

Condition of records satisfactory except as noted below:

NOTE: Tide reducers in volumn 2 positions 1d - 136d have been
revised in red and verified.


Chief, Tides and Currents Branch



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8642

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5/13/63	873	R.B. House	Before After Verification and Review Corr. 3' & 6' curves; Corr. Soundings & topo indicated in red
5/14/63	874	R.B. House	Before After Verification and Review Corr. 3' & 6' curves; Corr. Soundings & topo indicated in red
6/4/63	1266	J.S. McMillan	Before After Verification and Review Only most critical corrections applied thru Cht 873 & 874
11/20/63	1266	John P. Wein	Before After Verification and Review Part. Re-applied thru Chart 873 and 874 drawings "5"
7-7-69	872-SC	A.G. Hoffman	Before After Verification and Review Part applied thru Hydro Review, pages 4 & 5.
10/8/69	1266	H. P. Quixley	Before After Verification and Review Consider adequately applied before "Camille" - 8/18/69 Draw No. 35
10/8/69	872-SC	H. P. Quixley	Before After Verification and Review Consider adequately applied before "Camille" - 8/18/69 Draw No. 5
10/8/69	874-SC	H. P. Quixley	Before After Verification and Review Consider adequately applied before "Camille" - 8/18/69 Draw No. 5
3/31/70	872-SC	A.E. Lundberg	Before After Verification and Review to bring into general agreement to apply adequately before "Camille" per H. Burquyne 3/24/70 Revised Chart in areas
4/2/70	874-SC	A.E. Lundberg	Before After Verification and Review thru overlap of Cht 872-SC. Consider adequately applied per H. Burquyne 3/24/70 (before "Camille")
5/8/70	1266	A.E. Lundberg	Consider adequately applied (before "Camille") thru Cht 872-SC (side B)

Memo 3/24/69

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.