

9028

Diag. Cht. No. 1268

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. . . . . 742-20-1-69  
Office No. . . . . H-9028

LOCALITY

State . . . . . MISSISSIPPI  
General Locality . . . . . MISSISSIPPI SOUND  
Locality . . . . . CAT ISLAND

1970-71

CHIEF OF PARTY  
George C. Chappell

LIBRARY & ARCHIVES

DATE . . . . . 6/16/77

9028

Area 4  
Chts  
0785C  
1268

HYDROGRAPHIC TITLE SHEET

H-9028

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. 742-20-1-69

State Mississippi

General locality Mississippi Sound

Locality Cat Island June 22, 1970 (173)

Scale 1:20,000 Date of survey ~~30 October 1970~~ to 15 October 1971 (288)

Instructions dated 25 October 1968 Project No. OPR-468

Instructions dated 3 September 1969 Project No. OPR-468

Vessel 17 November 1969  
Hydrographic Field Party 742; Launches 1247, 1259, and 1260.

Chief of party Lt. George C. Chappell

Surveyed by Robert A. Lewis

Soundings taken by echo sounder, hand lead, pole all

Graphic record scaled by party personnel

Graphic record checked by party personnel H.R.S

Protracted by Calcomp 618 AMC Automated plot by AMC - Calcomp-618

Soundings penciled by \_\_\_\_\_

Soundings in ~~XXXXXX~~ feet at MLW ~~MLW~~

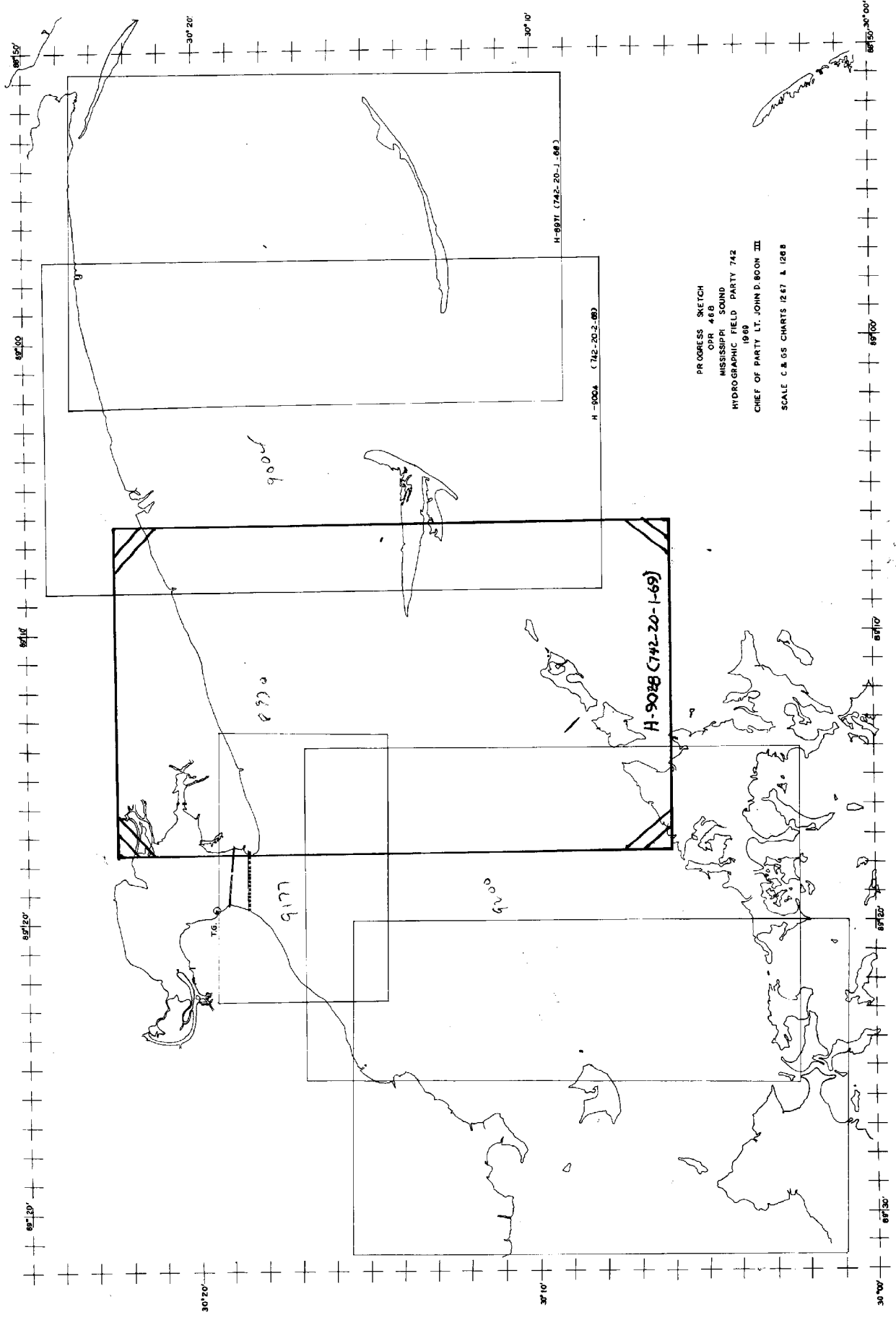
Vertical datum Mean High Water

REMARKS: Notes inserted by H.R. Smith

*Scanned by JEF JUN 24 1997*

*Descriptive Report for 1969 field work is filed with the field records; none of this work was accepted. See Para B of this report.*

*Applied to stds 12/1/77*



PROGRESS SKETCH  
 OPR. 468  
 MISSISSIPPI SOUND  
 HYDROGRAPHIC FIELD PARTY 742  
 1969  
 CHIEF OF PARTY LT. JOHN D. BOON III  
 SCALE C. & G. CHARTS 1247 & 1268

DESCRIPTIVE REPORT  
TO ACCOMPANY

HYDROGRAPHIC SURVEY H-9028

(FIELD NO. 742-20-1-69)

SCALE: 1:20,000

Hydrographic Field Party 742

CHIEF OF PARTY:

George C. Chappell

SURVEYED BY:

Robert A. Lewis

\* \* \* \* \*

A. PROJECT

Work on Project OPR-468 was done in accordance with Instructions dated 25 October 1968, Supplemental Instructions dated 3 September 1969 and Supplemental Instructions dated 17 November 1969.

B. AREA SURVEYED

This survey covers the area at the west end of Cat Island, including Cat Island Channel and Pass Marianne. This area is bounded by lat.  $30^{\circ} -06'$  to lat.  $30^{\circ} -17.5'$ , long.  $89^{\circ} -08'$  to  $89^{\circ} -17.5'$ .  
Aug 17 & 18, 1969

Field work began originally in April 1969, however due to changes caused by Hurricane "Camille" it was deemed necessary to resurvey the entire area covered by this sheet. The resurvey began ~~30 October~~ 1970 and ended 15 October 1971.

Junction was made with the following surveys:

(June 22, 1970 (Page 173))

North H-8970 (1968) scale 1:10,000

East H-9004 (1968) scale 1:20,000

West H-9200 (1971) scale 1:20,000

Northwest H-9177 (1970) scale 1:10,000

C. SOUNDING VESSELS

Raytheon fathometers, type De-723 were used on all launches to obtain echo soundings. A sounding pole was used in depths too shallow for accurate fathometer operation.

Corrections applied to echo soundings were determined by averaging daily bar checks.

All fathograms were scanned and checked scanned by party personnel.

Serial numbers of fathometers used and launches in which installed:

Launch CS-1247 Nos. 1995, 1885, 806, 535  
Launch CS-1260 Nos. 535, 1885  
Launch CS-1259 No. 1889

### E. SMOOTH SHEET

The smooth sheet will be plotted by the Atlantic Marine Center using punched paper tapes prepared by party personnel.

### F. CONTROL

Horizontal control was provided by a DRS Raydist system operating on a frequency of 3306.4 kHz.

Shore station antenna positions and calibration points are given in the Control Report of Photo Party 61.

The following intersection stations were used as calibration points:

	Red	Green
Gulfport Channel Lt. 60	534.53	272.80
Gulfport Channel Lt. 64	502.27	260.97
Gulfport Channel Lt. 68	473.41	260.75
Cat Island West End Channel light (North pile)	259.24	642.19
Merrill Shell Bank Light	175.46	706.78

Calibration was accomplished by positioning the launch (antenna) as close to the light as conditions permitted and setting the raydist navigator to the proper values.

Sextant fixes were taken, when visibility permitted, to check attenuation in areas south of Cat Island where the raydist signal passed over the island. A plot of the sextant fixes versus raydist in this area indicated a correction of less than .2 lane. Therefore no corrections were applied to the raydist readings.

### G. SHORELINE

Shoreline detail was taken from Manuscripts T-13035, T-11947<sup>6</sup> and Tp-00046.

There are no changes in shoreline to be noted.

### H. CROSSLINES

Crosslines were run at 10% of the regular system of sounding lines. There were no discrepancies at crossings.

### I. JUNCTIONS

Junctions are in good agreement with all surveys listed in section "B" of this report.

### J. COMPARISON WITH PRIOR SURVEYS

A comparison was made with Prior Survey No. 4000 - dated 1917, scale 1:40,000 and No. 3960 - dated 1918, scale 1:40,000. The area due north of Cat Island shows only little change has occurred, however the areas to the west and south of Cat Island show considerable change has taken place, in particular, the shifting of the numerous

shell banks. Following is a discussion of specifically searched for items as requested by Chart Division:

PSI #25 "The visible wreck PA" charted at lat. 30° -14.4', long. 89° -13.5' was searched for using a modified wire drag. An area of 1/2 mile square was dragged with the only indication of the wreck being two group of snags located during drag operations - posits. 2737 & 2738, <sup>Origin</sup> vol.22. These are believed to be remains of the wreck. <sup>H.O.N.M. No 6 of 63</sup> Each group of snags encompassed an area of approximately 3 ft. in radius, protruding 2 ft. above the bottom, and did have the appearance of wreckage from a vessel. (vol.7, 263 day, lch. CS-1247, vol.22, pg.62, posits. 2737 & 2738) Recommend charting symbol be changed from stranded wreck to subm. wreckage or snags.

PSI #26 - The 5 ft. sounding charted at lat. 30° -13.1', long. 89° -14.0', and the "subm. obstr" charted nearby at lat. 30° -13.1', long. 89° -14.1' were searched for using a modified wire drag. No indication of the obstruction was obtained within an area of 400 meter radius. The least depth in the vicinity is a 9 ft. sounding near the end of the 12 ft. shoal protruding northwesterly. Recommend 5 ft. sdg and obstruction symbol be deleted and soundings from this survey be charted. (vol.22, lch.1260, 257 & 277 day & vol.7, Lch. 1247, 264 day) <sup>Origin: 5' sdg. CL. 110 of 1945</sup> <sup>subm obstr. H.O.N.M. 14 of 1963</sup> <sup>Concur RWD</sup>

PSI #27 - The Visible Wreck PA - charted in lat. 30° -13.38', long. 89° -14.77' was searched for using a modified wire drag, covering an area of 400 meter radius from the plotted position. No indication of the wreck or remains was found. Prior to the search, a query was made of local fishermen and boatmen as to the disposition of the wreck. There were differing opinions as to when and how it was raised, however all agreed it had been moved. The search was made to assure nothing was left in the area. Recommend feature be deleted from chart (vol. 22, lch.1260, 257 day) vol.7, pos. 8388. <sup>Origin H.O.N.M. 12 of 63</sup> <sup>Concur RWD</sup>

PSI #28 - The 4 ft. PA charted in lat. 30° -14.41', long. 89° -15.22' was thoroughly investigated by running close spaced sounding lines over the area (vol.5, lch.1247, 338 day 1970) and wire dragging the area (vol.7, lch. 1247, 263 day 1971). There was no trace of the 4 ft. sounding at this position, however a 4 ft. least depth was obtained on the southwest tip of Merrill Shell Bank, 250m NE at lat. 30° -14.48', long. 89° -15.11'. -Recommend the isolated 4 ft. PA sounding be replaced by the above mentioned 4 ft. sounding. <sup>Origin CL. 1035 of 1966</sup> <sup>Concur RWD</sup>

obstruction (metal structure)

\*\* 50 meter line spacing rare; although not logged or smooth plotted. Pos. 8257-8287.

✓ PSI #29 - The subm. obstr. charted in lat.  $30^{\circ}-14.92'$ , long.  $89^{\circ}-16.60'$  was searched for by running a system of close spaced lines over an area with a 400 meter radius from the charted position. No indication of the obstruction was shown on the fathogram. Recommend this feature be deleted from chart. ✓ Origin H.O.N.M. No.14 of 1948

Concur RWD

✓ \* PSI - unnumbered - The 7 ft. sounding, charted at lat.  $30^{\circ}-14.3'$ , long.  $89^{\circ}-17.17'$  was searched for by running a system of close spaced lines (45m) over an area with a 350m radius from the charted position. No indication of shoaling was noted with general depths of 10 ft. being obtained. Recommend the 7 ft. sounding be replaced by depths obtained on this survey.

Concur RWD

2 \* ✓ PSI - unnumbered - the 6 ft. shoal, charted at lat.  $30^{\circ}-14.05'$ , long.  $89^{\circ}-14.12'$  was searched for by running close spaced lines. Little indication of shoaling was noted with a 89 ft. sounding being the shallowest obtained. Vol.22, 251 day, posits. 2657-2666. Chart present depths. Concur ✓  
Delete 6' sdg.

3 \* ✓ PSI - unnumbered - The 6 ft. shoal, charted at lat.  $30^{\circ}-14.2'$ , long.  $89^{\circ}-11.55'$  was developed with close spaced lines and drift sounding. A 4 ft. least depth was obtained. Vol.22, pg.62, posit. 2740. Chart present depths ✓

4 \* ✓ PSI - unnumbered - The 15 ft. sounding charted at lat.  $30^{\circ}-13.75'$ ,  $89^{\circ}-13.15'$ , was developed with close spaced lines and drift sounding. A 13 ft. least was obtained with a lead line. Vol.22, pg.50, posit. 2711. Chart present depths ✓

5 \* ✓ PSI - unnumbered - The 13 ft. sounding, charted at lat.  $30^{\circ}-11.05'$ , long.  $89^{\circ}-14.15'$ , added from H-3960 (1916-18) was developed and a 10 ft. leadline sounding was obtained. Vol.22, pg.41, posit. 2704. Chart present depths ✓

6 \* ✓ PSI - unnumbered - Merrill Coquille, charted at lat.  $30^{\circ}-12.9'$ , long.  $89^{\circ}-16.1'$ , was developed with the following changes to be noted. The portion of the shoal that is awash at MLW has shifted southeastward 400 meters with a least depth of 0.5 ft.; another shell bank, covered 1 ft. MLW, appearing at lat.  $30^{\circ}-12.45'$ , long.  $89^{\circ}-15.9'$ . The general configuration and area of the shoal has only changed to the extent that the southern extremity of the shoal is now at lat.  $30^{\circ}-12.3'$ , long.  $89^{\circ}-16.0'$  and not as shown on the chart extending south of Marianne Channel. The charted 2 ft. sdg. in lat  $30^{\circ}12.9'$ , long  $89^{\circ}16.1'$  should be deleted from the chart. ✓ RWD

7 \* ✓ PSI - unnumbered - The 11 ft. sounding charted at lat.  $30^{\circ}-10.1'$ , long.  $89^{\circ}-15.15'$ , still exists. The shoalest sounding obtained on the 12 ft. shoal by this survey was also 11 ft. ✓  
Chart 12 feet delete 11 feet. RWD.

12  
\* Origin H-3960 (1916-18) 4 -

8 \* PSI - unnumbered - 3 ft. sounding - lat. 30°-08.8', long. 89°-14.6' - This area was investigated by running close spaced lines - depths of 5 ft. or greater were obtained with the shoalest depth in the vicinity being ~~4 ft.~~ <sup>at the position of</sup> 600 meters SE of the charted 3 ft. sounding.

5 \* PSI - unnumbered - The charted 5 ft. sounding at lat. 30°-07.9', long. 89°-16.3' is still in existence and should be retained on the chart. <sup>Chart present depths ✓</sup> <sup>Shoal</sup> <sup>Chart present depths ✓</sup>

In addition to the above "PSI" items, the following changes should also be noted:

10 \* The shell bank, bare at MLW, shown on the <sup>H-3960</sup> ~~old survey~~ (also on chart 1268) at lat. 30°-13.8', long. 89°-10.8', no longer exists. Depths of 2 to 3 ft. now cover this area. Recommend shell bank symbol be deleted from chart. <sup>Concur ✓</sup>

11 The area of Pass Marianne at lat. 30°-13.8', long. 89°-13.2' shows depths of 37 ft. on the <sup>H-3960</sup> ~~old survey~~. Present survey indicates a shoaling trend with depths of ~~27~~ 27 ft. in the area. Adjacent soundings are also 5 to 10 ft. shoaler on the new survey.

12 \* The 2 shell banks at lat. 30°-10.7', long. 89°-12.7' <sup>H-3960</sup> ~~old survey~~ (shown on Chart 1268 as Cabbage Reefs) no longer bare at any stage of tide. This area remains shallow with hard-shell bottom, but is now covered 2 to 3 ft. MLW. <sup>Recommend deletion from chart</sup> <sup>RWD</sup>

K. COMPARISON WITH CHART

A comparison was made with Chart 1268 - 13th Ed. and 876-SC 7th Ed. The area north of Cat Island shows only minor differences between the chart and this survey while the areas west and south of the island show many changes have taken place. Following are specific items to be noted in addition to those discussed under section "J. COMPARISON WITH PRIOR SURVEY".

Charted Item	Lat. Long.	Remarks
11 ✓ marsh island	30°-10.2' 89°-09.9'	The island charted at this position no longer exists, depths of 6 to 8 ft. now cover this area. Depths between this position and the NE point of Isle au Pitre are now 4 to 5 ft. deeper than those shown on the chart. <sup>Recommend deletion from chart.</sup>
12 ✓ 12 ft. sdg.	30°-10.1' 89°-11.5'	Present survey shows depths agree. <del>4 to 5 ft. deeper at this position.</del> <sup>RWD</sup>

\* H-3960 (1916-18)



Charted Item	lat. long.	Remarks
Creole Gap ✓	30°-08.2' 89°-12.8'	Chart shows depths less than 6 ft. - present survey indicates depths of 30 to 33 ft. at this location. ✓
shell bank ✓	30°-06.8' 89°-13.95'	This charted shell bank was searched for with fathometer and sounding pole while running "cartwheel" and drift-sounding. Shell bank no longer exists - depths of 4 to 6 ft. now cover this area. Recommend shell bank symbol be deleted from chart and soundings from this survey be charted. Origin - T-5326 (1932) Concur RWD
trees ✓	30°-14.0' 89°-09.2'	Numerous trees were washed off the west end of Cat Island during Hurricane Camile and grounded north-west of West Point. Many of these trees are large oak trees and will probably remain there for a number of years. D.P.s were obtained on all the outlying trees and it is recommended these trees be charted. Pos'n's 2220 - 2225 Shown as snags on the present survey.
piles PA ✓	30°-14.48' 89°-14.91'	The piles shown with position approximate at this location are actually the remains of the original Merrill Shell Bank Light. The area immediately surrounding these ruins was dragged with a wire drag to determine if any additional submerged piles remained - none were found -. The remains are 10" steel piles, bare 15 ft. MHW, encompassing an area of 30 ft. square, lying 5 meters NE of the new light. - Recommend these piles be charted at their known position as "Ruins". Concur RWD

#### L. ADEQUACY OF SURVEY

This survey is considered to be fully adequate for charting purposes.

#### M. AIDS TO NAVIGATION

Within the limits of this survey there are 36 floating and 6 fixed aids to navigation maintained by the U.S. Coast Guard.

Although the aids adequately serve the purpose for which they were established by clearly marking the channels, shell banks and shoals, a comparison with Chart 876-SC 7th Ed. indicates a great number of the floating aids are out of their charted position 100 meters or more. It is recommended the buoy positions obtained on this survey be used for charting.

## N. STATISTICS

Vessel	Positions	Miles Sdg. line
Launch CS-1247	3314	1016.9
Launch CS-1260	2793	837.5
Launch CS-1259	<u>101</u>	<u>14.2</u>
	6208	1868.6

Total square nautical miles surveyed 85.5  
Number of bottom samples 119

## O. MISCELLANEOUS

Logging on this survey began using the old procedure of logging "0000" for misses and D.P.s. There are no actual zeros or negative soundings logged.

The corrector tape utilizes the new format for adding or deleting soundings as well as correcting errors made while logging.

At the beginning of this survey, days 173 thru 247, data was not recorded in the standard sounding volume. A new "daily log sheet" was substituted on an experimental basis and after this period of time it was concluded these log sheets did not offer enough space for remarks or additional soundings along with a number of other undesirable features. This experiment was abandoned in favor of the "old" sounding volume.

Fathograms were scanned by party personnel and checked scanned by launch chiefs. Scanning is considered to be complete and adequate.

Respectfully submitted,

*Robert A. Lewis*  
Robert A. Lewis  
Cartographic Tech.

APPROVAL SHEET  
TO ACCOMPANY  
Hydrographic Survey H-9028

The field work and part of the field processing was accomplished prior to my assuming command of this party.

The hydrographic records and descriptive report as completed by Robert A. Lewis are complete and adequate to the best of my knowledge.

Approved and forwarded,



Ned C. Austin  
LCDR., NOAA  
OIC, HFP-742

APPENDIX "A"

RAYDIST STATIONS AND CALIBRATION POINTS

Henderson 2 1966(R1 red)	lat. 30°-18' 14.540"
	long. 89°-17' 18.719"
Broadwater Temp 1969 (R2 green)	lat. 30°-23' 16.125"
	long. 88°-57' 43.245"

Calibration Points:

Gulfport Channel Lt. #60	red 534.53
	green 272.80
Gulfport Channel Lt. #64	red 502.27
	green 260.97
Gulfport Channel Lt. #68	red 472.41
	green 260.75
Cat Island West End Channel Lt. North Pile	red 259.24
	green 642.19
Merrill Shell Bank Light	red 175.47
	green 706.78

LIST OF SIGNALS AND ORIGIN

Signal ID. No.	Name
201	Cat Island Lighthouse Ruins -SW Corner lat. 30°-13' 50.309" long. 89°-09' 41.875"
202	SAWP 03 lat. 30°-13' 31.110" long. 89°-07' 43.438"
203	Cat Island Spit Cove Light 2 lat. 30°-10' 42.040" long. 89°-06' 49.271"
204	Cat Island West, End Channel Lt. -N. Pile lat. 30°-13' 43.338" <sup>223</sup> long. 89°-12' 09.592" 11 51.241

Velocity Tables  
To Accompany

Hydrographic Survey H-9028

000060 0 0000 0001 000 742100 009028  
000120 0 0002  
000160 0 0004  
000210 0 0006  
000260 0 0008  
000286 0 0010  
000314 0 0012  
001000 0 0014  
999999 0 0014  
000180 0 0000 0002 000 742100 009028  
001000 1 0002  
999999 1 0002  
000060 1 0002 0003 000 742300 009028  
000158 0 0000  
000199 0 0002  
000240 0 0004  
001000 0 0006  
999999 0 0006  
000060 0 0000 0004 000 742300 009028  
000091 1 0002  
000180 1 0004  
000222 1 0002  
000260 1 0000  
001000 0 0002  
999999 0 0002  
000060 0 0002 0005 000 742300 009028  
000100 0 0004  
000150 0 0006  
001000 0 0008  
999999 0 0008  
000046 1 0004 0006 000 742200 009028  
000056 1 0002  
001000 0 0000  
999999 0 0000

TRA TABLES  
TO ACCOMPANY

Hydrographic Survey H-9028 (742-20-1-69)

000100 0 0004 0001 000 742100 009028  
001000 0 0002  
999999 0 0002  
000050 0 0006 0002 000 742300 009028  
001000 0 0004  
999999 0 0004

APPENDIX "B"

CORRECTION TO ECHO SOUNDINGS

-Settlement and Squat-

Table 1	0.0 to 10.0	+0.4
Launch 1247 (742100)	10.1 to deeper	+0.2
2000 RPM		

Note: at speeds 1400 RPM or less - correction is less than 0.2 at all depths.

Table 2	0.0 to 5.0	+0.6
Launch 1260 (742300)	5.1 to deeper	+0.4
2000 RPM		

Note: At speeds 1400 RPM or less - correction is less than 0.2 at all depths.

Launch 1259 (742200) - Tests ran 12 August 1971 indicate no corrections for speeds of 2000 RPM or less at all depths.

(See attached printout for velocity tables - tra tables - TC/TI)

SIGNAL LIST  
BOAT SHEET HFP 742 H-9028

ANTENNA POSITIONS

HENDERSON 2	30 18 14.540'	89 17 18.719'
* Broadwater Temporary	30 23 16.125'	88 57 43.245'
CREOLE	30 07 31.751	89 13 20.585

CALIBRATION POINTS

Cat Island Spit Cove Light 2 (203)	30 10 42.040'	89 06 49.271
Cat island Lighthouse ruins-SW corner(201)	30 13 50.309'	89 09 41.875'
Cat Island West End Channel Lt.-N pile(204)	30 13 43.338'	89 12 09.592'
** Marianne Channel Light "8"	30 12 53.329'	89 14 46.318'
Merrill Coquille Light	30 13 42.155'	89 16 50.957'
** Merrill Shell Bank Light	30 14 27.957'	89 14 56.021'
* Gulfport Channel Light "60"	30 17 49.664'	89 02 12.651
* Gulfport Channel Light "64"	30 18 55.097'	89 03 08.071'
* Gulfport Channel Light "68"	30 20 02.778'	89 04 05.448'
SAWP 01	30 12 53.429'	89 05 43.117'
SAWP 02	30 12 45.994'	89 06 33.343'
SAWP 03 (202)	30 13 31.110'	89 07 43.438'
SAWP 04	30 13 45.859'	89 09 08.152'

\* Computational data forwarded to Photogrammetry AMC on 31 July 70  
in conection with Project 7008, Boat Sheets H-8971 and H-8924.

\*\* Computational data for these positions were forwarded in  
reports for Job PH 7008.



5/13/74

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center

Hourly heights are approved for Form 362

Tide Station Used (NOAA Form 77-12):

Bay St. Louis  
Gulfport

Period: June 22, 1970 - Oct. 7, 1971

HYDROGRAPHIC SHEET: H9028

OPR:

~~428~~  
458

Locality: Mississippi Sound, Mississippi

Plane of reference (mean lower low water): Bay St. Louis (1.3-1970-3/19/71)  
Gulfport (1.6-after 3/19/71)

Height of Mean High Water above Plane of Reference is 3.2 1.6 ft.

Remarks: Zoning:

1. Zone direct on Bay St. Louis south to  $30^{\circ}10'$ .
2. South of  $30^{\circ}10'$  apply ratio (.938) to Bay St. Louis heights referred to MLW.
3. Use Gulfport during periods of missing records.

*James R. Hubbard*  
for Chief, Tides Division

GEOGRAPHIC NAMES

Name on Survey	Source of Name											
	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	GRAND McNALLY ATLAS	U.S. LIGHT LIST				
BAYOU PIERRE ✓												1
CABBAGE REEF ✓												2
CAT ISLAND ✓												3
CAT ISLAND CHANNEL ✓												4
CAT ISLAND SHOAL ✓												5
CREOLE GAP ✓												6
FIRST KEY												7
FISH TAIL ✓												8
GRAND PASS ✓												9
ISLE AU PITRE ✓												10
ISLE AU PITRE BANK ✓												11
LITTLE BAYOU PIERRE ✓												12
MARIANNE CHANNEL ✓												13
MERRILL COQUILLE ✓												14
MISSISSIPPI SOUND												15
NORTH BANK												16
OYSTER BAY ✓												17
PASS MARIANNE ✓												18
PELICAN KEY ✓												19
PISTOL BANK ✓												20
PORPOISE SHOAL ✓												21
SHELL BANK CHANNEL ✓												22
SOUTH PASS ✓												23
SOUTH SHELL BANK FLATS												24
SQUARE HANKERCHIEF SHOAL ✓												25

APPROVED

*Chas. E. Harrington*

STAFF GEOGRAPHER - C51x2

27 JUNE 1977

H-9028

GEOGRAPHIC NAMES

Name on Survey	Source of Name											
	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	GRAND McNALLY ATLAS	U.S. LIGHT LIST				
SUNDOWN ISLAND ✓												1
TAIL OF THE SQUARE HANKERCHIEF ✓				D ✓								2
WEST POINT ✓												3
POTATO HILLS ✓												4
												5
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												23
												24
												25

APPROVED

*Chas. E. Harrington*

STAFF GEOGRAPHER - C51K2

27 June 1977

ATLANTIC MARINE CENTER  
APPROVAL SHEET  
FOR  
AUTOMATED SURVEY H- 9028

- A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position printout has/~~has not~~ been made. A new final sounding printout has/~~has not~~ been made.

Date: Dec. 16, 1976

Signed: William J. Jones

Title: Chief, Verification Branch

- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic and AMC Manuals. Exceptions are listed in the verifier's report.

Date: 12-20-76

Signed: Tahira. L. L. L.

Title: Chief, Processing Division

**HYDROGRAPHIC SURVEY STATISTICS**  
**HYDROGRAPHIC SURVEY NO. H-9028**  
742-20-1-69

**RECORDS ACCOMPANYING SURVEY:** To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET plus PNO & Excess Overlay		1	BOAT SHEETS		2	
DESCRIPTIVE REPORT		X 1	OVERLAYS (preliminary)		X 2	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES	X					X
ACCORDION CAHIERS	2 (Fathograms, Printouts, & Misc Data)					
VOLUMES	26					
BOXES	2 (10-Bundles of Strip Charts, 1-Snd Log, 1-Smooth Printout, 1-Envelope of Log Sheet & 1-Envelope of Misc. Data)					
T-SHEET PRINTS (List) T-00046, T-11946 plus 2-Junction Strips						
SPECIAL REPORTS (List)						

**OFFICE PROCESSING ACTIVITIES**

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				6208
POSITIONS CHECKED		700		
POSITIONS REVISED		70		
DEPTH SOUNDINGS REVISED		985		
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		8		
JUNCTIONS		24		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		16		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		501		
<b>TOTALS</b>		<b>549</b>		

PRE-VERIFICATION BY WH Guy - RRH:ll	BEGINNING DATE 08/14/74	ENDING DATE 06/04/75
VERIFICATION BY Harry R. Smith	BEGINNING DATE 06/23/75	ENDING DATE 07/19/76
REVIEW BY H.R. Smith	BEGINNING DATE 12/01/76	ENDING DATE 12/15/76

Reg. No. 9028

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey the following shall be completed:

CARDS CORRECTED

DATE \_\_\_\_\_ TIME REQ'D \_\_\_\_\_ INITIALS \_\_\_\_\_

<u>REMARKS:</u>					
	126	1017	2267	6232	
See pos.	289	1132	2332-33	6846	pos 2201 rec. number 11717
	293	1141	2350-52	6947	" 2260 " " 11911
	411	1408	2457	7010	" 6062 " " 19068
	424	1556	5008	7011	
	499	1559	5034	7320-21	
	732	1718	5035	7318	
	740	1747	5090	7731	
	749	1813-14	5185	7775	
	928	1871	5714	7949	
	937-39	1886	5863-64	2439-2440	
		1968			

Reg. No. \_\_\_\_\_

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE 6/6/79 TIME REQ'D. \_\_\_\_\_ INITIALS JHC

REMARKS:

H-9028

Information for Future Presurvey Reviews

This survey falls in an area of a very changeable bottom attributed to sedimentation and severe storms. The bottom is adequately developed but the holiday discussed in paragraph 2 of the Quality Control Report should be surveyed at a convenient time.

<u>Position Index</u>		<u>Bottom Change Index</u>	<u>Use Index</u>	<u>Resurvey Cycle</u>
<u>Lat.</u>	<u>Long.</u>			
300	0891	4	1	50 years
300	0892	3	2	50 years
301	0891	4	2	50 years
301	0892	3	2	50 years

ATLANTIC MARINE CENTER  
VERIFIER'S REPORT

REGISTRY NO. H-9028

FIELD NO. 742-20-1-69

Mississippi Sound, Cat Island

SURVEYED: June 22, 1970 through October 15, 1971

SCALE: 1:20,000

PROJECT NO.: OPR-468

SOUNDINGS: Raytheon Fathometers;  
DE-723; Sounding Pole

CONTROL: DRS Raydist  
3306.4 kHz

Chief of Party ..... George C. Chappell  
Surveyed by ..... Robert A. Lewis  
Automated Plot by ..... Calcomp Plotter #618 (AMC)  
Verified and Inked by ..... Harry R. Smith

1. Introduction

The field work began originally in April 1969. The area of this survey covered before Hurricane "Camille", was resurveyed beginning June 22, 1970. The field data for this prior to "Camille" is included within the survey data, although none of this data was processed or verified at the Atlantic Marine Center. See page 1, item B of the Descriptive Report.

2. Control and Shoreline

a. The control is adequately described in the Descriptive Report.

*Revised; see Para. 1 of the Quality Control Report.*  
b. The shoreline originates with Class I, final reviewed photogrammetric manuscripts TP-00046 and T-11946; date of photography - November 1969 and date of field edit - November 1971.

3. Hydrography *See Para. 2, of the Quality Control Report.*

a. The depths at crossings are in excellent agreement.

b. The standard depth curves are adequately delineated.

c. Adequate developments were run to determine least depths.

d. The low-water line was not developed. Approximate mean low water line was supplemented by TP-00046.



#### 4. Condition of Survey

The smooth sheet and accompanying overlays, hydrographic records, and reports are adequate to conform to the requirements of the Provisional Hydrographic Manual.

#### 5. Junctions See Para. 7, of the *Quality Control Report*

An adequate junction was effected with the following surveys:

H-8970	(1968)	✓	1:10,000	on the north
H-9004	(1968)	✓	1:20,000	on the east
H-9200	(1971)	✓	1:20,000	on the west
H-9177	(1970)	✓	1:10,000	on the northwest

These surveys are in good agreement with the present survey.

#### 6. Comparison with Prior Surveys See Para. 8, of the *Quality Control Report*

- a. H-4000 (1917) 1:40,000 on the east  
 H-3960 (1916-17) 1:40,000 on the west

The above prior surveys, taken together, cover the area of the present survey, except the position of the present survey around Isle Au Pitre and Oyster Bay. A comparison between the prior surveys and the present survey is discussed in Section K of the Descriptive Report. The most noticeable feature is the marked Intercoastal Waterway, Grand Island, and Marianne Channel, with a least depth of 13 feet on the present survey and from 8 to 12 feet in the area on the prior surveys.

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

- b. ~~There are no prior wire drag surveys.~~  
 The comparison with F.E. No. 1 1965 W.D. 1:40,000 is evaluated in the *Quality Control Report*.

#### 7. Comparison with Charts 876-SC (8th Edition, September 2, 1972) 1268 (16th Edition, March 2, 1974)

- a. Hydrography See Para. 9, of the *Quality Control Report*

The survey depths are in general harmony with the charted depths.

- b. Controlling Depths

The Marianne Channel had a least depth of 13 feet on the

present survey, and from 8 to 12 feet in the area on the prior surveys mentioned above.

c. Aids to Navigation

The aids to navigation from this survey adequately mark the features intended and are in substantial agreement with the charted positions.

d. Attention is directed to PSI items, as listed in the Descriptive Report.

8. Compliance with Instructions

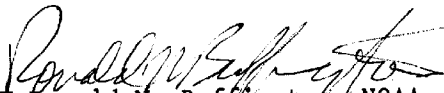
This survey adequately complies with the Project Instructions.

9. Additional Field Work

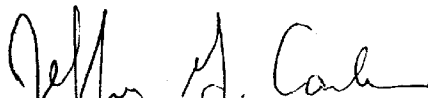
This is an excellent basic survey. Additional field work is ~~not~~ recommended. in the area of the holiday discussed in Para. 2, of the Quality Control Report.

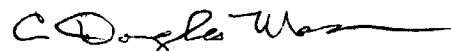
Approval Sheet for H-9028

Examined and Approved:  
Hydrographic Inspection Team  
Date: **12/16/76**

  
CAPT Ronald M. Buffington, NOAA  
Chief, Operations Division

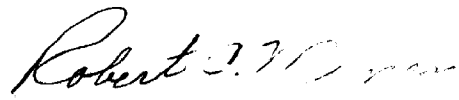
  
CDR Robert A. Trauschke, NOAA  
Chief, Processing Division

  
CDR Jeffrey G. Carlen, NOAA  
Chief, Coastal Mapping Division

  
C. Douglas Mason, LT(jg), NOAA  
Chief, EDP Branch

  
William L. Jonns  
Chief, Verification Branch

Approved/Forwarded

  
Robert G. Munson  
RADM, NOAA  
Director, Atlantic Marine Center



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SURVEY  
Rockville, Md. 20852

C352

August 19, 1977

TO: *A. J. Petrick*  
A. J. Petrick  
Chief, Marine Surveys Division

THRU: Chief, Quality Control Branch

FROM: R. W. DerKazarian *R.W. DerKazarian*  
Quality Evaluator

SUBJECT: Quality Control Report for H-9028 (1970-71), Cat Island,  
Mississippi Sound, Mississippi

Survey H-9028 was inspected to evaluate the accuracy and adequacy of the survey with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, shoreline transfer, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data. In general, it was found to conform to the National Ocean Survey's standards and requirements except as follows:

1. The dates of the shoreline manuscripts listed in the Verifier's Report are in error. The appropriate dates are as follows: T-11946 (66-68), TP-00046 (69-71).

The boathouse and piles as shown on T-11946 in latitude  $30^{\circ}13.06'$ , longitude  $89^{\circ}09.69'$  were mapped from photographs of 1966 and a field edit of 1968 which were prior to Hurricane Camille and the present survey. These features are considered to have been destroyed and the ruins should be charted from present survey information.

2. This information should be noted under "Hydrography":

Dashed curves have been added to emphasize certain features.

In the northwest corner of the present survey a holiday exists approximately 1,000 meters square; centered in latitude  $30^{\circ}17.1'$ , longitude  $89^{\circ}16.00'$ . An approximate 12-foot curve has been added.

3. Numerous omissions of data were added during the quality evaluation; e.g., snags, piles, ruins, elevations, notations (shell banks), and a floating aid. These items were located either on the boat sheet or in the volumes. In some instances notations as submerged snag or pipe were shown with no symbols.



4. Duplicate numbers exist for positions 2635-2649; and 6054-6063.
5. The approved Tide Note was appended to the Descriptive Report at the time of the quality evaluation.
6. During smooth plotting many soundings (approximately 100) were changed or excessed in the junctional area arbitrarily to bring about agreement and reconcile curves. In many cases a far more liberal attitude in changing sounding values was made beyond a recommended tolerance of 0.2 foot. To compound the error these soundings were not properly indicated in the final sounding printout as being changed or excessed. The "Marine Center Approval Sheet" clearly indicates a new sounding printout has been generated, but this is not apparent. These changes on the smooth sheet and in the printout have been corrected during the quality evaluation inspection.
7. The verifier's discussion of "Junctions" states that "adequate junctions were effected," when in fact additional cartographic work was required.

The junction to the north with H-8970 (1968) and to the east with H-9004 (1968) were adequately effected in part with butt junctions in flat areas where depth curves had shifted in position. Inasmuch as the present survey was subsequent to Hurricane Camille and these junctional surveys, the deeper depths on the present survey superseded the junctional soundings. Three 13-foot soundings transferred from H-8970 were in fact 12-foot soundings and were out of position. The junctions with H-9177 (1970) and H-9200 (1971) were adequately effected. Several soundings in the vicinity of the holiday area mentioned in paragraph 2 above have been transferred to delimit the curve.

8. These summarized statements should have been made in the "Comparison with Prior Surveys":

a.	H-3960	(1916-18)	1:40,000
	<u>H-4000</u>	<u>(1917)</u>	<u>1:40,000</u>

These surveys taken together cover the area of the present survey. No prior hydrographic survey of this office covers the southern portion of the present survey in the vicinity of Isle au Pitre and Oyster Bay. A comparison between the prior and present depths indicates that variable changes of 1-2 feet have occurred. A significant change has occurred in Grand Pass where present depths of 25 feet are as much as 20 feet deeper than prior depths. In the vicinity of the eastern approach to Marianne Channel, isolated shoaling of 2-8 feet has occurred with the most significant change in latitude  $30^{\circ}13.85'$ , longitude  $89^{\circ}13.2'$ , where present depths of 20 feet fall where prior depths of 37 feet existed. These changes are largely attributed to the natural shifting of sand and mud and the effects of Hurricane Camille.

Several shell banks on the prior surveys that have not been identified by the present survey are considered nonexistent.

b. F.E. No. 1 (1965) W.D. 1:40,000

A detached area on this wire-drag survey falls within the limits of the present survey. There are no conflicts between the present depths and the effective wire-drag depths.

The oyster stakes in the vicinity of latitude  $30^{\circ}17.38'$ , longitude  $89^{\circ}15.27'$  have been carried forward as submerged to supplement the present survey information.

c.	T-5325	(1934)	1:20,000
	T-5326	(1934)	1:20,000
	T-9655	(1950-55)	1:20,000
	T-9659	(1952-55)	1:20,000

These earlier topographic surveys are subsequent to the prior hydrographic surveys. Noticeable changes have taken place in the mean high water line of the islands which have receded as much as 400 meters since the prior hydrographic surveys. A marsh island has completely disappeared as mentioned in paragraph K of the Descriptive Report. Several of the shell banks have shifted or disappeared by evidence of the present survey, in particular the shell bank on T-5326, in latitude  $30^{\circ}06.50'$ , longitude  $89^{\circ}12.50'$ , which no longer exists.

One shell bank notation has been carried forward from T-5325 in latitude  $30^{\circ}13.83'$ , longitude  $89^{\circ}09.78'$ .

9. The chart edition used by the verifier was not the edition used by the hydrographer for a comparison. A markup copy was not forwarded with the records to Headquarters. See Provisional Hydrographic Manual section 6.3.10. The Verifier's Report did not include a statement indicating the origin of the charted information. The verifier should determine the source of all the charted information in the area of the present survey, if possible. Generally, most of the charted hydrography will have originated with the prior surveys discussed under "Comparison with Prior Surveys" and will have been superseded by a statement in that section of the report. If such is true, a reference to that statement should be made here. A concluding statement indicating the adequacy of the present survey to supersede the charted information was not made.

The following charts were compared with the present survey:

Chart 876-SC (7th Edition, October 16, 1971)  
Chart 1268 (13th Edition, December 12, 1970)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys in paragraph 8 of this report which require no further consideration, together with various chart letters.

Attention is directed to the following:

(1) Presurvey Review items charted in the area of the present survey are discussed in Paragraph J, "Comparison with Prior Surveys," of the Descriptive Report.

(2) Several recommendations for charted items are addressed in paragraph K of the Descriptive Report.

(3) Two marsh islets charted in latitude  $30^{\circ}09.06'$ , longitude  $89^{\circ}10.8'$  no longer exist; present depths are 9-10 feet.

Except as noted above the present survey is adequate to supersede the charted information in the common area.

b. Controlling Depths

The project controlling depth of Marianne Channel at 12 feet is in substantial agreement with the 13-foot controlling depth on the present survey. Data furnished by the U.S. Corps of Engineers subsequent to the date of the present survey should supersede the present survey for charting.

c. Aids to Navigation

The charted fixed and floating aids adequately mark the features intended. However, it is recommended that channel buoy N"6" be relocated to adequately mark the 6-foot shoal at latitude  $30^{\circ}13.53'$ , longitude  $89^{\circ}13.74'$ . Buoy "2PM" marks no danger or channel and would be more useful in marking the 6-foot shoal in latitude  $30^{\circ}15.8'$ , longitude  $89^{\circ}12.1'$ .

10. The Hydrographic Inspection Team did not enter their time on the "Hydrographic Survey Statistics" sheet.

cc:  
C351

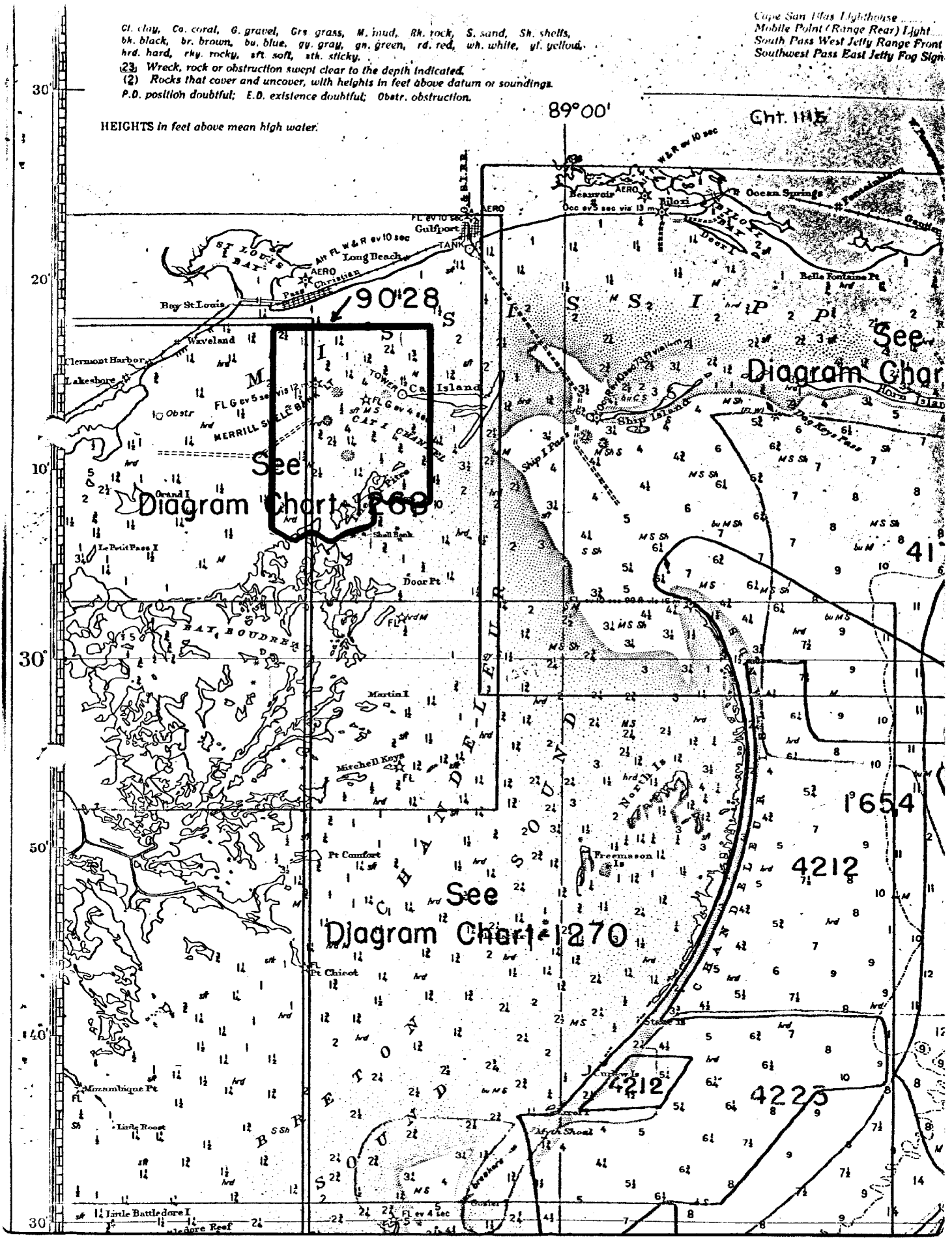
Cl. clay, Co. coral, G. gravel, Grs grass, M. mud, Rk. rock, S. sand, Sh. shells,  
 bk. black, br. brown, bu. blue, gv. gray, gn. green, rd. red, wh. white, yl. yellow.  
 hrd. hard, rky. rocky, sft. soft, stk. sticky.  
 (23) Wreck, rock or obstruction swept clear to the depth indicated.  
 (2) Rocks that cover and uncover, with heights in feet above datum or soundings.  
 P.D. position doubtful; E.D. existence doubtful; Obstr. obstruction.

Cape San Blas Lighthouse  
 Mobile Point (Range Rear) Light  
 South Pass West Jetty Range Front  
 Southwest Pass East Jetty Fog Sign

HEIGHTS in feet above mean high water.

89°00'

Chart 1115



9028  
 See Diagram Chart 9028

See Diagram Chart 1654

See Diagram Chart 4212

4225

30  
20  
10  
30  
50  
140  
30



