



**HYDROGRAPHIC TITLE SHEET**

H-09103  
[see note below.]

XWW 9/20/91

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.

H-8971 AD.WK.

State Mississippi

General locality Mississippi Sound

Locality Ship Island

Scale 1:20,000 Date of survey 2/24/70-5/27/70

Instructions dated 25 Oct. 1968, 3 Sept. 1969  
30 Oct. 1969, 17 Nov. 1969 Project No. OPR 468

Vessel H.F.P. 742

Chief of party Lt. Mark E. Harbert

Surveyed by Lt. Jg Efrem R. Krisher

Soundings taken by echo sounder, hand lead, pole \_\_\_\_\_

Graphic record scaled by Party Personnel

Graphic record checked by Party Personnel

Protracted by \_\_\_\_\_ Automated plot by \_\_\_\_\_

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

Soundings in fathoms feet at MLW MLW

REMARKS:

STANDARDS CK'D

8-1-84 C.109

AWOIS/SURF MSM 7/29/87

9/20/91

The absence of a registry number in the appropriate block of the Hydrographic Title Sheet and the inclusion of copies of the review reports for H-08924 and H-08971 caused some confusion regarding the relevant survey work addressed in this D.R. It is concluded that this DR text addresses the survey work assigned registry number H-09103. The copies of the review reports for H-08924 and H-08971 were retained in this DR for reference purposes only. Survey H-09103 is an unverified survey (HDEG category 2).

9/20/91  
XWW

X.W.W. 9/20/91



DESCRIPTIVE REPORT

TO ACCOMPANY

Hydrographic survey H-8971 Ad. Wk.

Project OPR-468

SCALE: 1:20,000 Hydrographic Field Party 742

CHIEF OF PARTY: Lt. Mark E. Harbert

SURVEYED BY: Lt. Jg Efrem R. Krisher

\* \* \* \* \*

A. PROJECT

Work on Project OPR-468 was executed in accordance with Project Instructions dated 25 October 1968, Supplemental Instructions dated 3 September 1969, 30 October 1969 and 17 November 1969.

B. AREA SURVEYED

This survey is in the area of Ship Island. It covers the area from 88°52' to 89°00' on the north side of Ship Island and 88°54' to 89°00' on the south side of Ship Island.

C. SOUNDING VESSELS

The following vessels were used to obtain hydrographic data.

Vessel	Identifying Color
Launch 1247	Red
Skiff 570	Purple
Party Personnel Walking	Green

D. SOUNDING EQUIPMENT

Raytheon Fathometer, DE-723, Serial No. 1885 was used on Launch 1247. All soundings taken on Skiff 570 and by party personnel walking were by sounding pole. See Appendix "B" of this report for corrections to echo soundings.

E. SMOOTH SHEET

The smooth sheet will be plotted at Atlantic Marine Center, Norfolk Va., using automated data processing punched tape produced by HFP-742 personnel.

F. CONTROL

Primary horizontal control was obtained by Raydist distance arcs. The zero foot curve was obtained by the standard visual three-point sextant fix method.

The Raydist was calibrated each day by coming alongside the calibration points as closely as possible, usually within one to two meters. After calibrating, the launch circled the calibration point and then returned for a check. The calibration point used and calibration data is at the beginning of the Raydist Saw-Tooth Records. The Raydist was also calibrated after the completion of hydrography for the day and these results are at the end of the Raydist Saw-Tooth Record.

All Raydist and sounding data was recorded on a trial "Position and Sounding Record" in place of sounding volumes. On the "Position and Sounding Record", the columns headed red and green refer to the red Raydist station and green Raydist station readings on the fix. Everything else is self-explanatory. Visual data was recorded in the sounding volume.

After completing the survey, a new position was obtained for calibration point "B", changing the Raydist values by one tenth of a lane on both red and green. This was corrected for in the corrector tape for the days pt. "B" was used.

Special calibration checks were made behind the island and close to shore. The results of these checks will be in a supplementary report.

See Appendix "A" of this report for a complete list of control.

G. SHORELINE

Shoreline on the boatsheet was taken from pre-Hurricane Camille manuscripts.

H. CROSSLINES

Crosslines were run at 10% of the regular system of lines. Crosslines were in good agreement.

I. JUNCTIONS

Junction was made on the north south and west with prior survey H-8971, scale 1:20,000, 1966-1968 and on the east with contemporary survey H-8924 Ad.Wk., scale 1:20,000, 1969-1970. Junctions are in good agreement and depth curves can be drawn adequately.

J. COMPARISON WITH PRIOR SURVEY

A comparison was made with survey H-8971, scale 1:20,000, 1966-1968. Actual tides were applied to boat sheet soundings.. Velocity and settlement and squat corrections were not applied to boat sheet soundings.

Good agreement between soundings was established except in some cases under six feet. Depth curves are in good agreement with the exception of the 18 foot curve at Lat. 30°13.3' Long. 88°55.5' which receded westward approximately 500 meters and at the cut in the island caused by Hurricane Camille.

Items located by prior survey in the vicinity of this survey were located and found as described below.

<u>FEATURE</u>	<u>POSITION</u>	<u>REMARKS</u>
Pipe	30°14.08' 88°53.81'	12" iron pipe bares 2.0 ft. at M.L.W.
Rocks	30°13.76' 88°53.91'	Rock piles baring 4 ft. at M.L.W. Rocks are in a NS line approximately 20m long. DP is at southern end.
Rock	30°13.77' 88°53.90'	Submerged rock 1.6 feet below M.L.W.
Pipe	30°14.78' 88°52.79'	3" marker pipe baring 2.1 ft. at M.L.W. Leaning 60° to the NW.
Pipe	30°14.85' 88°52.79'	3" pipe bare 0.4 ft. at M.L.W. Leaning 60° to the NE.
Pipe	30°14.38' 88°53.62'	3" marker pipe bares 7.6 ft. at M.L.W. Leaning 45° to the S.

J. COMPARISON WITH CHART (CONT'D)

Pipe	30°14.48' 88°53.63'	3" marker pipe bares 10.6' at M.L.W.
Pipe	30°14.36' 88°53.69'	4" pipe covered 3.4 ft. at M.L.W. Leaning S
Obstruction	30°14.29' 88°53.97'	Unknown hang, possible tree. Clear to 8.4 feet below M.L.W.
Pipe	30°14.06' 88°53.80'	3" pipe bares 1.6 ft. at M.L.W. Leans 60° to the W.
Iron Rod	30°13.10' 88°55.30'	Remains of triangulation station Gull. 1" iron rod. Bares 1 ft. at M.L.W.
Piling	30°14.18' 88°53.83'	Piling was searched for visually. No evidence was found.
Piling	30°12.71' 88°58.38'	Signal Ann. Was not seen while surveying.
Shoal	30°12.70' 88°59.75'	The 4 foot shoal has deepened to a least depth of 9 feet.
Deepening	30°12.62' 88°59.31'	A 35 foot area has deepened to a maximum depth of 45 feet.

K. COMPARISON WITH CHART

<u>Feature</u>	<u>Position</u>	<u>Remarks</u>
Wreck	30°12.5 88°59.1	The wreck was not searched for. It had been thoroughly searched for and had been recommended for deletion by survey H-8971.
Spit	30°13' 88°56'	The spit has broken off from the main part of the island. See Vol. I pg. 31 SNDg 1/11

K. COMPARISON WITH CHART (CONT'D)

Pier                    30°12.84'    The position is the end of  
                         88°58.30'    pier constructed over the  
                                            remains of old pier which  
                                            was destroyed by Hurricane  
                                            Camille.

The following features are recommended for charting.

4 Pilings                30°12.66'    Center of 4 pilings baring <sup>bc</sup>  
                         88°59.07'    4.8 ft. at M.L.W.

Remains of                30°12.66'    Remains of day beacon bare <sup>bc</sup>  
day beacon                88°59.05'    3.4 ft. at M.L.W.

Pilings                    88°58.32'    Bares 3.4 ft. at M.L.W. 2nd <sup>bc</sup>  
                         30°12.69'    piling Ø 030°10m.

The above comparison was made with Chart 876SC  
5th Edition, dated March 1970.

L. ADEQUACY OF SURVEY

This survey is adequate to supercede prior  
surveys for charting purposes.

M. STATISTICS

	No. of Pos.	Miles of Sdg. Line
Launch 1247	897	191.3
Skiff 570	37	2.2
Walking	41	
Totals	975	193.5
Total Area Surveyed	9.5 sq.miles	

N. AIDS TO NAVIGATION

Aids to Navigation in the area of the survey  
are maintained by the United States Coast Guard. No  
D.P.s on aids to navigation were taken due to the  
Coast Guard being in the area at the time of survey  
replacing and repairing these aids due to Hurricane  
Camille.

O. Miscellaneous

On Launch 1247 a modified wire drag was used to  
locate submerged objects. A 100 foot chain between  
two trawl boards was used in this operation



P. AUTOMATED DATA PROCESSING

All data was taped by party personnel in the H.F.P. 742 field office.

There are no positions 872-899 and 906-999.

Positions 6000-6078 include both skiff 570 and walking by party personnel as there is no difference in the processing.

A copy of the TRA/TI printout is included with this report.

Respectfully submitted

*Efrem R. Krisher*

Lt.jg Efrem R. Krisher

APPENDIX "A"

List of Control

Raydist Station	Dave, 1969
Lat.	30°22'13.050"
Long.	88°46'50.860"

Raydist Station	Gulf, 1969/6
Lat.	30°22'01.807"
	89°05'06.400"

Third order positions determined by Photo Party 61.

Raydist Calibration Points

Station B	Pipe
	Distance to Dave 74,264.16ft.
	Distance to Gulf 70,590.68ft.

Station C	Pipe
	Distance to Dave 54,796 ft.
	Distance to Gulf 78,208 ft.

Station F	Gulf Port Dir. Light
	Distance to Dave 80,907.66ft.
	Distance to Gulf 58,130.81ft.

List of Signals

Triangulation Stations

110	Ship Island Tank 3 1966
140	Stool 1970
150	Hip Abandoned Lighthouse
	Ship Island Lighthouse 1902
165	Signal 1966

APPENDIX "A" (CONT'D)

Photo-Hydro Signals

160	Day	T-13032
135	ERG	"
190	BUS	"
180	ART	"
170	POR	"

Hydro Signals

155	Vol. I pg. 18,24
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Signal	Lat.	Long.
110	30°13'1354.57m	88°53'1155.36m
140	30 12 1525.44	88 56 8857.18
150	30 12 1389.95	88 57 1547.01
165	30 12 1174.69	88 59 16.85
160	30 12 1198.9	88 59 03.4
135	30 13 336.83	88 56 613.91
190	30 12 888.26	88 57 1209.40
180	30 12 1516.8	88 57 413.6
170	30 14 66.85	88 59 03.29
155	150	147°35'
	160	
	170	80°25'

APPENDIX "B"

Correction to Echo Soundings

Table 1	To Depth in feet	Correction in feet
Launch 1247	5.8	-0.2
Fath. #1885	19.4	0.0
55 thru 104 day	29.0	+0.2
	32.8	0.4
	36.0	0.6
	50.0	0.8

Settlement & Squat Correction for Launch 1247

Depth(ft.)	R.P.M.	Correction(ft.)
All Depths	1400	0.0
0.0-7.0	1800	+0.4
7.0-50.0	1800	0.2

APPENDIX "C"

Tidal Note

Gage Location	Pt. Cadet, Biloxi Mississippi Lat. 30°23.38' Long. 88°51.45'
Gage Type:	Portable, pressure bubbler gage
Staff:	M.L.W. corresponds to 2.5ft. on staff.
Corrections:.	No time or height corrections were applied to the results obtained from the gage in reducing soundings.

90<sup>th</sup> meridian time was used at this tide station

APPENDIX "D"

APPROVAL SHEET TO ACCOMPANY

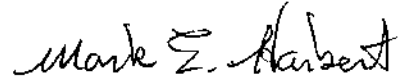
Hydrographic Survey H-8971 Ad. Wk.

The field and office work was accomplished under my supervision.

The hydrography and descriptive report was done by Lt.jg Efrem R. Krisher.

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

Approved and forwarded,



Mark E. Harbert  
Chief of Party

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8924

FIELD NO. HFP 742-20-2-66

AREA: Mississippi, Mississippi Sound, Approaches to Biloxi Bay

SURVEYED: January 12, 1967 - March 5, 1968

SCALE: 1:20,000

PROJECT NO: OPR-468

SOUNDINGS: DE 723 Depth Recorder  
Sounding Pole and Lead  
Line

CONTROL: Sextant Angles on  
Shore Signals

Chief of Party.....	A. J. Patrick
Surveyed By.....	R. A. Lewis
Protracted By.....	Gerber Digital Plotter
Soundings Plotted By.....	Gerber Digital Plotter
Verified and Inked By.....	F. Bean (Norfolk)
Reviewed By.....	S. R. Baumgardner
.....	Date: July 5, 1973
Inspected By.....	D. R. Engle

1. Description of the Area

This survey is located in Mississippi Sound, southeast of Biloxi, Mississippi and includes Biloxi East Channel, Dog Keys Pass, and Little Dog Keys Pass.

The bottom is generally flat and slopes gently to the south, except in the southern portion of the survey where sand bars with least depths of two feet between Ship and Horn Islands, and two natural passes with maximum depths of 35 and 37 feet through these bars provide a very irregular and changeable bottom.

The predominate bottom characteristics are mud and sand.

2. Control and Shoreline

The origin of control is adequately covered in Part F of the Descriptive Report.

The shoreline originates with reviewed photogrammetric Manuscripts T-11814, T-11815, T-13033, T-13034 and T-13035 of 1966-67.

H-8924 (67-68)

### 3. Hydrography

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

### 4. Condition of the Survey

The sounding records, smooth plotting, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual and the Instruction Manual - Automated Hydrographic Surveys, except as follows:

- A. A holiday exists on the survey in lat.  $30^{\circ}20.2'$ , long.  $88^{\circ}49.3'$ . Several soundings have been carried forward from H-4021 (1917) to partially fill this holiday.
- B. Two hydrographic signals, Bat and Joe, falling in the water area, have not been described but are assumed to be hydrographic buoys.

### 5. Junctions

Adequate junctions were made with H-8650 (1962) and H-8651 (1962) on the east. Junctions with H-8971 (1968) on the west and H-8922 (1966) on the north will be considered in the reviews of those surveys. No contemporary surveys junction with the present survey on the south, however, survey depths are in general harmony with charted depths at the southern limit of the present survey.

### 6. Comparison with Prior Surveys

- A. H-430 (1854) 1:20,000  
     H-489 (1855) 1:20,000  
     H-4021 (1917) 1:40,000

Comparison of the prior and present surveys reveals major changes throughout the survey area. The western tip of Horn Island has accreted about two and one quarter miles; Ship Island has migrated westerly about half a mile; and the southern tip of Deer Island has eroded more than half a mile since the earliest survey.



The area between Ship and Horn Island, consisting of sand bars and two deep passes through these bars into the Gulf, has changed radically with each survey because of continual shifting of the sand bars.

The area between the mainland<sup>and</sup> Ship and Horn Islands is now one to two feet deeper than the earliest surveys. Between 1854 and 1917 there was a general deepening trend throughout this area. This trend changed after the 1917 survey, evidently because of extensive dredging. Very little change occurred since that time except in the vicinity of East Biloxi Channel where shoaling of one to two feet has occurred.

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

#### 7. Comparison with Charts

374-SC (Latest print date October 14, 1972)  
 376-SC (Latest print date September 2, 1972)

##### A. Hydrography

The charted hydrography originates with the previously discussed surveys which require no further consideration, supplemented by information from the boatsheet (Bp 74010) and the unverified smooth sheet of the present survey.

Hydrography subsequent to Hurricane Camille in the vicinity of Ship and Horn Islands (Bp 79211) was applied to the chart. Information from this and later date aerial photography (1969) was used to revise the charted hydrography and shoreline and should be retained on the chart.

Attention is called to the following:

(1) The wreck charted in Lat.  $30^{\circ}15.60'$  Long.  $88^{\circ}48.80'$ , from Notice to Mariners 16 of 1970 subsequent to the date of the present survey, should be retained on the chart.

(2) The following items charted from Chart Letter 1593 of 1967, subsequent to the date of the present survey, should be retained on the chart:

a. The sunken wreck PA in Lat.  $30^{\circ}14.15'$  Long.  $88^{\circ}49.85'$

- b. The pole in Lat.  $30^{\circ}14.79'$  Long  $88^{\circ}49.98'$
- c. The pole in Lat.  $30^{\circ}14.51'$  Long.  $88^{\circ}49.93'$
- d. The submerged pipe in Lat.  $30^{\circ}14.60'$   
Long.  $88^{\circ}49.45'$
- e. The pole in Lat.  $30^{\circ}14.93'$  Long.  $88^{\circ}49.21'$

(3) The two submerged wrecks charted in approximate latitude  $30^{\circ}18.15'$ , longitude  $88^{\circ}45.78'$  from H.O.N. to M. 32/66, 34/68, 30/70, and LNM 31/71 appear to be two different positions for the same wreck. It is recommended that the present survey position be used to chart this wreck.

(4) The stranded wreck charted in Lat.  $30^{\circ}21'$ , Long  $88^{\circ}50'$  from Notice to Mariners 17 of 1967 has been refloated and removed according to local information acquired by the hydrographer. An investigation of the area revealed no remains. This wreck should be deleted from the chart.

(5) The pile charted in Lat.  $30^{\circ}20.89'$  Long.  $88^{\circ}45.05'$  originates with the boatsheet of H-8924 (1966) on which a zero sounding was mistaken for a pile. This pile symbol should be deleted from the chart.

(6) The islets charted in Lat.  $30^{\circ}20.78'$  Long.  $88^{\circ}45.10'$  from 1963 air photos (Bp 98133) prior to the present survey neither appear on T-11815 (1966-67) nor are mentioned by the hydrographer and should be deleted from the chart.

(7) The pipe located on the present survey in lat.  $30^{\circ}15.16'$ , long.  $88^{\circ}48.52'$  should be charted.

Except as noted above the present survey is adequate to supersede the charted hydrography within the common area.

#### B. Controlling Depths

The charted controlling depth notes of Biloxi Bay Channel are based on data furnished by the U.S. Corps of Engineers subsequent to the date of the present survey and supersede the present survey information.

C. Aids to Navigation

Many of the aids to navigation have been established or relocated subsequent to the date of the present survey.

The presently charted aids adequately mark the features intended.

8. Compliance with Instructions

This survey adequately complies with the project instructions.

9. Additional Field Work

This a good basic survey of the area prior to Hurricane Camille in 1969 and no additional field work is recommended.

Examined and Approved:

\_\_\_\_\_  
Chief,  
Marine Chart Division

\_\_\_\_\_  
Associate Director,  
Office of Marine Surveys and Maps

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

REGISTRY NO. H-8971

FIELD NO. HFP-742-20-1-68

Mississippi, Mississippi Sound, Ship Island Pass and Vicinity

SURVEYED: March 18 - May 28, 1968

SCALE: 1:20,000

PROJECT NO.: OPR-468

SOUNDINGS: DE-723 Depth Recorders,  
Lead Line, and Sounding  
Pole

CONTROL: Sextant Fixes on  
Shore Signals and  
Buoys

Chief of Party ..... A. J. Patrick  
..... J. D. Boon III  
Surveyed by ..... R. A. Lewis  
..... K. A. Boe  
Automated Plot by ..... Calcomp-618 (AMC)  
Verified by ..... M. W. Johnson  
Reviewed by ..... F. P. Saulsbury  
Date: June 9, 1975  
Cursory inspection made--survey  
processing considered complete ..... G. K. Myers  
May 17, 1976

1. Control and Shoreline

The origin of control is adequately described in part F of the Descriptive Report.

The shoreline originates with final reviewed photogrammetric manuscripts T-13032 (1966-68), T-13033 (1966-67), and T-13034 (1966-67).

2. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves are adequately delineated. The 3-foot depth curve was added to more adequately delineate bottom configuration.

C. The development of bottom configuration and determination of least depths is considered adequate.

H-8971(1968)

### 3. Condition of the Survey

The sounding records, plotting, various automated printouts, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual supplemented by the Instruction Manual - Automated Hydrographic Surveys.

### 4. Junctions

Adequate junctions were effected with H-8924 (1967-68) on the east, H-8922 (1966-68) on the northeast, H-8923 (1966-68) on the north, H-8925 (1967-68) on the northwest and H-9004 (1968-69) on the west.

### 5. Comparison with Prior Surveys

A.	H-194	(1848)	1:20,000
	H-430	(1854)	1:20,000
	H-488	(1855)	1:20,000
	T-2116	(1902)	1:20,000

These early surveys, which no longer serve as a source of present charted soundings, fall in the area of the present survey but are not discussed in the review.

B.	H-4000	(1917)	1:40,000
	H-4021	(1917)	1:40,000

The prior surveys taken together cover the entire area of the present survey and are prior to any alterations from dredging and spoiling created by Federal Channel Projects. In general, the bottom configuration has essentially remained the same except in those areas of manmade improvements. In addition, extensive shoreline differences in the area of Ship Island have occurred. The eastern part of the island has migrated about 200 meters northward and is presently about half its former size in width. The western end of the island has shifted about 250 meters southward and has accreted about 600 meters westward. These shoreline changes are considered to have been caused by wind and sea conditions, especially during storms.

Depths southwest of the end of Ship Island have shoaled about 6-15 feet and depict a general slope from the accreted shore in an area where depths of 30-35 feet existed.

Present soundings in the channel at Ship Island Pass are about 10-15 deeper than prior depths. This channel leads into Gulfport Channel.

With the addition of soundings brought forward from H-4000 and H-4021, the present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 876-SC (11372), 9th Edition, June 1, 1974  
Chart 1267 (11373), 20th Edition, December 7, 1974

A. Hydrography

The charted hydrography originates with the previously discussed prior surveys which require no further consideration, supplemented by partial application of the present survey, some adjoining contemporary surveys, and additional field work of 1969-70 through boat sheet information (Bps. 74010, 74616, 74617, 76253, 79211, 81127, and CL-1372/72) and the verified smooth sheets of the present surveys. Many soundings appear on the chart from a prior 1967 Corps of Engineers condition survey (Bp. 72930) and subsequent 1968-74 Corps of Engineers condition and after-dredging surveys (Bps. 73538, 87566, 88220, and 88221).

Attention is directed to the following:

(1) Items indicated on Bp. 91880 by the reviewer as having been charted subsequent to the date of the present survey, supersede the survey information and should be retained on the chart.

(2) The submerged pipe (PSI # 6-1) charted at latitude 30°13.9', longitude 88°53.9' and the submerged pile, PA (PSI # 6-2) charted at latitude 30°14', longitude 88°54' were reported to be iron pipes visible at low water from NM 29/64 and NM 42/66, respectively. A submerged pipe located at latitude 30°13.96', longitude 88°53.94' on the present survey was found to be the only positive hang of a chain drag investigation in this area. It is assumed this pipe is the same feature previously mentioned, and therefore, should be charted in accordance with its revised position.

(3) The sunken rocks charted in the immediate vicinity of latitude 30°12.77', longitude 88°58.35' from the advance manuscript of T-13032 should be revised to a breakwater in accordance with the present survey smooth sheet.

(4) The submerged wreck (PSI # 18) charted in latitude 30°12.5', longitude 88°59.1' originates with NM 31/61. This wreck was adequately investigated by a chain drag and is considered disproved on the present survey. It should be deleted from the chart.

(5) The ruins charted in the immediate vicinity of latitude 30°13.9', longitude 88°53.6' in 1968 from a source not readily ascertainable, formerly originated as a bridge from T-3701 (1916-17). This feature was not verified or disproved on the present survey and should be retained on the chart.

(6) Piles charted in latitude  $30^{\circ}13.84'$ , longitude  $88^{\circ}53.72'$  from the advance manuscript T-13033 should be relabeled pile.

Except as noted above, the present survey is adequate to supersede the charted hydrography within the common area.

B. Topography

The shoreline charted in the area of Ship Island originates with information subsequent to the date of the survey and should be retained on the chart.

C. Controlling Depths

The table of controlling depths is based on Corps of Engineers data subsequent to the present survey and supersedes the present survey information.

D. Aids to Navigation

The charted aids adequately mark the features intended.

7. Compliance with Instructions

The present survey adequately complies with Project Instructions.

8. Additional Field Work

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

Examined and Approved:

a. J. Patail  
Chief  
Marine Surveys Division

L. Gustafson  
Associate Director  
Office of Marine Surveys  
and Maps

PE

OPR 468

10/25/68

9/3/69

10/30/69

4/17/69



DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Ocean Survey  
Rockville, Maryland

Hydrographic Index No. 86 E

