H10113

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. WH-40-01-83

Registry No. H-10113

LOCALITY

State Alabama--Mississippi

General Locality Gulf of Mexico

Sublocality 30 Miles SSW of Mobile Bay

19 83

CHIEF OF PARTY
LCDR D.L. Suloff

LIBRARY & ARCHIVES

DATE May 29, 1986

DIAGRAM 1115-3

Charts

11360
11006
411

NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

H-10113

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.

WH-40-1-83

State Alabama -- MISSISSIPPI

General locality Gulf of Mexico

Locality ~~Offshore Alabama~~ 30 MILES SSW OF MOBILE BAY

Scale 1:40,000 Date of survey 25 August - 22 September, 1983

Instructions dated 26 November, 1982 Project No. OPR-J217-WH-83

Vessel NOAA Ship WHITING S-329 (2930)

Chief of party CDR Roy K. Matsushige, LCDR Donald L. Suloff

Surveyed by PDW, VNS, MEH, PJR, TAW, PMK

Soundings taken by echo sounder, ~~hand lead, pole~~ Ross Model 5000 fineline echo sounder

Graphic record scaled by WHITING personnel

Graphic record checked by VNS, MEH, PJR, TAW, PMK, frc mf, jaz, ab, jr, jb,

Protracted by Smooth Sheet Automated plot by ~~Hydroplot~~ XYNETIC PLOTTER (AMC) 1201

Verification by ~~WHITING personnel~~ M. W. HOLLOWAY

Soundings in ~~fathoms~~ feet at ~~MLW~~ MLLW

REMARKS: NOTES IN RED, IN DESCRIPTIVE REPORT WERE MADE DURING OFFICE PROCESSING.

STANDARDS CK'D 5-30-86
C. Clay

ADMIN/SURFV - 3/9/89, SJ/

SC 5-2-97

JWW 10/23/92

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. G.P.O. 1972-769-565/519 REG.#6

PROGRESS SKETCH

OPR - J217-WH-83

GULF of MEXICO

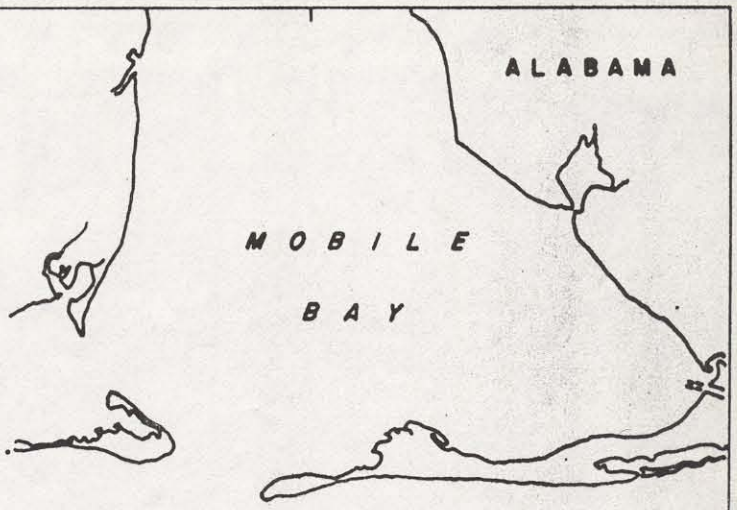
Aug-Sept 1983

NOAA Ship WHITING

CDR. Roy K. Matsushige -Aug.

Commanding

LCDR. Donald L. Suloff -Sept.

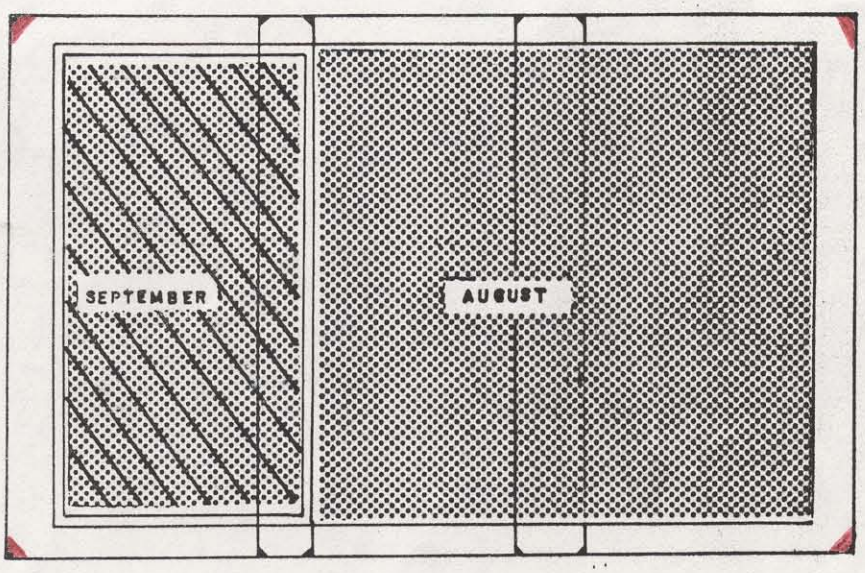


LEGEND

	Aug.	Sept.
LNM Sdg. Lines	1284	1811
SNM Hydrography	255	130
LNM Misc. Dist.	363	808
LNM Dist. To & From	120	360
Stations Recovered	7	0
Electronic Stations	2	2
Bottom Samples Taken	0	69
TDC Cast	0	1
Nansen Cast	0	0
Hydro Coverage		

30° 00'

30° 00'



29° 30'

29° 30'

From Chart 11300

Scale 1:460,732

88° 30'

88° 00'

DESCRIPTIVE REPORT

TO ACCOMPANY

BASIC HYDROGRAPHIC SURVEY

WH-40-1-83

H-10113

SCALE 1:40,000

SURVEYED 25 AUGUST - 22 SEPTEMBER 1983

NOAA SHIP WHITING (S-329)

CDR ROY K. MATSUSHIGE, NOAA

LCDR DONALD L. SULOFF, NOAA

COMMANDING OFFICERS

DESCRIPTIVE REPORT

ATTACHMENTS

* DATA REMOVED FROM DESCRIPTIVE REPORT.

A. PROJECT

Hydrographic Survey H-10113 was performed in accordance with Project Instructions OPR-J217-WH-83, Gulf of Mexico, Alabama, dated 26 November 1982, as supplemented by Change No. 1, dated 05 August 1983. The purpose of this project was to obtain modern hydrographic data for the revision of existing nautical charts of the approach to Mobile Bay.

B. AREA SURVEYED:

The area surveyed is the Gulf of Mexico, ~~23~~ 30 miles ~~south~~ SSW of Mobile Bay Entrance, Alabama, and is bounded by the following points:

~~29°35'00"N 87°36'00"W~~	29°-34'-48"N 87°-57'-36"W
~~29°51'00"N 87°36'00"W~~	29°-34'-48"N 88°-25'-30"W
~~29°51'00"N 88°25'00"W~~	29°-51'-12"N 88°-25'-30"W
~~29°35'00"N 88°25'00"W~~	29°-51'-12"N 87°-57'-36"W

This survey was conducted from 25 August to 22 September 1983, Julian Days 237-265.

C. SOUNDING VESSEL

The sounding vessel used throughout this survey was the NOAA Ship WHITING, EDP Number ~~2930~~ 3290. The WHITING was equipped with standard hydrographic equipment. The Argo Electronic Positioning System was used in this survey. Only minor problems were encountered with the Argo equipment. However, the system remained stable throughout numerous thunderstorms and squalls.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The sounding equipment used throughout this survey was the Ross Model 5000 Fine Line Echo Sounder, serial numbers 1053 and 1052. Proper belt tension could not be achieved during this survey on recorder 1053. To ensure correct analog recording, the blanking was set to a depth of 5 to 20 feet shoaler than the sounding depth. In this way, a constant phase check was ensured and a comparison of the analog and digital reading of the depth showed this to be a good practice. There was no other instrument error encountered for echo sounder 1053, and no problems at all for recorder 1052. An EG&G side scan sonar system was used on JDs 251-253. The only problem encountered with this system was a dark trace throughout most of its use.

The following procedures were used to determine the corrections to echo soundings:

Velocity Corrections - A TDC cast (using a Martek TDC, s/n 217, calibrated in February 1983) was taken on 8 September 1983, JD 251, in 140 feet of water at postion 22°34'30"N, 88°23'48"W. The value of this cast was compared to a Nansen cast taken in March of 1982. The values are in close agreement. The data and resultant graph can be found in Attachment D.

SEE ALSO SECTION 4.d. of the EVALUATION REPORT.

TRA Corrections - Fore and aft draft readings were taken at the beginning and end of each trip. These readings were then averaged to obtain the mean draft for each working period. A leadline comparison was taken on 23 September, JD 266, in 24 feet of water. There was no significant instrument error found. SEE ALSO 4.C. AND 4.E. OF THE EVALUATION REPORT.

Predicted Tides - Tide correctors for the smooth field sheets were determined from logger tapes and tide tapes produced by WHITING personnel. The reference gage used was the Pensacola station (872-9850).

Settlement & Squat - Trials were run on 2 September, JD 245, at 29°51'19"N, 88°04'56"W, in approximately 112 feet of water using Ross Echo Sounder s/n 1053. The resultant graph showed the data not to be consistent with historical data; therefore, the hydrographer feels that the historical data should be used for this survey. All data are included in Attachment D.
SEE ALSO SECTION 4.F. OF THE EVALUATION REPORT.

E. HYDROGRAPHIC SHEETS (FIELD SHEETS)

All field sheets were prepared by WHITING personnel using a Houston Instrument DP-3 Roll Plotter (s/n 5848-22). This survey was divided into three sheets (East, Central, and West) with a Skew of 90 degrees and the following origins:

East	29°34'00"N, 87°56'00"W
Central	29°34'00"N, 88°06'00"W
West	29°34'00"N, 88°16'00"W

The three sheets are bounded by the following points:

EAST SHEET		CENTRAL SHEET		WEST SHEET	
29°35'00"N	87°36'00"W	29°35'00"N	88°06'16"W	29°35'00"N	88°06'10"W
29°51'00"N	87°36'00"W	29°51'00"N	88°06'16"W	29°51'00"N	88°06'10"W
29°51'00"N	88°06'16"W	29°51'00"N	88°16'10"W	29°51'00"N	88°25'30"W
29°35'00"N	88°06'16"W	29°35'00"N	88°16'10"W	29°35'00"N	88°25'30"W

A total of 15 plotted sheets are submitted with this survey: 4 rough field sheets with mainscheme, crosslines, developments and bottom samples; and 11 smooth field sheets with mainscheme, crosslines, developments and bottom samples.

All plotted sheets and field records have been submitted to N/MOA23, Hydrographic Surveys Branch, for verification.

During the preparation of the final field sheets, a shift was discovered in several mainscheme lines. Through investigation this shift was determined to be caused by a malfunctioning plotter during the final plot. The shift was not due to an electronic failure or bad calibration data during on-line hydrography. CONCUR

F. CONTROL STATIONS

The following signals were used for electronic positioning control and visual calibration signals:

Signal No.	Name	Year Est'd
001	CLAUSEN RM3 1955 300862 1019	1955
002	WHITING 82	1982
005	H-61-03-AL G 16674	1981
007	H-61-01-AL G 16674	1981
010	Sand Island Lighthouse	1930
014	Mobile Point Rear Range Light	1982

These were all previously established stations. Data on these stations was derived from NOS horizontal control data quads. The datum for all stations is the 1927 North American Datum. SEE ALSO SECTION 2.9. of the EVALUATION REPORT.

G. HYDROGRAPHIC POSITION CONTROL

Range/range position control was used throughout this survey by the WHITING. The Argo (Automatic Ranging Grid Overlay) DM-54 Positioning System was used for all hydrography. Time slots used were 02/07/00/00 with a smoothing code of 03 and a frequency of 1646.7 KHz.

Frequent problems were encountered with this system due to adverse weather and changing atmospherics associated with sunrise and sunset. The majority of the problems were encountered by Station CLAUSEN which was at a greater distance from the working area.

The following component and serial number was used aboard the WHITING:

Station Name	ALU	RPU
	A047854	R0682571

The following compenents and serial numbers were used at the shore stations:

Station Name	ALU	RPU
WHITING 82		
JD 237-265	A047853	R0379122
CLAUSEN RM3		
JD237-245	A047858	R0682564
JD249-261	A047858	R047851
JD262-265	A0379124	R0682566

Slave unit stations were chosen so that the intersection angles between ranges within the working area would be greater than 30 degrees and less than 150 degrees. All range/range data for this survey was recorded in real time using RK112.

Calibrations for the Argo system were computed in accordance with Section 4.4.2.1 of the Hydrographic Manual. The calibration method used was the three point sextant fix with check angle. On-line partial correctors were based on the opening calibration and were entered into the on-line Program RK112 via the NAVCAL feature. The WHITING deployed two calibration buoys during this survey (JDs 238 and 244). These two buoys, along with the oil rig Penrod 82, were used daily as a check on whole lane count. Visual calibrations were performed at the beginning and end of each trip to establish and verify on-line partial correctors. The buoy deployed on JD 244 was reported by the WHITING to be missing on JD 267. Complete information on the buoys can be found in Attachment J, Supplemental Information. SEE ALSO SECTION N of this DESCRIPTIVE REPORT.

An ANDIST correction of 5.5 meters was applied to all data to account for the difference in position of the Argo antenna and the Ross transducer.

All calibration data for this survey is considered adequate, and no problems were encountered which would have degraded position accuracy. All values are shown on the electronic corrector abstract (Attachment E) and the calibration data is included in the supplemental data folder.

H. SHORELINE

There was no shoreline requirement for this survey, as per Project Instruction Section 4.2.1. SEE ALSO SECTION 2.b. of the EVALUATION REPORT.

I. CROSSLINES

145 miles of crosslines were run, which is 5% of the mainscheme. Agreement with the mainscheme was generally very good.

96% of the crosslines agreed within 0-3 feet with the remaining 4% agreeing within 4 feet. This meets the criteria stated in the Hydrographic Manual, Section 4.6.1. SEE ALSO SECTION 3.a. of the EVALUATION REPORT.

J. JUNCTIONS

This survey was junctioned with survey H-10001, 1:40,000, 1982. comparison with this survey was very good with 95% of the soundings agreeing within 0-2 feet and 100% agreeing within 4 feet, which meets the criterion stated in the Hydrographic Manual, Section 4.6.2. SEE ALSO SECTION 5.a. of the EVALUATION REPORT.

K. COMPARISON WITH PRIOR SURVEYS

SEE also SECTION 6. of the EVALUATION REPORT.

The following prior surveys were compared with survey H-10113:

Registry No.	Scale	Year Surveyed
H-6550	1:80,000	1940
H-6552	1:40,000	1940
H-6556	1:80,000	1940
H-6688	1:40,000	1941

All soundings on H-6550 agreed within one fathom, with the prior survey generally being shoaler.

The general contour of survey H-6552 remained unchanged, showing a gradual slope. Differences between the old and new contours may be attributed to line spacing of the prior survey being approximately 1600 meters. 94% of the soundings were within 0-2 feet, with the prior survey being generally shoaler.

Survey H-6650 showed the same irregular bottom at a general depth of 120 feet (varying as much as six feet) seen on the east sheet. The difference in contours can be attributed to the prior survey being in fathoms with line spacing of 1500 meters. All depths are within one fathom.

Survey H-6688 showed similar contours with differences attributable to wider line spacing in the prior survey. 97% of the soundings agreed within 0-2 feet.

In all cases, prior surveys were generally shoaler than survey H-10113. It is possible that the recent mass drilling for oil has caused the settling of the ocean bottom. This has been evidenced before on other contemporary surveys of this area.

The following PSR Items were investigated during this survey:

Item No.	Description	Charted Position	Source
2714	Obstruction	29°37'13"N, 88°24'27"W	LNM 34/72
2715	Obstruction	25°50'30"N, 88°12'18"W	LNM 33/82
"ORE II"	Obstruction (not charted)	29°24'N, 88°01'W	NOAA Ship OREGON II via N/MOA11

PSR Item 2714 was reported to be an obstruction with a least depth of 40 feet. Survey requirements were a full investigation with 400% side scan sonar with a one nautical mile radius. The required investigation was performed on JD's 252-253. The results were inconclusive. An apparent contact was found on the starboard channel of the sonar during a west running line. This same line was then rerun in an east direction and again in a west direction with no contact. The normal search pattern was continued until completion. At completion, the contact line was again run in a west direction with an apparent contact found on the starboard channel, and in an east direction with no contact. Side scan operations were terminated and a standard echo sounder search was initiated over the apparent contact with line spacing reduced to 10 meters. The position of the contact was computed using standard trigonometric equations. Such factors as depth of the fish in the water, precise angle of tow line, displacement of fish from directly astern, were approximations at best, and as such the position computed is not as accurate as desired. The approximate computed position of the apparent contact is 29°38'09.9"N, 88°24'40.8"W. A star pattern echo sounder search was also conducted over the position with no contact located. A dive on the site was planned but not performed as an exact position on the apparent contact could not be determined. Due to the fact that an apparent contact was found by the side scan sonar search, and that local fishermen report catching their nets on something in the area, the hydrographer recommends retaining the obstruction as charted. CONCUR Even though an exact position could not be determined via echo sounder searches, the hydrographer recommends updating the chart to include the computed position above. It is recommended that a wire drag investigation be undertaken by the NOAA Ships RUDE and HECK if absolute verification or disproval is considered necessary. SEE ALSO SECTION 7.a.1) of the EVALUATION REPORT. VEDM

PSR Item 2715 was reported to be eight rounds of high explosive forty millimeter projectiles. The item was an information item only. No trace was found on the echograms during normal hydrography. Due to the nature of the item, it is recommended by the hydrographer that the item remain as charted. SEE SECTION 7.a.2) of the EVALUATION REPORT ✓EDM

The last PSR Item, designated "ORE II" was assigned to this survey ~~by~~ VIA TELEPHONE MOA11 on September 16, 1983. The NOAA Ship OREGON II reported losing its gear in 40 fathoms of water. The object was reported to be 300 feet long, rising 20 feet off the bottom. The spot was reported to be marked with a buoy and the LORAN-C rates were recorded. The WHITING investigated this item on 20 and 21 September, JD's 263-264. The WHITING searched for the buoy for two hours with no sighting. Hydrography was begun and a spike was found rising ~~39~~ 40 feet off the bottom in a general depth of 245 feet. During the immediate investigation, four more spikes were found. A pattern of 20 meter line spacing was run for a total of 16 hours in seas of 1-2 feet. The investigation showed one extensive feature and three separate features. The extensive feature runs a course of 120/300 degrees and is approximately 2000 meters long. Although the apparent southeastern limit of the feature was NOT determined, it may extend further to the northwest. A time constraint placed on the investigation by MOA11 precluded additional investigation. This same time constraint precluded a side scan sonar search. The return of the contacts on the echo sounder most nearly resembles a fault zone with associated volcanic pinnacles, but this is an unlikely description for this area. The general depths preclude this feature from being a hazard to navigation, CONCUR however it is definitely hazardous to bottom trawls. The hydrographer

recommends that further field work might be done perhaps by NOAA's Atlantic Oceanographic and Meteorological Laboratory or a NOAA Sea Grant University with geological/oceanographic interests such as Texas A & M University.

SEE also SECTION 7.a.3) of the EVALUATION REPORT.

PSR Item 2715 was reported to be eight rounds of high explosive forty millimeter projectiles. The item was an information item only. No trace was found on the echograms during normal hydrography. Due to the nature of the item, it is recommended by the hydrographer that the item remain as charted.

The last PSR Item, designated "ORE II" was assigned to this survey by MOA11 on September 16, 1983. The NOAA Ship OREGON II reported losing its gear in 40 fathoms of water. The object was reported to be 300 feet long, rising 20 feet off the bottom. The spot was reported to be marked with a buoy and the LORAN-C rates were recorded. The WHITING investigated this item on 20 and 21 September, JD's 263-264. The WHITING searched for the buoy for two hours with no sighting. Hydrography was begun and a spike was found rising 39 feet off the bottom in a general depth of 245 feet. During the immediate investigation, four more spikes were found. A pattern of 20 meter line spacing was run for a total of 16 hours in seas of 1-2 feet. The investigation showed one extensive feature and three separate features. The extensive feature runs a course of 120/300 degrees and is approximately 2000 meters long. The return of the contacts on the echo sounder most nearly resembles a fault zone with associated volcanic pinnacles, but this is an unlikely description for this area. The general depths preclude this from being a hazard to navigation, however it is definitely hazardous to bottom trawls. The hydrographer recommends that further field work might be done by NOAA's Atlantic Oceanographic and Meteorological Laboratory or a NOAA Sea Grant University with geological/oceanographic interests such as Texas A & M University.

DISREGARD same DATE as ON P.6 of this DESCRIPTIVE REPORT

L. COMPARISON WITH THE CHART

H-10113 was compared with NOS Chart 11360, 26th Edition, January 30, 1982, scale 1:456,394. Additionally, H-10113 was compared with NOS Chart 11360, 27th Edition, October 30, 1982, scale 1:456,394. Agreement with both chart editions was good. Soundings from the charts were consistently shoaler than the surveyed soundings by as much as six feet. There was no apparent pattern to the distribution of these differences. These differences may be attributed to the general subsidence of the Gulf of Mexico Basin. SEE ALSO SECTION 7 of the EVALUATION REPORT.

M. ADEQUACY OF SURVEY

This survey was conducted in accordance with the Project Instructions and the Hydrographic Manual. The following areas are the only ones in which hydrography did not accomplish its intended mission.

The WHITING investigated PSR Item 2714 as per Section 6.11 of the project instructions and the Automated Wreck and Obstruction Information System. As stated in Section K, conclusive evidence of the existence or non-existence of the obstruction was not found so verification or disproval was not made. With this exception, this survey is considered complete and adequate to superscede all prior surveys for charting. SEE ALSO SECTION 7.a.1) of the EVALUATION REPORT.

N. AIDS TO NAVIGATION

The only aid to navigation located within the limits of this survey is an oil rig that was established during this survey. Its position was determined by less than third order methods but was positioned by hydrographic methods (Argo) as per 4.2.2.5 of the Project Instructions. The rig is a jack-up type, 200 feet long by 300 feet wide. The position determined for the rig (named Penrod 82) is Latitude, 29°39'50.45"N, Longitude 88°13'59.64"W. The position is on the drilling tower as shown in the photograph in Attachment J. The rig was observed to be brightly lit at all times. There was no strobe light on the rig. SEE ALSO SECTION 4.a. AND 7.b. of the EVALUATION REPORT.

O. STATISTICS

Total Nautical Miles of Hydrography	3228
Total Square Miles of Hydrography	392
Tide Stations	5
Total Positions	4836
Bottom Samples	69
TDC Casts	1
Electronic Control Stations	2

P. MISCELLANEOUS

Loran-C was collected throughout this survey by interfacing a Raytheon Raynav 6000 with RK-112. All data has been submitted to N/MOA23. There was no malfunction of the Loran-C equipment.

Coast Pilot data was not collected during this survey. The vessel operated far offshore from specific Coast Pilot descriptions and found no opportunity to make a special investigation.

Current observations were not performed as suggested by Section 8.2.2 of the project instructions.

Bottom samples have been submitted to the Smithsonian Institution as per Section 8.1 of the Project Instructions.

On several occasions, the gyro repeater input to the on-line program RK112 was erratic. This was found to be caused by transmissions from the Sunair HF radio. The masters were not edited to correct these erratic headings as the exact heading could not be determined. If necessary, the headings can be edited to show the base course of the line.

A unique geological feature was discovered during the "ORE II" investigation. For a complete report, see Section K, Comparison with Prior Surveys.

Q. RECOMMENDATIONS

Survey H-10113 is adequate as presented and no further field work is recommended. See recommendations in Section K (Comparison with Prior Surveys). CONCUR

R. AUTOMATED DATA PROCESSING

Program	Description	Version Date
RK112	Range/Range Real-Time Hydroplot	08/04/81
RK201	Grid, Signal and Lattice Plot	04/18/81
RK211	Range/Range Non-Real Time Plot	02/02/81
RK300	Utility Computations	10/21/80
RK330	Data Reformat and Check	05/04/76
AM530	Layer Corrector For Velocity	05/10/76
RK561	Range/Range Geodetic Calibration	12/01/82
AM602	Extended Line Oriented Editor	12/08/82

S. REFERRAL TO REPORTS

No additional reports are being submitted.

Respectfully submitted,

Thomas A. Wolf, Ensign, NOAA
NOAA Ship WHITING S-329

MASTER SIGNAL TAPE LISTING

OPR-J217-WHITING 1982

**	001	6	30	23	03963	086	26	50475	250	0006	171870	CLAUSEN RM3 1955 300862 1019
***	002	6	30	13	36330	088	01	31070	250	0001	171870	WHITING 82 1982
*	003	6	30	13	52256	087	59	21068	139	0000	000000	H-61-05-AL 1981 G 16674
*	004	6	30	13	50829	087	59	52270	139	0000	000000	H-61-04-AL 1981 G 16674
*	005	6	30	13	55608	087	57	50908	139	0000	000000	H-61-03-AL 1981 G 16674
*	006	6	30	13	46648	087	58	05173	139	0000	000000	H-61-02-AL 1981 G 16674 destroyed
*	007	6	30	13	26995	088	00	33550	139	0000	000000	H-61-01-AL 1981 G 16674
**	008	6	30	13	42022	088	01	23698	139	0000	000000	FORT MORGAN 1846 300882 1042
*	009	6	30	13	42242	088	01	23852	139	0000	000000	FORT MORGAN 1846 ECC 198
**	010	6	30	11	14826	088	03	02235	139	0000	000000	SAND ISLAND LIGHTHOUSE 19 300882 1062
*	011	6	30	14	52295	088	04	29341	139	0000	000000	FORT GAINES USE 1958
***	012	6	30	13	18826	088	01	35867	139	0000	000000	MOBILE POINT FRONT RANGE LIGHT 1982
***	014	6	30	13	40773	088	01	26553	139	0000	000000	MOBILE POINT REAR RANGE LIGHT 1982
**	015	6	30	15	11959	088	06	44901	139	0000	000000	DAUPHIN ISLAND, WATER TAN 300882 1102
***	076	6	30	19	55431	087	08	29041	139	0000	000000	PENSACOLA BEACH TANK 1978
****	082	6	30	20	26339	087	05	51599	139	0000	000000	PENSACOLA BEACH EAST TANK
**	106	6	30	21	35305	087	10	56109	139	0000	000000	GULF BREEZE TANK 1981
**	111	6	30	20	47316	087	16	06799	139	0000	000000	PENSACOLA USN AIR STA PWR 300872 1137 193
**	114	6	30	20	45346	087	18	29205	139	0000	000000	PENSACOLA LIGHTHOUSE CENT 300872 1120
****	122	6	30	21	48807	087	16	24844	139	0000	000000	NAVY YARD SUPPLY TANK
**	124	6	30	20	49163	087	18	37416	139	0000	000000	SHERMAN FIELD TANK 1981
**	132	6	30	19	08571	087	25	32464	139	0000	000000	ESCAMBIA COUNTY TANK 198
**	134	6	30	17	42154	087	29	07651	139	0000	000000	ONO ISLAND TANK 1981

*NGS Unpublished ***WHITING Personnel
**NGS Publication ****Field Party

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

- [X] TO BE CHARTED
- [ ] TO BE REVISED
- [ ] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
NOAA Ship WHITING	ALABAMA	Offshore Mobile Bay	10/31/83

The following objects HAVE [X] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
J217-WH-83		H-10113	NAD 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
RIG	200' x 300' jack-up oil rig (no strobe)	29 39	50.45	88 13	59.64			11360
	INSERTED AS POSITION 4635							
	SEE also section 7.D. of the							
	EVALUATION REPORT.							

55

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD		☐ PHOTO FIELD PARTY ☐ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED		FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

☆ U.S.GPO:1975-0-665-080/1155

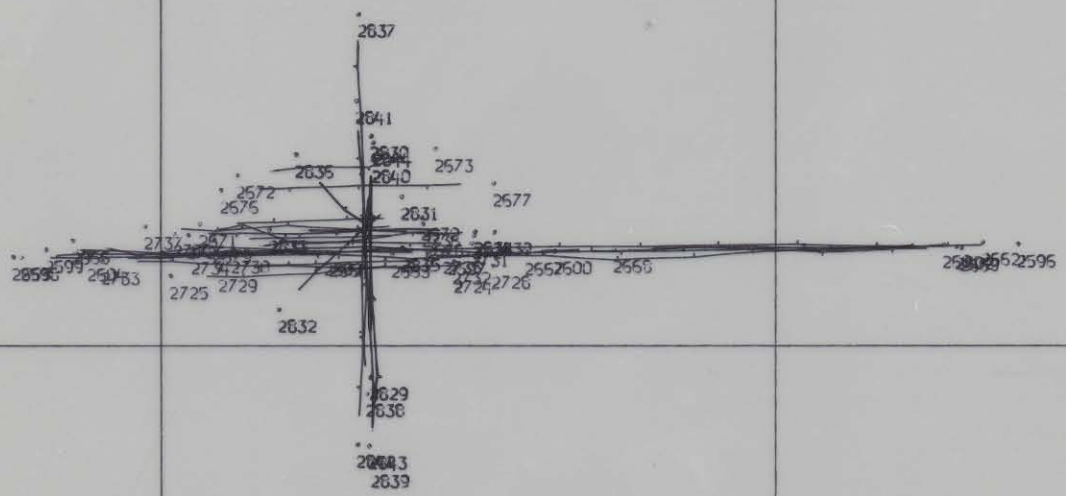
This hydrographic survey was conducted in accordance with the Project Instructions, as amended by Change Number 1, and the Hydrographic Manual. The effort was under the daily supervision of Commander Roy K. Matsushige, NOAA, Commanding Officer of the NOAA Ship WHITING (S-329), during the period from August 25, 1983, through September 16, 1983, and under my daily supervision during the period from September 17, 1983, through September 22, 1983. I have reviewed the sheets in their entirety and spot checked all records. Except as noted within the text of this Descriptive Report, I find the survey adequate for charting, and recommend no further field work.

Donald L. Suloff

Donald L. Suloff, LCDR, NOAA
Commanding Officer
NOAA Ship WHITING (S-329)

88° 25′ 88° 24′

29° 39′ 29° 39′



29° 38′ 29° 38′

PSR Item 2714

Scale 1:20,000

Position Overlay

To Accompany H-10113

29° 37′ 29° 37′

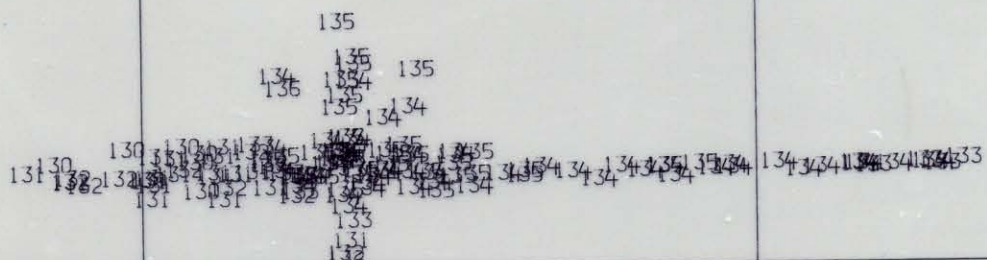
88° 25′ 88° 24′

88° 25′

88° 24′

29° 39′

29° 39′



29° 38′

29° 38′

PSR Item 2714

Scale 1:20,000

Excess Level 3

To Accompany H-10113

29° 37′

29° 37′

88° 25′

88° 24′

88° 25′ 88° 24′

29° 39′ 29° 39′

128 131 131 134 135 133

29° 38′ 29° 38′

128

PSR Item 2714

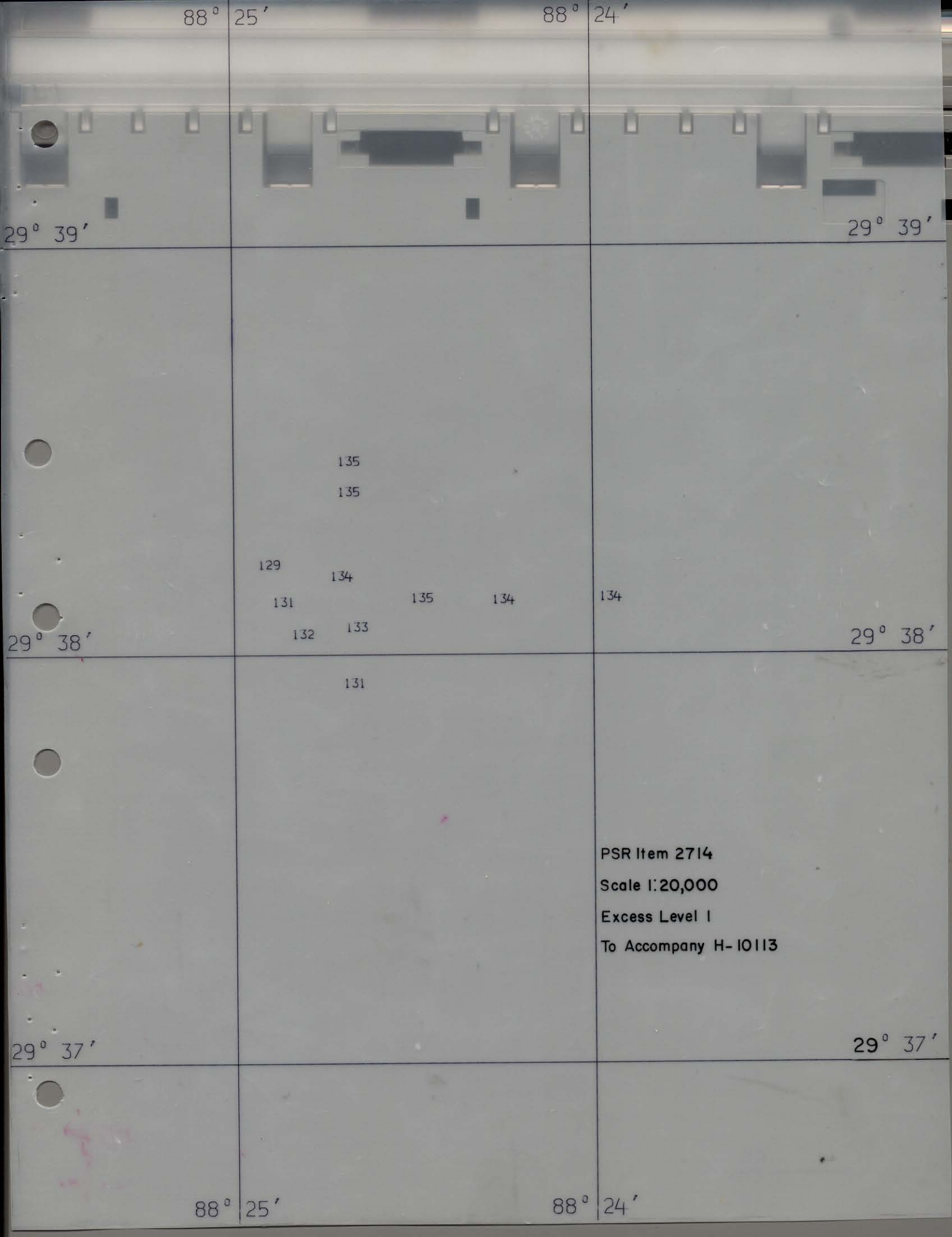
Scale 1:20,000

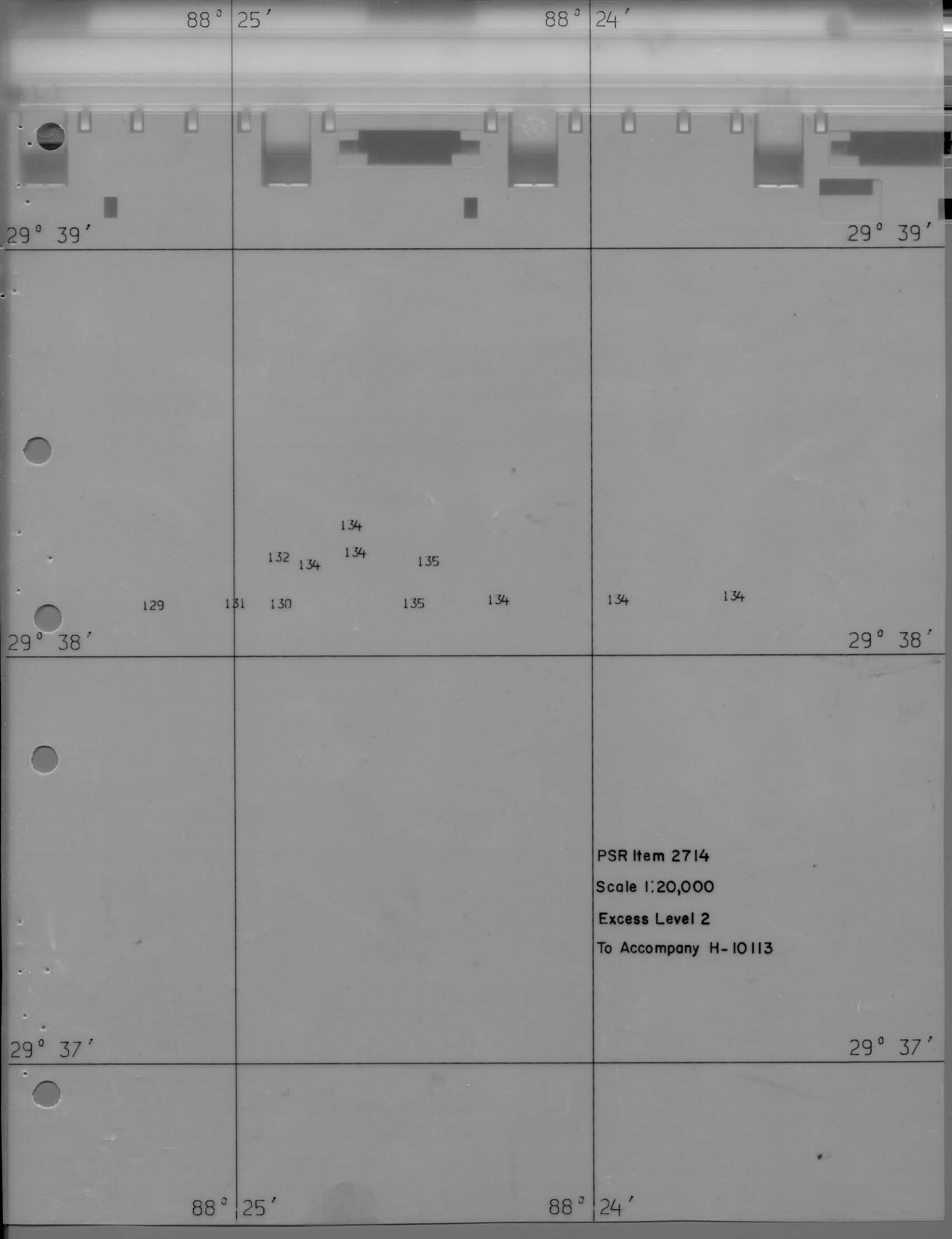
Excess Level 0

To Accompany H-10113

29° 37′ 29° 37′

88° 25′ 88° 24′


88° 25'
88° 24'
29° 39'
29° 39'
135
135
129
134
131
135
134
134
132
133
29° 38'
29° 38'
131
PSR Item 2714
Scale 1:20,000
Excess Level 1
To Accompany H-10113
29° 37'
29° 37'
88° 25'
88° 24'


88° 25'
88° 24'
29° 39'
29° 39'
134
132
134
134
135
129
131
130
135
134
134
134
29° 38'
29° 38'
PSR Item 2714
Scale 1:20,000
Excess Level 2
To Accompany H-10113
29° 37'
29° 37'
88° 25'
88° 24'

December 9, 1983

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

Tide Station Used (NOAA Form 77-12): 873-5780, Dauphin Island, Alabama

Period: August 25 - September 22, 1983

HYDROGRAPHIC SHEET: H - 10113

OPR: J 217

Locality: Offshore Alabama Coast

Plane of reference (mean lower low water): 2.68 Ft.

Height of Mean High Water above Plane of Reference is 1.2 FT.

REMARKS: Recommended Zoning

Apply a - 15 minute time correction

James R Hubbard
Chief, Datums and Information Branch

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10113

Name on Survey	A ON CHART NO. 11360	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
ALABAMA (title)										1
GULF OF MEXICO (title)										2
MISSISSIPPI (title)										3
MOBILE BAY (title)										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
					Approved:					19
					Charles E. Harrington					20
					Chief Geographer - N/CG2x5					21
										22
					FEB 19 1986					23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: H-10113

Number of positions		4738
Number of soundings		32063
Number of control stations		6

	TIME-HOURS	DATE COMPLETED
Preprocessing Examination	34	11/28/83
Verification of Field Data	465	06/11/85
Quality Control Checks	78	
Evaluation and Analysis	39	05/02/86
Final Inspection	13	04/28/86
TOTAL TIME	629	
Marine Center Approval		04/30/86

Transmittal letter of survey and survey records will be included in the Descriptive Report to identify the records accompanying the survey.

ATLANTIC MARINE CENTER
EVALUATION REPORT

SURVEY NO.: H-10113 FIELD NO.: WH-40-1-83

Alabama--Mississippi, Gulf of Mexico, 30 Miles SSW of Mobile Bay

SURVEYED: 25 August through 22 September, 1983

SCALE: 1:40,000 and
1:20,000 Inset

PROJECT NO.: J217-WH-83

SOUNDINGS: Ross Digital
Echo Sounder

CONTROL: CUBIC WESTERN DM54
ARGO (Range/Range)

Chief of Party.....R. K. Matsushige
.....D. L. Suloff

Surveyed by.....P. L. Wheling
.....M. E. Henderson
.....P. J. Ruiz
.....T. A. Wolf
.....V. N. Shaffer
.....P. M. Kenul

Automated Plot by.....XYNETICS 1201 Plotter (AMC)

1. INTRODUCTION

a. No unusual problems were encountered during office processing.

b. Notes in the Descriptive Report were made in red during office processing.

c. The digital records for this survey contain multiple header records identifying two digital files: the main sheet and inset number one.

2. CONTROL AND SHORELINE

a. Control is adequately discussed in sections F. and G. of the Descriptive Report.

b. There is no shoreline within the limits of this survey.

3. HYDROGRAPHY

a. Soundings at crossings are in excellent agreement and comply with the criteria found in sections 4.6.1. and 6.3.4.3. of the HYDROGRAPHIC MANUAL.

b. The standard 120 foot depth curve could be drawn in its entirety. Additional dashed and brown curves were drawn to better show bottom relief.

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

4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records and reports are adequate and conform to the requirements of the HYDROGRAPHIC MANUAL with the following exceptions:

a. The field unit failed to provide data supporting the location of the oil platform "PENROD 1982". A position was computed in the field, but no data was received to verify the position. Additionally, the Eighth Coast Guard District was contacted on June 7, 1985, and it was determined that this oil platform has been relocated twelve (12) times since Local Notice to Mariners 38 of 1983 (LNM 38/83). It is recommended that the oil platform not be plotted as shown on the present survey. It is further recommended that the chart compiler assure whether a need exists for plotting this oil rig on the chart.

b. The hydrographer did not submit a side scan sonar log for this survey. Side scan sonargrams were not annotated correctly as required by section 7.12.3. of the Project Instructions. Also, the field unit did not submit a side scan sonar overlay for the present survey as required by section 7.12.3.1. of the Project Instructions.

c. Sounding corrector abstracts submitted by the field unit were not correct. The proper vessel draft was found on page 19 of the Descriptive Report. The correct values for vessel draft were applied during office processing.

d. The velocity graph submitted by the field unit did not include depths below 145 feet. The velocity graph was extended to incorporate the deeper depths during office processing.

e. The vertical lead-line cast log was filled out incorrectly. Apparently lead-line depths were not taken on the port side of the ship, and the corrector to the water line was entered in the column for port side lead-line readings. Original vertical cast data was not submitted by the field unit as required by section 4.9.5.1.2. of the HYDROGRAPHIC MANUAL.

f. The settlement and squat test performed on 2 September 1983 was not used because it did not agree with historical settlement and squat test data. During the 19 March 1982 settlement and squat test the WHITING had only one (1) launch in the davits when the test was run. The ship operated with two

(2) launches aboard during the present survey. The 19 March 1982 settlement and squat data was used for this survey. The 19 March 1982 settlement and squat data was compared with a 26 April 1982 settlement and squat data which had two (2) launches in the davits. Difference between the two (2) settlement and squat tests does not significantly impact the quality of the survey.

g. Insufficient raw data was submitted by the field for checking computations of the position of a side scan sonar contact found in Latitude 29°38'09.90"N, Longitude 88°24'40.80"W. This contact was found while investigating Automated Wreck and Obstruction Information System (AWOIS) ITEM #2714, a charted submerged obstruction, PA, in Latitude 29°37'13.00"N, Longitude 83°24'27.00"W. Two side scan sonar contacts were noted during office processing in approximate positions: Latitude 29°38'09.60"N, Longitude 88°24'24.00"W and Latitude29°36'54.00"N, Longitude 86°24'29.00"W. Both contacts were added by scaling the contact from the side scan records to the present survey. See also section 7.a.1) of this report. EdM

h. The hydrographer did not submit a negative dangers to navigation report in the Descriptive Report as required by section 6.12. of the Project Instructions.

i. Abstract of positions submitted by the field unit was not filled out correctly. The abstract of positions did not meet requirements as stated in section 7.12.3.1. of the Project Instructions.

5. JUNCTIONS

H-10001 (1982) to the east
H-10206 (1986) to the north

A Standard junction could not be effected with survey H-10001 (1982). Survey H-10001 (1982) is archived at National Ocean Service (NOS) Headquarters, Rockville, Maryland. Any adjustments to the depth curves in the junctional areas will have to be made at headquarters during chart compilation..

Survey H-10206 (1986) which junctions with the present survey to the north has not reached an appropriate stage in office processing; therefore, a junction between the two surveys can not be completed at this time. The junction between the present survey and survey H-10206 (1986) will be addressed in the Evaluation Report for survey H-10206 (1986).

There are no contemporary surveys to the south or west of the present survey. The charted depths and the present survey soundings are in harmony to the south and west.

6. COMPARISON WITH PRIOR SURVEYS

H-6550 (1940) 1:80,000
H-6552 (1940) 1:40,000
H-6656 (1940) 1:80,000
H-6688 (1941) 1:40,000

The four (4) prior surveys listed above cover the present survey area in its entirety.

Prior Survey H-6552 (1940) and prior survey H-6688 (1941) compare favorably and show a trend of being one (1) to three (3) feet shoaler than the present survey. There are some scattered soundings four (4) to six (6) feet shoaler with no apparent pattern.

Prior surveys H-6550 (1940) and H-6656 (1940) show a general trend of being one (1) to six (6) feet shoaler than present survey.

The overall present survey's deeper depths may be attributed to a combination of a present survey narrow beam echo sounder,the withdrawal of gas and oil in the area and subsequent subsidence of the bottom.

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

7. COMPARISON WITH CHART NO. 11360 (27th Edition Oct 30/82

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys. The following should be noted:

1) Automated Wreck and Obstruction Information System (AWOIS) ITEM #2714 a charted submerged obstruction, PA, (6 fms rep), in Latitude 29°37'13.00"N, Longitude 88°24'27.00"W, originates with Local Notice to Mariners 34 of 1972 (LNM 34/72). A least depth of forty (40) feet was reported. The item was searched for by hydrographer, and two (2) contacts were found approximately one (1) nautical mile north of the charted obstruction using side scan sonar. One contact was plotted by the field and labeled submerged obstruction, PA. Further examination of the sonargrams during office processing revealed that there are three (3) separate obstructions in the area. Approximate positions for the two additional contacts were determined and added to the present survey. The quality of the present survey's side scan sonar records was not considered sufficient to disprove the charted submerged obstruction. It is recommended that the charted submerged obstruction, PA, (6 fms rep), be retained as charted. The following contacts should be charted as portrayed on present survey as submerged obstruction, PA, in positions:

a) Latitude 29°38'09.90"N, Longitude 88°24'40.80"W
b) Latitude 29°38'09.60"N, Longitude 88°24'24.00"W

c) Latitude 29°36'54.00"N, Longitude 88°24'29.00"W ✓ EdM

2) AWOIS ITEM #2715 charted, unexploded projectiles, in Latitude 29°50'30.00"N, Longitude 88°12'48.00"W, originates with Local Notice to Mariners 33 of 1982 (LNM 33/82). The item was an information item only and negative results were found on echograms run on main scheme hydrography. It is recommended ✓ EdM that the item remain as charted.

3) Presurvey Review Item designated, "ORE II", in approximate Latitude 29°24'00"N, Longitude 88°01'00"W, was assigned to this survey via telephone by MOA 11 on September 16, 1983, and was searched for by hydrographer with negative results. However a bottom feature rising up to forty (40) feet shoaler than surrounding depths was discovered during the search in this area. A bottom sample on the feature would have been desirable. The feature is discussed in section K., page 5. of the Descriptive Report. It is recommended that this feature be charted as shown on the present survey.

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

b. Aids to Navigation

The hydrographer located one (1) fixed aid to navigation in the survey area. This aid which is on an oil platform appears adequate to serve it's intended purpose. The aid is no longer in the area that was charted during this survey as noted in section 4.a. of this report. It may be desirable to place a warning note on the chart concerning the portability of some oil and gas platforms.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the Project Instructions except as noted in other sections of this report.

9. ADDITIONAL FIELD WORK

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

for Leroy C. Sam
Maurice W. Holloway
Cartographic Technician
Verification of Field Data

Norris A. Wike
Cartographer
Evaluation and Analysis

Robert R. Hill
Senior Cartographic Technician
Verification Check

Inspection Report
H-10113

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts of the survey have been made. The survey complies with National Ocean Service requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report.

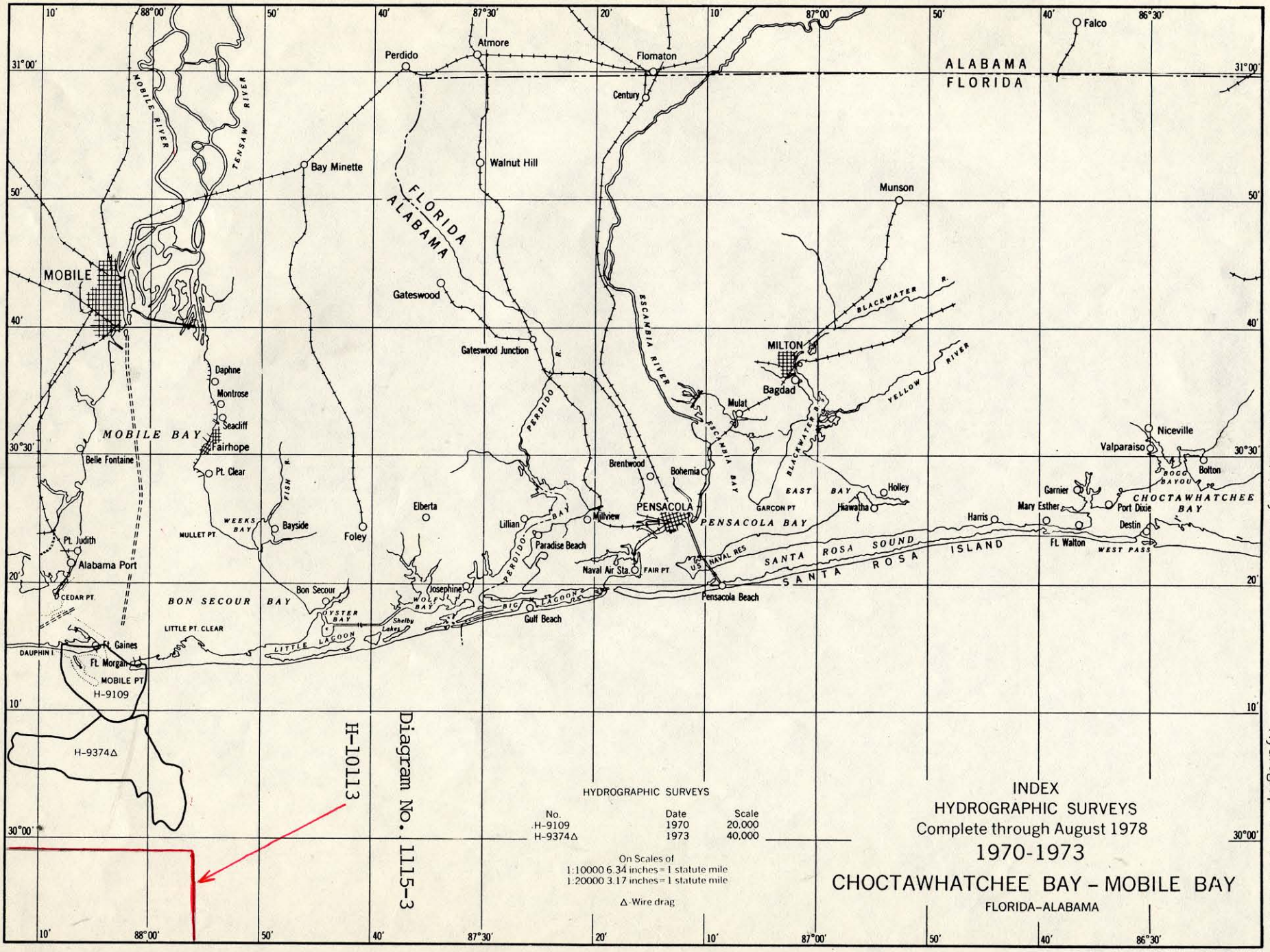
Inspected

R. D. Sanocki
Chief, Hydrographic Surveys
Processing Section
Hydrographic Surveys Branch

David B. MacFarland, Jr., CDR, NOAA
Chief, Hydrographic Surveys Branch

Approved: 30 April, 1986

Wesley V. Hull, RADM, NOAA
Director, Atlantic Marine Center



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

Hydrographic Index No. 85 F

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

SIGNED FOR NM
GDBU
Rec'd 11/17/89

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10113

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
11360	7-19-90	Ed Martin	Full ~~Part Before~~ After Marine Center Approval Signed Via ~~ltr~~
			Drawing No. 45
11006	1/11/91	ALMACEN	Full ~~Part Before~~ After Marine Center Approval Signed Via full application of sndgs
			Drawing No. from SS and one Inset sndg 38fms @ 29°23'30"N 88°01'30"W
4111	1/15/91	ALMACEN	Full ~~Part Before~~ After Marine Center Approval Signed Via full application of sndgs.
			Drawing No. from SS thru 11006. one Inset sndg 38fms @ 29°23'30"N, 88°01'30"W
11366	10-30-91	John Pierce	Full ~~Part Before.~~ After Marine Center Approval Signed Via
			Drawing No. New Chart
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.