

8796

Diag. Cht. Nos. 1278, 1279 & 1116-3.

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. **HY-40-2-64**
Office No. **HL-8796**

LOCALITY

State **Louisiana**
General Locality **Gulf of Mexico**
Locality ... **Vicinity of Calcasieu Pass**

19 64

CHIEF OF PARTY
V. R. Sobieralski

LIBRARY & ARCHIVES

DATE **1/25/67**

8796

HYDROGRAPHIC TITLE SHEET

H-8796

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.

HY-40-2-64

State Texas - LouisianaGeneral locality Gulf of MexicoLocality Vicinity of Calcasieu Pass
Sabine Bank Calcasieu Pass and VicinityScale 1:40,000Date of survey Aug. 28 to October 20, 1964Original Inst. dtd. 5/15/62; Supp. Inst. dtd. Instructions dated 7/15/63, Rev. Inst. dtd. 8/9/63, Project No. OPR-427Supp. Inst. dtd. 3/27/64, Proj. Inst. letter dtd. 5/12/64, Supp. Inst. dtd. 8/13/64Vessel USC&GS Ship HYDROGRAPHER and Launch HY-1Chief of party V. Ralph SobieralskiSurveyed by J.P. Randall, J. H. Allred, S. J. Ruden, W. R. Klesse, N. A. Barnes Jr.,
W.Y.S. Williams, J. T. Smith, M. A. LevitanSoundings taken by echo sounder, ~~handbook notes~~ DE-723 Serial Numbers 61-29 and 555Graphic record scaled by Ship PersonnelGraphic record checked by Ship PersonnelProtracted by to be smooth plotted, by Gerber Plotter, at Regional Office, Seattle, Wash.Soundings penciled by same as aboveSoundings in ~~feet~~ feet at MLW MOON

The procedure for processing and disposition of records is as follows:

REMARKS: SHIP - The fathogram is scanned and corrected or omitted soundings are entered on the original printout (by hand). Raydist, Tide and Draft corrections are entered on the original printout (by hand). (Tide corrections are first verified by Washington Office). The original punched tape is not altered. Using the corrected original printout, a Corrector punched tape is made with its own printout. This is proof-read. A third tape containing Velocity data is prepared (with printout).

LAUNCH - Launch hydrographic data was transferred from sounding volumes, by hand logger, to Raw Data punched tape with printout. The one exception is: the sounding on this tape is the scanned or omitted sounding. The Raydist values on this tape are uncorrected. This is proof-read. The remainder of the tape is same as that of the ship.

The tapes, printouts, boatsheet, descriptive report, sounding volumes, Brush Recorder tapes and fathograms are forwarded to the Regional Office, Seattle, Washington, for final compilation and smooth plotting using the Gerber Plotter.

*NOTE - The Velocity Tape for HY-40-2-64 was included with the Velocity Tape for HY-40-1-64 and was forwarded with the records for that sheet.

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY (HY-40-2-64)

H-8796

1964

USC&GS SHIP HYDROGRAPHER

SCALE 1:40,000

V. RALPH SOBIERALSKI, CDR, USC&GS

CHIEF OF PARTY

A. PROJECT

This survey was accomplished under Project OPR-427, ^{Calcasieu Pass} ~~Sabine Bank~~, Texas - Louisiana; Original Instructions dated May 15, 1962; Supplemental Instructions dated July 15, 1963; Revised Instructions dated August 9, 1963; Supplemental Instructions dated March 27, 1964, Project Instruction Letter dated May 12, 1964; Supplemental Instructions dated August 13, 1964.

B. AREA SURVEYED

This survey covers an area of 486 square nautical miles in the Gulf of Mexico, vicinity of ^{Calcasieu Pass} ~~Sabine Bank~~, Texas - Louisiana. It lies between Latitudes 29°47' North and 29°26' North; Longitudes 93°44' West and 93°11' West.

Hydrography began on August 28, 1964 and was completed on October 20, 1964.

The survey junctions with contemporary surveys ⁽¹⁹⁶²⁾ H-8738 and ⁽¹⁹⁶²⁾ H-8767 at the southern limits. ^{Comparisons} Junctions were made with the following prior surveys: ^{and H-8795 (1964) on the west.}

| <u>Registry Number</u> | <u>Scale</u> | <u>Date of Survey</u> |
|------------------------|--------------|-----------------------|
| H-4332 | 1:40,000 | 1922-23 |
| H-4364 | 1:40,000 | 1924 |
| H-5315 | 1:40,000 | 1933 |
| H-5418 | 1:40,000 | 1933 |

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USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

C. SOUNDING VESSEL

All hydrography on this survey was accomplished by the Ship HYDRO-
GRAPHER and Launch HY-1.

D. SOUNDING EQUIPMENT

Hydrography was accomplished using the Raytheon Survey Fathometers,
Model DE-723, Serial Numbers 61-29 and 555. Instrument Number 61-29 ✓
was used for all ship hydrography and Instrument Number 555 was used
for all launch hydrography.

The DE-723 initial settings were maintained at 11.0 feet for ship ✓
hydrography and 0.0 feet for launch hydrography.

Depths encountered ranged from 0⁵ to ⁴⁴43 feet.

Corrections to echo soundings for the ship were determined as fol-
lows:

- (a) Transducer draft corrections were derived from daily measurements of an internal draft gage, which is connected to the main engine cooling water intake. Determinations are outlined in "Report on Corrections to Echo Soundings, 1964 Season".
- (b) Settlement and Squat corrections were derived from tests made on August 20, 1963.
- (c) Echo sounder instrument corrections were determined by simultaneous comparisons (vertical casts) made in areas of smooth bottom during periods of calm weather and sea conditions. ✓
- (d) Phase corrections were not determined as all soundings were accomplished on "A" scale.
- (e) Sound velocity corrections were determined from velocimeter observations that were taken once each trip. These observations were supplemented by one temperature and salinity observation on July 17, 1964.
- (f) Echo sounder gain checks were made periodically during this survey. The echo sounder was observed for various gain settings, while the ship was stopped. Several gain checks were supplemented by vertical casts.

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Corrections to echo soundings for the launch were determined as follows:

- (a) Transducer draft, instrument and sound velocity corrections were derived from bar checks, which were taken each day of launch hydrography.
- (b) Settlement and squat corrections were derived from tests made on September 1, 1964.
- (c) Gain setting corrections were derived from periodic gain setting observations.

For detailed information on corrections to echo soundings, refer to "Report on Corrections to Echo Soundings, 1964 Season".

E. SMOOTH SHEET

The smooth sheet will be plotted in the Seattle Regional Office, utilizing a punched tape prepared by personnel of the HYDROGRAPHER.

F. CONTROL

All hydrography on this survey was controlled by means of Raydist, ^(Range Range) supplemented by visual (three-point) fixes on the inshore end of each hydrographic line.

The R₁ (RED) station was located in the vicinity of Johnson's Bayou, Louisiana. The Raydist mast was erected over BULL, 1964; Latitude 29°47'35.776" North, Longitude 93°44'53.842" West.

The R₂ (GREEN) station was located on the Sabine National Wildlife Refuge north of Holly Beach, Louisiana. The Raydist mast was erected over WILD, 1964; Latitude 29°51'57.534" North, Longitude 93°27'13.494" West.

Personnel from the Ship HYDROGRAPHER established the location of the Raydist stations in February, 1964, using third-order triangulation methods. The stations were temporarily marked with iron stakes and were not described. *(shown as topo. stations)*

Norfolk Photo Field Unit 751 provided photo-hydro support for the supplementary visual hydrography.

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

There is very good agreement between the Raydist and visual positions. These positions were used in the determination of Raydist corrections for launch hydrography. ^{incomplete} Advanced manuscripts (T-10633) RS 811 (T-10631), (T-10630), and (T-10629) RS 808, July 1963, were used to transfer signals to the boatsheet. ^{RS 807} (T-10632) RS 810.

Raydist corrections for the ship were derived from observations on triangulation stations located on off-shore oil structures and other oil structures located by Raydist traverse.

An abstract of Raydist corrections is appended to this report. For detailed information concerning Raydist corrections and calibrations, refer to Raydist Report, 1964 Field Season, OPR-427.

G. SHORELINE (See Review Par. 2)

The shoreline on this survey was transferred to the boatsheet from the blue line tracings of the manuscripts listed in paragraph F. Norfolk Field Unit 751 completed the inspection of shoreline while the hydrographic party found no major disagreement with the delineation on the manuscripts. Small tide ranges prevented a complete definition of the shoreline in the area surveyed.

H. CROSSLINES

Approximately 9% of the regular system of lines were run as cross-lines. All crossings were in good general agreement.

I. JUNCTIONS (see Review Par. 5)

Satisfactory junctions were made with prior and contemporary surveys listed in Paragraph B of this report. There is a discrepancy of 1 to 3 feet in junction soundings. This disagreement is a result of a change in the tidal datum this year. } This is a boat sheet junction.

J. COMPARISON WITH PRIOR SURVEYS (see Review Par. 6)

A comparison of this survey was made with prior surveys H-4365, 1923-24 (scale 1:40,000) and H-4372, 1924 (scale 1:40,000) and indicates good general agreement. There is, however, a discrepancy of 1 to 3 feet in soundings. This disagreement is probably a result of a

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USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

change in the tidal datum and echo sounder equipment.

In accordance with Supplemental Instructions dated August 13, 1964, the following Pre-Survey Review Items were developed. There is no indication of shoals in these areas. ✓

(See Review Part A, item 5)

NO TRA correctors Available for items 1-5

| Item No. | Position | Reported Depth | Recorded Depth |
|----------------|--|----------------|---|
| 1 | Latitude 29°31.18' North Longitude 93°27.03' West | 27½ ft. | 37 ft. <i>disproved on H-8767</i> |
| 2 | Latitude 29°32.15' North Longitude 93°24.40' West | 35 ft. | 38 ft. <i>delete rpt 35 ft from chart</i> |
| 3 <i>24/66</i> | Latitude 29°32.62' North Longitude 93°20.68' West | 35 ft. | 38 ft. <i>delete rpt 35 ft from chart</i> |
| 4 | Latitude 29°34.40' North Longitude 93°24.22' West | 35 ft. | 38 ft. <i>Disregard not charted</i> |
| 5 | Latitude 29°33.07' North Longitude 93°29.50' West | 35 ft. | 37 ft. <i>delete rpt 35 ft from chart</i> |

The items were plotted on tracing vellum overlays to avoid unnecessary congestion on the boatsheet. Position numbers were assigned beginning with 8000 to differentiate development from the regular system of sounding lines. The developments were recorded on the printout, not on the punched tape. The survey records for these items, including the overlays, are forwarded separately in an envelope labelled "Pre-Survey Review Items 1 - 5". ✓

K. COMPARISON WITH CHARTS (see Review Part 7)

A comparison of this survey with C&GS Charts 1278 (4th Edition, Dec. 19, 1960; Revised Oct. 9, 1961) and 1279 (6th Edition, August 28, 1961; Revised March 4, 1963) indicates good, general agreement. Depths on this survey were found to be shallower, in general, than those on Charts 1278 and 1279. ✓

A shoal area was located near the entrance to Calcasieu Pass at Latitude 29°44.5' North, Longitude 93°20.1' West, which extends approximately ½ nautical mile in a north-south direction. This shoal is ✓

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USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

probably a result of dredging operations in the area.

An iron pipe, which is the outermost pipe of a series, perpendicular to the beach, was located at Latitude 29°45.53' North, Longitude 93°34.2' West. The location is contained in Volume V, Page 6, of launch hydrography. At the time of the survey, the pipe was approximately 1 foot above water. plotted as (S)

An iron piling was located at Latitude 29°45.54' North, Longitude 93°33.9' West. The location is contained in Volume VI, Page 33, of launch hydrography. At the time of the survey, the piling was approximately 3 feet above water. plotted as (S)

L. ADEQUACY OF SURVEY

This survey is complete and adequate for charting purposes. The shoreline delineation is not complete due to inadequate tide ranges at the time of launch hydrography.

M. AIDS TO NAVIGATION

All floating and non-floating aids to navigation were located using Raydist control. Positions of all floating aids were verified using U.S. Coast Guard Light List, Volume II, Atlantic and Gulf Coasts, 1964. The following offshore oil structures were located and are listed in Eighth Coast Guard District Local Notice to Mariners No. 76 dated July 1, 1964:

scaled from boat sheet

Structure Sign Designating Company, Area,
Block Number, Structure Number or Letter

Latitude

Longitude

| | | | |
|-------|---------|--------------|--------------|
| ✓ GAO | WC-45-1 | 29°40'20" N. | 93°36'30" W. |
| GAO | WC-45-4 | 29°39'02" N. | 93°35'40" W. |
| ✓ GAO | WC-45-5 | 29°40'25" N. | 93°36'16" W. |
| ✓ GAO | WC-45-8 | 29°40'40" N. | 93°35'53" W. |
| GAO | WC-45-7 | 29°41'03" N. | 93°35'35" W. |
| ✓ BA | WC-20-8 | 29°41'28" N. | 93°35'15" W. |
| ✓ BA | WC-20-6 | 29°41'30" N. | 93°35'03" W. |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

| <u>Structure Sign Designating Company, Area, Block Number, Structure Number or Letter</u> | | <u>Latitude</u> | <u>Longitude</u> |
|---|----------------------|---------------------------------|------------------------------|
| TGT | WC-40-A | 29°40'49" N. | 93°20'42" W. |
| GAO | WC-45-2 | 29°39'41" N. | 93°35'48" W. |
| BR-AM | WC-11 P L MKR | 29°45'00" N. | 93°36'45" W. |
| CALCO | WC-17-3 | 29°41'38" N. | 93°43'08" W. |
| | S-45 (new structure) | 29°42'03" N. | 93°43'06" W. |
| PO | WC-3-1 | 29°45'18" N. | 93°12'33" W. |
| PO | WC-2-1 | 29°45'52" N. | 93°11'50" W. |
| TGT | WC-40-B | 29°41'14" N. | 93°20'46" W. |
| PO | WC-2-A | 29° ^{45'59"} 46'08" N. | 93° ^{57"} 11'57" W. |
| PO | WC-2-B | 29°45'30" N. | 93°11'45" W. |
| GAO | WC-45-9 | 29°41'12" N. | 93°35'13" W. |
| BA | WC-20-7 | 29°41'30" N. | 93°34'39" W. |
| BA | WC-20-1 | 29°41'27" N. | 93°36'20" W. |
| BA | WC-20-3 | 29°41'26" N. | 93°36'47" W. |
| GAO | WC-45-6 | 29° ⁰ 41'56" N. | 93°36'40" W. |
| GAO | WC-45-10 | 29°41'08" N. | 93°36'30" W. |
| BA | WC-20-A | 29°41'36" N. | 93°35'50" W. |
| BA | WC-20-2 | 29°41'29" N. | 93°35'55" W. |
| GAO | WC-45-3 | 29°40'30" N. | 93°36'50" W. |
| BA | WC-20-9 | 29°41'30" N. | 93°35'42" W. |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

| <u>Structure Sign Designating Company, Area, Block Number, Structure Number or Letter</u> | <u>Latitude</u> | <u>Longitude</u> |
|---|-----------------|------------------|
| BA WC-20-4 | 29°41'30" N. | 93°35'29" W. |
| MOBIL WC-110-A | 29°31'06" N. | 93°17'06" W. |
| MOBIL WC-110-D | 29°30'42" N. | 93°16'33" W. |
| MOBIL WC-110-1 | 29°30'19" N. | 93°16'42" W. |
| MOBIL WC-111-B | 29°30'27" N. | 93°17'47" W. ✓ |
| PH WC-118-3 | 29°30'52" N. | 93°38'35" W. ✓ |
| PH WC-118-2 | 29°30'15" N. | 93°38'19" W. ✓ |
| PH WC-118-1 | 29°29'56" N. | 93°38'24" W. |
| SU WC-149-B-1 | 29°26'32" N. | 93°25'44" W. ✓ |

These locations were scaled from the uncorrected boatsheet positions.

Refer to "Report on Landmarks for Charts and Fixed Aids to Navigation" for information concerning the location of survey markers and other additional information.

N. STATISTICS

Vessel - Ship HYDROGRAPHER

| | |
|-------------------------------------|--------|
| Number of Positions ----- | 3746 |
| Miles of Sounding Line ----- | 2398.1 |
| Area in Square Nautical Miles ----- | 358 |
| Number of Bottom Samples ----- | 478 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Vessel - Launch HY-1

Number of Positions ----- 2384
Miles of Sounding Line ----- 1174.7
Area in Square Nautical Miles ----- 128
Bottom Samples ----- 179

Within the area of this survey one Current Station (No. 4) was observed - Position - Latitude 29°39.0' North, Longitude 93°20.0' West.

0. MISCELLANEOUS

The 1964 field records for ship hydrography of this survey were recorded automatically by the DATEX Digital Recording System consisting of a literal printout and punched paper tape; this in conjunction with a corrector and velocity data tape will be used for automatic processing and mechanical plotting systems. All launch hydrography was originally recorded in sounding volumes and is to be logged into the DATEX system for similar reasons. Following is the format used for this survey:

(a) Original Hydrographic Data:

| Time | Phase Indicator | Depth | Position Number | Day Number | Feet/Fathoms | Raydist (R1) | Raydist (R2) |
|--------|-----------------|-------|-----------------|------------|--------------|--------------|--------------|
| 083000 | 01 | *0275 | 1867 | 275 | 1 | 078270 | 103250 |

* For launch hydrography this will be the scanned depth.

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

(b) Corrector Tape:

| Time | Phase Indicator | Scanned Depth | Position Number | Day Number | Feet/Fathoms | Raydist Corrections | | Sounding Corrections | | |
|--------|-----------------|---------------|-----------------|------------|--------------|---------------------------|---------------------------|----------------------|-------|----------|
| | | | | | | Raydist (R ₁) | Raydist (R ₂) | Tide | Draft | Velocity |
| 081300 | 01 | 0278 | 0028 | 252 | 1 | 100120 | 000120 | 1032 | 032 | 000 |

For complete information concerning the logging of data for the automatic plotting systems refer to Chief, Operations Division Memorandum WSC-210 dated December 7, 1964 (Subject: Revised Instructions for Logging the Corrector Tape). Copy of memorandum is appended to this report.

(c) Velocity Tape:

In making the Velocity Tape, all entries will consist of short words. Example below:

| Depth Range | Velocity Correction | Velocity Tape Format |
|--------------|---------------------|----------------------|
| 0 to 5.0 fms | + 0.1 fms | 000050 00 0001 |
| 5.1 to 7.0 | + 0.2 | 000070 00 0002 |
| 7.1 to 9.0 | + 0.3 | 000090 00 0003 |
| 9.1 to 11.0 | + 0.4 | 000110 00 0004 |
| 11.1 to 13.0 | + 0.5 | 000130 00 0005 |

For complete instructions concerning the Velocity Tape, refer to Chief, Operations Division Memorandum WSC-210 dated December 7, 1964. Copy of memorandum is appended to this report.

Within the area of this survey there is a mud slush layer, lying on the bottom, that may be detected by hand lead. Gain and stylus needle length settings on the fathometer are especially critical because of this condition. Gain checks were made to determine the proper gain setting for any given area.

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

A number of suspicious spikes were noticed on the fathograms in the area of this survey. Two of the most prominent spikes were investigated by the Ships WAINWRIGHT and HILGARD by means of wire drag. Both areas were cleared well below the depth indicated by the spikes. At the time these spikes were observed, seismic investigations were in progress in the area. As a result of this investigation, it is recommended that these spikes be considered strays and disregarded. A copy of the special report on the wire drag operation is appended to this report.

P. RECOMMENDATION

None

Q. REFERENCES TO REPORTS

The reports listed below are necessary for a complete evaluation and understanding of this survey and have been submitted to the Washington Office:

Title of Report

Date Forwarded

Raydist Report, 1964 Field Season,
Project OPR-427, Sabine Bank, Texas -
Louisiana

Report on Corrections to Echo Soundings,
1964 Field Season, Project OPR-427, Sabine
Bank, Texas - Louisiana

Report on Landmarks for Charts & Fixed Aids
to Navigation, OPR-427, Sabine Bank, Texas -
Louisiana

2/2/65

Season's Report, USC&GS Ship HYDROGRAPHER
1964 Field Season

1/19/65

James H. Barnes Jr.
Norment A. Barnes Jr., LTJG, USC&GS

Approved and Forwarded: MAR 5 1965
V. Ralph Sobieralski
V. Ralph Sobieralski, CDR, USC&GS

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

UNITED STATES GOVERNMENT

Memorandum

TO : Commanding Officer
USC&GSS HYDROGRAPHER
Box 1259, St. Petersburg, Fla.

FROM : Commanding Officer
USC&GS Ships WAINWRIGHT & HILGARD
102 W. Olney Road, Norfolk, Va. 23510

SUBJECT: Special Report, Sabine Bank, Wire Drag

DATE: 12/7/64

Inserted in D.R.

In accordance with verbal instructions 14 September 1964, additional wire drag investigations were carried out in latitude 29°37.26', longitude 93°42.0'; and latitude 29°36.51', longitude 93°38.9' to verify or disprove the existence of the 23.0' and 27.0' soundings indicated on boat sheet overlay supplied by the Hydrographer.

An approximate 0.42 square mile area was wire dragged to an effective depth of 28.0' in search of the indicated 23.0' sounding, and an approximate 0.24 square mile area was wire dragged to an effective depth of 31.5' in search of the indicated 27.0' sounding, with negative results.

Hourly heights were furnished by the Washington Office for tidal data and are herewith enclosed as Attachment #1. Effective depths are in feet at Mean Low Water.

No further investigation of either indicated sounding is deemed necessary and it is recommended the 23.0' and 27.0' soundings be removed from the contemporary survey.

Accepted hydrographic and wire drag methods were followed with 3-point sextant fixes used for control. Existing control points (natural objects) were used in all cases as indicated on boat sheet


James S. Midgley

encl. #1 - Tidal Data; #2 Overlay
CC: Op. Div.

LEG/jrb

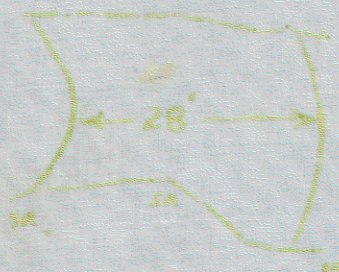
Hydro

DUD Large oil platform with large house & structure, no derrick
lat. 29°41.6', long. 93°35.85'

200 Large oil rig with derrick, lat. 29°39.8', long. 93°47.2'

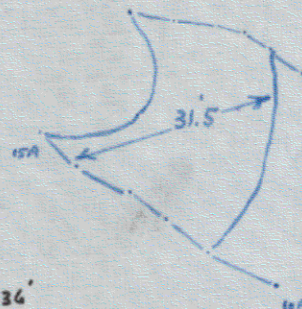
outside sheet limits

- 15 -



93° 42'

29° 38'

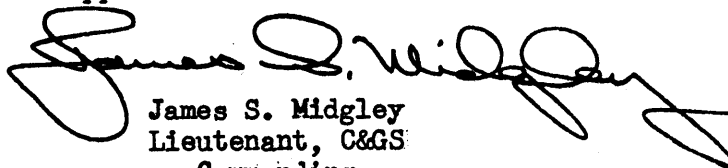


29° 36'
93° 40'

Wire Drag
Wainwright & Hilgard
Sabine Bank, La.
14 September 1964
Overlay, Boat Sheet #
(special investigation)
scale 1:40,000

APPROVAL SHEET

The attached report, related wire drag records
and plotting sheets have been inspected by me
and are approved.

A handwritten signature in dark ink, appearing to read "James S. Midgley", is written over the typed name and title.

James S. Midgley
Lieutenant, C&GS
Commanding
WAINWRIGHT & HILGARD

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

SIGNAL NAMES

| <u>Signal Name</u> | <u>T-Sheet or Triangulation</u> |
|--------------------|---------------------------------|
| ADD | T-10630 |
| ACE | T-10633 |
| AMA | BRAMA, 1963 |
| ANN | T-10629 |
| ARM | T-10629 |
| BED | T-10629 |
| BIG | Sextant Cuts from shore |
| BOB | T-10632 |
| BUT | T-10632 |
| CAL | RBN CALCASTEU, 1955 |
| CAR | T-10629 |
| CON | T-10630 |
| CUE | T-10632 |
| DAY | T-10632 |
| DIP | T-10632 |
| DOL | T-10629 |
| DOT | T-10633 |
| DUD | Sextant Cuts from shore |
| DUM | Sextant Cuts from shore |
| EAR | T-10629 |
| FAT | T-10629 |
| FIN | T-10629 |
| FOE | T-10632 |
| FOG | T-10631 |
| FOX | T-10631 |
| FROST | FROST, 1963 |
| GET | T-10633 |
| GUS | T-10629 |
| HACK | HACK, 1923 |
| HOE | T-10633 |
| ITS | T-10632 |
| IVY | T-10631 |
| JAR | T-10633 |
| JAW | T-10630 |
| JOE | T-10630 |
| JOY | T-10629 |
| JUG | T-10632 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

(cont'd)

SIGNAL NAMES

| <u>Signal Name</u> | <u>T-Sheet or Triangulation</u> |
|--------------------|---|
| JUT | T-10632 |
| LEE | LEE, 1924 |
| LYN | HOLLYND, 1955 |
| MAN | MAN, 1924 |
| MAST | JOHNSON'S BAYOU, GENERAL AMERICAN OIL COMPANY MAST, 1963 |
| MIC | T-10629 |
| MUG | T-10631 |
| OCEAN | OCEAN, 1933 |
| OIL | T-10631 |
| OUT | T-10635 |
| PAW | T-10631 |
| PLY | T-10631 |
| RAG | T-10631 |
| RAM | T-10630 |
| RIO | SUPERIOR B, 1955 |
| ROLL | ROLLER, 1963 |
| SAG | T-10631 |
| SET | T-10630 |
| SOW | T-10630 |
| TAN | T-10631 |
| TAX | T-10632 |
| THY | T-10632 |
| VET | PEVETO, 1963 |
| WAX | T-10631 |
| WOO | T-10632 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

INDEX OF BOTTOM SAMPLES

| <u>SHIP</u> | | |
|-----------------------------|-------------|----------------------------------|
| <u>Day</u> <u>Number</u> | <u>Date</u> | <u>Position</u> <u>Number</u> |
| 288 | October 14 | 2844 |
| 288 | " | 2850 |
| 288 | " | 2858 + 2 min. |
| 288 | " | 2865 |
| 288 | " | 2871 |
| 288 | " | 2872 |
| 288 | " | 2873 |
| 288 | " | 2874 |
| 288 | " | 2875 |
| 288 | " | 2883 |
| 288 | " | 2891 |
| 288 | " | 2892 |
| 289 | October 15 | 3033 ^{← 2909} |
| 289 | " | 3041 |
| 289 | " | 3080 |
| 289 | " | 3172 |
| 290 | October 16 | 3386 |
| 290 | " | 3391 |
| 290 | " | 3395 |
| 290 | " | 3406 |
| 291 | October 17 | 3543 |
| 291 | " | 3547 + 1 min. |
| 291 | " | 3594 + 2 min. |
| 291 | " | 3598 + 1 min. |
| 291 | " | 3603 |
| 291 | " | 3614 |
| 291 | " | 3632 |
| 291 | " | 3637 |
| 291 | " | 3642 |
| 291 | " | 3647 |
| 291 | " | 3648 |
| 291 | " | 3649 |
| 291 | " | 3650 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

INDEX OF BOTTOM SAMPLES (SHIP) - cont'd.

| <u>Day Number</u> | <u>Date</u> | <u>Position Number</u> |
|-----------------------|-------------|----------------------------|
| 291 | October 17 | 3651 |
| 291 | " | 3652 |
| 291 | " | 3653 |
| 291 | " | 3654 |
| 291 | " | 3655 |
| 291 | " | 3660 |
| 291 | " | 3665 |
| 291 | " | 3700 |
| 291 | " | 3704 |
| 291 | " | 3710 |
| 292 | October 18 | 3737 |
| 292 | " | 3738 |
| 292 | " | 3739 |
| 292 | " | 3740 |
| 292 | " | 3741 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

INDEX OF BOTTOM SAMPLES

LAUNCH HY-1

| <u>Day Number</u> | <u>Date</u> | <u>Position Number</u> | <u>Volume</u> |
|-----------------------|--------------|----------------------------|---------------|
| 254 | September 10 | 5071 | I |
| 255 | September 11 | 5203 | II |
| 255 | " | 5234 | II |
| 255 | " | 5247 | II |
| 256 | September 12 | 5424 | II |
| 258 | September 14 | 5514 | III |
| 271 | September 27 | 5987 | VI |
| 273 | September 29 | 6182 | VII |
| 273 | " | 6189 | VII |
| 273 | " | 6273 | VII |
| 274 | September 30 | 6291 | VIII |
| 274 | " | 6300 | VIII |
| 285 | October 11 | 6604 | IX |
| 286 | October 12 | 6619 + 2 min. | IX |
| 286 | " | 6630 + 2 min. | IX |
| 286 | " | 6804 + 2 min. | X |
| 286 | " | 6809 | X |
| 292 | October 18 | 7131 | XI |
| 293 | October 19 | 7285 | XII |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

RAYDIST CORRECTIONS

PROJECT OPR-427

SABINE BANK, TEXAS - LOUISIANA

1964 FIELD SEASON

The following listed corrections apply to both ship and launch hydrography. The times listed are those of actual hydrography:

SHIP

| Day of the Year | Date | From | To | Corrections (R ₁) (R ₂) |
|--------------------|------|----------------------|----------------------|--|
| 241 ✓ | 8-28 | 1038 | 2400 | - 0.3 + 0.4 |
| 242 ✓ | 8-29 | 0000 2057 | 0250 2400 | - 0.3 + 0.4 - 0.3 + 0.4 |
| 243 ✓ | 8-30 | 0000 0245 2229 | 0220 0316 2400 | - 0.3 + 0.4 - 0.3 + 0.4 - 0.3 - 0.6 |
| 244 ✓ | 8-31 | 0000 2122 | 0311 2400 | - 0.3 - 0.6 - 0.3 - 0.6 |
| 245 ✓ | 9-1 | 0000 2053 | 0255 2400 | - 0.3 - 0.6 - 0.3 - 0.6 |
| 246 ✓ | 9-2 | 0000 2107 | 0315 2400 | - 0.3 - 0.6 - 0.3 + 0.4 |
| 247 | 9-3 | 0000 | 0245 | - 0.3 + 0.4 |
| 253 ✓ | 9-9 | 1937 | 2400 | + 0.6 + 0.4 |
| 254 ✓ | 9-10 | 0000 2128 | 0314 2400 | + 0.6 + 0.4 - 0.4 + 0.4 |
| 255 | 9-11 | 0000 2030 | 0640 2400 | - 0.4 + 0.4 - 0.4 + 0.4 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Raydist Corrections (Ship) - cont'd.

| Day of the Year | Date | From | To | Corrections (R ₁) (R ₂) |
|--------------------|-------|--------------|--------------|--|
| 256 | 9-12 | 0000 2107 | 0224 2400 | - 0.4 + 0.4 - 0.4 + 0.4 |
| 257 | 9-13 | 0000 | 2400 | - 0.4 + 0.4 |
| 258 | 9-14 | 0000 2112 | 0425 2400 | - 0.4 + 0.4 - 0.4 + 0.4 |
| 259 | 9-15 | 0000 1318 | 0324 2400 | - 0.4 + 0.4 - 0.4 + 0.4 |
| 260 | 9-16 | 0000 | 0818 | - 0.4 + 0.4 |
| 263 | 9-19 | 1807 | 2400 | + 0.6 + 1.4 |
| 264 | 9-20 | 0000 | 2400 | + 0.6 + 1.4 |
| 265 | 9-21 | 0000 1252 | 0548 2400 | + 0.6 + 1.4 - 0.4 + 0.4 |
| 266 | 9-22 | 0000 2235 | 2234 2400 | - 0.4 + 0.4 - 0.4 - 1.6 |
| 267 | 9-23 | 0000 1846 | 0320 2400 | - 0.4 - 1.6 + 0.6 + 1.4 |
| 268 | 9-24 | 0000 | 0713 | + 0.6 + 1.4 |
| 282 | 10-8 | 1654 | 2310 | - 0.4 + 1.4 |
| 284 | 10-10 | 0711 | 2400 | - 0.4 - 0.6 |
| 285 | 10-11 | 0000 | 0130 | - 0.4 - 0.6 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Raydist Corrections (Ship) - cont'd.

| Day of the Year | Date | From | To | Corrections (R ₁) (R ₂) |
|--------------------|-------|------|------|--|
| 287 | 10-13 | 1243 | 2400 | + 0.6 + 0.4 |
| 288 | 10-14 | 0000 | 0139 | + 0.6 + 0.4 |
| | | 0307 | 0423 | + 0.6 + 2.4 |
| | | 0424 | 0427 | + 0.6 + 4.4 |
| | | 0428 | 0436 | + 0.6 + 6.4 |
| | | 0437 | 0438 | + 0.6 + 8.4 |
| | | 0439 | 0446 | + 0.6 +10.4 |
| | | 0537 | 2400 | + 0.6 - 0.6 |
| 289 | 10-15 | 0000 | 2400 | + 0.6 - 0.6 |
| 290 | 10-16 | 0000 | 0404 | + 0.6 - 0.6 |
| | | 0405 | 0406 | + 0.6 + 3.4 |
| | | 0407 | 0414 | + 0.6 + 7.4 |
| | | 0415 | 0445 | + 0.6 + 9.4 |
| | | 0525 | 1727 | + 0.6 - 0.6 |
| | | 1940 | 2400 | + 0.2 - 1.2 ✓ |
| 291 | 10-17 | 0000 | 2400 | + 0.2 - 1.2 |
| 292 | 10-18 | 0000 | 0358 | + 0.2 - 1.2 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Raydist Corrections (Launch HY-1)

| Day of the Year | Date | From | To | Corrections (R ₁) (R ₂) |
|--------------------|-------|--------------|--------------|--|
| 246✓ | 9-2 | 1454 | 1836 | - 0.3 + 0.4 |
| 254✓ | 9-10 | 0648 | 1853 | - 0.3 + 0.4 |
| 255✓ | 9-11 | 0830 | 1830 | - 0.3 + 0.4 |
| 256✓ | 9-12 | 0548 | 1741 | - 0.3 + 0.4 |
| 258✓ | 9-14 | 0557 1515 | 1106 1900 | - 0.3 + 0.4 - 0.3 + 0.4 |
| 259✓ | 9-15 | 0530 | 1053 | - 0.3 + 0.4 |
| 265✓ | 9-21 | 0752 | 1005 | - 0.3 + 1.4 |
| 267✓ | 9-23 | 0557 | 1659 | - 0.3 + 0.4 |
| 268✓ | 9-24 | 0816 | 1240 | + 0.7 + 0.4 |
| 269✓ | 9-25 | 0756 | 1659 | - 0.3 - 0.6 |
| 270✓ | 9-26 | 0947 | 1027 | + 0.7 + 0.4 |
| 271✓ | 9-27 | 0814 1146 | 1035 1820 | - 0.3 - 0.6 + 0.7 + 0.4 |
| 272✓ | 9-28 | 0807 | 1714 | + 0.7 + 0.4 |
| 273✓ | 9-29 | 0914 | 1647 | + 0.7 + 0.4 |
| 274✓ | 9-30 | 0813 | 1632 | + 0.7 + 0.4 |
| 281✓ | 10-7 | 1121 1507 | 1410 1521 | - 0.3 - 0.6 + 0.7 - 0.6 |
| 285✓ | 10-11 | 0533 1450 | 1435 2400 | + 0.7 - 1.6 + 0.7 + 0.4 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Raydist Corrections (Launch HY-1) - cont'd.

| Day of the Year | Date | From | To | Corrections (R ₁) | (R ₂) |
|--------------------|-------|------|------|----------------------------------|-------------------|
| 286 ✓ | 10-12 | 0000 | 1204 | + 0.7 | + 0.4 |
| | | 1325 | 1328 | + 0.7 | - 1.6 |
| | | 1329 | 1958 | + 0.7 | + 0.4 |
| | | 2053 | 2400 | + 0.7 | - 1.6 |
| 287 ✓ | 10-13 | 0000 | 1008 | + 0.7 | - 1.6 |
| 292 ✓ | 10-18 | 0640 | 1331 | - 0.3 | + 1.4 |
| | | 1401 | 2400 | - 0.3 | - 0.6 |
| 293 ✓ | 10-19 | 0000 | 0337 | - 0.3 | - 0.6 |
| | | 1037 | 1055 | - 0.3 | - 2.6 |
| | | 1142 | 2240 | - 0.3 | - 0.6 |
| 294 ✓ | 10-20 | 0023 | 0637 | - 0.3 | - 0.6 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Listed below are the Total Draft Corrections, in feet, for the ship only. Only times of actual hydrography are listed.

Draft Correction is based on daily readings from an internal gage in the ship's engine room.

Settlement & Squat Correction is based on the following values for ship's speed: Full Speed + 1.0 feet, Half Speed + 0.3 feet, Slow Speed and Stop 0.0 feet.

Instrument or Index Correction is the amount the fathogram initial is in error.

ABSTRACT OF TOTAL DRAFT CORRECTIONS

| <u>Day of the Year</u> | <u>Date</u> | <u>From</u> | <u>To</u> | <u>Draft Corr.</u> | <u>S & S Corr.</u> | <u>Instr. or Index Corr.</u> | <u>Total Draft Corr.</u> |
|----------------------------|-------------|------------------------------|------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 241 | 8-28 | 1038 | 2359 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| 242 | 8-29 | 0000 2245 | 0250 2359 | + 0.6 + 0.5 | + 1.0 + 1.0 | 0.0 0.0 | + 1.6 + 1.5 |
| 243 | 8-30 | 0000 2229 | 0316 2359 | + 0.5 + 0.3 | + 1.0 + 1.0 | 0.0 0.0 | + 1.5 + 1.3 |
| 244 | 8-31 | 0000 2122 2130 2359 | 0311 2359 2359 | + 0.3 + 0.2 + 0.2 | + 1.0 + 1.0 + 1.0 | 0.0 + 0.02 0.0 | + 1.3 + 1.2 + 1.2 |
| 245 | 9-1 | 0000 2053 | 0255 2359 | + 0.2 + 0.1 | + 1.0 + 1.0 | 0.0 0.0 | + 1.2 + 1.1 |
| 246 | 9-2 | 0005 2107 2202 2213 | 0315 2201 2212 2359 | + 0.1 + 0.1 + 0.1 + 0.1 | + 1.0 + 1.0 + 1.0 + 1.0 | 0.0 0.0 + 0.2 0.0 | + 1.1 + 1.1 + 1.3 + 1.1 |
| 247 | 9-3 | 0000 | 0245 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| 253 | 9-9 | 1937 2312 2313 | 2311 2359 | + 0.9 + 0.9 + 0.9 | + 1.0 + 1.0 + 1.0 | 0.0 - 0.2 0.0 | + 1.9 + 1.7 + 1.9 |
| 254 | 9-10 | 0000 | 0300 | + 0.9 | + 1.0 | 0.0 | + 1.9 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Abstract of Total Draft Corrections (Ship) cont'd.

| <u>Day of the Year</u> | <u>Date</u> | <u>From</u> | <u>To</u> | <u>Draft Corr.</u> | <u>S & S Corr.</u> | <u>Instr. or Index Corr.</u> | <u>Total Draft Corr.</u> |
|----------------------------|-------------|-------------|-----------|------------------------|----------------------------|----------------------------------|------------------------------|
| 254 (cont'd) | 9-10 | 0301 | 0314 | + 0.8 | + 1.0 | 0.0 | + 1.8 |
| | | 2128 | 2230 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| | | 2231 | 2254 | + 0.7 | + 1.0 | - 0.2 | + 1.5 |
| | | 2255 | 2359 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| 255 | 9-11 | 0000 | 0213 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| | | 0214 | 0215 | + 0.7 | + 1.0 | - 0.2 | + 1.5 |
| | | 0216 | 0259 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| | | 0403 | 0640 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| | | 2030 | 2359 | + 0.6 | + 1.0 | 0.0 | + 1.6 |
| 256 | 9-12 | 0012 | 0100 | + 0.6 | + 1.0 | 0.0 | + 1.6 |
| | | 0101 | 0224 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 2107 | 2359 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| 257 | 9-13 | 0000 | 0007 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 0008 | 0009 | + 0.4 | + 1.0 | - 0.2 | + 1.2 |
| | | 0010 | 0322 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 0323 | 0328 | + 0.4 | + 1.0 | - 0.2 | + 1.2 |
| | | 0329 | 0900 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 0901 | 2359 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| 258 | 9-14 | 0000 | 0425 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 2112 | 2359 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| 259 | 9-15 | 0000 | 0103 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 0104 | 0112 | + 0.2 | + 1.0 | - 0.2 | + 1.0 |
| | | 0113 | 0248 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 0255 | 0302 | + 0.2 | + 1.0 | - 0.2 | + 1.0 |
| | | 0303 | 0324 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 1318 | 1524 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1759 | 2359 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| 260 | 9-16 | 0000 | 0103 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 0108 | 0114 | + 0.1 | + 0.3 | - 0.2 | + 0.2 |
| | | 0115 | 0116 | + 0.1 | + 0.3 | 0.0 | + 0.4 |
| | | 0117 | 0818 | + 0.1 | + 1.0 | 0.0 | + 1.1 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Abstract of Total Draft Corrections (Ship) cont'd.

| <u>Day of the Year</u> | <u>Date</u> | <u>From</u> | <u>To</u> | <u>Draft Corr.</u> | <u>S & S Corr.</u> | <u>Instr. or Index Corr.</u> | <u>Total Draft Corr.</u> |
|----------------------------|-------------|-------------|-----------|------------------------|----------------------------|----------------------------------|------------------------------|
| 263 | 9-19 | 1807 | 2359 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| 264 | 9-20 | 0000 | 0119 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| | | 0133 | 0134 | + 0.7 | + 1.0 | - 0.2 | + 1.5 |
| | | 0135 | 0657 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| | | 0658 | 0702 | + 0.7 | + 1.0 | - 0.2 | + 1.5 |
| | | 0703 | 1050 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| | | 1439 | 2359 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| 265 | 9-21 | 0004 | 0100 | + 0.7 | + 1.0 | 0.0 | + 1.7 |
| | | 0101 | 0548 | + 0.6 | + 1.0 | 0.0 | + 1.6 |
| | | 1252 | 1609 | + 0.6 | + 1.0 | 0.0 | + 1.6 |
| | | 1830 | 2356 | + 0.6 | + 1.0 | 0.0 | + 1.6 |
| 266 | 9-22 | 0018 | 1013 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 1213 | 1648 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 1649 | 1651 | + 0.5 | + 0.3 | 0.0 | + 0.8 |
| | | 1652 | 1700 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 1701 | 2359 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| 267 | 9-23 | 0000 | 0320 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 1846 | 2130 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| | | 2131 | 2335 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 2336 | 2337 | + 0.2 | + 0.3 | 0.0 | + 0.5 |
| | | 2338 | 2339 | + 0.2 | 0.0 | 0.0 | + 0.2 |
| | | 2343 | 2352 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| 268 | 9-24 | 0004 | 0713 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| 282 | 10-8 | 1654 | 2058 | 0.0 | + 1.0 | 0.0 | + 1.0 |
| 284 | 10-10 | 0711 | 1000 | + 0.9 | + 1.0 | 0.0 | + 1.9 |
| | | 1001 | 1030 | + 0.8 | + 1.0 | 0.0 | + 1.8 |
| | | 1547 | 2100 | + 0.8 | + 1.0 | 0.0 | + 1.8 |
| | | 2101 | 2120 | + 0.8 | + 0.3 | 0.0 | + 1.1 |
| | | 2121 | 2359 | + 0.8 | + 1.0 | 0.0 | + 1.8 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Abstract of Total Draft Corrections (Ship) cont'd.

| <u>Day of the Year</u> | <u>Date</u> | <u>From</u> | <u>To</u> | <u>Draft Corr.</u> | <u>S & S Corr.</u> | <u>Instr. or Index Corr.</u> | <u>Total Draft Corr.</u> |
|----------------------------|-------------|-------------|-----------|------------------------|----------------------------|----------------------------------|------------------------------|
| 285 | 10-11 | 0000 | 0130 | + 0.8 | + 1.0 | 0.0 | + 1.8 |
| 287 | 10-13 | 1243 | 1259 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 1300 | 1308 | + 0.5 | + 1.0 | - 0.2 | + 1.3 |
| | | 1309 | 1326 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 1327 | 1439 | + 0.5 | + 1.0 | - 0.2 | + 1.3 |
| | | 1440 | 1704 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 1705 | 1726 | + 0.5 | + 1.0 | - 0.2 | + 1.3 |
| | | 1727 | 1804 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 1842 | 1853 | + 0.5 | + 1.0 | - 0.2 | + 1.3 |
| | | 1854 | 2029 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 2030 | 2138 | + 0.5 | + 1.0 | - 0.2 | + 1.3 |
| | | 2139 | 2208 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 2233 | 2250 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 2251 | 2300 | + 0.5 | + 1.0 | - 0.2 | + 1.3 |
| | | 2301 | 2302 | + 0.5 | + 0.3 | - 0.2 | + 0.6 |
| | | 2303 | 2307 | + 0.5 | + 0.3 | 0.0 | + 0.8 |
| | | 2308 | 2310 | + 0.5 | 0.0 | 0.0 | + 0.5 |
| | | 2311 | 2359 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| 288 | 10-14 | 0000 | 0050 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 0051 | 0124 | + 0.5 | + 1.0 | - 0.2 | + 1.3 |
| | | 0307 | 0347 | + 0.5 | + 1.0 | - 0.2 | + 1.3 |
| | | 0348 | 0357 | + 0.5 | + 1.0 | + 0.2 | + 1.7 |
| | | 0358 | 0400 | + 0.5 | + 1.0 | 0.0 | + 1.5 |
| | | 0401 | 0446 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 0537 | 0817 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 0833 | 1020 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 1233 | 1234 | + 0.4 | 0.0 | 0.0 | + 0.4 |
| | | 1241 | 1305 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 1306 | | + 0.4 | 0.0 | 0.0 | + 0.4 |
| | | 1307 | 1330 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 1331 | 1339 | + 0.4 | 0.0 | 0.0 | + 0.4 |
| | | 1340 | 1400 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 1401 | 1403 | + 0.4 | 0.0 | 0.0 | + 0.4 |
| | | 1404 | 2030 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 2031 | 2042 | + 0.4 | 0.0 | 0.0 | + 0.4 |
| | | 2043 | 2359 | + 0.4 | + 1.0 | 0.0 | + 1.4 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Abstract of Total Draft Corrections (Ship) cont'd.

| <u>Day of the Year</u> | <u>Date</u> | <u>From</u> | <u>To</u> | <u>Draft Corr.</u> | <u>S & S Corr.</u> | <u>Instr. or Index Corr.</u> | <u>Total Draft Corr.</u> |
|----------------------------|-------------|-------------|-----------|------------------------|----------------------------|----------------------------------|------------------------------|
| 289 | 10-15 | 0004 | 0037 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 0038 | 0140 | + 0.4 | + 1.0 | - 0.2 | + 1.2 |
| | | 0141 | 0400 | + 0.4 | + 1.0 | 0.0 | + 1.4 |
| | | 0401 | 0419 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| | | 0426 | 0631 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| | | 0632 | 0634 | + 0.3 | 0.05 | 0.0 | + 0.38 |
| | | 0635 | 0708 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| | | 0716 | 1543 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| | | 1544 | 1547 | + 0.3 | + 0.3 | 0.0 | + 0.6 |
| | | 1548 | 1557 | + 0.3 | 0.0 | 0.0 | + 0.3 |
| | | 1558 | 1751 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| | | 1857 | 1906 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| | | 1907 | 1910 | + 0.3 | + 1.0 | - 0.2 | + 1.1 |
| | | 1911 | 2359 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| 290 | 10-16 | 0000 | 0001 | + 0.3 | + 1.0 | - 0.3 | + 1.0 |
| | | 0002 | 0107 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| | | 0108 | 0130 | + 0.3 | + 1.0 | - 0.2 | + 1.1 |
| | | 0131 | 0330 | + 0.3 | + 1.0 | 0.0 | + 1.3 |
| | | 0331 | 0345 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 0346 | 0356 | + 0.2 | + 0.3 | 0.0 | + 0.5 |
| | | 0357 | 0802 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 0915 | 0930 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 0931 | 0938 | + 0.2 | + 1.0 | - 0.2 | + 1.0 |
| | | 0939 | 1225 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 1319 | 1349 | + 0.2 | + 1.0 | - 0.2 | + 1.0 |
| | | 1350 | 1433 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 1452 | 1510 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 1511 | 1514 | + 0.2 | 0.0 | 0.0 | + 0.2 |
| | | 1515 | 1530 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 1531 | 1533 | + 0.2 | 0.0 | 0.0 | + 0.2 |
| | | 1534 | 1542 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 1704 | 1705 | + 0.2 | + 1.0 | - 0.2 | + 1.0 |
| | | 1706 | 1728 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 1940 | 2238 | + 0.2 | + 1.0 | 0.0 | + 1.2 |
| | | 2239 | 2243 | + 0.2 | + 1.0 | + 0.2 | + 1.4 |
| | | 2244 | 2359 | + 0.2 | + 1.0 | 0.0 | + 1.2 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Abstract of Total Draft Corrections (Ship) cont'd.

| <u>Day of the Year</u> | <u>Date</u> | <u>From</u> | <u>To</u> | <u>Draft Corr.</u> | <u>S & S Corr.</u> | <u>Instr. or Index Corr.</u> | <u>Total Draft Corr.</u> |
|----------------------------|-------------|-------------|-----------|------------------------|----------------------------|----------------------------------|------------------------------|
| 291 | 10-17 | 0000 | 0003 | + 0.1 | + 1.0 | - 0.2 | + 0.9 |
| | | 0004 | 0625 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 0626 | 0630 | + 0.1 | 0.0 | 0.0 | + 0.1 |
| | | 0631 | 0645 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 0646 | | + 0.1 | 0.0 | 0.0 | + 0.1 |
| | | 0647 | 0751 | + 0.1 | + 1.0 | - 0.2 | + 0.9 |
| | | 0752 | 1039 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1040 | 1042 | + 0.1 | 0.0 | 0.0 | + 0.1 |
| | | 1043 | 1055 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1056 | 1058 | + 0.1 | 0.0 | 0.0 | + 0.1 |
| | | 1059 | 1106 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1200 | 1203 | + 0.1 | + 0.3 | 0.0 | + 0.4 |
| | | 1204 | 1336 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1337 | 1355 | + 0.1 | + 1.0 | - 0.2 | + 0.9 |
| | | 1356 | 1420 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1421 | 1422 | + 0.1 | + 0.05 | 0.0 | + 0.16 |
| | | 1423 | 1440 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1441 | 1442 | + 0.1 | + 0.05 | 0.0 | + 0.16 |
| | | 1443 | 1501 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1502 | 1503 | + 0.1 | + 0.05 | 0.0 | + 0.16 |
| | | 1504 | 1845 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1846 | 1847 | + 0.1 | 0.0 | 0.0 | + 0.1 |
| | | 1848 | 1905 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1906 | 1907 | + 0.1 | 0.0 | 0.0 | + 0.1 |
| | | 1908 | 1927 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 1928 | 1931 | + 0.1 | + 1.0 | - 0.2 | + 0.9 |
| | | 1932 | 2231 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 2232 | 2234 | + 0.1 | 0.0 | 0.0 | + 0.1 |
| | | 2235 | 2238 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 2239 | 2253 | + 0.1 | 0.0 | 0.0 | + 0.1 |
| | | 2254 | 2300 | + 0.1 | + 1.0 | 0.0 | + 1.1 |
| | | 2301 | 2304 | + 0.1 | 0.0 | 0.0 | + 0.1 |
| | | 2304 | 2359 | + 0.1 | + 1.0 | 0.0 | + 1.1 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USCGS SHIP HYDROGRAPHER - 1964 - cont'd.

Abstract of Total Draft Corrections (Ship) cont'd.

| <u>Day of the Year</u> | <u>Date</u> | <u>From</u> | <u>To</u> | <u>Draft Corr.</u> | <u>S & S Corr.</u> | <u>Instr. or Index Corr.</u> | <u>Total Draft Corr.</u> |
|----------------------------|-------------|-------------|-----------|------------------------|----------------------------|----------------------------------|------------------------------|
| 292 | 10-18 | 0000 | 0002 | 0.0 | + 1.0 | - 0.2 | + 0.8 |
| | | 0003 | 0025 | 0.0 | + 1.0 | 0.0 | + 1.0 |
| | | 0026 | 0045 | 0.0 | + 1.0 | - 0.2 | + 0.8 |
| | | 0046 | 0358 | 0.0 | + 1.0 | 0.0 | + 1.0 |

Listed below are the Total Draft Corrections, in feet, for the launch only. Only times of actual hydrography are listed.

Draft Correction will remain at 0.0 feet. This is taken care of by Bar Check. (Abstract of Bar Checks appended to this report).

Settlement & Squat Correction is based on following values for the speed of the launch: 1230 R.P.M. and above = + 0.2 feet, all below 1230 R.P.M. = 0.0 feet.

Instrument or Index Correction is the amount the fathogram initial is in error.

| <u>Day of the Year</u> | <u>Date</u> | <u>From</u> | <u>To</u> | <u>Draft Corr.</u> | <u>S & S Corr.</u> | <u>Instr. or Index Corr.</u> | <u>Total Draft Corr.</u> |
|----------------------------|-------------|-------------|-----------|------------------------|----------------------------|----------------------------------|------------------------------|
| 246 | 9-2 | 1454 | 1550 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| | | 1551 | 1626 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| | | 1627 | 1836 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 254 | 9-10 | 0648 | 1853 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 255 | 9-11 | 0830 | 1830 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 256 | 9-12 | 0548 | 1502 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| | | 1502 | 1723 | 0.0 | + 0.2 | + 0.2 | + 0.4 |
| | | 1723 | 1741 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 258 | 9-14 | 0557 | 1900 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 259 | 9-15 | 0530 | 1053 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 265 | 9-21 | 0752 | 1005 | 0.0 | + 0.2 | 0.0 | + 0.2 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

Abstract of Total Draft Corrections (Launch) cont'd.

| <u>Day of the Year</u> | <u>Date</u> | <u>From</u> | <u>To</u> | <u>Draft Corr.</u> | <u>S & S Corr.</u> | <u>Instr. or Index Corr.</u> | <u>Total Draft Corr.</u> |
|----------------------------|-------------|-------------|-----------|------------------------|----------------------------|----------------------------------|------------------------------|
| 267 | 9-23 | 0557 | 1232 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| | | 1232 | 1301 | 0.0 | + 0.2 | + 0.2 | + 0.4 |
| | | 1301 | 1654 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 268 | 9-24 | 0816 | 0823 | 0.0 | + 0.2 | - 0.2 | 0.0 |
| | | 0823 | 1240 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 269 | 9-25 | 0756 | 1658 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 270 | 9-26 | 0947 | 1027 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 271 | 9-27 | 0814 | 1605 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| | | 1605 | 1826 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 272 | 9-28 | 0808 | 1714 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 273 | 9-29 | 0914 | 1600 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| | | 1600 | 1616 | 0.0 | + 0.2 | - 0.2 | 0.0 |
| | | 1616 | 1647 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 274 | 9-30 | 0813 | 1632 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 281 | 10-7 | 1122 | 1521 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 285 | 10-11 | 0534 | 2358 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 286 | 10-12 | 0000 | 2350 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 287 | 10-13 | 0000 | 0547 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 287 | 10-13 | 0548 | 1008 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 292 | 10-18 | 0641 | 2356 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 293 | 10-19 | 0000 | 0218 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| | | 0219 | 0234 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | 0235 | 2240 | 0.0 | + 0.2 | 0.0 | + 0.2 |
| 294 | 10-20 | 0023 | 0637 | 0.0 | + 0.2 | 0.0 | + 0.2 |

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

TIDE NOTE

Field No. HY-40-2-64

Registry No. H-8796

Tide Station: Sabine Bank Lighthouse, Texas - Louisiana
Latitude 29°28'20" North
Longitude 93°43'21" West

Plane of Reference: MLW = 5.9 feet on the bubbler gage

Time Meridian: 90° West

Time Correction: None

Height Correction: In accordance with Chief, Marine Data Division letter 2321-307-982h dated November 13, 1963 (copy attached) boat sheet soundings were plotted using a reference: MLW = 4.9 feet on the gage. When the MLW value was redetermined to be 5.9 feet on the gage (Chief, Marine Data Division letter 2321-212-CSS 4 dated September 28, 1964 - copy attached) subsequent soundings were plotted using the first reference for purposes of continuity.

Area Covered: Entire area of Boatsheet HY-40-2-64
(See page 35)

An abstract of tide corrections (verified by Tide and Currents Branch) is appended to this report.

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

TIDE NOTE

Field No. HY-40-2-64

Registry No. H-8796

Tide Station: Pleasure Pier, Galveston, Texas
Latitude 29°17'00" North
Longitude 94°47'00" West

Plane of Reference: MLW - 2.4 feet on the staff*

Time Meridian: 90° West

Time Correction minus $\frac{1}{2}$ hour*

Height Correction: 1.2 feet (Ratio)*

Area Covered: used only for launch hydrography on sheet
HY-40-2-64 during the time Sabine Bank
Lighthouse gage was inoperative

*Chief, Marine Data Division letter 2321-244-CSS 4, dated November 9, 1964. (copy appended)

UNITED STATES GOVERNMENT

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

Memorandum

TO : Commanding Officer
USC&GS Ship HYDROGRAPHER

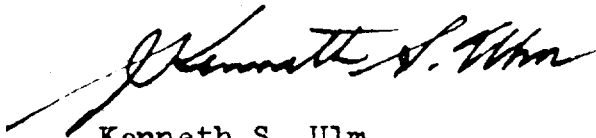
DATE: November 13, 1963
In reply refer to:
2321-307-982h

FROM : Chief, Marine Data Division

SUBJECT: TIDAL data OPR-427

Hourly heights from the bubbler gage record at Sabine Beach Lighthouse are to be used for sounding reductions on Project OPR-427. MLW is 4.9 ft. above gage zero.

Tabulations of the Galveston Pleasure Pier for September 19-30 are enclosed as requested. Heights at Galveston are referred to a datum which is 2.4 ft. below MLW.


Kenneth S. Ulm

Enclosures

UNITED STATES GOVERNMENT

Memorandum

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

IN REPLY REFER TO: 2321-212-CSS 4


TO: The Commanding Officer
USCGC HYDROGRAPHER
P.O. Box 448
Galveston, Texas

DATE: September 28, 1964

FROM: Chief, Marine Data Division

SUBJECT: Sabine Bank Lighthouse tidal data.

Pressure gage records for the period July 16 - September 16 have been tabulated and reduced to mean values. The correction of -0.7 ft. to heights from 2000 July 17 to 1600 July 18 is verified. During the period 2000 August 5 to 0900 August 19, the correction to heights shown on the marigram should be -1.3 ft. Heights tabulated from the latest records received, August 19 to September 16, should be corrected by -0.2 ft. After these corrections are made, MLW is 5.9 ft. above the zero of tabulation.


William D. Barbee

UNITED STATES GOVERNMENT

Memorandum

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

IN REPLY REFER TO: 2321-244-
CSS 4

TO: The Commanding Officer
USCGC HYDROGRAPHER
P.O. Box 448
Galveston, Texas

DATE: November 9, 1964

FROM: Chief, Marine Data Division

SUBJECT: Sabine Bank Tidal Data

We are enclosing hourly height observations at Galveston Pleasure Pier for the reduction of soundings in the Sabine Bank area. Data for the period October 1-7, 1964 will be sent on as soon as possible.

Observations at Galveston Pleasure Pier should be corrected as follows for Sabine Bank: Subtract $\frac{1}{2}$ hour from times of high and low waters, apply factor of 1.2 ft. to range of tide.


William D. Barbee

Enclosures

UNITED STATES GOVERNMENT

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

Memorandum

TO : Commanding Officer
USCGS Ship HYDROGRAPHER

DATE: December 7, 1964

In reply refer to: WSC-210

FROM : Chief, Operations Division

SUBJECT: Revised Instructions for Logging the Corrector Tape

Reference: Chief, Operations Division memo dated July 8, 1964

Effective immediately, velocity corrections shall be logged onto a separate tape, called the Velocity Tape, in lieu of logging these corrections onto the corrector tape. On the corrector tape, 000 shall be entered in the 3-diget space provided for the velocity correction. This change will greatly reduce the length of the corrector tape, as noticed in the following example, which utilizes the same correctors and changes, except for the velocity corrections, that were used in the example on page 3 of previous instructions, dated July 8, 1964:

Corrector Tape Printout

| Time | Indicator | Depth | Pos. No. | Day No. | Ft. | Raydist Corrections | | Sounding Corrections | | |
|--------|-----------|-------|----------|---------|-----|---------------------|----------------|----------------------|--------|------|
| | | | | | | R ₁ | R ₂ | Tide | Trans. | Vel. |
| 083000 | 00 | 0277 | 0001 | 269 | 1 | 100120 | 000100 | 1032 | 032 | 000 |
| 083200 | 00 | 0214 | | | | | | | | |
| 083500 | 00 | 1540 | | | | | | | | |
| 083530 | 01 | 1385 | | | | | | | | |
| 083800 | 00 | 0183 | | | | | | | | |
| 083920 | 01 | 0199 | | | | | | | | |
| 084100 | 00 | 0157 | 0003 | 269 | 1 | 100120 | 000100 | 1034 | 032 | 000 |
| 084130 | 01 | 1590 | | | | | | | | |
| 084400 | 00 | 0965 | | | | | | | | |
| 084500 | 00 | 0830 | | | | | | | | |
| 085000 | 00 | 0470 | 0005 | 269 | 1 | 100110 | 000100 | 1034 | 032 | 000 |

In making the Velocity Tape, all entries will consist of short words. The example shown on the following page illustrates the format to be used.



| <u>Depth Range</u> | | <u>Velocity Correction</u> | <u>Velocity Tape Format</u> |
|--------------------|---------|----------------------------|-----------------------------|
| 0 to | 5.0 Fms | 0.1 Fms | 000050 00 0001 |
| 5.1 | 7.0 | 0.2 | 000070 00 0002 |
| 7.1 | 9.0 | 0.3 | 000090 00 0003 |
| 9.1 | 11.0 | 0.4 | 000110 00 0004 |
| 11.1 | 13.0 | 0.5 | 000130 00 0005 |
| 13.1 | 16.0 | 0.6 | 000160 00 0006 |
| 16.1 | 20.0 | 0.8 | 000200 00 0008 |
| 20.1 | 24.0 | 1.0 | 000240 00 0010 |
| 24.1 | 28.0 | 1.2 | 000280 00 0012 |
| 28.1 | 32.0 | 1.4 | 000320 00 0014 |

In preparation for smooth sheet plotting, the computer will apply the velocity corrections to all soundings in relation to depth. If more than one set of velocity corrections are used on the same hydrographic sheet, a separate Velocity Tape shall be prepared for each set of corrections. The area covered by each set of corrections shall be described in the Descriptive Report, and in the Report on Corrections to Echo Soundings.

Due to the heavy backlog of marine data to be verified in the Washington Office at this time, the velocity correction data recently received from the Ship HYDROGRAPHER are being returned unverified. This data, along with other velocity correction data computed and checked during the 1964 season, shall be logged onto Velocity Tapes, and then forwarded with other pertinent hydrographic data to the Seattle Regional Office for smooth sheet plotting. The verification of velocity corrections will be done at Seattle as required.

Tide corrections shall be submitted on Form C&GS-8502 to the C&GS Rockville, Md. office for verification before the corrector tapes are made.

Horace G. Conerly
Horace G. Conerly

cc: 211
Seattle R.O.
35
C-835

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

VELOCITY CORRECTIONS

(SHIP)

During the periods July 17 to August 6 and September 9 to September 24
use TABLE I. 199 219 253 268

During the period August 11 to September 3, use TABLE II. 224 247

During the period October 8 to October 18, use TABLE III. 282 292

All depths and corrections are in FEET.

TABLE I

253 - 268

| Depth | Correction |
|-------------|------------|
| 12.0 - 13.0 | 0.0 |
| 15.0 | + 0.1 |
| 17.0 | + 0.2 |
| 19.0 | + 0.3 |
| 21.0 | + 0.4 |
| 23.0 | + 0.5 |
| 25.0 | + 0.6 |
| 27.0 | + 0.7 |
| 29.0 | + 0.8 |
| 31.0 | + 0.9 |
| 33.0 | + 1.0 |
| 35.0 | + 1.1 |
| 37.0 | + 1.2 |
| 39.0 | + 1.3 |
| 41.0 | + 1.4 |
| 43.0 | + 1.5 |
| 45.0 | + 1.6 |

525

2410

TABLE II

224 - 247

| Depth | Correction |
|-------------|------------|
| 12.0 - 13.0 | 0.0 |
| 14.8 | + 0.1 |
| 16.6 | + 0.2 |
| 18.4 | + 0.3 |
| 20.3 | + 0.4 |
| 22.1 | + 0.5 |
| 23.9 | + 0.6 |
| 25.7 | + 0.7 |
| 27.5 | + 0.8 |
| 29.4 | + 0.9 |
| 31.2 | + 1.0 |
| 33.0 | + 1.1 |
| 34.8 | + 1.2 |
| 36.6 | + 1.3 |
| 38.5 | + 1.4 |
| 40.3 | + 1.5 |
| 42.1 | + 1.6 |

Fix 0000

524

TABLE III

287 - 292

| Depth | Correction |
|-------------|------------|
| 12.0 - 13.0 | 0.0 |
| 15.4 | + 0.1 |
| 17.8 | + 0.2 |
| 20.2 | + 0.3 |
| 22.6 | + 0.4 |
| 25.0 | + 0.5 |
| 27.4 | + 0.6 |
| 29.8 | + 0.7 |
| 32.2 | + 0.8 |
| 34.6 | + 0.9 |
| 37.0 | + 1.0 |
| 39.4 | + 1.1 |
| 41.8 | + 1.2 |
| 44.2 | + 1.3 |
| 46.6 | + 1.4 |

2411

3746

DESCRIPTIVE REPORT - HYDROGRAPHIC SURVEY (HY-40-2-64) - H-8796

USC&GS SHIP HYDROGRAPHER - 1964 - cont'd.

VELOCITY CORRECTIONS

(LAUNCH HY-1)

ABSTRACT OF BAR CHECKS

246
September 2

IV

| <u>Depth</u> | | <u>Correction</u> |
|--------------|--|-------------------|
| 5.0 to 5.7 | | 0.0 |
| 5.8 to 7.2 | | + 0.2 |
| 7.3 to 8.7 | | + 0.4 |
| 8.8 to 11.8 | | + 0.6 |
| 11.9 to 16.5 | | + 0.8 |
| 16.6 to 21.4 | | + 1.0 |
| 21.5 to 26.2 | | + 1.2 |
| 26.3 to 30.5 | | + 1.4 |
| 30.6 to 35.5 | | + 1.6 |
| 35.6 to 40.0 | | + 1.8 |

259 - 259 5
September 10 - September 14

IV

| <u>Depth</u> | | <u>Correction</u> |
|--------------|--|-------------------|
| 5.0 to 6.2 | | 0.0 |
| 6.3 to 8.4 | | + 0.2 |
| 8.5 to 11.2 | | + 0.4 |
| 11.3 to 14.3 | | + 0.6 |
| 14.4 to 19.3 | | + 0.8 |
| 19.4 to 22.2 | | + 1.0 |
| 22.3 to 26.2 | | + 1.2 |
| 26.3 to 31.5 | | + 1.4 |
| 31.6 to 36.5 | | + 1.6 |
| 36.6 to 40.0 | | + 1.8 |

265
September 21 - September 30

VII

274

| <u>Depth</u> | | <u>Correction</u> |
|--------------|--|-------------------|
| 4.9 to 6.4 | | 0.0 |
| 6.5 to 7.9 | | + 0.2 |
| 8.0 to 9.5 | | + 0.4 |
| 9.6 to 14.3 | | + 0.6 |
| 14.4 to 20.7 | | + 0.8 |
| 20.8 to 27.2 | | + 1.0 |
| 27.3 to 32.0 | | + 1.2 |
| 32.1 to 38.5 | | + 1.4 |
| 38.6 to 44.0 | | + 1.6 |

281 - 294 VII
October 7 - October 20

| <u>Depth</u> | | <u>Correction</u> |
|--------------|--|-------------------|
| 5.0 to 6.2 | | 0.0 |
| 6.3 to 8.4 | | + 0.2 |
| 8.5 to 11.8 | | + 0.4 |
| 11.9 to 19.3 | | + 0.6 |
| 19.4 to 29.0 | | + 0.8 |
| 29.1 to 40.0 | | + 1.0 |

1/17/75

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~~ Tides Branch

Tide Station Used (NOAA Form 77-12): Sabine Bank Lighthouse,
Texas & Louisiana

Period: July 16 - Sept. 16, 1974

HYDROGRAPHIC SHEET: H-8796

OPR: 427

Locality: Coast of Texas near Sabine Bank

Plane of reference (mean ~~lower~~ low water): 5.9 ft.

Height of Mean High Water above Plane of Reference is 2.6 ft.

Remarks: In accordance with Chief, Marine Data Division letter 2321-307-982h dated November 13, 1963 (copy attached) boat sheet soundings were plotted using a reference: MLW = 4.9 feet on the gage. When the MLW value was redetermined to be 5.9 feet on the gage (Chief, Marine Data Division letter 2321-212-CSS 4 dated September 28, 1964 - copy attached) subsequent soundings were plotted using the first reference for purposes of continuity.

James R. Hubbard
for Chief, Tides Branch

APPROVAL SHEET

Field No. HY-40-2-64

Registry No. H-8796

The field work accomplished on this survey was under my immediate supervision. Daily inspections of the boat sheet, DATEX printout records and fathograms were made as the survey progressed.

On the basis of the boatsheet review, the survey is complete and adequate, and no additional field work is recommended.

V. Ralph Sobieralski
V. Ralph Sobieralski, CDR, USC&GS
Commanding Officer
USC&GS Ship HYDROGRAPHER

[illegible]

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 8796

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

| RECORD DESCRIPTION | | | AMOUNT | RECORD DESCRIPTION | | | AMOUNT |
|--------------------|---------------|----------------------|-----------|--------------------|---------------|--------------------------------|--------|
| SMOOTH SHEET | | | 1 | BOAT SHEETS | | | 1 |
| DESCRIPTIVE REPORT | | | 1 | OVERLAYS | | | 1 |
| DESCRIPTION | DEPTH RECORDS | HORIZ. CONT. RECORDS | PRINTOUTS | TAPE ROLLS | PUNCHED CARDS | ABSTRACTS/ SOURCE DOCUMENTS | |
| ENVELOPES | | | | | | | |
| CAHIERS | 3 | | 3 | | | 1 | |
| VOLUMES | 15 | | | | | | |
| BOXES | | | | | | | |

~~XXXXXXXXXX~~

1-Position Overlay and 1-Roll Manuscripts

SPECIAL REPORTS (List)

Tides filed in Cahiers

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 | | | | |
| POSITIONS CHECKED | | | 20 | |
| POSITIONS REVISED | | | / | |
| DEPTH SOUNDINGS REVISED | | | | |
| DEPTH SOUNDINGS ERRONEOUSLY SPACED | | | / | |
| SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED | | | / | |
| | TIME (MANHOURS) | | | |
| TOPOGRAPHIC DETAILS | | | 15 | |
| JUNCTIONS | | | 20 | |
| VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS | | No time entered. | 30 | |
| SPECIAL ADJUSTMENTS | | Estimated | 103 | |
| ALL OTHER WORK | | ↓ | | |
| TOTALS | | 300 hrs. | 168 | |
| PRE-VERIFICATION BY | | BEGINNING DATE | ENDING DATE | |
| VERIFICATION BY <i>Richard D. Lynn</i> | | BEGINNING DATE | ENDING DATE <i>1/1/67 ESTIMATED</i> | |
| REVIEW BY <i>J. Baumgardner</i> | | BEGINNING DATE <i>Nov 25, 1974</i> | ENDING DATE <i>Jan 8, 1975</i> | |

1 map Form B B. 66 hrs. 1-28-75 *Cartoon 17.11-2/10/75*

Reg. No. 8796

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 _____

REMARKS:

H-8796 (1964)

Items for Future Pre-Survey Review

The bottom is considered adequately developed on the present survey. A general shoaling of 1 to 2 feet has taken place throughout the survey area. However, west of the Calcasieu Pass Channel to Holly Beach a shoaling of as much as 7 feet has occurred.

| Position Index | | Bottom Change | Use | Resurvey |
|----------------|--------------|---------------|--------------|--------------|
| <u>Lat.</u> | <u>Long.</u> | <u>Index</u> | <u>Index</u> | <u>Cycle</u> |
| 292 | 0932 | 4 | 6 | 25 Years |
| 293 | 0932 | 4 | 6 | 25 Years |
| 294 | 0932 | 4 | 6 | 25 Years |
| 293 | 0933 | 4 | 5 | 25 Years |
| 294 | 0933 | 5 | 6 | 10 Years |
| 293 | 0934 | 4 | 5 | 25 Years |
| 294 | 0934 | 4 | 5 | 25 Years |
| 293 | 0935 | 4 | 4 | 25 Years |
| 294 | 0935 | 4 | 4 | 25 Years |

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8796

FIELD NO. HY-40-2-64

Louisiana, Gulf of Mexico, Vicinity of Calcasieu Pass

SURVEYED: August 28 through October 20, 1964

PROJECT NO.: OPR-427

SCALE: 1:40,000

SOUNDINGS: DE-723 Depth Recorders

CONTROL: Sextant Fixes on
Shore Signals
Electronic-Raydist

Chief of Party V. R. Sobieralski
Surveyed by J. P. Randall
..... J. H. Allred
..... S. J. Ruden
..... W. R. Klesse
..... N. A. Barnes, Jr.
..... W. Y. S. Williams
..... J. T. Smith
..... M. A. Levitan
Automated Plot by Gerber Digital Plotter (PMC)
Verified and Inked by R. D. Lynn
Reviewed by S. Baumgardner
Date: Jan. 8, 1975
Inspected by F. B. Powers

1. Description of the Area

This survey, located off the Louisiana coast, extends off-shore for a distance of approximately 10 miles and includes Calcasieu Pass Channel, a small portion of Sabine Pass Channel and the outer limits of the Sabine Bank shoal.

The bottom slopes very gradually from the shoreline to maximum depths of 44 feet except for the southwest portion where the outer limits of the Sabine Bank shoal lie. In this area least depths are 25 feet.

The predominant bottom characteristics are mud, sand and shells.

2. Control and Shoreline

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

The shoreline originates with incomplete photogrammetric manuscripts RS-808, RS-809, RS-810, and RS-811 based on 1963 photography and RS-807 based on 1963 photography and field edited in 1964.

3. Hydrography

Depths at crossings are in good agreement. The usual depth curves were adequately delineated. Supplemental curves were added to emphasize certain bottom features. The development of the bottom configuration and the investigation of least depths are considered adequate.

4. Condition of the Survey

The sounding records, smooth plotting, various sounding printouts and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual, supplemented by the Instruction Manual-Automated Hydrographic Survey except as listed below:

A. Numerous detached positions were not given position numbers nor were times entered in the volumes as required by the Hydrographic Manual.

B. A plus four tenths TRA corrector was disregarded for the ships work on Julian day 257 and positions 1129 to 1181, on Julian day 258. This corrector was applied by the reviewer only where the depth curves were effected.

5. Junctions

An adequate junction was effected with H-8767 (1962) on the southwest and H-8738 (1962-63) on the southeast. The

junction with H-8795 (1964) on the west is discussed in the review of that survey. No contemporary survey junctions with the present survey on the east. However, present depths are in good agreement with charted depths.

6. Comparison with Prior Surveys

- A. H-1596a (1884) 1:80,000
 H-1645 (1885) 1:80,000
 H-1648 (1885) 1:20,000
 H-1350 (1875-77) 1:600,000
 H-487 (1855) 1:20,000

These prior surveys cover the area common to the present survey. A portion of H-1645 and H-487 has been compared with and is superseded by H-5334 discussed below. The sparcity of soundings on these prior surveys preclude a detailed comparison with the present survey; however, the present depths are generally 1-2 feet shoaler than prior depths in some areas.

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

- B. H-3669 (1914) 1:20,000

This prior survey covers a small portion of the south-east corner of the present survey approaching the Sabine Bank shoal. A detailed comparison between the prior and present surveys reveals a shoaling of as much as 4 feet.

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

- C. H-4332 (1922-23) 1:40,000 H-4372 (1924) 1:40,000
 H-4364 (1924) 1:40,000 H-5334 (1933) 1:10,000
 H-4365 (1923) 1:40,000

These surveys cover the area common to the present survey. A portion of H-4365 has been compared with and is superseded by H-5334. A detailed comparison between the prior and present surveys reveals a minor shoaling of approximately 1 to 2 feet. However, the area west of the Calcasieu Pass Channel to Holly Beach has shoaled as much as 7 feet since 1922.

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

D. F.E. No. 1 (1966) W.D.

Effective depths from this wire-drag investigation do not conflict with depths on the present survey.

The 20-ft. cleared depth in lat. 29°42.69', long. 93°19.38' was erroneously charted from F.E. No. 1, 1966 and ²¹⁴should be deleted from the chart.

The 16-ft. obstruction and 31 ft. depth in lat. 29°44.35'²¹⁰, long. 93°15.80' and lat. 29°36.15'⁰⁹⁰, long. 93°17.80'¹¹⁵⁰ were brought forward from the above wire-drag investigation.

7. Comparison with Chart 11344 (latest print date Sept. 7, 1974)
 1279 (latest print date May 4, 1974)
 11347 (latest print date June 15, 1974)

A. Hydrography

The charted hydrography originates with the partial application of depths from the boat sheet and verified smooth sheet of the present survey, supplemented by F.E. No. 1, 1966 and subsequent Corps of Engineers surveys. Only minor differences were noted between charted depths and present survey depths.

Attention is directed to the following items:

(1) Items indicated on BP 90601-02, by the reviewer were charted subsequent to the date of the present survey. They supersede the present survey information, and should be retained on the chart.

(2) The prior items listed below were neither verified nor disproven by the present survey and should be retained as charted.

Chart 11347

| <u>Item</u> | <u>Lat.</u> | <u>Long.</u> | <u>Source</u> |
|--------------------------|-------------|--------------|-----------------------|
| #403 (a) Submerged wreck | 29°28.42' | 93°16.83' | Wreck List No. 708 |
| (b) Visible Wreck PA | 29°45.14' | 93°22.68' | NM 21/63 |

Chart 1279

| | | | | |
|-------|------------------------|-----------|-----------|--------------|
| | (c) Oil Platform | 29°40.34' | 93°36.28' | BP60192 (60) |
| | (d) Oil Platform | 29°40.20' | 93°36.52' | BP60192 (60) |
| | (e) Pier ruins | 29°45.10' | 93°37.49' | CL 333/55 |
| # 426 | (f) Visible Wreck PA | 29°44.92' | 93°35.99' | NM 40/54 |
| # 428 | (g) Submerged wreck PA | 29°45.80' | 93°26.20' | NM 36/56 |
| | (h) Oil Platform | 29°41.00' | 93°37.27' | CL 46/60 |
| | (i) Oil Platform | 29°40.12' | 93°44.18' | NM 52/63 |

(3) Two oil platforms located in lat. 29°37.91', long. 93°22.72' and lat. 29°37.93', long. 93°22.91' were erroneously plotted from chart 651-SC Aid Proof No. 7 and should be deleted from the chart.

(4) A survey marker located on the present survey in lat. 29°42.59', long. 93°20.02' is not presently charted.

(5) The vicinity of the reported shoal depths listed below was investigated adequately to discredit the shoaling and the reported shoals should be deleted from the chart. It is probable that inaccuracy in the reported depths resulted from excessive settlement and squat.

| <u>Reported Depth (ft.)</u> | <u>Lat.</u> | <u>Long.</u> | <u>Charted From</u> |
|---------------------------------|-------------|--------------|-------------------------|
| 34 | 29°31' | 93°16' | CL 426 (1958) |
| 35 | 29°32.6' | 93°20.7' | NM 29/1960 |
| 35 | 29°32.2' | 93°24.32' | CL 947 (1964) |
| 35 | 29°33.1' | 93°29.50' | CL 947 (1964) |

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

B. Controlling Depths

The charted controlling depth tables for Sabine Bank Channel and Calcasieu Pass Channel originate with subsequent Corps of Engineers information and should be retained on the chart.

C. Aids to Navigation

The aids to navigation have been established subsequent to the date of the present survey. The aids presently charted adequately mark the features intended.


8. Compliance with Instructions

This survey adequately complies with the Project Instructions.

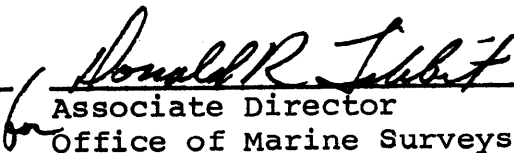
9. Additional Field Work

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

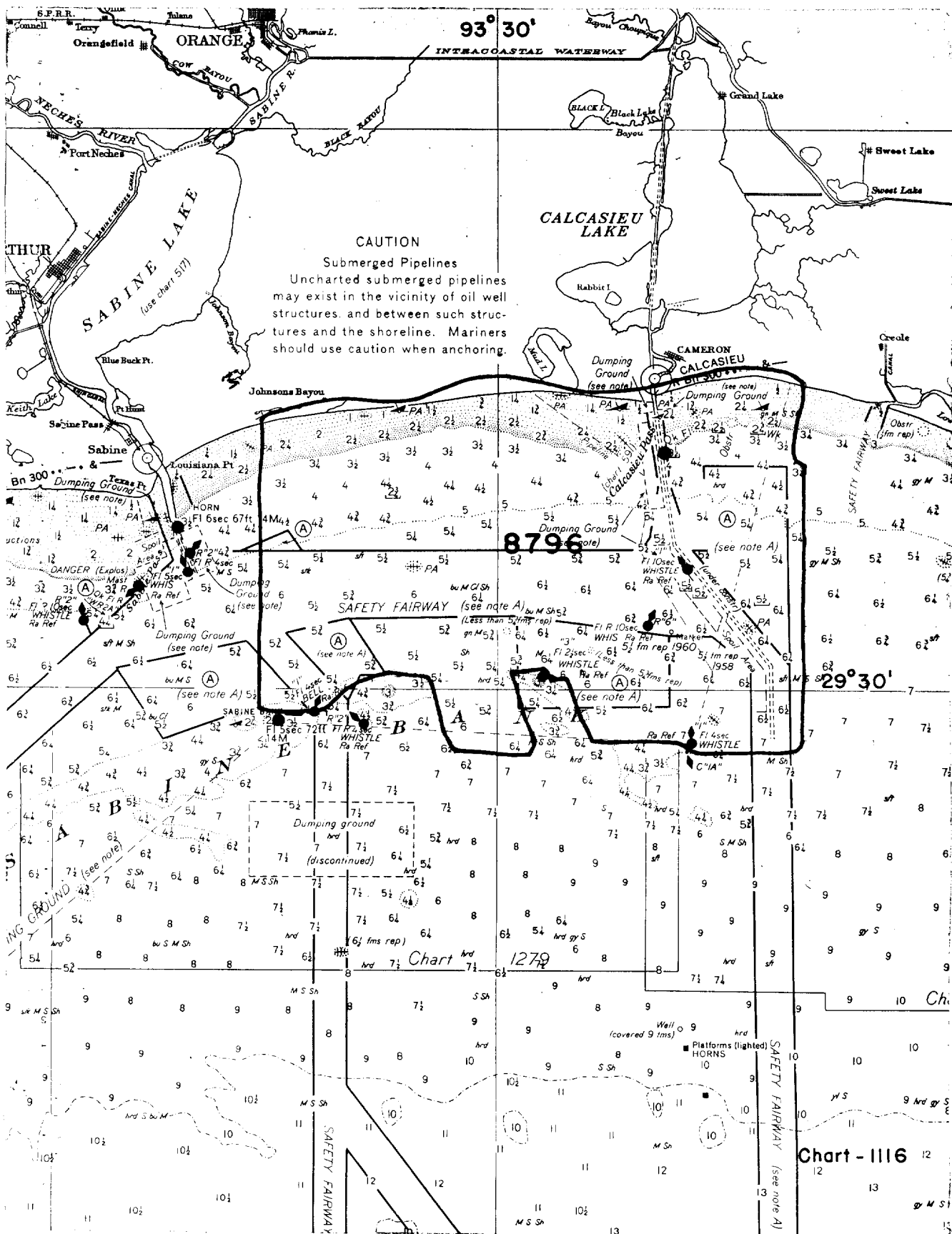
Examined and Approved:



Chief
Marine Chart Division



Associate Director
Office of Marine Surveys and Maps



RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. *H-8796*

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 |
|-------------------------------|-----------------|-----------------------|---|
| <i>591</i> | <i>2-27-67</i> | <i>E. M. Thompson</i> | Part Before After Verification Review Inspection Signed Via Drawing No. <i>added 4 sdgs (sdgs on chart generally show new survey.)</i> |
| <i>1116</i> | <i>4/11/67</i> | <i>H. Helmer</i> | Part Before After Verification Review Inspection Signed Via Drawing No. <i>Exam thru 591, Dwg #14a. Added o file 29°45'30" 93°23'</i> <i>Held further application until applied to 651-SC</i> |
| <i>1279</i> | <i>5/22/67</i> | <i>H. Quinlan</i> | Part Before After Verification Review Inspection Signed Via Drawing No. <i>less area covered by 651-SC</i> |
| <i>651-SC</i> | <i>10/27/67</i> | <i>H. Helmer</i> | Part Before After Verification Review Inspection Signed Via Drawing No. <i>All sdgs & curves revised to show new hydro</i> |
| <i>1278</i> <i>1134</i> | <i>11/1/67</i> | <i>D. Lundberg</i> | Part Before After Verification Review Inspection Signed Via Drawing No. <i>All sdgs & curves revised to show new hydro thru</i> <i>pt 651-SC and overlap.</i> |
| <i>1116</i> <i>1134</i> | <i>11/4/67</i> | <i>H. V. Howard</i> | Part Before After Verification Review Inspection Signed Via Drawing No. <i>ALL sdgs & curves revised to show new hydro thru Charts 1278 & 1279 & 651-SC</i> |
| <i>1279</i> <i>1341</i> | <i>1-10-68</i> | <i>T. A. Ware</i> | Part Before After Verification Review Inspection Signed Via Drawing No. <i>all sdgs & curves to show new hydro thru charts 1278 & 651-SC (consider completely updated & reviewed)</i> |
| <i>1051</i> <i>11345</i> | <i>5/14/68</i> | <i>T. A. Ware</i> | Part Before After Verification Review Inspection Signed Via Drawing No. <i>Soundings & curves revised to show new hydro thru chart 1278. (complete fill after survey 11345)</i> |
| <i>651</i> <i>11347-SC</i> | <i>2/16/79</i> | <i>D. M. Perkins</i> | Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>13</i> |
| <i>11344</i> | <i>10/17/89</i> | <i>Ed Martin</i> | Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>37</i> |
| <i>11345</i> | <i>7-20-90</i> | <i>John Pierce</i> | Fully applied; no further corrections, Dwg. 38; appl'd thru <i>cht 11344</i> |
| <i>11341</i> | <i>3-15-91</i> | <i>DAN BLACK</i> | FULLY APP'D DWG #48 APP'D THRU 11347 |
| <i>11330</i> | <i>1983</i> | | Full New Chrt Dwg #1 |
| <i>11340</i> | <i>3-19-91</i> | <i>DAN BLACK</i> | FULLY APP'D DWG #72 APP'D THRU 11330 |
| <i>11345</i> | <i>10/16/91</i> | <i>DAN BLACK</i> | FULLY APP'D DWG #39 APP'D THRU 11344 |