

9289

Diag. Cht. No. 1237.

FORM C&GS-504

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. MI-20-1-72 Office No. H-9289

LOCALITY

State South Carolina

General locality Inshore

Locality Myrtle Beach to Murrells Inlet

1972

CHIEF OF PARTY

E. K. McCaffrey

LIBRARY & ARCHIVES

DATE 3-11-74

*Charts 8355C B
1237
1110*

9289

HYDROGRAPHIC TITLE SHEET

H-9289

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.

MI-20-1-72

State South Carolina

General locality Inshore

Locality Myrtle Beach to Murrells Inlet, South Carolina

Scale 1:20,000 Date of survey 8-9-72 to 9-23-72

Instructions dated May 2, 1972 Project No. OPR-437-MI-72

Vessel NOAA Ship MT MITCHELL (MSS-22)

Chief of party Edwin K. McCaffrey, CAPT, NOAA, Commanding Officer

Surveyed by Ship's Personnel (LTJG M.C. Meyer, NOAA, Officer in Charge)

Soundings taken by echo sounder, hand lead, ~~XXXX~~

Graphic record scaled by Ship's Personnel

Graphic record checked by _____

Protracted by _____ Automated plot by AMC CALCOMP 618

Soundings penciled by _____

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

REMARKS: The boatsheet comprises two Roll Plotter (COMPLIT) sheets annotated A of A, B and B of A, B. A mylar sheet showing the entire area surveyed contains the junction soundings, pre-survey review items, prior survey soundings and other data used for comparison. This sheet also shows the entire shoreline available through the use of T-Sheets.

Chart #
123-8
835sc B
1110

Descriptive Report
To Accompany
Hydrographic Survey MI-20-1-72
Registry Number H-9289

OPR-437-MI-72
Coast of North and South Carolina

1972 Field Season

NOAA Ship MT MITCHELL (MSS-22)

Edwin K. McCaffrey
CAPT, NOAA
Commanding Officer

*Applied to stds 3-15-74
CAS*

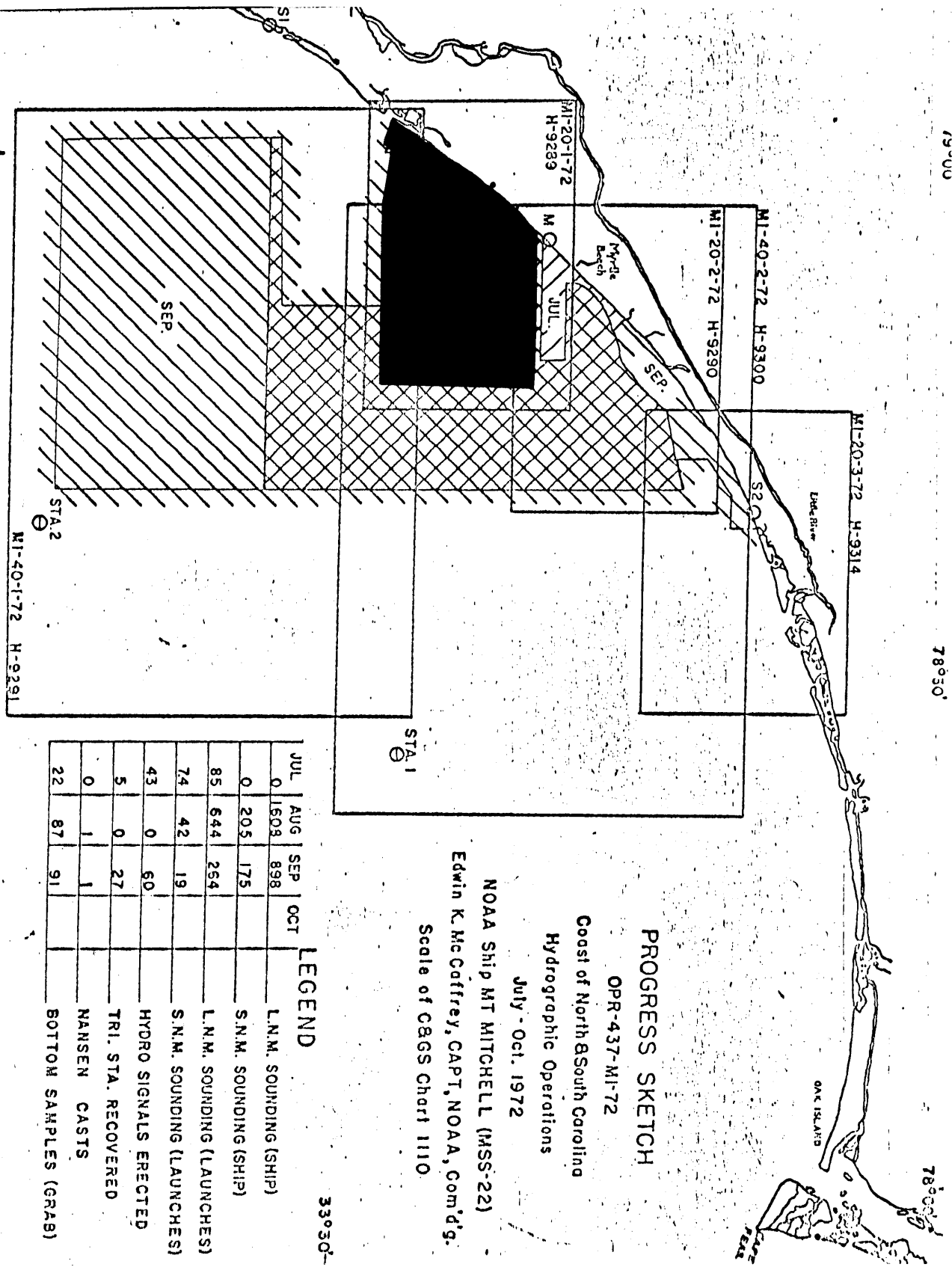
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79°00'

78°30'

78°00'



PROGRESS SKETCH

OPR-437-MI-72

Coast of North & South Carolina

Hydrographic Operations

July - Oct. 1972

NOAA Ship MT MITCHELL (MSS-22)

Edwin K. McCaffrey, CAPT, NOAA, Com'd'g.

Scale of CGGS Chart 1110

33°30'

LEGEND

	JUL	AUG	SEP	OCT	
L.N.M. SOUNDING (SHIP)	0	1608	898		
S.N.M. SOUNDING (SHIP)	0	205	175		
L.N.M. SOUNDING (LAUNCHES)	85	644	264		
S.N.M. SOUNDING (LAUNCHES)	74	42	19		
HYDRO SIGNALS ERECTED	43	0	60		
TRI. STA. RECOVERED	5	0	27		
NANSEN CASTS	0	1	1		
BOTTOM SAMPLES (GRAB)	22	87	91		

Descriptive Report

To Accompany

Hydrographic Survey MI-20-1-72

Registry Number H-9289

OPR-437-MI-72

Coast of North and South Carolina

1972 Field Season

NOAA Ship MT MITCHELL (MSS-22)

Edwin K. McCaffrey
CAPT, NOAA
Commanding Officer

A. Project

This survey was conducted along the coast of South Carolina in accordance with Project Instructions, OPR-437-MI-72, Coast of North and South Carolina, dated May 2, 1972.

B. Area Surveyed

The area surveyed is bounded on the west by the shoreline extending from Murrells Inlet to Myrtle Beach, South Carolina. The northern boundary is Latitude 33°39'21"N. The eastern boundary is Longitude 78°46'00"W. The southern boundary passes through the following points:

Latitude 33°31'42"N.	Longitude 79°02'00"W.
Latitude 33°31'09"N.	Longitude 78°55'00"W.
Latitude 33°31'49"N.	Longitude 78°51'00"W.
Latitude 33°31'49"N.	Longitude 78°46'00"W.

Inclusive dates for the survey are August 9, 1972 to September 23, 1972.

C. Sounding Vessel

All of the soundings obtained for this survey were taken by the NOAA Ship MT MITCHELL and Launches MI-3, MI-5 and MI-6.

D. Sounding Equipment

The MT MITCHELL, Launch MI-5 (Plastic Pig), and Launch MI-6 (Uniflite) used the automated HYDROPLOT system. Launch MI-3 (Bertram) ran inshore hydrography using Hyper-Visual control. All of the soundings for this survey were recorded and plotted in feet.

The following equipment was used:

	<u>Ship</u> <u>Ser. No.</u>	<u>MI-3</u> <u>Ser. No.</u>	<u>MI-5</u> <u>Ser. No.</u>	<u>MI-6</u> <u>Ser. No.</u>
Computer, PDP-8E	8E-412	-----	387	8E-853
HYDROPLOT Controller	7605941-3	-----	7605941	7605941-1
Ross Model 4000 Echo Sunder Transducer	1052	-----	1049	201745
Ross Model 5000 Echo Sunder Recorder	1052	-----	1049	201745
Ross Model 6000 Echo Sunder Digitizer	1052	-----	1049	201745
Houston Instruments Model DP-3 Roll Plotter	3750-2	-----	4680-1	4309-1
Hi-Fix Navigation Interface	5	-----	11	6
Hi-Fix Receiver	A-358	A-278	A-273	A-264
Raytheon Model DE-723B Survey Fathometer	-----	1281	-----	-----

The initial was set at zero on all echo sounders. Initial drift due to stylus wear was always re-set to zero. Any variance from the zero initial was applied when the graphic records were scanned.

At times, on the Ross Echo Sounder graphic record, a second

"Initial" appears at 10 feet. This is the indication that the function called "blanking" was in use. It was necessary to use "blanking" on the Ross sounding gear in order for the depth digitizer to operate properly. This function blanks returns above the depth to which it is applied and eliminates stray digitized depths due to return from cavitation bubbles below the transducer. This produces a trace resembling the zero mark at the depth to which "blanking" was applied, but has no effect on the recorded soundings.

The following checks of the Raytheon DE-723B Survey Fathometer were made frequently: A-F Scale Check (with fine arc check), Speed Count, MRV, Initial and Paper Alignment. No corrections were necessary.

The graphic records were scanned by trained personnel, spot checks for errors were made by the Officer-in-Charge of the particular launch used for the day's work, and the Officer-in-Charge of the sheet. These spot checks insured that the data were correctly interpreted in accordance with Paragraphs 1-34, 5-121, and 5-122 of the Hydrographic Manual (20-2).

Velocity corrections and instrument error for all of the launches were determined from bar check data. Bar checks were made at least once a day if weather and sea conditions permitted. An abstract of velocity corrections, one for each launch, is included in this report.

Velocity corrections for the MT MITCHELL were determined by two serial temperature casts made on August 17 and September 9, 1972. An abstract of velocity corrections for the ship is included in this report.

Instrument error for the ship was determined from a vertical cast made on September 19, 1972 in the survey area. An abstract of the vertical cast data is included in this report.

Settlement and squat corrections for the ship were obtained from test runs made on October 8, 1969. An abstract of settlement and squat data is included in this report.

Settlement and squat, and draft data for Launches MI-5 and MI-6 was collected on February 9, 1972, and data for Launch MI-3 was obtained on July 25, 1972. An abstract of the launch settlement and squat data is included in this report.

A draft of 14 feet was assumed for the ship for the initial entry into the HYDROPLOT system. Draft readings were taken at the beginning and end of each trip the ship made to the working grounds. Any difference between the assumed and true draft was applied on the Corrector Tape. An abstract of the ship's draft is included in this report.

Tides were recorded by the Bristol Pressure Recording Tide Gage (Bubbler) at Myrtle Beach, South Carolina. Operation of this gage, during times of sounding operations, was verified by contacting the Tide Gage Observer at Myrtle Beach.

E. Smooth Sheet

The smooth sheet for this survey will be prepared by the Atlantic Marine Center, Norfolk, Virginia. The following tapes, with printouts, were furnished to them:

1. Hyperbolic Master Tapes
2. Hyperbolic Corrector Tapes
3. Hyper-Visual Master Tapes
4. Hyper-Visual Corrector Tapes
5. Velocity Correction Tapes
6. TC/TI Tapes
7. ASCII Signal Tape
8. Computer Parameter Tapes

F. Control

Control for the MT MITCHELL and Launches MI-5 and MI-6 was hyperbolic Hi-Fix using frequency 1618.650 KHz. The three Hi-Fix stations, located by third-order traverse, were as follows:

Master	BOURBON R.M. 5, 1972	Latitude 33°39'33.20"N. Longitude 78°55'00.95"W.
Slave 1	OKEEFE, 1972	Latitude 33°24'28.72"N. Longitude 79°08'03.35"W.
Slave 2	CABANA, 1969	Latitude 33°49'33.00"N. Longitude 78°38'57.79"W.

Calibrations of Hi-Fix were made at various intervals throughout the day using a three-point visual fix and a check angle.

An average of all Hi-Fix correctors for the day was used as the corrector for that day on the off-line plot.

A sawtooth strip chart recorder was in constant use for the purpose of monitoring lane count.

Control for Launch MI-3 was hyper-visual consisting of a visual angle and one electronic pattern.

For further information concerning the Hi-Fix related control please refer to: "Report on Calibration of Hi-Fix - OPR-437-MI-72, Coast of North and South Carolina" 1972.

All of the visual signals, erected by the MT MITCHELL or Photo Party #62 personnel, were located by third-order traverse. Some of the calibration visual fix objects were triangulation intersection stations.

G. Shoreline

The Photogrammetry Section, Atlantic Marine Center, furnished the following T-Sheets to be used as the source of the shoreline. All of the sheets carry the same identification information: Dates of Photography - Dec. 1969, Apr. 1970, Dec. 1970 and Date of Revision - Feb. 1972.

T-12296 (2)

T-12298 (2)

T-12299 (2)

The sheets are labeled "Second Edition" and are Scale 1:20,000.

The shoreline within the limits of hydrography consists entirely of sand beaches.

H. Crosslines

Crosslines were run to the extent of 10.0% of the regular system of sounding lines. Agreement between crosslines and regular sounding lines was excellent rarely exceeding one foot.

I. Junctions

This survey junctions on the south with H-9102 (WH-20-1-65)

and soundings compare within one foot after the application of velocity corrections.

J. Comparison with Prior Surveys

Prior surveys of this area are H-4615 (1925-1926) and H-4616 (1926). Agreement with both surveys is within one foot except in the area near Murrells Inlet. Due to the constant shifting of the bar at the mouth of the inlet there were differences of up to five feet.

This survey agreed within one foot or less with all contemporary surveys adjacent to it: H-9291 (1:40,000) to the south, H-9300 (1:40,000) to the east, and H-9290 (1:20,000) to the north.

K. Comparison with Charts

The area covered by this survey was compared with the latest editions of C&GS Charts 1001, 1110, 1237 and 835 SC. Chart 1001 contains no soundings for this area (too shallow - blue tinted area). Chart 1110 agrees within 1-2 feet with the offshore areas of this survey. There was good agreement with Chart 835 SC except for the discrepancy noted in Item 1 - Chart 1237, which follows.

Chart 1237 is the largest scale chart for this area. The soundings on this chart usually agree within 1-2 feet. However, there were two areas where the chart and survey fail to agree.

- (1) At Latitude 33°34'00"N. Longitude 78°59'35"W. C&GS Chart 1237 indicates an 18 foot shoal. Regular hydrographic sounding lines fail to reveal any depth less than 24 feet in this vicinity. (Correction for sound velocity applied).
- (2) At Latitude 33°32'54"N. Longitude 78°56'17"W. The chart indicates a sounding of 21 feet. This pre-survey review item was thoroughly developed. No sounding less than 24 feet was found (Correction for sound velocity applied).

There were two pre-survey review items investigated on this boatsheet. Both are on C&GS Chart 1237. The two pre-survey

review items were investigated while running Development #1. The chart indicates a 21 foot sounding at Latitude 33°32.9'N. Longitude 78°56.3'W. After development the least depth found was 24 feet. At Latitude 33°33.5'N. Longitude 78°56.5'W. a 20 foot charted sounding was verified. In addition, a sounding of 18 feet was located at Latitude 33°33.5'N. Longitude 78°56.9'W. and should be charted.

Development #2 was a sand ridge located at Latitude 33°33.5'N. Longitude 78°55.5'W. The least depth found was 27 feet.

Development #3, at Latitude 33°34.5'N. Longitude 78°59.8'W., was run because a number of strays were recorded on the graphic record while running the system of regular sounding lines adjacent to the beach. The development failed to show any strays at all leading to the belief that the strays were large schools of fish which had been noticed in the area previously.

Development of similar strays on the 1:20,000 scale surveys to the north, using leadline and echo sounder, verified that such strays were, in fact, caused by large schools of fish migrating along parallel to the beach in 15-20 foot depths.

The final development, #4, located at Latitude 33°38.1'N. Longitude 78°54.1'W. was run to prove the existence of a small sand ridge. The ridge was only 2 to 3 feet higher than the bottom surrounding it and, prior to development, the existence of the ridge was questionable.

L. Adequacy of the Survey

A small holiday (2 soundings) exists at Latitude 33°31'52"N. Longitude 78°53'48"W. because of a mis-applied Hi-Fix lane corrector used on Day 237. Otherwise, this survey is complete and adequate to supersede all prior surveys of the area. This "holiday" is not critical due to depths and general bottom configuration.

M. Aids to Navigation

There are two private aids to navigation within the limits of this survey. The aids are listed in U.S. Coast Guard Light List, Volume II (CG-160), Atlantic and Gulf Coast, 1972.

Surfside Fishing Pier Obstruction Lights (on end of the pier) Light List No. 10 (Page 1)

2 Fixed Red Lights

Latitude $33^{\circ}36.2'N$. Longitude $78^{\circ}58.2'W$.
33°36 1268 78°58 1262 0200

Garden City Fishing Pier (on end of the pier) Light List No. 11 (Page 1)

2 Fixed Red Lights

Latitude $33^{\circ}34.5'N$. Longitude $78^{\circ}59.8'W$.
33°34 9253 78°59 4916 0160

N. Statistics

	<u>Ship</u>	<u>MI-3</u>	<u>MI-5</u>	<u>MI-6</u>
Linear Nautical Miles, Sounding Line	468.7	80.4	304.5	98.7
Square Nautical Miles, Area Surveyed	42.0	6.8	23.9	9.8
Number of Positions	1087	523	716	194
Number of Bottom Samples	4	7	24	39
Number of Developments	0	1	2	1

O. Miscellaneous

Due to the depth of the water, the area covered by this survey is out of normal shipping lanes. Many shrimp boats have been observed working in this area.

Sounding volumes labeled "Hydrographic Operations Log" were used by the ship and Launches MI-5 and MI-6 to record data pertinent to the survey.

The boatsheet comprises two Roll Plotter (COMPLIT) sheets annotated A of A, B and B of A, B.

A mylar sheet, covering the surveyed area, contains the junction soundings, prior survey soundings and pre-survey review items. Shoreline, as shown on the T-Sheets is also on this composite sheet. The mylar sheet was forwarded as part of the survey records.

P. Recommendations

None.

Q. Reference to Reports

The 1972 Field Season reports, listed below, should be used as reference for a complete evaluation of this survey.

Report on Calibration of Hi-Fix

Report on Corrections to Echo Soundings

Respectfully Submitted:

Michael C. Meyer

Michael C. Meyer
LTJG, NOAA

Approved and Forwarded:

Edwin K. McCaffrey
Edwin K. McCaffrey
CAPT, NOAA
Commanding Officer

ATLANTIC MARINE CENTER

PROJECTION PARAMETERS

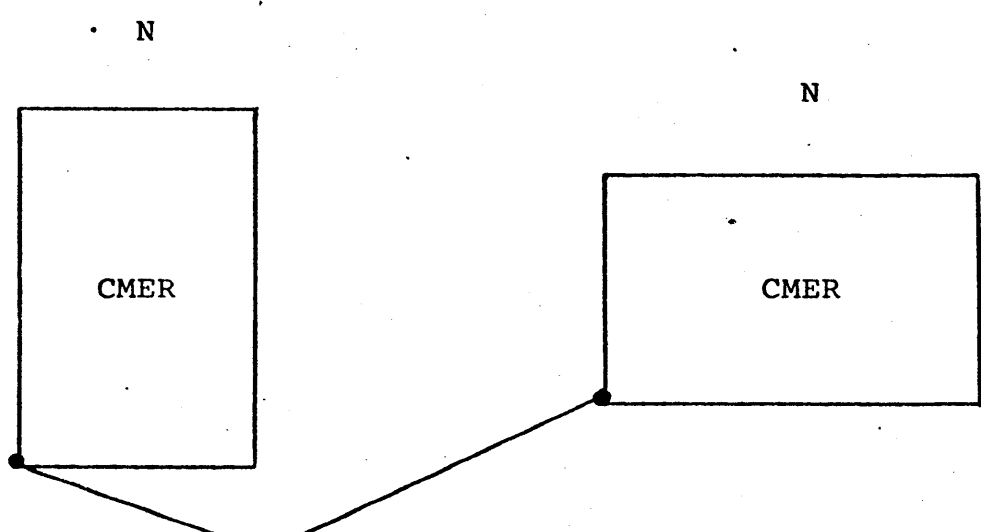
POLYCONIC OR MODIFIED TRANSVERSE MERCATOR

- 1. Project No. OPR 437
- 2. Reg. No. H-9289
- 3. Field No. MI-20-1-72
- 4. Requested By AMC
- 5. Ship or Office VERIFICATION
- 6. Date Required _____

- 7. Polyconic Modified Transverse Mercator
- 8. Central Meridian of Projection 78° 53' 00"
- 9. Survey Scale: 1: 20,000

- 10. Size of Sheet (check one):
 36 x 54 36 x 60 Other Specify _____

- 11. Sheet Orientation (check one):
 NYX = 1 NYX = 0



- 12. Plotter Origin: S.W. Corner of Sheet (not necessarily a grid intersection)
 Latitude 33° 30' 45"
 Longitude 79° 03' 00"

- 13. G.P.'s of triangulation and/or signals attached
- 14. Material Desired: Tracing Paper Mylar
 Smooth Sheet Other Specify _____

15. Remarks: _____

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

1. Project # OPR-437 2. Reg. # H- 9289 3. Field # MI-20-1-72
 4. Type of Control Hi-Fix (Hi-Fix, Raydist, EPI, etc.)
 5. Frequency 1618.650 KHz (for conversion of electronic lanes to meters)
 6. Mode of Operation (check one):

Range-Range Range-Visual Range One (R₁)

Lat. _____° _____' _____"

Station I.D. _____

Long. _____° _____' _____"

Range Two (R₂) _____

Lat. _____° _____' _____"

Station I.D. _____

Long. _____° _____' _____"

Hyperbolic (3-station) Hyper-Visual

Slave One

Lat. 33° 24' 28.72"Station I.D. OKEEFE 1972Long. 79° 08' 03.35"

Master

Lat. 33° 39' 33.20"Station I.D. BOURBON R.M. 5 1972Long. 78° 55' 00.95"

Slave Two

Lat. 33° 49' 33.00"Station I.D. CABANA 1969Long. 78° 38' 57.79"

7. Location of Survey:

Range-Range Imagine an observer is standing at R₁ Station and looking directly at R₂ (check one):Survey area is to observer's Right A=0Survey area is to observer's Left A=1Hyperbolic

Looking from survey area toward Master Station:

Slave One must be to observer's Left.Slave Two must be to observer's Right.8. This form is submitted as an aid in preparing a boat sheet. This form applies to all data on this survey. This form applies to part of the data on this survey.

Vessel EDP #	From		To		Position Numbers (inclusive)
	Time	Day	Time	Day	
_____	_____	_____	_____	_____	_____ to _____
_____	_____	_____	_____	_____	_____ to _____
_____	_____	_____	_____	_____	_____ to _____

9. Remarks:

(11)

Boatsheet MI-20-1-72

H-9289

Computer Sheet Parameters

Sheet A of A, B

FEST	=	25000
CLAT	=	3674000
CMER	=	78/55/30
GRID	=	01/00
PLSCL	=	20000
PLAT	=	33/31/00
PLON	=	79/02/54
MLAT	=	33/39/33.20
MLON	=	78/55/00.95
S1LAT	=	33/24/28.72
S1LON	=	79/08/03.35
S2LAT	=	33/49/33.00
S2LON	=	78/38/57.79
Q	=	1618.65
VESNO	=	2220 (all units)
YR	=	72

Boatsheet MI-20-1-72

H-9289

Computer Sheet ParametersSheet B of A, B

FEST	=	25000
CLAT	=	3674000
CMER	=	78/55/30
GRID	=	01/00
PLSCL	=	20000
PLAT	=	33/34/52
PLON	=	79/02/54
MLAT	=	33/39/33.20
MLON	=	78/55/00.95
S1LAT	=	33/24/28.72
S1LON	=	79/08/03.35
S2LAT	=	33/49/33.00
S2LON	=	78/38/57.79
Q	=	1618.65
VESNO	=	2220 (all units)
YR	=	72

Descriptive Tide Note

OPR-437-MI-72

Coast of North and South Carolina

The tide gage used for this project was a pressure recording tide gage (supervised by the Tides Section, Atlantic Marine Center, Norfolk, Virginia) at Myrtle Beach, South Carolina Latitude $33^{\circ}41.0'N$. Longitude $78^{\circ}53.1'W$.).

This gage operated using +5 ($75^{\circ}W$.) Zone Time. The tide gage was not inspected by the ship. However, in accordance with Project Instructions the tide observer was contacted regularly and reported continuous gage operation for the duration of the project.

Hourly heights for the project are to be furnished by Tides Section, National Ocean Survey, Rockville, Maryland.

ATLANTIC MARINE CENTER

TIDE NOTE

1. Project No: OPR-437 2. Vessel/~~Rockville~~ NOAA Ship MT MITCHELL
3. Year: 1972 4. Meridian Time Zone: (GMT) 75°W.
5. Tide Station Name: Myrtle Beach, South Carolina
6. Position: Lat. 33° 41.0' N. Long. 78° 53.1' W.
7. Plane of Reference: MLW, MLLW corresponds to 4.53
feet on the tide staff for the period 7-26-72 to 9-24-72.
8. Hourly Heights: ~~Standard Gauge~~ <sup>Pressure Recording
Tide Gauge</sup>, furnished from Rockville.
 Scaled and logged from field marigrams.
9. Tidal Zoning: Not applicable.
 By two or more gauges automatically zoned.
 By applying tidal differences and constants
for the area(s): a. _____

TIME (Hour, Minute)		HEIGHT (Feet)		HEIGHT RATIO (If Applicable)	
High Water	Low Water	High Water	Low Water	High Water	Low Water

b. _____

TIME (Hour, Minute)		HEIGHT (Feet)		HEIGHT RATIO (If Applicable)	
High Water	Low Water	High Water	Low Water	High Water	Low Water

c. Include additional areas on separate sheet(s).

10. Remarks: Tide observers at Charleston, S.C. and at Myrtle Beach, S.C. were contacted by telephone on 7-17-72. The tide observer at Myrtle Beach was also contacted on 9-28-72 (by phone).



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

Date: October 11, 1972

Reply to
Attn of: Commanding Officer
NOAA Ship MT MITCHELL

Subject: OPR-437-MI-72 - Coast of North & South Carolina
Tide Data

To: Director, National Ocean Survey

Ref: (a) CO MT MITCHELL memorandum to Director, National Ocean
Survey, Attn: C3312 dated September 29, 1972

The second paragraph of reference (a) requests that the tide data for the project listed above be forwarded to this ship.

Please send the requested data to: Director, Atlantic
Marine Center, Attn: CAM22.

Edwin K. McCaffrey



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

Date: September 29, 1972

Reply to
Attn of: Commanding Officer
NOAA Ship MT MITCHELL

Subject: Descriptive Report Tide Data
OPR-437, Coast of North and South Carolina

To: Director, National Ocean Survey

Attn: C3312

Encl: (1) C3312-233-NOAAD memorandum dated July 27, 1972

This ship has just completed Project OPR-437-MI-72, Coast of North and South Carolina. The reference tide gage is the pressure recording tide gage at Myrtle Beach, South Carolina.

It is requested that Tides: Hourly Heights data for the period July 26, 1972 to September 24, 1972, using Greenwich Mean Time, be forwarded to this ship. This data is required to complete Descriptive Reports on five surveys.

The enclosure is forwarded for possible use in computing the requested data.

Edwin K. McCaffrey
Edwin K. McCaffrey



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

Date: July 27, 1972

Reply to
Attn of: C3312-233-NOAAD

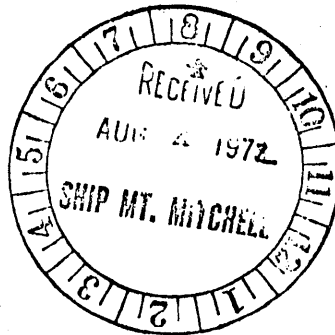
Subject: Myrtle Beach

To: Commanding Officer
NOAA Ship MT. MITCHELL

Mean low water on the staff of January 27, 1972 at Myrtle
Beach, South Carolina is 4.53 feet.

Saul C. Berkman

Saul C. Berkman
Chief, Processing Section
Tides Branch
Oceanographic Division



Boatsheet MI-20-1-72

H-9289

Actual Times of Hydrography

Launch MI-3

<u>Date</u> (1972)	<u>Julian</u> <u>Day</u>	<u>Start Time</u> (GMT)	<u>End Time</u> (GMT)
Aug. 15	228	131400	192625
Aug. 29	242	130700	195330
Aug. 30	243	124430	194200
Aug. 31	244	125430	140130
Sep. 10	254	144530	164520
Sep. 22	266	125030	182100

Launch MI-5

Aug. 9	222	135721	195632
Aug. 10	223	133124	182618
Aug. 12	225	125001	203543
Aug. 13	226	122354	200703
Aug. 14	227	152427	185837
Aug. 15	228	134024	193101
Aug. 16	229	133526	200043
Aug. 23	236	130852	193308
Aug. 24	237	131630	195204

Launch MI-6

Aug. 9	222	140250	202957
Aug. 14	227	152945	193811
Aug. 27	240	133903	195029
Sep. 23	267	125623	140532

NOAA Ship MT MITCHELL (MSS-22)

Aug. 22	235	230322	235809
Aug. 23	236	000241	234239
Aug. 24	237	003517	235819
Aug. 25	238	000943	051103
Sep. 11	255	140149	170121
Sep. 13	257	162245	190100
Sep. 14	258	133842	155611

South Carolina 1972

Signal Number	N-Latitude Deg-Min-Sec	W-Longitude Deg-Min-Sec	Method of Location	Temporary or Recoverable	Additional Designation (Official or Unofficial)
100	33 31 4132	079 02 1974	Traverse	Temp.	
104	33 31 5972	079 01 4930	"	"	
108	33 32 0963	079 01 3874	"	"	
112	33 32 1857	079 01 2921	"	"	
116	33 32 2911	079 01 2302	"	"	
120	33 32 4178	079 01 1971	"	"	
124	33 32 5345	079 01 1320	"	"	
128	33 33 0316	079 01 0720	"	"	
132	33 33 1602	079 00 5924	"	"	
136	33 33 2840	079 00 5027	"	"	
140	33 33 4113	079 00 4104	"	"	
144	33 33 5171	079 00 3274	"	"	
148	33 34 0478	079 00 2097	"	"	
152	33 34 1826	079 00 1007	"	"	
156	33 34 2576	079 00 0300	"	"	
160	33 34 3253	078 59 4916	"	"	GARDEN CITY FISHING PIER OBSC LTS 1964
164	33 34 4450	078 59 4608	"	"	
168	33 34 5305	078 59 3798	"	"	
172	33 35 0348	078 59 2810	"	"	
176	33 35 1363	078 59 1871	"	"	
180	33 35 2185	078 59 1110	"	"	
184	33 35 3060	078 59 0310	"	"	
188	33 35 4041	078 58 5412	"	"	
192	33 35 4931	078 58 4547	"	"	
196	33 36 0145	078 58 3485	"	"	
200	33 36 1268	078 58 1262	"	"	SURFSIDE FISHING PIER OBST LTS 1964
204	33 36 2764	078 58 0958	"	"	
208	33 36 3892	078 57 5883	"	"	
212	33 36 4899	078 57 4933	"	"	

(20)

Signal Number	N-Latitude Deg-Min-Sec	W-Longitude Deg-Min-Sec	Method of Location	Temporary or Recoverable	Additional Designation (Official or Unofficial)
216	33 36 5806	078 57 4071	Traverse	Temp.	
220	33 37 0635	078 57 3291	"	"	
224	33 37 1669	078 57 2375	"	"	
228	33 37 2577	078 57 1571	"	"	
232	33 37 3578	078 57 0614	"	"	
236	33 37 4362	078 56 5864	"	"	
240	33 37 5414	078 56 4848	"	"	
244	33 38 0128	078 56 4159	"	"	
248	33 38 1087	078 56 3170	"	"	
252	33 38 1844	078 56 2390	"	"	
256	33 38 2791	078 56 1360	"	"	
260	33 38 3770	078 56 0297	"	"	
264	33 38 4533	078 55 5356	"	"	
268	33 38 4904	078 55 3814	"	"	
272	33 39 0320	078 55 3231	"	"	
276	33 39 1164	078 55 2259	"	"	
280	33 39 1974	078 55 1364	"	"	
284	33 39 2567	078 55 0708	"	"	
300	33 39 4051	078 54 5149	"	"	
388	33 46 2878	078 45 4728	"	"	
392	33 46 3565	078 45 3510	"	"	
804	33 42 1011	078 52 3944	Intersection	Recv.	Elyptical Water Tank (unoff)
810	33 39 5815	078 54 3278	Photo-Pos.	"	Elev. Shaft, North Side of Hotel (unoff)
812	33 40 0639	078 54 2333	"	"	Red Brick Chimney, Yellow Roofed house (unoff)
904	33 39 2571	078 56 4250	3rd Ord. Tri.	"	Myrtle Beach AFB Water Tank No. 1160 (off)
906	33 40 0725	078 56 2038	"	"	Airport Beacon Myrtle Beach AFB (off)
908	33 40 0725	078 56 2039	"	"	Myrtle Beach AFB Water Tank No. 224 (off)
910	33 40 4268	078 54 0964	"	"	Myrtle Beach South Municipal Water Tank (off)

*SAME
LOCATION
NOT USED*

<u>Signal Number</u>	<u>N-Latitude Deg-Min-Sec</u>	<u>W-Longitude Deg-Min-Sec</u>	<u>Method of Location</u>	<u>Temporary or Recoverable</u>	<u>Additional Designation (Official or Unofficial)</u>
914	33 41 4752	078 53 0364	3rd Ord.Tri.	Recv.	Myrtle Beach Municipal
916	33 42 3238	078 51 5956	" "	"	Water Tank,Center (off)
924	33 43 4387	078 50 0627	" "	"	Myrtle Beach North Municipal
926	33 46 1253	078 47 1951	Intersection	"	Water Tank (off)
928	33 48 3344	078 42 1802	3rd Ord.Tri.	"	Ocean Forest Hotel Beacon (off)
930	33 49 1707	078 40 2184	" "	"	Singleton Swash Tank (unoff)
932	33 36 4852	078 58 4219	Intersection	"	Crescent Beach Municipal
934	33 40 2294	078 54 0338	" "	"	Water Tank (off)
936	33 40 4620	078 53 3454	" "	"	Ocean Drive Beach Municipal
952	33 47 5907	078 43 4298	" "	"	Water Tank (off)
998	33 39 3320	078 55 0095	3rd Order Traverse	"	Surfside Beach Tank (unoff)
					Yellow Construction Elev., South(unoff)
					Holiday Hotel,Northerly
					Offshore Corner (unoff)
					Windy Hill Tank (unoff)
					Hi-Fix Master Station
					Antenna (unoff)

NOAA Ship MT MITCHELL (MSS-22)

Boatsheet **MI-20-1-72**

Jul Day	Date 1972	Boat No.	Vol No.	To		TRA Correction Abstract		Registry Number H-9289		
				Time GMT	Time GMT	Velocity Table	Instr. Corr. & Draft Corr.	Initial Corr.	Settlement & Squat Corr.	TRA Corr.
228	8-15	2223	3	131400	154300	03	+1.8	0.0	0.0	+1.8
228	8-15	2223	3	163230	192625	03	+1.8	0.0	0.0	+1.8
242	8-29	2223	4	130700	195330	03	+1.8	0.0	0.0	+1.8
243	8-30	2223	6	124430	194200	03	+1.8	0.0	0.0	+1.8
244	8-31	2223	7	125430	140130	03	+1.8	0.0	0.0	+1.8
254	9-10	2223	7	144530	164520	03	+1.8	0.0	0.0	+1.8
266	9-22	2223	7	125030	153100	03	+1.8	0.0	0.0	+1.8
266	9-22	2223	7	172400	182100	03	+1.8	0.0	0.0	+1.8

(27)

NOAA Ship MT MITCHELL (MSS-22)

Boatsheet MI-20-1-72		TRA Correction Abstract				Registry Number H-9289				
Jul Day	Date 1972	Boat No.	Vol No.	Velocity Table		Instr. Corr. & Draft Corr.	Initial Squat Corr.	Settlement & 2 Eng	TRA Corr	
				Time GMT	To Time GMT					Nearest 0.2 ft
222	8-9	2225	2	135721	195632	05	+2.0	0.0	+0.6	+2.6
223	8-10	2225	2	133124	182618	05	+2.0	0.0	+0.6	+2.6
225	8-12	2225	2	125001	203543	05	+2.0	0.0	+0.6	+2.6
226	8-13	2225	2	122354	200703	05	+2.0	0.0	+0.6	+2.6
227	8-14	2225	2	152427	185837	05	+2.0	0.0	+0.6	+2.6
228	8-15	2225	2	134024	193101	05	+2.0	0.0	+0.6	+2.6
229	8-16	2225	2	133526	140529	05	+2.0	0.0	+0.2	+2.2
229	8-16	2225	2	142349	145054	05	+2.0	0.0	+0.6	+2.6
229	8-16	2225	2	145534	153934	05	+2.0	0.0	+0.1	+2.1
229	8-16	2225	2	154530	161300	05	+2.0	0.0	+0.6	+2.6
229	8-16	2225	2	162241	171321	05	+2.0	0.0	+0.2	+2.2
229	8-16	2225	2	171622	172327	05	+2.0	0.0	+0.6	+2.6
229	8-16	2225	2	180050	184345	05	+2.0	0.0	+0.4	+2.4
229	8-16	2225	2	184656	191951	05	+2.0	0.0	+0.6	+2.6
229	8-16	2225	2	192158	200043	05	+2.0	0.0	+0.4	+2.4

NOAA Ship MT MITCHELL (MSS-22)

Boatsheet MT-20-1-72		TRA Correction Abstract				Registry Number H-9289				
Jul Day	Date 1972	Boat No.	Vol No.	To		Instr. Corr. & Draft Corr.	Initial Squat Corr.	Settlement & Corr.	TRA Corr	
				Time GMT	Time GMT					
				Nearest 0.2 ft	Nearest 1.0 ft		-1 Eng	2 Eng		
235	8-22	2220	4	230322	235809	01	+13.5	0.0	+0.8	+14.3
236	8-23	2220	4	000241	234239	01	+13.5	0.0	+0.8	+14.3
237	8-24	2220	4	003517	235819	01	+13.5	0.0	+0.8	+14.3
238	8-25	2220	4	000943	051103	01	+13.5	0.0	+0.8	+14.3
255	9-11	2220	4	140149	170121	01	+13.3	0.0	+0.8	+14.1
257	9-13	2220	4	162245	190100	01	+13.2	0.0	+0.8	+14.0
258	9-14	2220	4	133842	144927	01	+13.1	0.0	+0.8	+13.9
258	9-14	2220	4	150659	155611	01	+13.1	0.0	0.0	+13.1

NOAA Ship MT MITCHELL (MSS-22)

Pre-Survey Review Soundings - Comparison Sheet

Registry Number H- 9289

Launch MI-3

Boatsheet MI-20-1-72

Julian Day	Volume Number	Charted Soundings (ft.) (#)	Development Number	Position of Shoalest Depth		Comments/Recommendations
				Lat. 33°N.	Long. 78°W.	
266	7	----	3	34.5'	59.8'	This area was developed because of a number of strays on the fathogram. These strays showed while the boat was running regular system of hydrographic sounding lines. The development failed to show any strays at all. Large schools of fish were observed in the area and it is felt that the fish were the cause of the strays.
(32)						NOTE-See the Descriptive Reports covering the Surveys H-9290 and H-9314 (to the north).

NOAA Ship MT MITCHELL (MSS-22)

Pre-Survey Review Soundings - Comparison Sheet

Boatsheet MI-20-1-72

Launch MI-3

Registry Number H-9289

Julian Day	Volume Number	Charted Sounding (ft.) (fm.)	Development Number	Position of Shoalest Depth		Comments/Recommendations
				Lat. 33°N.	Long. 78°W.	
237	2	21	1	32.9'	56.3'	<u>All development soundings corrected for velocity</u> The charted sounding (Pre-Survey Review Item) is 21 ft. The least depth found in the area was 23 ft.
237	2	20	1	33.5'	56.5'	The shoalest sounding found in this area verifies the existence of the charted Pre-Survey Review sounding
237	2	--	1	33.5'	56.9'	An uncharted sounding of 18 ft. was located at this position
237	2	--	2	33.5'	55.5'	A development was run on this sand ridge. The least depth located was 27 ft. The ridge is 3-4 ft. shoaler than surrounding soundings

NOAA Ship MT MITCHELL (MSS-22)

Pre-Survey Review Soundings - Comparison Sheet

Boatsheet MI-20-1-72

Launch MI-6

Registry Number H-9289

Julian Day	Volume Number	Charted Number	Soundings (ft.) (fm.)	Development Number	Position of Shoalest Depth Lat. Long.	Comments/Recommendations
267	1	--	4		33°N. 78°W. 54.1'	This area was developed to prove the existence of a small sand ridge. The ridge was at 25 feet in 26-28 feet of water. The existence of this ridge was questionable until the development

Boatsheet MI-20-1-72

H-9289

Abstract of Hi-Fix Lane CorrectorsNOAA Ship MT MITCHELL (MSS-22)

<u>Julian Day</u>	<u>Time (GMT)</u>		<u>P1 Corr.</u>	<u>P2 Corr.</u>
	<u>From</u>	<u>To</u>		
235	230322	240000	-0.04	-0.24
236	000241	133635	-0.04	-0.24
	133636	240000	-0.04	-0.33
237	003517	023248	-0.04	-0.33
	023249	072508	-1.04	-1.33
	072509	240000	-0.04	-0.33
238	000943	240000	-0.04	-0.33
255	140149	235959	-0.17	+0.65
257	162245	235959	-0.22	-0.32
258	133842	235959	-0.13	+0.58

Launch MI-3Hyper-Visual

228	130700	184959	-----	-0.10
	185000	185159	-----	-10.10
	185200	235959	-----	-0.10
242	130700	160459	-----	-0.12
	160500	160529	-----	+0.45
	160530	235959	-----	-0.12
243	124430	235959	-----	-0.06
244	125430	235959	-----	-0.05
266	125030	172359	-----	-0.08

Hyperbolic

266	172400	235959	+0.20	-0.08
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Launch MI-5Hyperbolic

222	135721	235959	-0.10	-0.01
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Boatsheet MI-20-1-72 H-9289

Abstract of Hi-Fix Lane Correctors (continued)

Launch MI-5 (Hyperbolic)

Julian Day	Time (GMT)		P1 Corr.	P2 Corr.
	From	To		
223	133124	170245	-0.10	-0.04
	170246	235959	-1.10	-0.04
225	125001	174212	-0.10	-0.03
	174213	175252	-1.10	-2.03
	175253	180342	-2.10	-2.03
	180343	181612	-3.10	-2.03
	181613	183057	-3.10	-3.03
	183058	192123	-5.10	-4.03
	192124	194418	-6.10	-4.03
	194419	201042	-6.10	-5.03
	201043	201747	-6.10	-6.03
	201748	235959	-10.10	-10.03
226	122354	171518	-0.14	-0.01
	171519	174040	-3.13	-6.99
	174041	235959	-0.13	-0.01
227	152427	184631	-0.15	0.00
	184632	235959	-1.15	+0.03
228	134024	235959	-0.13	+0.01
229	133526	235959	-0.14	+0.03
236	130852	235959	-0.10	-0.30
237	131630	235959	-0.09	-0.31

Launch MI-6

Hyperbolic

222	140250	155106	+0.92	-0.03
	155107	155445	+0.92	-0.97
	155446	235959	-0.08	-0.92
227	152945	160410	-1.18	-1.03
	160411	164840	-2.18	-1.03
	164841	174249	-2.18	-0.03
	174250	235959	-3.18	-0.03
240	133903	235959	-0.07	-0.33
267	125623	133200	+0.05	+0.54
	133201	235959	+1.05	+0.54

(Let 3 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET

FORM C&GS-117
(11-65)

U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

VELOCITY CORRECTIONS

Ship NOAA SHIP-MT MITCHELL
 Capt. Edwin K. McCaffrey Comdr.
 These corrections are to be used
 between July 19 72 and Sept. 19 72
 in the locality South Carolina Coast
VESNO 2220
 for hydrographic surveys Nos. H-9289, H-9290
H-9300, H-9291

(For deep water add a 0 to these figures)

DEPTHS IN FATHOMS FEET

10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190

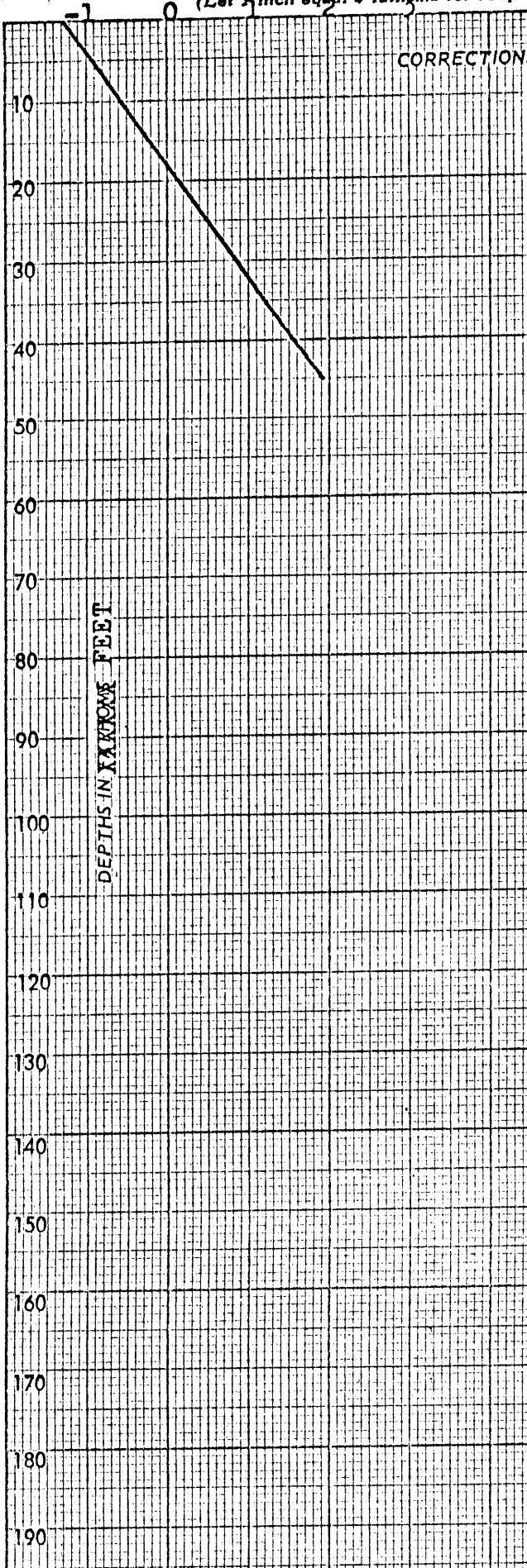
Corrections to Depth

0.0 (ft)	2.3 (ft)
+0.2	6.0
0.4	9.6
0.6	13.1
0.8	17.0
1.0	20.6
1.2	24.3
1.4	28.0
1.6	31.7
1.8	35.2
2.0	39.0
2.2	42.6
2.4	46.2
2.6	50.0
2.8	53.5
3.0	57.5
3.2	61.0

Velocity Table 01

(Let 1/2 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET, XXXXXX



FORM C&GS-117
(11-65)

U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

VELOCITY CORRECTIONS

Ship NOAA SHIP - MT MITCHELL
 Capt. Edwin K. McCaffrey Comdg.
 These corrections are to be used
 between July 1972 and Sept. 1972
 in the locality South Carolina Coast
 Launch MI-2223
 for hydrographic surveys Nos. H-9289, H-9290
H-9314

Corrections to Depth

Correction (ft)	Depth (ft)
-1.2	2.6
-1.0	5.5
-0.8	8.2
-0.6	11.1
-0.4	13.7
-0.2	16.7
0.0	19.3
0.2	22.2
0.4	25.0
0.6	27.5
0.8	30.6
1.0	33.2
1.2	36.0
1.4	38.8
1.6	41.5
1.8	44.4
2.0	46.9

Velocity Table 03

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET, ~~FATHOMS~~

FORM C&GS-117
(11-68)

U.S. DEPARTMENT OF COMMERCE
ESBA
COAST AND GEODETIC SURVEY

VELOCITY CORRECTIONS

Ship NOAA SHIP MT MITCHELL

Capt. Edwin K. McCaffrey Comdg.

These corrections are to be used

between July 1972 and Sept. 1972

in the locality South Carolina Coast

Launch 2229

for hydrographic surveys Nos. H-9289, H-9290

H-9314

Corrections to depth

-0.6 (ft) 1.9 (ft)

-0.4 4.4

-0.2 7.2

0.0 9.7

0.2 12.3

0.4 14.9

0.6 17.5

0.8 20.1

1.0 22.8

1.2 25.4

1.4 28.0

1.6 30.5

1.8 33.3

2.0 36.0

2.2 38.5

2.4 41.3

2.6 44.0

2.8 46.7

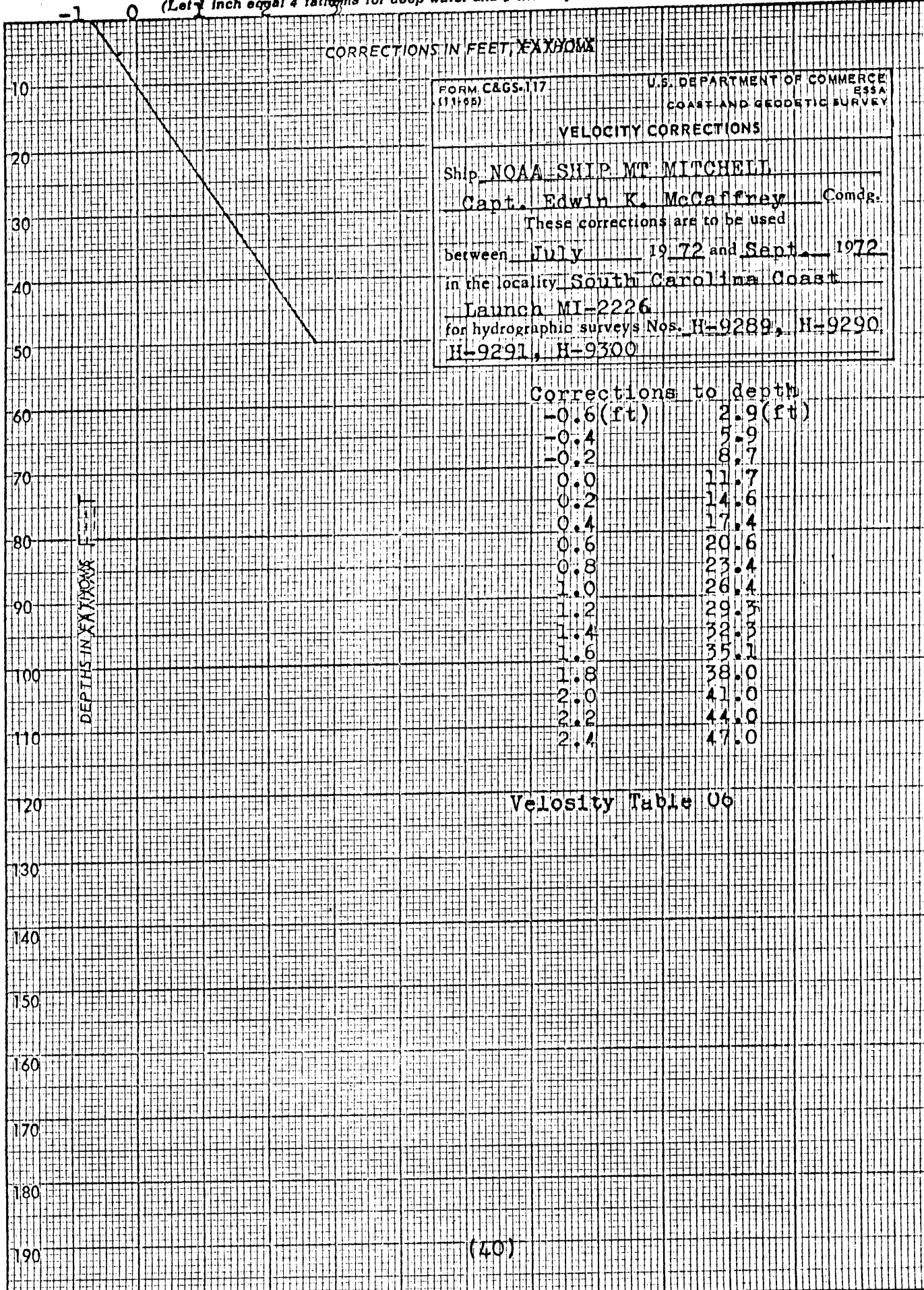
3.0 49.0

DEPTHS IN ~~FATHOMS~~ FEET

(For deep water add a 0 to these figures)

Velocity Table 05

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)



FORM C&GS-117
(11195)

U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

VELOCITY CORRECTIONS

Ship NOAA SHIP MT MITCHELL

Capt. Edwin K. McCaffrey Comdg.

These corrections are to be used
between July 19 72 and Sept 19 72
in the locality South Carolina Coast
Launch MI-2226
for hydrographic surveys Nos. H-9289, H-9290
H-9291, H-9300

Corrections to depth

-0.6 (ft)	2.9 (ft)
-0.4	5.9
-0.2	8.7
0.0	11.7
0.2	14.6
0.4	17.4
0.6	20.6
0.8	23.4
1.0	26.4
1.2	29.3
1.4	32.3
1.6	35.1
1.8	38.0
2.0	41.0
2.2	44.0
2.4	47.0

(For deep water add a 0 to these figures)

Velocity Table 06

Boatsheet MI-20-1-72

H-9289

TC/TI Tape

Launch MI-3 VESNO 2223

131400 0 0000 0003 228 222300 009289

235959 0 0000 0003 266 222300 009289

Launch MI-5 VESNO 2225

135721 0 0000 0005 222 222500 009289

235959 0 0000 0005 237 222500 009289

Launch MI-6 VESNO 2226

140250 0 0000 0006 222 222600 009289

235959 0 0000 0006 267 222600 009289

NOAA Ship MT MITCHELL VESNO 2220

230322 0 1005 0001 235 222000 009289

235959 0 1005 0001 258 222000 009289

Settlement and Squat Abstract

Launch MI-3

Both Engines

July 25, 1972

Transducer Draft = 1.8 feet

Rod Readings (corrected for tide)

<u>RPMS</u>	<u>Pass#1</u>	<u>Pass#2</u>	<u>Pass#3</u>	<u>Mean</u>	<u>Corr.</u>
*DIW	8.38	8.41	8.35	8.38	0.0
1500	8.48	8.50	----	8.49	+0.1
2000	8.52	8.54	----	8.53	+0.1
2500	8.52	8.49	----	8.51	+0.1
3000	8.43	8.40	8.42	8.42	0.0

Launch MI-4

Both Engines

September 18, 1972

Transducer Draft = 1.8 feet

*DIW	6.37	6.36	6.36	6.36	0.0
1500	6.51	6.48	----	6.50	+0.1
2000	6.53	6.64	----	6.58	+0.2
2300	6.68	6.66	----	6.67	+0.3

Launch MI-6

One Engine

September 18, 1972

Transducer Draft = 2.6 feet

*DIW	5.48	5.45	5.44	5.46	0.0
1200	5.83	5.68	----	5.75	+0.3
1500	5.92	5.87	----	5.89	+0.4
1800	6.24	6.16	----	6.20	+0.7
2000	6.07	6.07	----	6.07	+0.6
**Full	6.12	6.21	----	6.16	+0.7

**2650 (starboard)

Launch MI-6

Both Engines

February 9, 1972

Transducer Draft = 2.6 feet

*DIW	7.30	7.30	7.30	7.30	0.0
1000	7.45	7.50	7.40	7.45	+0.1
1500	7.60	7.75	7.60	7.65	+0.3
1800	7.80	7.80	7.80	7.80	+0.5
2000	7.85	7.80	7.80	7.80	+0.5
2500	7.45	7.40	7.40	7.40	+0.1
**Full	7.15	7.15	7.00	7.15	-0.1
**3000 (port) 2600 (starboard)					

*Dead in Water

(42)

Settlement and Squat Abstract

Launch MI-5 (single engine boat)

February 14, 1972

Transducer Draft = 2.0 feet

Rod Readings (corrected for tide)

<u>RPMS</u>	<u>Pass#1</u>	<u>Pass#2</u>	<u>Pass#3</u>	<u>Mean</u>	<u>Corr.</u>
*DIW	6.05	6.00	6.05	6.05	0.0
1000	6.15	6.15	6.10	6.15	+0.1
1500	6.30	6.27	6.30	6.30	+0.2
2000	6.65	6.65	6.60	6.65	+0.6

*DIW = Dead in Water

V

Settlement and Squat Abstract

NOAA Ship MT MITCHELL (MSS-22)

Excerpt from Commanding Officer, MT MITCHELL memorandum dated October 29, 1969, "Skeg Transducer Performance".

Another item of interest was the settlement and squat determination. This was run in 52 feet of water, calm with only a slight swell and the data is well within the limits of $\frac{1}{2}$ foot accuracy. We had a full load of fuel and the draft was 13.8 feet stern, 14.0 feet midships at dockside just before the determination.

Results were:

	<u>Standard Speed</u> 175 RPM	<u>Half Speed</u> 105 RPM
Skeg Transducer	0.8 feet	0.1 feet
Mid-ships Transducer	1.4 feet	0.6 feet

This bears out the past eyeball observations that the MT MITCHELL goes down by the bow considerably when underway. Fuel is always used from the forward tanks first to combat this situation.

Linear Interpolation Graph Abstract

<u>Mid-ships Transducer</u>					
<u>RPM</u>	<u>Correction</u>	<u>RPM</u>	<u>Correction</u>	<u>RPM</u>	<u>Correction</u>
105	----- +0.6	130	----- +0.9	155	----- +1.2
110	----- +0.6	135	----- +0.9	160	----- +1.2
115	----- +0.7	140	----- +1.0	165	----- +1.3
120	----- +0.8	145	----- +1.1	170	----- +1.3
125	----- +0.8	150	----- +1.1	175	----- +1.4

<u>Skeg Transducer</u>					
<u>RPM</u>	<u>Correction</u>	<u>RPM</u>	<u>Correction</u>	<u>RPM</u>	<u>Correction</u>
105	----- +0.1	130	----- +0.3	155	----- +0.6
110	----- +0.1	135	----- +0.4	160	----- +0.6
115	----- +0.2	140	----- +0.4	165	----- +0.7
120	----- +0.2	145	----- +0.5	170	----- +0.7
125	----- +0.3	150	----- +0.5	175	----- +0.8

Anchored off Crescent Beach, South Carolina
September 19, 1972

Ship's Draft=14.1'(aft)

Ross Echo Sounder
Serial Number 1052
(Skeg Transducer)

Vertical Cast

Cast No.	Leadline Depth	Digital Depth	Graphic Depth	
1	35.0	17.6	18.5	Reject
2	33.0	17.9	18.5	
3	33.2	18.1	18.5	
4	33.2	18.2	18.3	
5	33.4	17.9	18.4	
6	33.2	18.3	18.4	
7	33.0	18.1	18.5	
8	33.0	18.2	18.5	
9	33.2	18.3	18.5	
10	33.4	17.7	18.5	Reject
11	33.2	18.3	18.5	
Total = 298.4		Total = 163.3	Total = 166.1	
Mean = 33.15		Mean = 18.14	Mean = 18.45	

Tape - Leadline Comparison

Tape	LL	Tape	LL	Mean Leadline Depth = 33.15'
5.0	5.00	35.0	34.85	Leadline Corr. = - 0.15'
10.0	9.97	40.0	39.85	Corr. Leadline Depth = 33.00'
15.0	14.95	45.0	44.80	
20.0	19.90	50.0	49.80	
25.0	24.90	55.0	54.75	
30.0	29.85	60.0	59.75	

18.14' = Mean Digital Depth
+ 0.92' = Velocity Correction for 18.45'
19.06' = Corrected Digital Depth
14.10' = Transducer Depth
33.16' = Corrected Mean Digital Depth to Waterline
33.00' = Corrected Mean Leadline Depth
- 0.16' = Instrument Error for Digitizer

18.45' = Mean Graphic Depth
+ 0.92' = Velocity Correction for 18.45'
19.37' = Corrected Graphic Depth
14.10' = Transducer Depth
33.47' = Corrected Mean Graphic Depth to Waterline
33.00' = Corrected Mean Leadline Depth
- 0.47' = Instrument Error for Ross Echo Sounder #1052

NOAA Ship MT MITCHELL (MSS-22)

Abstract of Ship MT MITCHELL Draft (from linear interpolation)

<u>Date</u> <u>(1972)</u>	<u>Draft</u> <u>(Ft&In)</u>
8-28-72 -----	14'00"
8-29-72 -----	13'10"
8-30-72 -----	13'08"
8-31-72 -----	13'05"
9- 1-72 -----	13'03"
9- 6-72 -----	13'00"
9- 7-72 -----	13'02"
9- 8-72 -----	13'03"
9- 9-72 -----	13'05"
9-10-72 -----	13'06"
9-11-72 -----	13'08"
9-12-72 -----	13'09"
9-13-72 -----	13'08"
9-14-72 -----	13'07"
9-15-72 -----	13'06"
9-19-72 -----	14'04"
9-20-72 -----	14'02"
9-21-72 -----	14'00"
9-22-72 -----	13'11"
9-23-72 -----	13'09"

FORM C&GS-733M
(6-66)

Obtained using a snapper
type sampler imbedded in
a sounding lead

U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

Boatsheet MI-20-1-72 H-9289

SERIAL NO.	DATE (1972)	PROJ. NO.		DEPTH in feet	WEIGHT OF SAM- PLER	AP. PROX. PENE- TRA- TION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, denting, cutters, size, no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.		
		YEAR										CHECKED BY	DATE CHECKED
		North LATITUDE	West LONGITUDE										
	August 24	33°	78°										
		32.6'	55.5'	32.8	14 lb	NA	NA	brown	crs br S brk Sh	Pos. No. 3668	PS		
1	24	31.8'	55.5'	30.3				green	crs gn S Sh	Pos. No. 3669	PS		
2	24	31.8'	56.6'	34.5				green	crs gn S Sh	Pos. No. 3670	FL		
3	24	32.7'	56.7'	25.8				brown	fne br S Sh	Pos. No. 3671	FL		
4	24	32.7'	58.0'	24.3				brown	fne br S Sh	Pos. No. 3672	FL		
5	24	31.9'	58.0'	32.8				green	fne gn S Sh	Pos. No. 3673	FL		
6	24	31.6'	59.3'	25.2				green	crs gn S Sh	Pos. No. 3674	FL		
(47)	24	31.6'	00.6'	23.5				----	Sh	Pos. No. 3675	FL		
7	24	32.7'	00.5'	16.8				----	Sh	Pos. No. 3676	FL		
8	24	32.7'	59.2'	23.2				brown	crs br S Sh	Pos. No. 3677	FL		
9	24	33.8'	59.2'	20.2				green	crs gn S Sh	Pos. No. 3678	FL		
10	24	33.8'	57.9'	25.1				green	crs gn S Sh	Pos. No. 3679	FL		
11	24	33.8'	56.7'	22.3				green	crs gn S Sh	Pos. No. 3680 REJ.	FL		
12	24	33.8'	56.7'	22.3				green	crs gn S Sh	Pos. No. 3681	FL		
13	24	33.8'	55.4'	31.7				brown	crs br S Sh	Pos. No. 3682	FL		
14	24	33.8'	54.1'	31.7				green	crs gn S Sh	Pos. No. 3683	FL		
15	24	32.7'	54.2'	35.6				brown	crs br S Sh	Pos. No. 3684	FL		
16	24	31.6'	54.2'	32.7				brown	crs br S Sh	Pos. No. 3685	FL		

Use more than one line per sample if necessary.

FORM C&GS-733M (6-66)		OCEANOGRAPHIC LOG SHEET - M										U.S. DEPARTMENT OF COMMERCE ESSA COAST AND GEODETIC SURVEY	
VESSEL NOAA Ship MT MITCHELL		PROJECT NO. OPR-437-MI-72		YEAR 1972		Coast of North & South Carolina				CHECKED BY T.J. McConnell		DATE CHECKED date obtained	
SERIAL NO.	DATE (1972)	SAMPLE POSITION		DEPTH (feet)	WEIGHT OF SAM- PLER	AP- PROX. PENE- TRA- TION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.		
		North LATITUDE 33°	West LONGITUDE 78°										
18	August 24	31.7'	52.9'	37.8	14 lb	NA	NA	green	crs gn S Sh	Pos. No. 3686	FL		
19	24	32.8'	52.9'	36.5				green	crs gn S Sh	Pos. No. 3687	FL		
20	24	32.7'	51.4'	42.8				green	crs gn S Sh	Pos. No. 3688	FL		
21	24	33.8'	51.6'	37.3				green	crs gn S Sh	Pos. No. 3689	FL		
22	24	33.8'	52.9'	34.3				green	crs gn S Sh	Pos. No. 3690	FL		
23	24	34.9'	52.9'	35.8				green	crs gn S Sh	Pos. No. 3691	FL		
24	24	34.9'	54.2'	32.8				brown	crs dk br S Sh	Pos. No. 3692	FL		
(to 25)	27	39.3'	47.7'	41.8				brown	fne br S Sh	Pos. No. 0138	PS		
26	27	39.2'	49.0'	36.9				brown	fne br S Sh	Pos. No. 0139	PS		
27	27	39.2'	50.3'	36.0				brown	crs br S Sh	Pos. No. 0140	PS		
28	27	39.2'	51.6'	33.6				green	fne gn S Sh	Pos. No. 0141	PS		
29	27	39.2'	52.9'	32.8				brown	fne br S Rk Sh	Pos. No. 0142	PS		
30	27	39.2'	54.2'	26.8				---	Sh	Pos. No. 0143	PS		
31	27	38.1'	55.4'	28.8				gray	crs gy S Sh	Pos. No. 0144	PS		
32	27	38.1'	54.1'	30.5				green	crs gn S Sh	Pos. No. 0145	PS		
33	27	38.2'	52.9'	36.3				green	fne gn S Sh	Pos. No. 0146	PS		
34	27	38.1'	51.5'	37.5				green	fne gn S Sh	Pos. No. 0147	PS		

Use more than one line per sample if necessary.

FORM C&GS-733M
(6-66)

Obtained using a snapper
type sampler imbedded in
a sounding lead

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

U.S. DEPARTMENT OF COMMERCE
ESSA
COAST AND GEODETIC SURVEY

SERIAL NO.	DATE (1972)	SAMPLE POSITION		DEPTH (feet)	WEIGHT OF SAM- PLER	AP- PROX. PEN- TRA- TION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	CHECKED BY	DATE CHECKED	REMARKS	OBS. INIT.
		North LATITUDE	West LONGITUDE										
	August 27	33° 38.1'	78° 50.3'	38.3	14 lb	NA	NA	brown	fne br S Sh	T.J. McConnell	obtained		
35	27	38.1'	48.9'	40.8				brown	crs br S Sh			Pos. No. 0148	PS
36	27	38.1'	47.7'	44.0				green	fne gn S Sh			Pos. No. 0149 REJ. Pos. No. 0148 0150	PS
37	27	37.0'	47.7'	47.8				black	fne bk S Sh			Pos. No. 0151	PS
38	27	37.1'	49.0'	42.8				brown	fne br S Sh			Pos. No. 0152	PS
39	27	37.1'	50.3'	38.8				brown	crs br S Sh			Pos. No. 0153	PS
40	27	37.0'	51.6'	35.5				brown	fne br S Sh			Pos. No. 0154	PS
(41)	27	37.0'	52.9'	36.0				---	Sh			Pos. No. 0155	PS
42	27	37.1'	54.2'	33.0				green	fne gn S Sh			Pos. No. 0156	PS
43	27	37.0'	55.5'	30.0				green	crs gn S Sh			Pos. No. 0157	PS
44	27	37.0'	56.8'	25.6				brown	crs br S Sh			Pos. No. 0158	PS
45	27	36.1'	58.0'	21.3				green	fne gn S Sh			Pos. No. 0159	PS
46	27	35.9'	56.7'	28.5				---	Sh			Pos. No. 0160	PS
47	27	36.0'	55.4'	31.8				---	Sh St			Pos. No. 0161	PS
48	27	36.0'	54.2'	33.5				green	crs gn S Sh			Pos. No. 0162	PS
49	27	36.0'	58.9'	36.5				green	fne gn S Sh			Pos. No. 0163	PS
50	27	36.0'	51.6'	35.0				green	fne gn S Sh			Pos. No. 0164	PS
51	27	36.0'	51.6'	35.0				green	fne gn S Sh			Pos. No. 0165	PS

Use more than one line per sample if necessary.

FORM C&G-733M
(6-66)

Obtained using a snapper
type sampler imbedded in
a sounding lead

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

Boatsheet MI-20-1-72 H-9289

SERIAL NO.	DATE (1972)	SAMPLE POSITION		DEPTH Feet	WEIGHT OF SAMPLER	AP. PROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, deformed cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
		NORTH LATITUDE	WEST LONGITUDE								
VESSEL NOAA Ship MT MITCHELL											
PROJECT NO. PR-437-MI-72 1972 Coast of North & South Carolina											
CHECKED BY T.J. McConnell										DATE CHECKED date obtained	
52	August 27	36.0'	50.2'	41.0	1 lb	NA	NA	green	crs gn S Sh	Pos. No. 0166	PS
53	27	36.0'	49.0	42.8				green	crs gn S Sh	Pos. No. 0167	PS
54	27	36.0'	47.7'	44.8				green	crs gn S Sh	Pos. No. 0168	PS
55	27	34.9'	47.8'	41.0				---	Sh	Pos. No. 0169	PS
56	27	34.9'	49.0'	38.8				green	crs gn S Sh	Pos. No. 0170	PS
57	27	34.9'	50.3'	38.8				green	crs gn S Sh	Pos. No. 0171	PS
58	27	34.9'	51.6'	36.8				green	crs gn S Sh	Pos. No. 0172	PS
59	27	34.9'	55.5'	31.5				brown	crs br S Sh	Pos. No. 0173	PS
60	27	34.9'	56.8'	26.8				---	Sh St	Pos. No. 0174	PS
61	27	34.9'	58.1'	22.3				brown	fne br S Sh	Pos. No. 0175	PS
62	27	33.8'	50.3'	40.5				green	fne gn S Sh	Pos. No. 0176	PS
63	27	33.8'	49.0'	38.8				green	fne gn S Sh	Pos. No. 0177	PS
64	Sept. 14	32.6'	46.6'	46.0				green	crs gn S Sh	Pos. No. 1584	RH
65	14	32.8'	47.7'	46.5				green	crs gn S Sh	Pos. No. 1585	RH
66	14	32.8'	49.2'	47.0				green	crs gn S Sh	Pos. No. 1586	RH
67	14	32.9'	50.3'	45.0				green	crs gn S Sh	Pos. No. 1587	RH
68	22	33.8'	47.8'	41.6				brown	fne br S Sh	Pos. No. 6517	FL

Use more than one line per sample if necessary.

USCOMM-DC 37019-P66

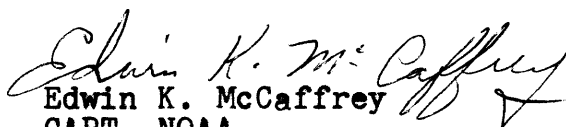
Approval Sheet

Field Number MI-20-1-72

Registry Number H-9289

The field work and processing of data from this hydrographic survey was under my immediate daily supervision. The boat sheet and all records have been reviewed and are approved by me.

This survey is complete, within the limits of the hydrography, and adequate to supersede all prior surveys of the area.


Edwin K. McCaffrey
CAPT, NOAA
Commanding Officer

7/17/73

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center

Hourly heights are approved for Long Beach, N.C.

Tide Station Used (NOAA form 77-12): Myrtle Beach, S.C.
Year 1972

Period: March 28-May 4, 1971

HYDROGRAPHIC SHEET: H-9229 H-9230 H-9260 H-9289 H-9290

OPR: 437

Locality: Coast of South Carolina

Plane of reference (mean ~~lower~~ low water): Long Beach 4.0 ft.
Myrtle Beach ~~4.6~~ ft.

Height of Mean High Water above Plane of Reference is
Long Beach 4.8 ft.
Myrtle Beach 5.1 ft.

Remarks: Zoning

For year 1972 apply Myrtle Beach direct.

Recommend use of multiple gage zoning between Long Beach and Myrtle Beach during the period March 28-May 4, 1971.

*Myrtle Beach
subtract from hourly heights
1970 4.6
1971 4.4
1972 7.6*

*See instructions with Hubbard 8/10/73. A memo
will follow. WFT*

Richard A. Cummings
Chief, Tides Branch



**U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

NATIONAL OCEAN SURVEY
Rockville, Md. 20852

Date: November 6, 1973

Reply to
Attn of: C3311-89-SIP

Subject: Form 712 corrections to plane of reference

To: Director, Atlantic Marine Center, CAM221

Completed tidal summaries for Myrtle Beach, South Carolina indicate tabulations for 1971-1972 should be corrected to mean low water by subtracting 8.4 feet from 1971 hourly heights and 7.6 feet from 1972 values.

The corrections to plane of reference should be applied to Form 712, Hydrographic sheets H-9229, H-9230, H-9260, H-9289 and H-9290.

C. I. Thurlow

C. I. Thurlow
Chief, Tidal Datum Planes Section
Tides Branch
Oceanographic Division

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H- 9289

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

Date: March 4, 1974

Signed: William L. Jonns
Title: William L. Jonns
Chief, Verification Branch

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

Date: March 4, 1974

Signed: C. Dale North, Jr.
Title: C. Dale North, Jr. LCDR. NOAA
Chief, Processing Division

VERIFICATION NOTES
SURVEY H-9289

This appears to be an excellent basic survey. Soundings are in good agreement at crossings and the depth curves adequately delineate the features in the area.

Problems encountered during verification and the methods used to resolve them are explained in the accompanying AMC Plotter Notes.

March 4, 1974

William L. Jonns
William L. Jonns
Chief, Verification Br. AMC

ATLANTIC MARINE CENTER
VERIFICATION OF SMOOTH TIDES

SURVEY H-9289

PLANE OF REFERENCE MLW OR ~~MHW~~
TIME MERIDIAN GMT
HEIGHT DATUM ON STAFFS 1. 7.6 2. _____ 3. _____

TIDE STATIONS	POSITION	TYPE GAGE	TIME CORR.		HEIGHT CORR. *	
			H.W.	L.W.	H.W.	L.W.
1 Myrtle Beach, S.C. 1972	33 Y 78	41.0 Stn. 53.1	0.0	0.0	0.0	0.0

2. \emptyset
Y

3. \emptyset
Y

HOURLY HEIGHTS FROM ROCKVILLE OFFICE
 FROM FIELD MARIGRAMS

VERIFIED BY: Rockville

TIDE ZONING NOT APPLICABLE
 BY COMPUTER
 FROM TWO OR MORE GAGES

LIMITS AND DESCRIPTION OF ZONING METHODS

TIDE CORRECTIONS COMPILED BY COMPUTER
 MANUALLY

VERIFIED BY: GFT
VERIFIED BY: _____

HEIGHT OF MHW ABOVE PLANE OF REFERENCE 5.1

TIDE CORRECTIONS VERIFIED ON SOUNDING PRINTOUT BY: GFT

DATE OF VERIFICATION Dec. 13, 1973

*OR RATIO

W. J. Jones
EXAMINED & APPROVED

Verifier:... B.J. Stephenson

Norfolk, Va.

Nov. 8, 1972

VERIFICATION BRANCH
PLOTTER NOTE TO EDP.AMC.

SURVEY H-9289 (MI-20-1-72)

- Prior to plotting this Branch checked the fathograms and printouts for this survey.
The quality of the field scanning is considered excellent and no changes are necessary at this time.

WLJ



Hugh L. Proffitt
Chief, Ver. Br. AMC

Verifier: H. R. Smith

2-May-1973

VERIFICATION NOTE TO EDP
H-9289 (MI 20-1-72)

Personnel of this branch have examined this sheet and are returning it to your office for corrections.

Signal numbers should be plotted to the left of the signals to keep the numbers out of the soundings. ^{N.W.}

A listing of the actual signals used should be made, as signal 910 falls off the north edge of the sheet. If the signal is used a larger sheet may be required in order to have all signals on the sheet and room on the south edge for the proper border.

Plot the following as triangulation stations: 904, 908, 910.
All others are topo stations.

After these corrections have been rectified, furnish this office with a preliminary position overlay and preliminary position printout.


Hugh L. Proffitt
Chief, Verification Branch, AMC

VERIFICATION NOTE TO EDP
SURVEY H-9289
OPR-437

Vreifier G.F.Trefethen

NOV.26,1973

This branch has completed verification of the preliminary pos. o/L

The hi-fix correctors for days 236,237,222,227, 240,267 are in error. record nos. 14050-16291.

Vessel ID numbers are in error from pos. 3534-3629. record nos. 14050-14849

Record nos. 17005-17202 time and pos. nos. are out of order.

After the corrections have been applied please furnish this branch a second pos. o/L and add hi-fix lane 1 and 5 on pat. 2 to cover the area of hydro.

Cards have been key punch by this branch 24 pos. nos. were duplicated.

Delete signals 906 and 908 not used.


W.L. Johns
Chief Verification Br.

Verifier: Dorothy Calland

December 7, 1973

VERIFICATION NOTE TO EDP
SURVEY H-9289 (MI-20-1-72) OPR 437

The verification of the second preliminary position overlay 11/27/73 has been completed.

There are nine deletes, three plot aheads, and position number changes for day 223, position 3059 to 3759 thru 3122 to 3822, record numbers 10129 - 10616. Key punched cards for same herewith. After these changes have been incorporated please furnish this branch a partial position (to show corrections) and a preliminary sounding printout and overlay.

W: L. Jonns
William L. Jones
Chief, Verification Br.

NOTE TO EDP
H-9289
OPR-437

Ver. G.F.Trefethen

12/14/73

This branch has completed the ver. of the preliminary P/O made to check the sgg,s correctors.

- 1 Tide corr. checked ok
- 2 Vel. corr. checked ok
- 3 The TRA corr. are in error from rec. no. 14995-15024; 15053-16160; 16201-16291. 17005-17061, 17446-17589. cards have been punched.

Please furnish this br, with a sgg,s O/L.

W.L. Jonns

W.L. Jonns
CH. VER. BR.

*When plotting sgg's of L
ck these Rec. no for Sgg's
in Error 14090, 15104, 17509, 17510*

Verifier: R. G. Roberson

23-January-197⁴~~5~~

H-9289(MI 20-1-72)
OPR-437
VERIFIER NOTE TO EDP

This branch has completed verifying the preliminary sounding overlay of this survey. Correction cards have been punched by personnel of this branch, and the cards will accompany the sounding printout to EDP Branch.

The majority of errors were a result of rotation of soundings 45° . This rotation was completed after the soundings were excessed. The end result was a great number of soundings touching or the possibility of soundings touching when plotted on the smooth sheet.

After these changes have been made, please furnish this office with a smooth sheet, new excess level I, and a smooth position plot.

William L. Jonns

William L. Jonns
Chief, Verification BR., AMC

GEOGRAPHIC NAMES

HL-9289

Name on Survey	Source of Name											
	A	B	C	D	E	F	G	H	K			
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	GRAND McNALLY ATLAS	U.S. LIGHT LIST				
GARDEN CITY BEACH												1
LONG BAY												2
MURRELLS INLET												3
MYRTLE BEACH												4
SURESIDE												5
												6
												7
												8
												9
												10
												11
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Approved by:
 [Signature]
 Staff Geographer
 27 March 1974

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 9289

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & 3-Overlays			BOAT SHEETS		1 (2parts)	
DESCRIPTIVE REPORT			OVERLAYS		5	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1					
VOLUMES	7					
BOXES			2 1 & Sawtooth Rec.			
T-SHEET PRINTS (List)						
SPECIAL REPORTS (List)						

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				
POSITIONS CHECKED				
POSITIONS REVISED				
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS				
JUNCTIONS				
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS				
SPECIAL ADJUSTMENTS				
ALL OTHER WORK				
TOTALS		22.6		
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY <i>H P Smith, G F Trefethen</i> <i>D L Calland and R G Robertson</i>	BEGINNING DATE		ENDING DATE <i>2/28/74</i>	
REVIEW BY	BEGINNING DATE		ENDING DATE	

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H-9289

INSTRUCTIONS - This form serves to identify items of a check list in verification together with items which are separately reported to the Reviewer. The form is not to be forwarded to the Reviewer. A report, which is prepared for the Reviewer, should identify items by number and letter and will be filed in the Descriptive Report until the survey is reviewed.

CL - Check List Items: should be checked as having been completed during the verification processes.

R - Report Item: This column refers to those items reported to the reviewer and is used to indicate the items discussed.

Part I - DESCRIPTIVE REPORT		CL	R	Part III - JUNCTIONS (Continued)		CL	R
<p>Note: The verifier should first read the Descriptive Report for general information and problems.</p> <p>1. The Descriptive Report was consulted, paragraphs checked if found satisfactory, and notations were made in soft black pencil regarding action taken. Remarks Required: -- None</p>				<p>10. Junctions with contemporary surveys were satisfactory except as follows: Remarks Required: -- Consider conditions after adjustments have been made; note adjustments made. Make special notes of Butt junctions and areas which are SUPERSEDED.</p>			
<p>2. Soundings originating with the survey and mentioned in the Descriptive Report have been verified and checked in soft black pencil, including latitude and longitude, together with position identification. Remarks Required: -- None</p>				<p>Part IV - VOLUMES 11. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken and exceptions noted in the volumes. Remarks Required: -- None</p>			
<p>3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None</p>				<p>12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following: (a) rocks (b) line turns (c) position values of beginning and ending of lines (d) bar check or velocity correctors (e) time recording (f) notes or markings on fathograms (g) was reduction of soundings accurately done? (h) was scanning accurate? (i) were peaks at uneven intervals missed? (j) were stamps completed? (k) references to adjacent features</p>			
<p>Part II - SHORELINE AND SIGNALS 4. Source of shoreline signals Remarks Required: -- List all surveys a. Give earliest and latest dates of photographs b. Field inspection date c. Field Edit date d. Reviewed-Unreviewed</p>				<p>Part V - PROTRACTING 13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None</p>			
<p>5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.</p>				<p>14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None</p>			
<p>6. The plotting of all triangulation stations, topographic stations and hydrographic signals has been checked and noted in processing stamp No. 42 on the smooth sheet. Remarks Required: -- None</p>				<p>15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None</p>			
<p>7. Objects on which signals are located and which fall outside of the high-water line have been described on the sheet. Remarks Required: -- List those signals still unidentified.</p>							
<p>Part III - JUNCTIONS Note: Make a cursory comparison preliminary to inking soundings in area of overlap. 8. All junctions of contemporary or overlapping sheets were transferred in colored ink and overlapping curves were made identical. Remarks Required: -- None</p>							
<p>9. The notation in slanted lettering "JOINS H---- (19)" was added in colored ink for all verified contemporary adjoining or overlapping sheets. Those not verified are shown in pencil. Remarks Required: -- None</p>							

Part V - PROTRACTING (Continued)	CL	R	Part VIII - AIDS TO NAVIGATION	CL	R
<p>16. The protracting was satisfactory except as follows:</p> <p>Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.</p>			<p>26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey.</p> <p>Remarks Required: -- Conflicts of any nature listed.</p>		
<p>17. The protractor has been checked within the last three months.</p> <p>Remarks Required: -- Date of check, type of protractor and number.</p>			<p>27. All floating aids listed in the Descriptive Report should be verified and checked in soft black pencil, including latitude and longitude and position identification.</p> <p>Remarks Required: -- None</p>		
<p>Part VI - SOUNDINGS</p> <p>18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings.</p> <p>Remarks Required: -- None</p>			<p>Part IX - BOATSHEET</p> <p>28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information.</p> <p>Remarks Required: -- None</p>		
<p>19. Sounding line crossings were satisfactory except as follows:</p> <p>Remarks Required: -- Discuss adjustments.</p>			<p>29. Heights of rocks awash were correctly reduced and compared with topographic information.</p> <p>Remarks Required: -- Note excessive conflicts with topographic information.</p>		
<p>20. The spacing of soundings as recorded in the records was closely followed;</p> <p>Remarks Required: -- None</p>			<p>Part X - GENERAL</p> <p>30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2).</p> <p>Remarks Required: -- None</p>		
<p>21. The scanning, reduction, spacing, plotting of questionable soundings have been verified.</p> <p>Remarks Required: -- None</p>			<p>31. Unnecessary pencil notes have been removed from the sheet.</p> <p>Remarks Required: -- None</p>		
<p>Part VII - CURVES</p> <p>23. The depth curves have been inspected before inking.</p> <p>Remarks Required: -- By whom was the penciled curves inspected.</p>			<p>32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet.</p> <p>Remarks Required: -- None</p>		
<p>24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following:</p> <ul style="list-style-type: none"> a. From T-Sheet in dotted black lines b. From soundings in orange c. Approximate position of sketched curve is dashed orange d. Approximate position of shoal area not sounded in black dashed <p>Remarks Required: -- None</p>			<p>33. The bottom characteristics are adequately shown.</p> <p>Remarks Required: -- None</p>		
<p>25. Depth curves were satisfactory except as follows:</p> <p>(This statement should not refer to the manner in which the curves were drawn).</p> <p>Remarks Required: -- Indicate areas where curves could not be drawn completely because of lack of soundings. For some inshore areas a general statement is sufficient.</p>			<p>Part XI - NOTES TO THE REVIEWER</p> <p>34. Unresolved discrepancies and questionable soundings.</p>		
<p>Verified by</p>			<p>35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.</p>		
			<p>36. Supplemental information.</p>		
<p>Date</p>					

RADIOBEACON SIGNALS
For a schedule of operations see Light List and for changes see Notice to Mariners
Stations Signals
Georgetown Lighthouse Cap 2 dots, 1 dash and 1 dot for 60 sec, silent 120 sec

79° 00'

Ocean Forest

9290

33° 40'

1395a

9289

9230

1419

4615

Chart-1237

