

7963

Diag. Cht. Nos. 1233-2 & 1234-2

es-352

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

ECSP-1152

Field No. Hi-1152

Office No. H-7963

LOCALITY

State NORTH CAROLINA

General locality MOREHEAD CITY & APPROACHES

Locality

1952-53

CHIEF OF PARTY

CLARENCE R. REED & JOHN C. TRIBBLE

LIBRARY & ARCHIVES

DATE

MAY 14 1954

7963

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-7963

Field No. ECSP-1152 & Hi-1152

State NORTH CAROLINA

General locality MOREHEAD CITY AND APPROACHES

Locality _____

Scale 1:12,500 Date of survey 10 NOV. 1952 to 17 MARCH 1953

Instructions dated 22 SEPT. 1952 & 15 JAN. 1953

Vessel EAST COAST SHORE PARTY & SHIP HILGARD

Chief of party CLARENCE R. REED & JOHN C. TRIBBLE

Surveyed by SHIP'S OFFICERS

Soundings taken by ~~SCUBA~~, graphic recorder, hand lead, ~~WEX~~ POLE

Fathograms scaled by FIELD PERSONNEL

Fathograms checked by FIELD PERSONNEL & NORFOLK PROCESSING OFFICE

Protracted by A.K. SCHUGELD

Soundings penciled by A.K. SCHUGELD

Soundings in ~~5000~~ feet at MLW ~~MARK~~

REMARKS: This folder contains the descriptive reports for field surveys ECSP-1152 & Hi-1152. These surveys were combined and smooth plotted as survey H-7963.

APC
82

DESCRIPTIVE REPORT
TO ACCOMPANY

HYDROGRAPHIC SURVEY NUMBER--

Field No. HI-1152 (CS-352)
Outer Beaufort Inlet, N.C.

*Combined with
ECSP -1152*

- A. PROJECT:- This survey covers the offshore portion of project No. CS-352, instructions dated 25 Sept. 1952; supplemental instructions dated 15 Jan. 1953.
- B. SURVEY LIMITS AND DATES:- This survey covers the offshore area of the project to a southern limit of latitude; $34^{\circ}38'30''$; the eastern limit to longitude; $76^{\circ}37'0''$ and western limit to longitude; $76^{\circ}47'0''$ (western limit extended by supplemental instructions of 15 Jan. 1953). Previous surveys in the area covered by the HILGARD follows: No. H-577, No. H-789, No. H-1219, No. H-4767, No. H-4770 and No. H-6798. This survey also makes a junction with the Hydrographic Survey made by the Atlantic Coast Shore Party Comdr. C.R. Reed, Chief of Party).
Field work on this survey began 10 November 1952 and ended 11 February 1953.
- C. VESSEL AND EQUIPMENT:- The Ship HILGARD was used for the offshore survey of this project. Portable depth recorder No. 67, type 808a was used for all soundings. Almost all sounding was done at half speed. The turning diameter at half speed with full rudder was 80 meters, with half rudder 175 meters. Depths varied from about 12 feet to about 50 feet (reduced).
- D. TIDE AND CURRENT STATIONS:- One standard tide station was established at the Morehead City Port Terminal. One portable tide station was established by the Atlantic Coast Shore Party, (see report by Comdr. C.R. Reed covering same project). Tide reducers were obtained from the offshore portable gage or from staff readings at the same sight (heavy seas washed out the portable gage, after which staff readings were made to ~~sketch~~ determine the tide correction). Plotted curves and tide corrections for this survey are attached to the ORIGINAL.
One 75 hour current station was observed at the Morehead City draw bridge, Newport River. Adverse weather prevented the occupation of the second current station called for in the original instructions (Beaufort Inlet Channel). Three attempts were made to occupy this station and was only abandoned after conversing with the Chief of Division of Coastal Surveys.
- E. SMOOTH SHEET:- (to be submitted by Processing Office).
NOTE:- Boat Sheet was ruled in the Washington Office.

F. CONTROL STATIONS:- Control stations were located by triangulation, topography and sextant fixes. Attached list of signals gives dates of triangulation and initials of chief of party. The topographic signals were located by the Atlantic Coast Shore Party (see report by Comdr. C.R. Reed). Hydrographic signals were located by at least three sextant cuts or by three point fix with check angle. All data on hydrographic signals are recorded in sounding records.

G. SHORELINE AND TOPOGRAPHY:- See report of Atlantic Coast Shore Party on same project for data on Shoreline and Topography.

H. SOUNDINGS:- All soundings obtained on this survey were by type 808a depth recorder (recorder No. 67). Transceiver units were mounted inboard.

Corrections were obtained from bar checks only, a record of which is a part of this report.

I. CONTROL OF HYDROGRAPHY:- All sounding lines were controlled by visual three point fixes.

J. ADEQUACY OF SURVEY:- The area surveyed is considered adequate and should supercede prior surveys for charting purposes (subject to findings of the smooth plotter).

A comparison of boat sheets (Atlantic Coast Shore Party and Hilgard) showed a satisfactory junction with adequate overlap. Depth curves were adequately drawn at the junctions.

K. CROSSLINES:- About 8% crosslines were run on this survey. Examination of boat sheet indicates that discrepancies will be less than 1% of depth.

L. & M. COMPARISON WITH PRIOR SURVEYS AND CHART:- For the offshore area surveyed by the HILGARD the boat sheet comparison with prior surveys and chart No. 420, 52-1/7 showed good general agreement. One exception noted in the comparison was the two wrecks charted as follows:-
Wreck No. 1, Lat. ~~34-41.30~~ 34-41'.30, Long. 76-43'.75
Wreck No. 2, Lat. 34-41.15, Long. 76-43.30 (nun buoy No. 16 charted in this area). Closely spaced sounding lines in the area showed no sign of a wreck. Local fishermen say that they trawl in the area and have found no evidence of a danger existing at the two charted wreck symbols. It was reported by the same source that a part of one wreck did project about three feet above bottom (apparently the diesel engine).
NOTE:- The A.C.S.P. also sounded over these two areas and I am told that they found no dangers as charted, probably the report from the A.S.C.P. will give additional information on the charted wrecks.

retain wrecks
see review
par 6A.

J.C. Tribble, Jr.
Comdr., C.&G. Survey

STATISTICE, SHEET NO. HI-1152

BEAUFORT INLET, N.C., OFFSHORE, PROJECT; CS-352

Vol. No.	Date 1952	Day Letter	No. of Positions	Statute Miles Sdg. Lines
1	12-9	A	103	22.0
1	12-10	B	61	13.1
1	12-12	C	63	13.1
1&2	12-15	D	153	33.1
2	12-16	E	179	38.1
2	12-17	F	30	6.5
2	12-19	G	78	17.0
2&3	1-16-53	H	72	16.3
3	1-28	J	150	33.5
3	1-30	K	205	47.6
4	1-31	L	93	21.1
4	2-4	M	194	41.6
4&5	2-5	N	228	45.4
5	2-6	P	164	37.4
5&6	2-9	Q	176	37.4

TOTALS 1949 423.2

AREA IN SQUARE STATUTE MILES- 18.2

TIDE NOTE

TO ACCOMPANY DESCRIPTIVE REPORT

FOR HYDROGRAPHIC SURVEY NO.

FIELD NO. HL-1152

Project No. GS-352

OUTER BEAUFORT INLET, N.C.

The standard tide gage located at the Morehead City Port Terminal and the portable tide gage established by the Atlantic Coast Shore Party were used to obtain hourly heights for tide corrections. The portable gage was not in operation during all the period of this survey, however staff readings were furnished by the Shore Party during the days the gage was out of operation. Plotted curves and tide corrections form a part of the original of this report.

Location of tide gages:-

Standard gage, Morehead City Port Terminal

Lat. 34°-43'-07"

Long. 76°-41'-44"

Portable Tide Gage, offshore site

Lat. 34°-41'.62"

Long. 76°-40'.85"

TABULATION OF BAR CHECKS. FATHOMETER # 67
"A" SCALE

Depth of bar	10'	15'	20'	25'	30'	35'	40'	45'	50'
Fathometer reading									
12-15-52	10.0	15.0	20.0	R	30.0	35.0	40.0	45.0	
16	9.8	14.8	19.9	25.0	30.0	35.0	40.0	45.0	50.2
19	10.1	15.0	20.2	26.0	30.6				
1-16-53	9.9	14.9	20.0	25.0	30.0	35.0	40.1		
23	10.0	14.9	20.0	25.0	30.1	34.9			
30	10.0	14.9	19.8	24.9	30.0	35.0	40.0		
31	9.9	14.6	20.0	25.0	30.0	35.0	40.0	45.3	
2-4-53	10.0	14.9	20.0	25.0	30.0	35.0	40.0		
5	9.7	14.5	19.9	25.0	29.6	36.0			
6	9.8	14.8	20.0	25.0	30.0	35.0	40.0		

MEAN 9.9 14.8 20.0 25.1 30.1 35.0 40.0 45.1 50.2
Above for A scale only, no correction applied for A scale.

"B" SCALE

Depth of bar	40.0'	45.0'	50.0'
Fathometer reading			
12-16-52	40.2	45.5	50.3
1-30-53	40.6		
31		46.0	
2-4-53	40.0		
6	41.0		

MEAN 40.4 45.75 50.3

Corrections for "B" scale

up to 38.5'	corr.	-0.2 ft.
to 41.5'	do	-0.4 ft.
to 44.0'	do	-0.6 ft.
to 46.0'	do	-0.8 ft.
to 47.5'	do	-0.6 ft.
to 50.0'	do	-0.4 ft.
to 52.5'	do	-0.2 ft.
above 52.5'	Corr.	zero

ECSP-1152

NOTES FOR DESCRIPTIVE
REPORT TO ACCOMPANY

HYDROGRAPHIC SHEETS H -7963 & ~~H-7964~~ (FIELD NO. ~~ECSP HI-1152~~
& ~~ECSP-1252~~)

Beaufort Inlet, Harkers Island & Barden Inlet, North Carolina

EAST COAST SHORE PARTY

CLARENCE R. REED, CHIEF OF PARTY

PROJECT CS-352

1952-53

SCALE 1:10,000

* * * * *

PROJECT This survey was accomplished under instructions dated 25 September 1952 and supplemental instructions dated 15 January 1953, calling for basic hydrographic surveys in the vicinity of Beaufort Inlet and Barden Inlet, except in the dredged channels regularly surveyed by the United States Army Corps of Engineers.

SURVEY LIMITS AND DATES The survey on sheet H-7963 (Field No. ECSP HI-1152) covers the area on chart 420 bounded on the north by Latitude 34-44', on the West by the western limit of the chart, on the south by a contemporary hydrography executed by the USC&GSS Hilgard (an irregular junction line in depths of 18 to 30 feet) and on the east by Longitude 76-37' on the outer coast and a junction with sheet H-7964 (Field No. ECSP 1252) in the vicinity of Middle Marshes southeast of Beaufort, N.C. The field work began on the 25 November 1952 and was concluded on 17 March 1953. *Combined on this sheet*

The survey on sheet H-7964 (Field No. ECSP 1252) covers Barden Inlet from the 18 foot curve in Lookout Bight to the dredged channel in Back Sound, the west end of Back Sound from Longitude 76-35' to a junction with sheet H-7963 in approx Longitude 76-37', North River south of Latitude 34-44' and the Straits north of Harkers Island and Browns Island east to Marshshallberg, N.C. with the exception of flats in Westmouth Bay and lesser tributaries. The field work began on 10 February 1953 and was concluded on 3 April 1953.

VESSELS AND EQUIPMENT Aluminum Launch No. 168 was used for nearly all the hydrography. The Launch was operated from a mooring at The U.S. Fish and Wildlife Biological Station on Pivers Island, Beaufort, N.C.

The launch has a turning radius of 15 meters while running at sounding speed of 6 knots at 1800 R.P.M.

A Hydrographic Skiff was used on occasions when sounding in shoal water. The skiff was powered by two 10 HP Johnson outboard motors. Only one outboard motor was used while sounding.

Launch No. CS 82 was also used in running sounding lines in the channel north of Harkers Island, from the Harkers Island bridge to Core Sound Light No. 42A. In all three boats, Graphic Recorders No. 138 SPX and 150 SPX were used with their transducers mounted inboard. *On H-7964*

TIDES ANDS CURRENTS The tide note is attached to this report. No currents were observed by this party, however, currents

were observed by the ship Hilgard in this area during the time this survey was in progress.

SMOOTH SHEETS The smooth sheets are to be plotted by the Norfolk Processing Office.

Control Stations The control consisted mainly of triangulation stations and topographic stations located by planetable. Only two hydrographic stations were necessary, one on sheet 1152, and one on 1252.

SHORELINE AND TOPOGRAPHY The shoreline and topographic details were transferred from Air Photo Compilation sheets T-8744n/2, (1144-48) T8745n/2, T8744s/2, T8745s/2 and ~~T8818n/2~~ T8743 (1144)

Because of continuous eroding on either side of Beaufort Inlet, a planetable survey was made to determine the present mean high water line. Portions of the mean high water line at Barden Inlet was also determined by planetable. The mean low water line was determined by planetable on a shoal located just west of the Morehead City Channel Rear Range Light. Other discrepancies in the shoreline noticed on the Air Photo Compilation were resolved in the field by planetable and are shown on the topographic sheets.

SOUNDINGS The depths were measured with graphic recorders, sounding poles and hand leads. Bottom samples were obtained with armed hand leads.

CONTROL OF HYDROGRAPHY The sounding lines of this survey were controlled by three point fixes taken with sextants at 1 to 2 minute intervals. No unusual jumps were noted when changing control stations.

ADEQUACY OF SURVEY This survey is complete except for unimportant flats in Westmouth Bay and lesser tributaries to the Straits ⁰⁷⁻⁷⁹⁶⁴ north of Harker Island and Browns Island. It is considered adequate to supersede prior surveys.

CROSSLINES Prescribed crosslines were run with satisfactory crossings.

COMPARISON WITH PRIOR SURVEYS Junctions with hydrographic survey H-6798 are satisfactory. Other hydrographic surveys in the area are old and a detailed comparison would be less useful than a comparison with charted soundings. Soundings were transferred from chart No. 420 to the boat sheets before beginning field work. They are shown in green ink. Present soundings which differed materially from the charted soundings are listed below in tabular form.

EA-53

7964

COMPARISON WITH CHART
SHEET H-7963 (Field No. 1152)

LATITUDE	LONGITUDE	CHART NO. 420 52-1/7	1952-53 SUR.
34-43.10'	76-44.38'	10'	15' 14"
34-42.56	76-43.70	1/2	51' 1' is some SE
34-42.74	76-43.18	5	11
34-43.54	76-41.73	6	11
34-43.58	76-41.61	2	87'
34-43.70	76-41.42	13	21' X
34-43.58	76-40.08	1	32' The shoal charted just south of this sounding does not appear to be as extensive as shown on the chart.
34-43.00	76-40.63	10	2' X
34-42.71	76-41.44	23	7' X
34-42.58	76-41.30 ²⁸	17	5' X
34-42.32	76-41.38	14	20
34-42.06	76-40.49	12	23 22'
34-41.60	76-40.01	12	19
34-41.55	76-39.89	9	19
34-41.90	76-40.06	8	23'
34-41.57	76-39.41	8	1' X
34-40.46	76-39.05	7	14
34-40.34	76-40.02	6	15
34-40.87	76-40.08	9	30
34-41.14	76-40.00	2 ✓	30 32'
34-41.08	76-40.21	24 ✓	109
34-40.20	76-40.17	10-	18
34-40.74	76-40.31	24 ✓	76'
34-40.61	76-40.40	15 ✓	3
34-40.02	76-40.77	23	16
34-40.27	76-40.82	8	15
34-40.42	76-41.00	5	17 16'
34-41.47	76-40.74	4	14
34-40.72	76-41.27	6	16
34-40.82	76-41.55	10	18 17'
34-40.89	76-41.68	21	16
34-41.03	76-41.770	17	11
34-41.23	76-42.11	11	24 22'
34-41.45	76-42.50	28	14
34-41.57	76-39.41	8	1
34-41.79	76-39.38	19	8 8'
34-41.35	76-38.29	25	16
34-41.34	76-37.90	17	8 12'

PRELIMINARY REVIEW BY CHART DIVISION

The following items of the preliminary review by the Division of Charts were investigated with result as indicated.

Item No. 1 Wreck charted in Latitude 34-41'09" Longitude 76-43'18" was investigated intensively by depth recorder by this party and ship HILGARD. No indication was found. For recommendation see item 2. *retain on chart*

Item No. 2 Wreck charted in Latitude 34-41'18" Longitude 76-43'45" was investigated the same as item No. 1. No indication was found. It is probable that only one wreck existed in the first place and that the two positions are both the same wreck on different dates. Local fishermen say there is nothing left of the wreck but its engine nearly buried on the bottom. It is questionable whether an accurate location could be obtained even with wire drag equipment. However until cleared with such equipment it should ~~be~~ continue to be charted. *retain on chart*

Item No. 3 No evidence of either wreck charted in Latitude 34-42'51" Longitude 76-40'15" could be found. It is recommended that both wrecks be removed from the chart. *expunge from chart*

Item No. 4 The wreck charted in Latitude 34-43'06" Longitude 76-41'30" was found in 11 feet of water covered by 6½ feet at low water. It is marked by a black can buoy No. 41 approximately 30 meters southwest of the wreck. *10"*

Item No. 5 At Latitude 34-41'29" Longitude 76-40'13" a search at low water for the charted submerged piles proved fruitless. Their existence is doubtful. The source from which these piles were charted should be re-examined. *retain on chart*

Item No. 6 There are no longer any dolphins in any of the three areas indicated and they should be deleted from the charts. *retain dolphins shown on present survey*

Item No. 7 This channel was closely developed as instructed.

Item No. 8 At the present time there are no radio towers at Camp Glen. The only visible radio equipment is a group of short wooden masts on top of the buildings at the camp. These are not conspicuous and should not be charted as land marks.

The reported shoals in the vicinity of Latitude 34-43'20" Longitude 76-45'20" were found and developed. This shoal runs almost due east and west and has an area approximately 900 meters long and 150 meters wide which bares at low water.

COAST PILOT INFORMATION Information pertaining to Coast Pilot was turned over to Mr. E.W. Smith of the Coast Pilot during his stay in Morehead City, N.C. Section

LANDMARKS FOR CHARTS The following additional landmarks should be charted on charts 420 and 423. (See form 567) C.L.'s 681 and 854 (1953)

- ✓ Fort Macon State Park, Chimney on picnic shelter.
- ✓ Morehead City, orange elevated water tank- Lloyd A. Fry Roofing Company.
- ✓ Beaufort, First Baptist Church, Spire (this is a new church)

replacing the old one which is next door to the east.

Morehead City, First Methodist Church, spire, and Morehead City, First Baptist Church, spire should be charted as they are conspicuous. Both churches are new.

The stack indexed on air photo topo sheet T8744 N/2 as No. 24 - "Stack - tallest of 3" has been replaced by a brick stack 10 feet in diameter at its base and with its top 110 feet above high water. No objects were visible at the stack for a sextant location. However the following data will serve to plot the stack on the smooth sheet. A sextant fix was taken at Morehead City Port Terminal with a cut to the stack:

MOR	73° 05'
TAN	
WAT	98° 26'
Brick stack to MOR	35° 26'

The distance of the stack from the high water line is 21.3 meters and from the building to the east is 1.2 meters. It is 19.7 meters from an inshore continuation of the edge of the wharf to the south. This stack should be plotted on the smooth sheet and its position used for charting as a landmark. It is recommended that the distinguishing name "BRICK STACK" be charted as there are countless black metal stacks in the vicinity which rise and fall with the fortunes of the fertilizer industry.

✓ The "LOOKOUT TOWER" shown on chart 420 at Fort Macon Coast Guard Station should be deleted. It is not only erroneously charted southwest of the Coast Guard Station cupola instead of southeast but also it is inconspicuous. *Deleted on new print*

GEOGRAPHIC NAMES

Notes 454-LH
The island between Morehead City Port Terminal and Pivers Island is known locally as Radio Island. The tower of radio station WMBL is prominent. It is recommended that the name "Radio Island" be charted. *(Deleted thru 6-15-59/31)*
No other changes in charted names are indicated.

MISCELLANEOUS

Morehead City Channel was thoroughly developed although it is in the area dredged by the U.S. Engineers. The reason was because of the difficulty experienced by the Chart Division in applying U.S. Engineers' surveys to our charts. The channel tends to shoal on its southern edge near Fort Macon.

Late on the night of 7 February 1953 the collier SEACONNET went aground southwest of the seaward end of Beaufort Inlet Channel. According to an oral report from the Commanding Officer of the U.S. Coast Guard Buoy Tender CONIFER, the Commanding Officer of the SEACONNET dropped anchor and the vessel immediately went aground. Light fog was present and it was quite apparent that the distance offshore was misjudged. The Coast Guard Cutter CONIFER immediately assisted the SEACONNET and attempted to free her and tow her to deeper water but was only successful in shifting her position slightly. The grounding occurred during the tugboat strike in Norfolk and New York and for that reason assistance had to be requested from Miami.

The vessel was freed on high tide 13 February. She had been inbound for fuel oil prior to a planned departure for Italy with her cargo of coal. The grounding was the direct result of the failure of the Commanding Officer of the SEACONNET to take proper precautions to assure himself of the ship's position and thus remain sufficiently distant from the shore to avoid stranding.

The wreck discovered by the hydrographic party in the vicinity of Latitude 34-43.6' Longitude 76° 40.1' should be charted. *it is charted J. Reed. 2/3/54*

It will be necessary to obtain the shoreline for the west end of Bogue Sound from air photo topographic sheets available from the Washington office.

A new railroad pier on Radio Island for military use was not located by this survey as construction was incomplete at the closing of the field season.

A close development was not made in Barden Inlet in the area covered by recent U.S. Engineers' surveys. These surveys on a larger scale can be properly coordinated by using the positions of fixed aids to navigation as located by this party by planetable. It should be noted that the U.S. Engineers' survey bases tide reduction on a datum sloping from Lookout Bight to Lighthouse Bay. The present survey of Barden Inlet is based on tides observed in Lookout Bight.

The new highway bridge from Morehead City to Atlantic Beach will have two 90 foot channels, one on either side of the center pier on which the draw span swings. The vertical clearance closed will be 12 feet at high water. The overall width of the bridge is 32 feet. Angles taken to locate the center of the bridge are as follows:

- ✓ At ⊙ TOP - North side of draw to ⊙ KIN 66° 51'
- ✓ At ⊙ TOP - Center pier to ⊙ KIN 63° 13'
- ✓ At ⊙ TOP - South side of draw to ⊙ KIN 59° 22'

The angles were taken after the sounding volumes were packed for shipment and are not recorded therein.

The above report was re-written from notes left by Ensign Richard H. Houlder upon his detachment and from additional notes by Ensigns Robert B. Noble and Lionel D. Kelley.

Approved and forwarded;

Clarence R. Reed
Clarence R. Reed
CDR, USCGS
OinC, East Coast Shore Party

TIDE NOTE TO ACCOMPANY

HYDROGRAPHIC SURVEY SHEETS: (FIELD NOS. ECSP 1152 & 1252)

Register Nos. H-7963 & H-7964

Observations were obtained at three tide stations. A portable automatic tide gage was maintained at Atlantic Beach. A standard automatic gage was maintained at the Morehead City Port Terminal. Visual observations were taken at Cape Lookout. No difference of time and height was applied to the observed tides. Planes of reference were furnished by the Washington Office or computed from elevations of previous tidal bench marks.

<u>STATION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>MLW ON STAFF</u>
Morehead City Port Terminal	34-43.13	76-41.72	3.2
Atlantic Beach	34-41.65	76-42.79	
25 Nov. 1952 - 8 Dec. 1952			2.5
15 Dec. 1952 - 5 Jan. 1953			1.7
6 Jan. - End of Project			3.6
Cape Lookout	34-36.68	76-32.13	2.2

FATHOMETER CORRECTIONS
PROJECT CS-352

HYDROGRAPHIC SURVEY SHEETS (FIELD NO. ECSP 1152, 1252)

Register Nos. H-7963 & H-7964

The corrections tabulated below are based on an initial set at one foot. Where the initial on the fathogram varies from the correct setting, INDEX CORRECTIONS must be entered in the sounding volumes. All soundings were obtained on the (A) Range, Foot Scale.

FATHOMETER NO. 138 SPX
Launch No. 168

25 November 1952 - 28 January 1953

Correction	Depth	
	From	To
-1.6	3.0	3.3
-1.4	3.4	3.5
-1.2	3.6	3.7
-1.0	3.8	4.0
-0.8	4.1	4.6
-0.6	4.7	15.2
-0.8	15.3	28.5
-1.0	28.6	38.0
-1.2	38.1	46.9
-1.4	47.0	Sdg. Limit

The corrections tabulated below are based on an initial set at zero on the fathogram. Where the initial varies from the correct setting, INDEX CORRECTIONS must be entered in the sounding volumes. All soundings were obtained on the (A) Range, Foot Scale

FATHOMETER NO. 150 SPX
Launch No. 168

29 January - 1 March 1953

Correction	Depth	
	from	To
-0.2	2.4	3.0
0.0	3.1	19.0
-0.2	19.1	30.0
-0.4	30.1	36.0
-0.6	36.1	40.0
-0.8	40.1	45.0
-1.0	45.1	Sdg. Limit

(Cont. From Page 1)

FATHOMETER NO. 138 SPX
Launch No. 168

3 March - 19 March 1953

Correction	Depth	
	From	To
-0.6	3.0	3.2
-0.4	3.3	3.4
-0.2	3.5	4.0
0.0	4.1	6.0
0.2	6.1	17.5
0.0	17.6	25.2
-0.2	25.3	32.5
-0.4	32.6	40.0
-0.6	40.1	47.5
-0.8	47.6	Sdg. Limit

FATHOMETER NO. 150 SPX
Hydrographic Skiff No. 736

12 January and 13 January 1953

Correction	Depth	
	From	To
0.0	3.0	13.0
-0.2	13.1	18.0
-0.4	18.1	23.0

20 February 1953

Correction	Depth	
	From	To
-1.0	4.8	5.2
-0.8	5.3	5.4
-0.6	5.5	6.4
-0.4	6.5	10.0
-0.6	10.1	15.0
-0.8	15.1	19.0
-1.0	19.1	Sdg. Limit

(Fathometer Corrections Cont.)

FATHOMETER NO. 150 SPX
Launch No. 168

18 and 19 March 1953

No bar checks were obtained on these days, due to poor weather conditions on 18 March and fathometer breakdown on 19 March, however depth comparisons were made between the fathometer and sounding pole. A correction of zero was indicated by these comparisons.

FATHOMETER NO. 138 SPX
Launch No. 82

The corrections tabulated below are based on an initial set at zero on the fathogram. Where the initial varies from the correct setting, INDEX CORRECTIONS must be entered in the sounding volumes. All soundings were obtained on the (A) Range, Foot Scale.

20 and 25 March 1953

Correction	Depth	
	From	To
0.4	3.0	3.5
0.6	3.6	5.5
0.8	5.6	Sdg. Limit

3 April 1953

Correction	Depth	
	From	To
0.0	3.0	3.6
0.2	3.7	5.0
0.4	5.1	7.5
0.6	7.6	14.0
0.8	14.1	16.5
1.0	16.6	Sdg. Limit

FATHOMETER NO. 138 SPX
Skiff No. 736

31 March and 1 April 1953

The bar check gave correction of zero for these days.

STATISTICS TO ACCOMPANY HYDROGRAPHIC SHEET H- 7963

(Launch No. 168)
(FIELD NO. ECSP 1152)

Date 1952-53	Day Ltr.	Vol. No.	Lead Lines	No. of Positions	Stat.Mi. Sdgs.
25 Nov.	a	1	—	63	11.5
1 Dec.	b	1	—	113	18.7
2 "	c	2	—	17	1.9
3 "	d	2	1	40	4.0
4 "	e	2	2	83	8.4
6 "	f	2&3	4	101 ⁹⁹	11.0
8 "	g	3	—	159	26.2
9 "	h	3&4	4	156	26.2
10 "	j	4&5	—	130	17.9
16 "	k	5	—	71	11.1
17 "	l	5&6	36	118	17.0
18 "	m	6	1	55 ⁵⁴	8.9
19 "	n	6&7	185	140	19.2
20 "	p	7	—	63	9.5
23 "	q	7&8	162	133	16.2
30 "	r	8	18	65	8.5
31 "	s	8	9	9	—
2 Jan.	t	8	53	11	1.4
5 "	u	8&9	101	82	9.5
6 "	v	9	147	82	9.0
15 "	w	9	30	38	4.4
16 "	x	9&10	1	113	16.9
19 "	y	10	73	176	16.3
20 "	z	10	9	35	3.1
21 "	aa	11	198	40 ⁹⁰	11.5
22 "	ba	11	225	77	8.6
23 "	ca	11&12	77	46 ¹⁰³	9.9
27 "	da	12	50	85	8.5
29 "	ea	12	46	40	0.8
30 "	fa	12&13	43	146	12.5
2 Feb.	ga	13	294	93	8.5
3 "	ha	13	85	77	6.4
5 "	ja	14	151	73	6.6
6 "	ka	14	178	146	15.9
9 "	la	15	7	92	8.5
11 "	ma	15	124	106	8.4
12 "	na	15	57	21	1.8
13 "	pa	15&16	79	122	10.1
17 "	qa	16	232	128	11.5
18 "	ra	16&17	97	152 ¹⁴⁶	13.5
24 "	sa	17	—	65	8.5
25 "	ta	17&18	52	72	9.4
26 "	ua	18	4	4	—
27 "	va	18	127	43	4.3
3 Mar.	wa	18	54	31	3.6
4 "	xa	18	3	7	0.7
5 "	ya	18&19	169	163	15.2
16 "	za	19	45	58	5.3
17 "	ab	19&20	21	105	10.6
		TOTALS	3204	4040 4138	476.45

Area in square statute miles 15.8

STATISTICS TO ACCOMPANY HYDROGRAPHIC SHEET H- ~~7963~~ 7963

(Hydro. skiff #736)
(FIELD NO. ECSP 1152)

Date 1953	Day Ltr.	Vol. No.	Lead Lines	No. of Positions	Stat. Mi. Sdgs.
12 Jan.	a	± 21	11	11	—
13 "	b	± 21	101	29	1.9
14 "	c	± 21	496	89	7.8
20 Feb.	d	± 21	246	64	5.5
		TOTALS	854	193	15.2

APPROVAL SHEET

HYDROGRAPHIC SURVEYS H7963 & H7964

The records and boat sheets for hydrographic survey H7964 and for that part of hydrographic survey H7963 accomplished by the East Coast Shore Party have been inspected by me and are approved.

Clarence R. Reed

Clarence R. Reed
CDR, USC&GS
OinC, East Coast Shore Party

**LIST OF SIGNALS
H-7963**

TRIANGULATION STATIONS

CAR CAMP GLEN WATER TANK, 1927 landmark ✓
 EAST BEACH HOTEL, EAST TOWER, 1933 landmark
 FISH BEAUFORT, U.S. MARINE BIOLOGICAL STATION, FLAGPOLE, 1927
 FOR BEAUFORT, MUNICIPAL WATER TANK, 1927-43 landmark
 GAR BEAUFORT INLET CHANNEL RANGE, REAR LIGHT, 1953
 HANK HANK, 1952
 MAC GAR, 1927
 MIKE MIKE, 1952
 MOR MOREHEAD CITY, PORT TERMINAL WATER TANK, 1943 landmark ✓
 PORT NEWPORT RIVER, HIGHWAY BRIDGE, EAST TOWER, 1933
 ROT CARROT, 1927-33
 SON MOREHEAD CITY CHANNEL RANGE, REAR LIGHT, 1953
 TOWN TOWN MARSH 2, 1927-34
 USE BEAUFORT, COURTHOUSE CUPOLA, 1913-27 landmark
 NAT MOREHEAD CITY, WATER TANK, 1913-43 landmark ✓
 WEST BEAUFORT CHANNEL BRIDGE, WEST TOWER, 1933
 WMBL MOREHEAD CITY, WMBL RADIO TOWER, 1948 landmark
 VAL MOREHEAD CITY, VILLA HOTEL, WATER TANK (VI), 1927-43 landmark ✓

DESCRIBED TOPOGRAPHIC STATIONS

Cub T-8744 CUPOLA, 1946 on 524 filed with T-8744
 C.G. ECSP-Aa-52 no 524 found
 Cro " " no 524 found ✓
 Tar " " no 524 found

TOPOGRAPHIC STATIONS

(Source, ECSP-Aa-52)
 Ape Cot Dan Don Dot Ess Fat Gab Hat Him Jef
 Mid Nag Nic Oil Sig Sid Sil Ted Ten Tie Til
 Top Wet^(d) Zag Pat Pat Sta Tan land.

(Source, ECSP-Ab-52)
 Cab Dog Hot Hug Jim land. Ply Rag aid Sam Tex Vat Wax
 Zoo

(Source, ECSP-Ba-53)
 Boy Dud aid Fan Fit Fly Joe Joy Lad Oak Ski Tas
 Val Δ May

(Source, ECSP-Ca-53)
 Rum aid

(Source, T-8744)
 Ben Fig aid Kay aid Kin land. Lit aid Toe Wes^(d) (GABLE, 1947)

HYDROGRAPHIC STATIONS

How Vol. 16, pg. 38

JEG 11-12-54

no axts were labeled

FLOATING AIDS TO NAVIGATION
H-7963

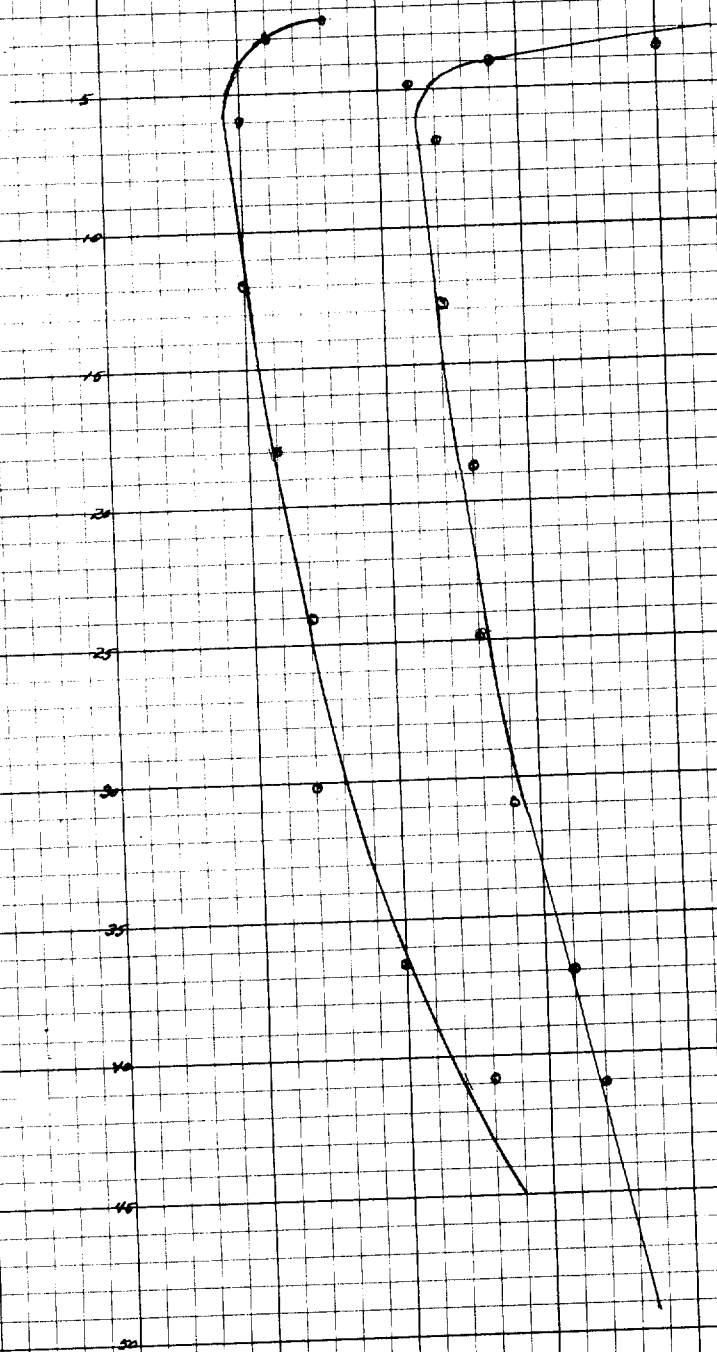
<u>BUOY</u>	<u>LAT.</u>	<u>LONG.</u>	<u>DEPTH</u>	<u>POS.</u>	<u>DATE</u>
Atlantic Beach Wreck Buoy 16	34-41.17	76-43.32	-	102j	12-10-52
Beaufort Inlet Chan. Buoy 6	34-40.42	76-40.12	25 LL	64r	12-30-52
Beaufort Inlet Chan. Lighted Buoy 8	34-40.81	76-40.13	29 LL	1s	12-31-52
Beaufort Inlet Chan. Lighted Buoy 7	34-40.80	76-40.19	20 LL	2s	" " "
Beaufort Inlet Chan. Buoy 10	34-41.27	76-40.04	46 LL	3s	" " "
Beaufort Inlet Chan. Buoy 9	34-41.26	76-40.15	28 FATH	4s	" " "
Beaufort Inlet Chan. Lighted Buoy 11	34-41.44	76-40.12	36 LL	5s	" " "
Beaufort Inlet Buoy 10A	34-41.50	76-39.99	35 LL	6s	" " "
Bogue Sound Buoy 5A	34-42.75	76-43.21	12 LL	82u	1-5-53
Bogue Sound Buoy 5B	34-42.95	76-43.87	11 LL	30a	1-23-53
Bogue Sound Buoy 4	34-42.85	76-42.35	13 LL	17ea	1-29-53
Bogue Sound Lighted Buoy 3	34-42.87	76-42.09	16 LL	19ea	" " "
Elizabeth R. Turn- ing Basin Buoy 4	34-43.08	76-41.51	13 LL	23ea	" " "
Morehead City Chan. Lighted Buoy 21	34-42.70	76-41.63	33 LL	27ea	" " "
Morehead City Chan. Buoy 20	34-42.78	76-41.55	36 LL	28ea	" " "
Morehead City Chan. Buoy 18	34-42.51	76-41.31	24 LL	29ea	" " "
Morehead City Chan. Lighted Buoy 19	34-42.44	76-41.35	38 LL	50ea	" " "
Morehead City Chan. Buoy 17	34-42.13	76-40.88	32 LL	31ea	" " "
Morehead City Chan. Lighted Buoy 16	34-42.17	76-40.81	28 LL	32ea	" " "
Newport R. Entr. Lighted Buoy 1	34-42.27	76-40.71	24 LL	36ea	" " "

(Con't)

<u>BUOY</u>	<u>LAT.</u>	<u>LONG.</u>	<u>DEPTH</u>	<u>POS.</u>	<u>DATE</u>
Newport R. Buoy 2	34-42.80	76-40.68	10 LL	37ea	1-29-53
Newport R. Buoy 8	34-43.83	76-40.34	9 LL	38ea	" " "
Newport R. Buoy 11	34-43.48	76-40.15	11 LL	40ea	" " "
Beaufort Inlet Chan Buoy 3	34-39.97	76-40.39	29 LL	52ja	2-5-53
Beaufort Inlet Chan Lighted Buoy 4	34-39.96	76-40.29	23 LL	53ja	" " "
Beaufort Inlet Chan Buoy 5	34-40.45	76-40.30	25 LL	54ja	" " "
Morehead City Chan. Buoy 14	34-41.96	76-40.49	32 LL	1ua	2-26-53
Morehead City Chan. Buoy 15	34-41.93	76-40.56	24 LL	2ua	" " "
Morehead City Chan. Bighted Buoy 13	34-41.72	76-40.25	45 LL	3ua	" " "
Morehead City Chan Ltd. Buoy 12	34-41.65	76-40.05	8 LL	4ua	" " "
Eliz. River Buoy 37	34-43.75	76-41.59	8 LL	92ab	3-7-53
Eliz. River Turn- ing Basin Buoy 39	34-43.65	76-41.65	16 LL	93ab	" " "
Beaufort Inlet Ltd. Whistle Buoy 1	34-38.65	76-40.54	50 FATH	1L	1-31-53 (Hilgard)
Calico Creek Entr. Buoy 1	34-43.27	76-41.73	12 LL	47ma	2-11-53
<u>UN-OFFICIAL AIDS</u>					
Red Can (temp)	34-43.31	76-41.74	10 LL	46ma	2-11-53
Black Can "	34-43.27	76-41.73	-	47ma	" " "

-1.0 -0.2 -0.4 -0.6 -0.8 -1.0 -1.2 -1.4 -1.6 -1.8 -2.0

Velocity Corrections



Fathometer 188 SPK
25 Nov - 28 Jan

Correction	Depth	
	Fm	TG
-1.6	3.0	3.3
-1.4	4.4	3.6
-1.2	3.6	3.7
-1.0	3.8	4.0
-0.8	4.1	4.6
-0.6	4.7	15.2
-0.5	15.3	28.5
-1.0	28.6	30.0
-1.2	38.1	46.9
-1.4	47.0	- Sdg. Limit

Fathometer 180 SPK
29 Jan - 1 March

-0.2	2.4 - 3.0
0.0	3.1 - 19.0
-0.2	19.1 - 30.0
-0.4	30.1 - 36.0
-0.6	36.1 - 40.0
-0.8	40.1 - 45.0
-1.0	45.1 - Sdg. Limit

0.4 +0.2 0.0 -0.2 -0.4 -0.6

correction in feet

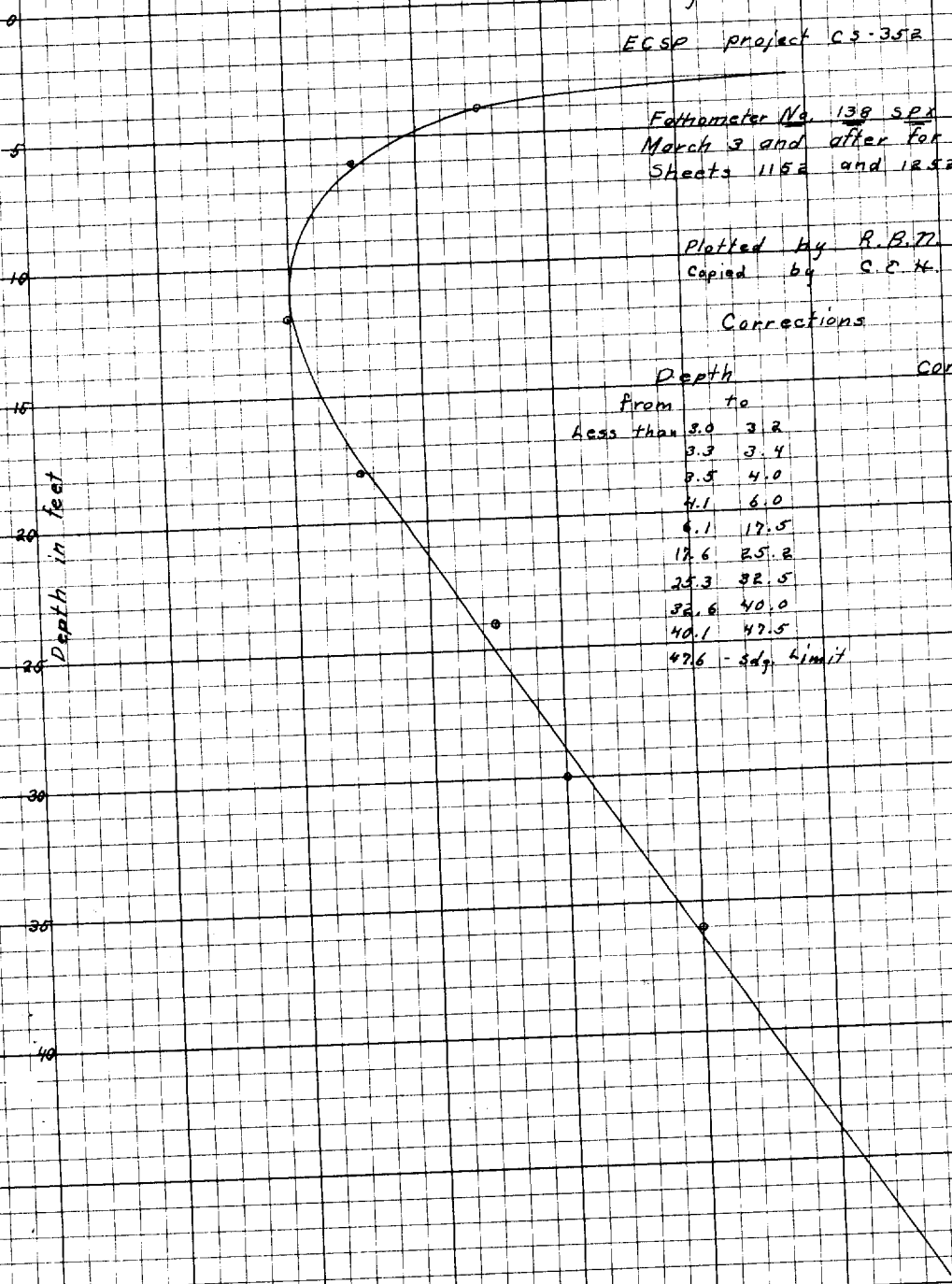
Velocity Corrections

ECSP project C-352

Fathometer No. 138 SPS
 March 3 and after for Launch No. 168
 Sheets 1152 and 1252

Plotted by R.B.T.
 Copied by C.P.H.

Corrections



Depth		Correction
From	To	
Less than 3.0	3.2	-0.6
3.3	3.4	-0.4
3.5	4.0	-0.2
4.1	6.0	0.0
6.1	17.5	+0.2
17.6	25.2	0.0
25.3	32.5	-0.2
32.6	40.0	-0.4
40.1	47.5	-0.6
47.6	- sdy. limit	-0.8

Velocity Corrections
 Fathometer 150 SPX
 Hydro Skill

00 -02 -04 -06 -08 -10

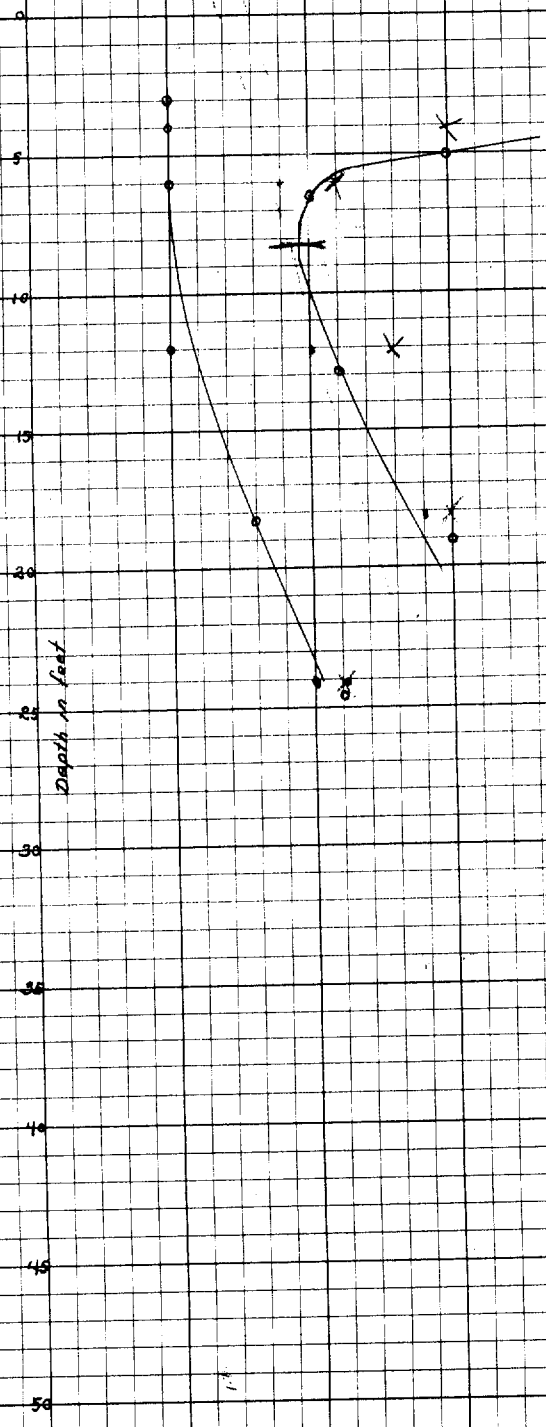
A day and B day

Correction	Depth	From T0
-0.0	3.0	13.0
-0.2	13.1	13.0
-0.4	18.1	23.0

C day 0.0 (70 fathometer)

D day

-1.0	4.8	5.2
-0.8	5.3	5.4
-0.6	5.5	6.4
-0.4	6.5	10.0
-0.6	10.1	15.0
-0.4	15.1	19.0
-1.0	19.1	sdg limit



~~Velocity Corrections~~

~~100 100 100~~

~~100~~

100

100

100

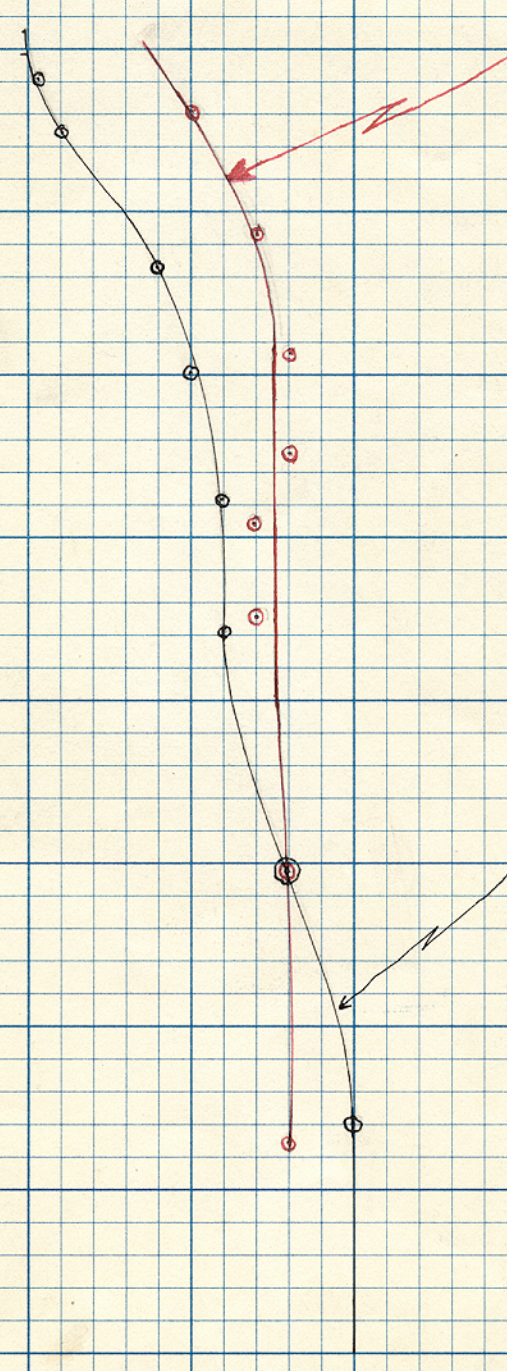
100

100

Velocity Corrections

0.0 +0.5 +1.0

0
5
10
15
20
25



Fathometer 138 SPX
Project C.S. 352
Sheet 1252 Launch 82
e day 20 March 1953
d day 25 March 1953

No soundings shallower than 3'

3.0-3.5 +0.4
3.6-5.5 +0.6
5.6 & deeper +0.8

e day April 3, 1953

No soundings shallower than 3'

3.0-3.6 0.0
3.7-5.0 +0.2
5.1-7.5 +0.4
7.6-14.0 +0.6
14.1-16.5 +0.8
16.6 & deeper +1.0

FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T -

TOPOGRAPHIC TITLE SHEET

FIELD NO. ECSP-Aa-52

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE North Carolina

GENERAL LOCALITY Beaufort Inlet Vicinity, N.C.

LOCALITY Bogue Banks and Morehead City

SCALE 1/10,000

DATE OF SURVEY Nov.-Dec., 1952

VESSEL East Coast Shore Party

CHIEF OF PARTY Clarence R. Reed

SURVEYED BY Robert B. Noble

INKED BY Robert B. Noble

HEIGHTS IN FEET ABOVE MHW OR TO GROUND TO TOPS OF TREES

CONTOUR APPROXIMATE CONTOUR FORM LINE INTERVAL FEET

PROJECT NUMBER CS-352

REMARKS

All applicable data transferred to H-7963

12/15/54 -ARS-

Declinatoire reading 50° 08' W

Set up at Fort. Macon Δ

5 January 1953

1140 EST

FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T -

TOPOGRAPHIC TITLE SHEET

FIELD NO. ECSP-Ab-52

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE North Carolina

GENERAL LOCALITY Beaufort Inlet Vicinity, N.C.

LOCALITY Shackleford Banks and Beaufort

SCALE 1/10,000

DATE OF SURVEY Nov.-Dec., 1952

VESSEL East Coast Shore Party

CHIEF OF PARTY Clarence R. Reed

SURVEYED BY Robert B. Noble

INKED BY Robert B. Noble

HEIGHTS IN FEET ABOVE MHW OR TO GROUND TO TOPS OF TREES

CONTOUR APPROXIMATE CONTOUR FORM LINE INTERVAL FEET

PROJECT NUMBER 65-352

REMARKS

All applicable data transferred to H-7963

12/15/54 - ARS-

Declinatoire reading 4° 43' W

Set up at Fort Mason Δ

5 January 1953

1146 EST

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7963..

Records accompanying survey:

Boat sheets .2....; sounding vols. ..27.; wire drag vols.;
 bomb vols.; graphic recorder rolls 35.Env.;
 special reports, etc. 1.Smooth Sheet; 1.Descriptive Report;.....

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

Number of positions on sheet		6280
Number of positions checked		473
Number of positions revised		35
Number of soundings revised (refers to depth only)		2611
Number of soundings erroneously spaced		5
Number of signals erroneously plotted or transferred		0
Topographic details	Time	32
Junctions	Time	8
Verification of soundings from graphic record	Time	40

20 JEG

Verification by *F.P. Saulsbury*..... Total time *594*. Date *11-30-54*
J.E. Gearhart..... *20 hrs.* *11-10-54*

Reviewed by..... *A.R. STIRNI*..... Time *96 hrs.* Date *12/15/54*

GEOGRAPHIC NAMES

Survey No. H-7963

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
<u>North Carolina</u>										B.671	1
<u>Beaufort Inlet</u>											2
<u>Shackleford Banks</u>										B.671	3
<u>Taylor Creek</u>											4
<u>Beaufort</u>											5
<u>Rivers Island</u>											6
<u>Radio Island</u>											7
<u>Morehead City</u>											8
<u>Morehead City Port Terminal</u>											9
<u>Calico Creek</u>											10
<u>Tar Landing Bay</u>											11
<u>Atlantic Beach</u>											12
<u>Hoop Pole Creek</u>											13
<u>Bogue Sound</u>											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names approved
6-16-54.

L. Heck

See charts 420, 423, for
any additional names
that may be desired.

DESCRIPTIVE REPORT
TO ACCOMPANY

GRAPHIC CONTROL SHEETS

Project CS-352 Beaufort Inlet Vicinity, N.C.

<u>SHEETS:</u>	FIELD NO.	ECSP- <u> </u> - <u> </u> -52	1:10,000 - 1952
	FIELD NO.	ECSP- <u>Ab</u> -52	1:10,000 - 1952
	FIELD NO.	ECSP- <u>Ba</u> -53	1:10,000 - 1953
	FIELD NO.	ECSP- <u>Bb</u> -53	1:10,000 - 1953
	FIELD NO.	ECSP- <u>Ca</u> -53	1:10,000 - 1953

} cover area of
H-7964 (1953)

CONTROL:

The basic control for these graphic control sheets consisted of triangulation and recoverable air-photo topographic stations. Projections were made and the stations were plotted and checked by this party. Three topographic stations were transferred from sheet FIELD NO. ECSP-Aa-52 to sheet FIELD NO. ECSP-Ba-53 to supplement the three triangulation stations available for that sheet.

METHODS USED:

In most instances, the three-point problem was used to orient the plane table. In a few cases the method of resection was used when set up on range with two triangulation stations. On sheet FIELD NO. ECSP-Ab-52, a traverse was run between 1953 triangulation stations MIKE and HANK. The error of closure of a 4200 meter traverse was 17 meters. The adjustment was distributed throughout the traverse in proportion to the distance from the origin.

ERROR =
6.5 m/5.4 mile
is in excess
of allowable
error

SHEET COVERAGE:

Each sheet covered an area as follows:

- Sheet No. FIELD NO. ECSP-Aa-52, 1952; Bogue Banks and Morehead City
 FIELD NO. ECSP-Ab-52, 1952; Shackleford Banks and Beaufort
 FIELD NO. ECSP-Ba-53, 1953; Bogue Banks and west of Morehead City
 FIELD NO. ECSP-Bb-53, 1953; Cape Lookout
 FIELD NO. ECSP-Ca-53, 1953; North River and Harker's Island

COMPARISON WITH AIR PHOTO TOPOGRAPHIC SHEETS:

Sheet ECSP-Aa-52

Bogue Sound Light No. 5 as shown on T-8744 N/2 has been moved.

Hydro signal SIL on Crab Point is the northerly of 2 silos - the southerly one having been built during the field season.

Sheet ECSP-Ab-52 ✓

Beaufort - First Baptist Church spire (No. 28 on T-8744 N/2) has been replaced by a new church - the spire of which has been located by graphic triangulation.

① FOR ? FOR IS A NAME, JUST NORTH

Sheet ECSP-Bb-53

Fixed aids to navigation in Barden Inlet have been moved since compilation of T-8745 S/2.

Barden Inlet Light No. 1 and Lookout Bight Wreck Light have been moved since compilation of T-8818 N/2.

Sheet ECSP-Ca-53

Cove Sound Light 58 (1947) has been moved since its triangulation location shown on T-8745 N/2.

~~Cove Sound Light 55 (T-8745 N/2) has been numbered 1401.~~

The high water line on the outer coast has changed considerably and was relocated by planetable.

MISCELLANEOUS:

These graphic control sheets are considered complete and adequate for their required purpose. All discrepancies were resolved in the field.

Respectfully submitted,

Robert B. Noble

Robert B. Noble
ENS, USC&GS

Lionel D. Kelley

Lionel D. Kelley
ENS, USC&GS

Approved & Forwarded

Clarence R. Reed

Clarence R. Reed
CDR, USC&GS
OinC, East Coast Shore Party

ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-796³ (Field Nos. ECSP-1152 & HI-1152)

GENERAL

Field surveys ECSP-1152 and HI-1152 were combined and smooth plotted on a scale of 1:12,500 in order to fit them on a conventional size sheet. The survey appears to be entirely adequate and no unusual difficulties were encountered. The bottom is very irregular in most of the inshore waters, as there are numerous sloughs and spoils banks in addition to the dredged channels.

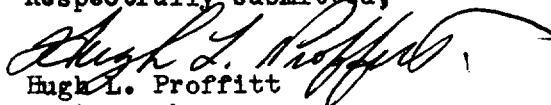
SHORELINE

Penciled shoreline, in the vicinity of Lat. 34-42.30 & Long. 76-44.20, was transferred from provisional chart number 423 as the air-photo compilation did not show these latest changes. *also lat 34° 41.4' Long 76° 39.6'*
41.4.0 39.6.0
transferred in brown ink.

DISCREPANCIES

Positions ¹ thru 19H (Hilgard) were not smooth plotted because of weak fixes.

Respectfully submitted,


Hugh L. Proffitt
Cartographer.

Norfolk, Va.
12 May 1954

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7963

FIELD NO. ^{ECSP-1152} HI-1152

North Carolina, Morehead City and Approaches

Project No. CS-352

Surveyed Nov. 1952 - March 1953

Scale 1:12,500

Soundings:

Control:

308 Fathometer
Sounding Pole
Hand Lead

Sextant fixes on
shore signals

Chief of Party - C. R. Reed, J. C. Tribble
Surveyed by - J. C. Tribble, R. H. Houlder, R. B. Noble
M. C. Fox, L. D. Kelley
Protracted by - A. K. Schugeld
Soundings plotted by - A. K. Schugeld
Verified and inked by - F. P. Saulsbury
Reviewed by - A. R. Stirni 12/15/54
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline in black is from air-photographic surveys T-8743 (1949), T-8744 (1946-48) and T-8745 (1946-49). Shoreline in red is from graphic control surveys ECSP-Aa-52, ECSP-Ab-52 and ECSP-Ba-53.

Shoreline in brown was transferred from chart 423, the original sources being air-photographs 0-226-7 and 0-267 of June 10, 1953.

The low-water line drawn in dashed yellow 600 meters west of Shackelford Point was transferred from graphic control survey ECSP-Ab-52.

Graphic control surveys ECSP-Aa-52 and ECSP-Ab-52 are marked for destruction. All pertinent data located thereon has been transferred to the present survey.

The source of the signals are given in the Descriptive Report.

2. Sounding Line Crossings

Sounding line crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated. The 3-ft. depth curve was added to accentuate the many bars, shoals and depressions which characterize inshore areas less than twelve feet in depth. Offshore, beyond the twelve foot depth curve the bottom gradually and smoothly deepens seaward. A shoal area covered by 26-27 feet in depths of 40 ft. has developed beyond the end of Beaufort Inlet Channel at lat. $34^{\circ}39.30'$, long. $76^{\circ}40.90'$.

4. Junctions with Contemporary Surveys

Adequate junctions were effected on the east with H-6798 (1943) and H-7964 (1952).

The transfer of junctional soundings between H-7964 and the present survey is deferred pending the complete verification of H-7964.

5. Comparison with Prior Surveys

H-246 (1850) 1:10,000	H-856 (1864) 1:10,000
H-259 (1850) 1:10,000	H-1203 (1874) 1:20,000
H-418 (1854) 1:10,000	H-1219 (1874) 1:20,000
H-419 (1854) 1:10,000	H-3436 (1913) 1:10,000
H-576 (1857) 1:10,000	H-4647 (1927) 1:40,000
H-577 (1857) 1:40,000	H-4767 (1927) 1:40,000
H-789 (1862) 1:10,000	H-4770 (1927) 1:40,000
H-854 (1864) 1:20,000	

The surveys covering the period from 1850 to 1913 show a gradual swinging of the Beaufort Inlet Channel from a southeasterly direction close-in to Shackleford Banks to a southerly direction approximately equidistant from Shackleford Point and Fort Macon. The channel has been maintained in a southerly direction since 1905 by the U. S. Engineers. Other changes which have occurred since 1850 are typical of an inlet affected by storm action and currents, such as shifting of bars, scour, accretion and erosion. These changes, however, follow no particular trend. A comparison between the present survey and the earlier surveys indicates numerous differences, the most pronounced being a large bar and three islets on the present survey at lat. $34^{\circ}41.40'$, long. $76^{\circ}39.70'$, where Beaufort Inlet Channel was located on prior surveys.

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

6. Comparison with Chart 420 (Drawing Sept. 1954)
 Chart 423 (Latest print date 8/23/54)
 Chart 833 (Latest print date 5/10/54)

A. Hydrography

The hydrography on chart 420 originates with the previously discussed surveys supplemented by various surveys by the Corps of Engineers made over a period of the past twenty years and by boat sheets of the present survey HI-1152 and ECSP-HI-1152. Channel notes are from Chart Letters 912 (1954), 970 (1954) and the U. S. Engineers Annual Report of 1952.

The hydrography on chart 423 originates with the boat sheets ECSP-HI-1152 and HI-1152. Channel notes are from Chart Letters 690 (1954), 912 (1954) and the U. S. Engineers Annual Report of 1952.

The hydrography on chart 833 originates with the sources which were used in the compilation of chart 420.

The soundings charted on the three above charts differ with the present survey depths by as much as 10 ft. The following charted features not shown on the present survey are also noted:

- (1) Two sunken wrecks charted at lat. $34^{\circ}41.15'$, long. $76^{\circ}43.30'$ from H.O.N.M. 11 (1943) and at lat. $34^{\circ}41.30'$, long. $76^{\circ}43.77'$ from H.O.N.M. 7 (1943) are not conclusively disproved by the present survey and should be retained on the chart as recommended by the hydrographer. Local fisherman state that possibly the engine of one wreck extends about 3 ft. off the bottom.
- (2) The two sunken wrecks charted in lat. $34^{\circ}42.85'$, long. $76^{\circ}40.22'$ from T-4267 (1927) have apparently disintegrated and should be disregarded. The hydrographer states that no evidence of either wreck could be found.
- (3) The submerged piles charted at lat. $34^{\circ}41.48'$, long. $76^{\circ}40.22'$ from H.O.N.M. 114 (1948) were neither confirmed nor definitely disproved by the field party and should be retained on the chart.

In the vicinity of Hoop Pole Creek the shoals and channels are not completely developed on the present survey. Charted information in this area should be supplemented by the present survey.

Except for the wrecks and piles discussed in items (1) and

(3) and the undeveloped area in the vicinity of Hoop Pole Creek the present survey supersedes the charted information within the common area.

B. Aids To Navigation

Inasmuch as most of the aids to navigation located on the present survey have been subsequently changed in character or position a detailed comparison with the present chart would serve no useful purpose. Some of the aids are charted from the present survey as reported in Chart Letter 927 (1953). The changes that have occurred subsequently are reported in H. O. Notice to Mariners Nos. 21 and 49 (1953) and 15, 24, 31, and 40 (1954). The charted aids adequately mark the features intended.

C. Dredged Channels

The controlling depths in Beaufort Islet Channel, Morehead City Channel and the Turning Basin are from U. S. Engineers surveys subsequent to the present survey and are given in Chart Letter 970 (1954).

The controlling depth in the I. W. W. channels in Bogue Sound and Newport River is from Chart Letter 912 (1954) based on surveys of the U. S. Engineers subsequent to the present survey.

Other controlling depths are from the U. S. Engineers Annual Report of 1952 and are in agreement with the present survey except for an 8 ft. depth at lat. $34^{\circ}43.44'$, long. $76^{\circ}40.15'$ in a dredged channel with a controlling depth of $11\frac{1}{2}$ ft.

7. Condition of Survey

- A. Generally the sounding records and Descriptive Report are complete, however, investigations of Items 3 and 6 of the Preliminary Review are not substantiated by factual information either in the Descriptive Report or in the sounding volumes.
- B. The smooth plotting was accurately done.
- C. Tide reducers from the gage at Morehead City did not reflect tidal conditions in Bogue Sound west of Atlantic Beach Bridge and discrepancies of 1-2 ft. existed in soundings in this area. Revised reducers were applied to about 2500 soundings in resolving the discrepancies.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is a good basic survey and no additional field work is recommended. The sunken wrecks charted in lat. $34^{\circ}41.15'$, long. $76^{\circ}43.30'$ and lat. $34^{\circ}41.30'$, long $76^{\circ}43.77'$ are not disproved by the present hydrography and should be cleared by wire drag; should future wire drag operations extend into this area. As a matter of record it is noted that the shoals and channels in Hoop Hole Creek and vicinity are not completely delineated on the present survey.


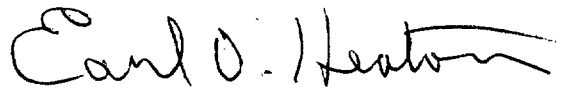
Examined and approved:



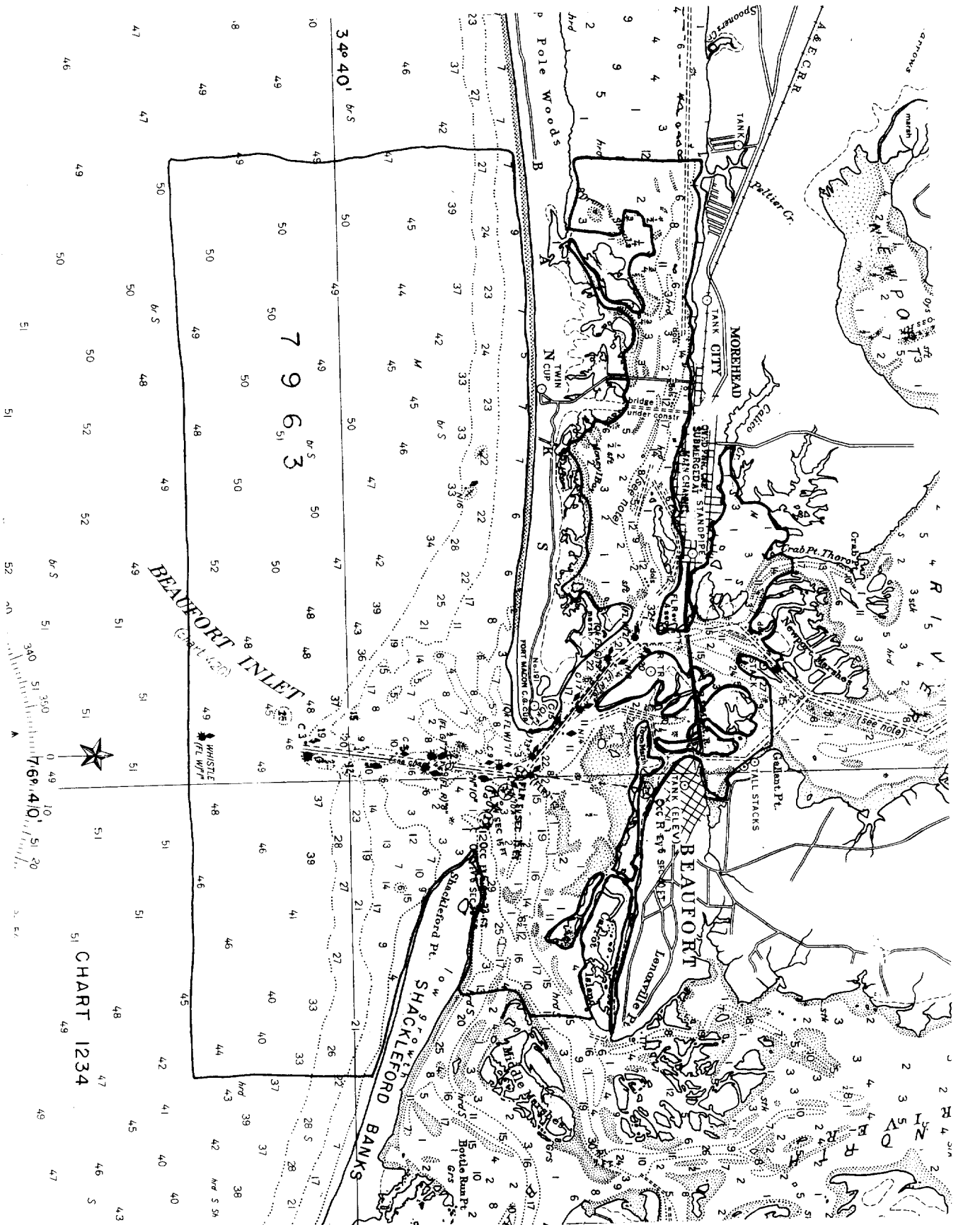
H. R. Edmonston
Chief, Nautical Chart Branch



E. R. McCarthy
Acting Chief, Division of Charts


G. R. Fish
Chief, Hydrography Branch

Earl O. Heaton
Chief, Division of Coastal Surveys



RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIVISION OF COASTAL SURVEY~~

12 July 1954

Division of Charts: R. H. Carstens

Plane of reference approved in
27 volumes of sounding records for

HYDROGRAPHIC SHEET 7963

Locality Beaufort Inlet, North Carolina

Chief of Party: C. R. Reed) in 1952-53
J. C. Tribble)
Plane of reference is mean low water, reading
3.2 ft. on tide staff at Morehead City
10.2 ft. below B. M. 1 (1927)
2.5 ft. on tide staff (Nov. 1952) at Atlantic Beach
1.7 ft. on tide staff (Dec. 1952) " "
3.6 ft. on tide staff (Jan. 1953) " "
13.5 ft. below B. M. 1 (1952)

Height of mean high water above plane of reference is as follows:
Morehead City = 2.5 feet
Atlantic Beach = 3.8 feet

Condition of records satisfactory except as noted below:

NOTE: Tide reducers for positions 75qa - 123qa inclusive in
Volume 16 and positions 6za - 58za inclusive in Volume 19
have been revised in red, these revisions have been verified.

Valid

EC Mc Kay
Tides Branch

Chief, Division of Tides and Currents.

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7963

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5/27/54	1233-4	Eaton-Walker	Before After Verification and Review Partially
1/7/55	423	S.F. M. Gunn	Before After Verification and Review Complete.
3-7-55	833	W. Andrews	Before After Verification and Review Partially Applied
11-22-57	422	X.H. Bowson	Before After Verification and Review Partially applied (The area of the Entrance was applied fully thru chart 423.)
11-17-58	833	Z.M. Allert	Before After Verification and Review Revised part of area N.W. of Mouth of City to agree with cht 423
12-22-58	420	R.E. Elkins	completely applied Before After Verification and Review app thru drg 4 within the area of cht 425.
1-7-59	1233	R.E. Elkins	completely applied Before After Verification and Review app in part thru drg - chart 420
18 Jan '60	1234	H. MacEwen	Before After Verification and Review Including only overlap with cht 1233
25 Jan '60	833	H. MacEwen	Fully applied through cht Drg 400 May 8 59 Before After Verification and Review
26 Jan '60	1234	Z.M. Allert	Area west of cht. 1233 via cht. 420 Before After Verification and Review
7/11/63	423	O. Svendsen	App. sdgs & depth curves in Disposal Area ^{34°39'} 76°41'
5-10-81	11547	M. MOLMUD	REAPPLIED SURVEY TO NEW EXTENSION (SCALE 1:12500) DRAWING NO. 30

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.