

9459

*Return to...*

*TRC corr. para D.*

Diag. Cht. No. 1240-3.

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT  
(HYDROGRAPHIC)

Type of Survey ..... HYDROGRAPHIC  
Field No. .... AHP-10-5-74  
Office No. .... H-9459

LOCALITY

State ..... GEORGIA-SOUTH CAROLINA  
General Locality .... SAVANNAH  
Locality ..... TYBEE ROADS

1974

CHIEF OF PARTY

F. T. Smith

LIBRARY & ARCHIVES

DATE ..... 4/12/76

☆ U.S. GOV. PRINTING OFFICE: 1975-668-353

9459

Area 3

Chart:

- 440

- 571 516

- 1240

839 S/C (off)

HYDROGRAPHIC TITLE SHEET

H-9459

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.

AHP 10-5-74

State Georgia - South Carolina

General locality Savannah  
~~Tybee Roads~~

Locality Tybee Roads

Scale 1:10,000 Date of survey July-August 1974

Instructions dated 29 October 73 Project No. OPR-436

Vessel Launch 1277

Chief of party F. T. Smith

Surveyed by W.A. Wert, F.L. Kleinschmidt, J.S. Bradford, D.M. Bryant

Soundings taken by echo sounder, hand lead, pole

Graphic record scaled by Launch Personnel

Graphic record checked by Launch Personnel ✓ B.J. Stephenson, AMC 3-6-76

Protracted by N/A Cal-Comp - 618 Automated plot by Cal-Comp Plotter - PBR-816 AMC 618

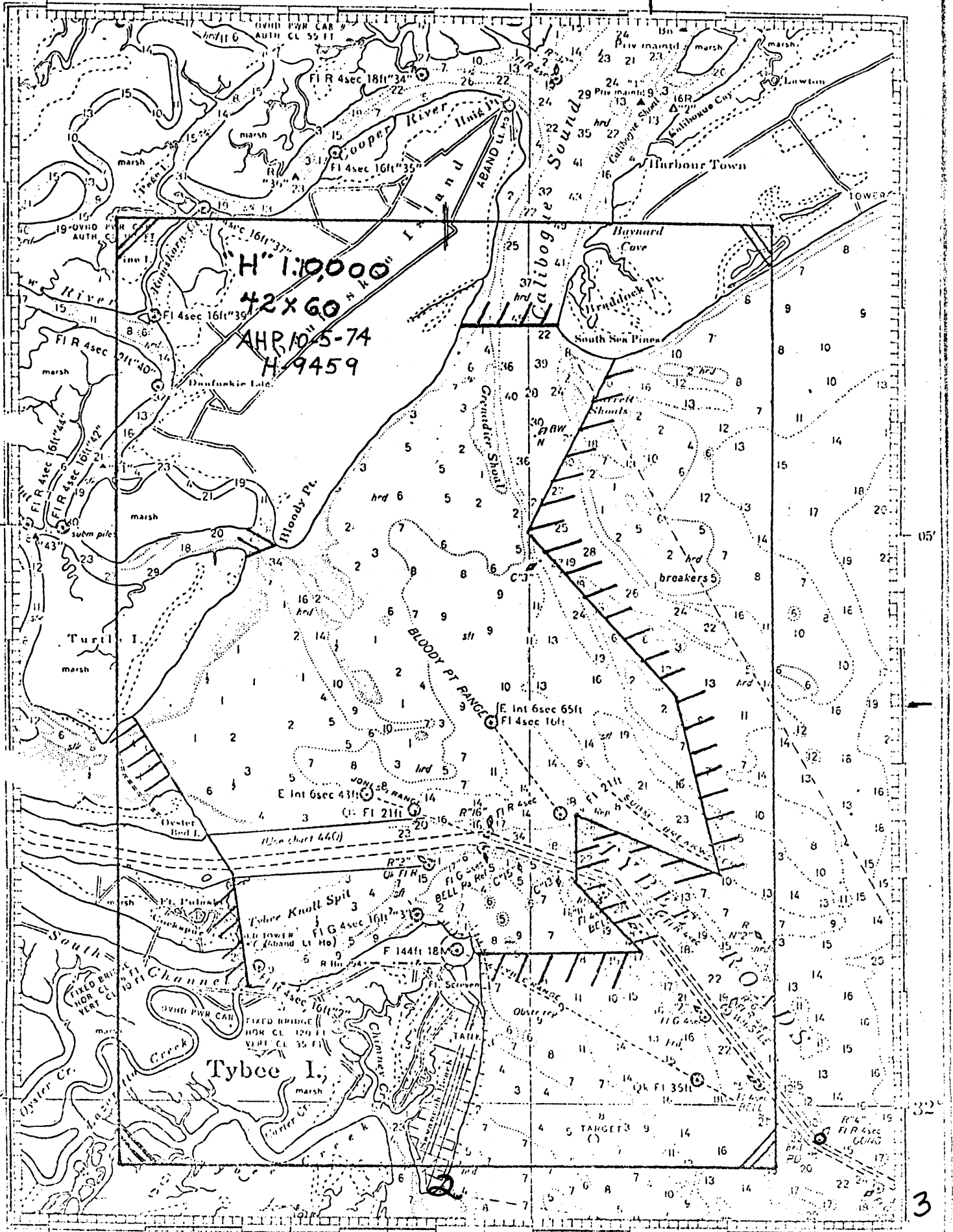
Verification by N/A ✓ B.J. Stephenson, AMC 3-6-76

Soundings in stations feet at MLW MLLW

REMARKS:

*Applied to stds 8/5/76*  
*CAS*

1.



DESCRIPTIVE REPORT  
TO ACCOMPANY  
HYDROGRAPHIC SURVEY H-9459  
AHP 10-5-74, SCALE 1:10,000  
OPR-436, TYBEE ROADS, GEORGIA

A. PROJECT

OPR-436 is a continuation of previous work done by NOAA Ship WHITING and is part of Project SCOPE. The survey was accomplished in accordance with Project Instructions OPR-436-WH-74 29 October 73.

B. AREA SURVEYED

The area encompassed by Sheet AHP 10-5-74<sup>H-9459</sup> is an irregular section extending offshore from Daufuskie, Turtle, Oyster Bed, Cockspur, and Tybee Islands to a junction of previous work accomplished by NOAA Ship WHITING. The approximate limits of this section extend northward from 32°01.1'N to 32°06.8'N and westward from 080°47.4'W to the shoreline. Junction was made with contemporary survey: H-9197, HSL 20-2-71, 1:20,000 scale, 1971. Detailed prior survey of the area is: H-4154, 1:20,000 scale, 1920. All field work was accomplished during the period 22 July 74 to 29 August 74. A 1:10,000 channel overlay is presented for plotting clarity. H-9197 combines work accomplished by HSL(20-2-71) and WHITING (WH-20-4-73). ✓

C. SOUNDING VESSEL

Launch 1277 was used exclusively to accomplish the survey work on AHP-10-5-74. H-9459  
BJS

D. SOUNDING EQUIPMENT

A Raytheon fathometer model number DE 723 D, serial number 1904 was used from 22 July 74 to 26 July 74 and Raytheon fathometer model number DE 723D serial number 1279 was used from 30 July 74 to 29 August 74 in Launch 1277. All initial settings were adjusted to zero. Frequent A to F scale checks were taken to adjust stylus arm length. A TRA correction of +1.5 feet was determined by drawing the bar check tightly against the transducer and measuring the bar depth. All fathograms were scanned to mean out sea swell action where applicable. Refer to velocity and fathometer corrector report, OPR-436, Tybee Roads, Georgia which is in the appendix. ✓

E. SMOOTH SHEET

Raw master tapes were logged and data plotted on the boatsheet by the launch's on-board PDP 8/e Hydroplot system. Edited master and corrector tapes, velocity tape, and TC/TI tape were logged by launch personnel and submitted for smooth plotting by Processing Division, Atlantic Marine Center. ✓

## F. CONTROL

Control for Del-Norte Hydrography was established utilizing three separate networks of remote transponders, located over the following third-order triangulation stations (1) Tybee Knoll Cut Range Rear Light; (2) Bloody Point Range Front Light (1963); (3) and Bloody Point Rear Range (1913).<sup>M+A</sup> Calibration of the Del-Norte System was accomplished using third order triangulation stations as calibration points. Refer to daily raw data printouts for calibration data, horizontal control report OPR-436, Tybee Roads, Georgia 1974 and to the enclosed Del-Norte Note.

## G. SHORELINE

Shoreline and topographic details were transferred to the boatsheet from manuscripts T-12621 and T-12811 in pencil. The MLW was defined by hydrography in most areas. *Shoreline was applied from Class E, (reviewed) manuscripts TP-0294 and TP-0278. Photography of Nov 1970 and Mar 1971, H-9459* *to smooth sheet*

## H. CROSSLINES

Approximately 31.9 nautical miles, or 9.5% of the hydrography run on sheet AHP 10-5-74 were crosslines. The agreement with main-scheme hydro was very good and all soundings agreed to the nearest foot.

## I. JUNCTIONS

Junction with H-9197 HSL 20-2-71 (WH 20-4-73) was very good and in general soundings agreed to the nearest foot.

## J. COMPARISON WITH PRIOR SURVEYS

Comparison with H-4154, 1:20,000 scale 1920 showed many changes.

Pre survey review items were investigated with the following results:

Item 13 submerged breakwater: 50 meter spacing lines were run to verify this item. The submerged breakwater is not a continuous underwater feature. The prominent least depths and positions are:

7 $\beta$ feet,	32° 02.73' N	32°-02'-42.8' N	Pos # 1820-1821
	080° 49.21' W	80°-49'-12.8' W	
9 $\gamma$ feet,	32° 02.33' N	32°-02'-19.1' N	Pos # 1927-1928
	080° 48.63' W	80°-48'-38.8' W	
9 $\beta$ feet,	32° 02.0' N	32°-02'-05.6' N	Pos # 2009-2010
	080° 48.17' W	80°-48'-09.9' W	
10 $\beta$ feet,	32° 02.22' N	32°-02'-12.73' N	Pos # 1932-1933
	080° 48.45' W	80°-48'-27.05' W	

The submerged breakwater runs in the same direction as shown on C & GS Chart No. 440, however it is located approximately 20 meters south of its present charted position. The submerged breakwater symbol should be retained on C & GS Chart No. 440.

Item 14 submerged wreck: 50 meter spacing lines were run to verify this item. A least depth of ~~8~~<sup>7</sup> feet was noted on the fathogram at 32°01.38'N (between positions 2481-2482) 080°50.20'W. Additional work such as wire drag or diver verification is recommended.

Item 15 seven soundings: 50 meter spacing lines were run to verify the circled soundings contained within the limits of H-9459. No indication of these depths were found. These soundings were based on various U.S. Army Corps of Engineers surveys and possibly these areas could have been dredged. *see Review Report*

Item CC Piling: Bloody Point Rear Range (1913) bares ~~14~~<sup>8</sup> feet at ~~MLW~~<sup>MHW</sup>, 32°05'33.337", 080°51'41.141' 12 foot square steel platform. Refer to Horizontal Control Report OPR-436 Tybee Roads, Georgia 1974. *There is a concrete pile in the area baring (2) feet at MHW Abs # 989.*

#### K. COMPARISON WITH THE CHART

A comparison with N.O.S. Chart 440 38th edition, 4 August 73 shows general agreement on the northern part of the survey. Below latitude 32°04'30"N the area has shoaled and the channel has shifted to the east. The shoal located at 32°04.0'N and 80°48.7'E has been cut into and the area is deeper. The WHITING survey would be necessary to see if the channel cuts through.

The charted closed channel extending off Bloody Point to the SE has shifted north and the old channel has filled. The new channel has a controlling depth of 3 to 4 feet.

~~The shoal at 32°03.5'N and 80°48.7'E has shifted south and bares at MLW. Previous charted soundings of 18 feet are now charted as 0.~~

A 22 ft. sounding charted at 32°01.68'N and 080°49.43'W is inside the charted 18 foot contour and is a possible charting error. A sounding of 8 feet was found in this area on the present survey.

Extensive changes have occurred in the area and this survey differs with the present chart. A new chart of the area should be compiled and a new edition published at the earliest possible date. The present charted soundings do not present a hazard to most deep draft ocean vessel since they are normally piloted in the dredged channels. Small boat traffic should be advised to use caution when traversing the area.

L. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys for charting.

M. AIDS TO NAVIGATION

Comparison of the observed floating aids to navigation with NOS Chart No. 440, 38th Edition, 4 August 73 and Light List Volume II Atlantic and Gulf Coast 1974 showed the following discrepancies:

Chart 440	Light List
C "1"	SP Buoy 1 GRN REFL
RN "2"	SP Buoy 2 R REFL
RN "4"	SP Buoy 4 R REFL
C "5"	SP Buoy 5 GRN REFL

Refer to Horizontal Control Report OPR-436, Tybee Roads, Georgia 1974 for positions of the fixed aids to navigation contained within the limits of H-9459.

N. STATISTICS

Vessel	Nautical Miles of Sounding
Launch 1277	385.2 N.M.

Sq. Nautical Miles of Sounding	No. of Bottom Samples	No. of Positions
18.9	32	2844

O. MISCELLANEOUS

The U.S. Army Corps of Engineers is currently dredging areas of the Savannah River Entrance Channel.

P. RECOMMENDATIONS

It is recommended that this survey be given a high priority for smooth plotting, verification and publishing. If this is not possible then an insert should be made for the existing chart.

Q. REFERENCES TO REPORTS

1. Fathometer and Velocity Correction Report ORP-436 Tybee Roads, Georgia 1974.
2. Horizontal Control Report OPR-436 Tybee Roads, Georgia 1974.

Respectfully Submitted:

William A. Wert  
LTJG, NOAA  
OIC, Launch 1277



APPROVAL SHEET  
SURVEY H-9459 (AHP 10-5-74)

The hydrographic records transmitted with this report are complete and adequate.



F. T. Smith  
LCDR, NOAA  
Chief, AHP

DEL NORTE NOTE  
AHP-10-5-74  
H-9459

Del Norte electronic positioning equipment, which operates in a Range Range Mode, was used to control all of the hydrography on Sheet AHP-10-5-74. Two networks were used on this sheet, with the shore stations located at established third-order triangulation stations.

Calibration was established twice daily by positioning the launch at a known third-order triangulation station. Del Norte ranges were compared to ranges calculated by PDP-8/e computer using the AM407 program.

On any day, the observed difference between the morning and evening calibrations seldom exceeded 1 meter, with a maximum difference of 4 meters. The mean difference in morning and evening calibrations was 1.1 meter for all stations combined.

Performance of the Del Norte system during the project was excellent, and no equipment malfunctions were experienced. Some minor interference was occasionally experienced due to the presence of the NOAA Ship WHITING, which was also using Del Norte control in the general vicinity of the project area; however, the effects of the occasional interference were not substantial. Time sharing was not used.

ABSTRACT OF EQUIPMENT UTILIZATION  
AHP-10-5-74 H-9459

I. SHORE STATION SITES

- A. Unit S/N 181, Directional Antenna, HT.=15' on Old Bloody Point  
Range Rear Platform  
32° 04' 33.337"N, 80° 51' 41.141"W ~~61~~
- B. Unit S/N 252, Directional Antenna, HT.=25' on Bloody Point Range  
Front Light ~~62~~  
32° 02' 30.533"N, 80° 49' 40.514"W
- C. Unit S/N 249, Directional Antenna, HT.=80' on Tybee Knoll Cut  
Range Rear Light  
32° 01' 56.332"N, 80° 54' 26.372"W

Station Pairs Used:

Julian Days 203(13:16:23) - 225(22:06:09), 238(20:56:59-22:13:13)

Pattern I: B  
Pattern II: C

Julian Days 226(15:06:21) - 238(19:44:26), 239(15:54:12-20:45:45),  
239(21:44:29) - 241(18:42:06)

Pattern I: C  
Pattern II: A

Julian Days 239(21:10:08 - 21:34:54)

Pattern I: A  
Pattern II: B

II. MOBILE TRANSPONDER S/N 162

III. DMU S/N 179

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 1277

SHEET : AHP-10-5-74

TIME	DAY	PATTERN 1	PATTERN 2
131623	203	+00004	+00003
133215	204	+00002	+00004
145736	205	+00002	+00003
154957	206	+00002	+00004
172842	211	+00003	+00004
133843	212	+00005	+00002
132637	213	+00004	+00002
134521	217	+00004	+00004
124215	219	+00002	+00004
141632	219	+00002	+00004
141429	220	+00004	+00003
151221	220	+00004	+00003
210335	220	+00004	+00003
151756	221	+00003	+00002
162730	221	+00003	+00002
191841	221	+00003	+00002
194502	224	+00002	+00001
202548	224	+00002	+00001
173129	225	+00002	+00004
191842	225	+00002	+00004
220012	225	+00002	+00004
150621	226	+00003	+00001

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 1277

SHEET : AHP-10-5-74

TIME	DAY	PATTERN 1	PATTERN 2
140200	227	+00002	+00002
133829	233	+00003	+00002
125948	235	+00003	+00002
142726	235	+00003	+00002
145738	238	+00004	+00003
161220	238	+00004	+00003
205659	238	+00003	+00004
155412	239	+00004	+00002
165528	239	+00004	+00002
180630	239	+00004	+00002
184957	239	+00004	+00002
211008	239	+00002	+00004
214429	239	+00004	+00002
160909	240	+00002	+00002
182249	240	+00002	+00002
195139	240	+00002	+00002
201107	240	+00002	+00002
210251	240	+00002	+00002
152700	241	+00003	+00001
162422	241	+00003	+00001
183643	241	+00003	+00001

SIGNAL LIST  
 OPR-436  
 TYBEE ROADS, GA.

050	32	04	42529	080	52	58254	TURTLE ISLAND STATION	50	<i>Not plotted</i>
053	32	04	07887	080	53	28499	" " "	53	<i>plotted</i>
059	32	03	05528	080	54	25127	" " "	59	<i>Not plotted</i>
060	32	03	17590	080	50	23135	BLOODY PT. RANGE REAR LT.	(1968)	-74
061	32	04	33337	080	51	41141	BLOODY PT. REAR RANGE	(1948)	<i>Steel Platform</i>
062	32	02	30533	080	49	40514	BLOODY PT. RANGE FRONT LT.	(1968)	-74
063	32	02	30954	080	51	10696	JONES ISLAND RANGE FRONT LIGHT,	1964-74	
064	32	02	39669	080	51	40736	" " "	REAR LIGHT,	1964-74
065	32	01	20912	080	52	48601	OLD TOWER	<i>(Not plotted on sheet)</i>	
067	32	01	56332	080	54	26372	TYBEE KNOLL CUT RANGE REAR LT.	(1964-74)	<i>Falls off sheet</i>
069	32	01	19301	080	50	44985	TYBEE LIGHTHOUSE,	1932-74	
070	32	00	39717	080	50	31690	SAVANNAH BEACH MUNICIPAL WATER TANK	<i>(falls off sheet)</i>	

To C-322

This ~~(un)revised~~ <sup>Quality Controlled</sup> survey H-9459  
is submitted for ~~preliminary~~ <sup>final</sup> in-

dication on the Standards and  
should be returned to Mr.  
Lightfoot as soon as possible.

Chief, Hydrographic Survey ~~Branch~~ <sup>Div.</sup>

ATLANTIC MARINE CENTER

PROJECTION PARAMETERS

POLYCONIC OR MODIFIED TRANSVERSE MERCATOR

- 1. Project No. 436
- 2. Reg. No. H-9459
- 3. Field No. AHP-10-5-74
- 4. Requested By Verification
- 5. Ship or Office AMC
- 6. Date Required ASAP

7. Polyconic  Modified Transverse Mercator

8. Central Meridian of Projection 80 ° 51 ' 12 "

9. Survey Scale: 1: 10,000

10. Size of Sheet (check one):

36 x 54  36 x 60  Other  Specify \_\_\_\_\_

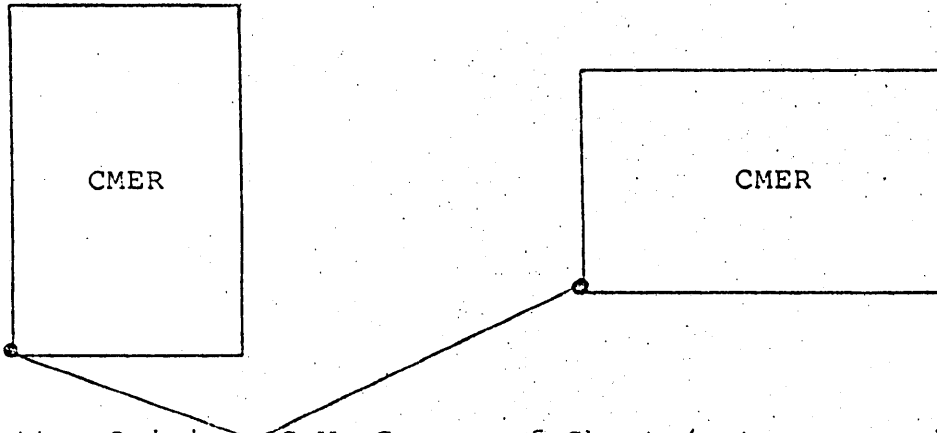
11. Sheet Orientation (check one):

NYX = 1

NYX = 0

N

N



12. Plotter Origin: S.W. Corner of Sheet (not necessarily a grid intersection)

Latitude 32 ° 00 ' 15 "

Longitude 80 ° 54 ' 06 "

13. G.P.'s of triangulation and/or signals attached

14. Material Desired: Tracing Paper  Mylar

Smooth Sheet  Other  Specify \_\_\_\_\_

15. Remarks: \_\_\_\_\_

P.O. CHECKED BY BJS  
DATE 2/18/76  
VERIFICATION BR., AMC



ATLANTIC MARINE CENTER

ELECTRONIC CONTROL PARAMETERS

1. Project # OPR- 436      2. Reg. # H-9459      3. Field # AHP-10-5-74  
 4. Type of Control: Del Norte (101) (Hi-Fix, Raydist, EPI, etc.)  
 5. Frequency 1498.35 (for conversion of electronic lanes to meters)  
 6. Mode of Operation (check one):

Range-Range

Range-Visual

Range One (R<sub>1</sub>) Bloody Point Range  
 Station I.D. Front Light  
 Range Two (R<sub>2</sub>) Tybee Knoll Cut  
 Station I.D. Range Rear Light

Lat.	<u>32</u> °	<u>02</u> '	<u>30.533</u> "
Long.	<u>80</u> °	<u>49</u> '	<u>40.514</u> "
Lat.	<u>32</u> °	<u>01</u> '	<u>56.332</u> "
Long.	<u>80</u> °	<u>54</u> '	<u>26.372</u> "

Hyperbolic (3-station)

Hyper-Visual

Slave One  
 Station I.D. \_\_\_\_\_  
 Master  
 Station I.D. \_\_\_\_\_  
 Slave Two  
 Station I.D. \_\_\_\_\_

Lat.	_____ °	_____ '	_____ "
Long.	_____ °	_____ '	_____ "
Lat.	_____ °	_____ '	_____ "
Long.	_____ °	_____ '	_____ "
Lat.	_____ °	_____ '	_____ "
Long.	_____ °	_____ '	_____ "

7. Location of Survey:

Range-Range

Imagine an observer is standing at R<sub>1</sub> Station and looking directly at R<sub>2</sub> (check one):

Survey area is to observer's Right  A=β

Survey area is to observer's Left  A=1

Hyperbolic

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 Time	Day	To Time	Day	Position Numbers (inclusive)
<u>1277</u>	<u>131623</u>	<u>203</u>	<u>220609</u>	<u>225</u>	<u>1</u> to <u>1628</u>
<u>1277</u>	<u>205659</u>	<u>238</u>	<u>221313</u>	<u>238</u>	<u>2294</u> to <u>2304</u>
_____	_____	_____	_____	_____	_____ to _____

9. Remarks: \_\_\_\_\_

P.O. CHECKED BY SJS  
 DATE 2/18/76  
 VERIFICATION BR.. AMC

To C322

This (~~unverified~~ <sup>PC</sup> survey H-~~9256~~ <sup>9256</sup> ~~final~~)  
is submitted for ~~preliminary~~ <sup>final</sup>  
indication on the Standards and  
examination for chart corrections  
and should be returned to ~~Mr. C353~~  
~~Lightfoot~~ as soon as possible.

Chief, Hydrographic Survey Branch

CA-13-2  
1/31/74

ATLANTIC MARINE CENTER  
ELECTRONIC CONTROL PARAMETERS

1. Project # OPR-436      2. Reg. # H-9459      3. Field # AHP-10-5-74
4. Type of Control: Del Norte (102) (Hi-Fix, Raydist, EPI, etc.)
5. Frequency 1498.35 (for conversion of electronic lanes to meters)
6. Mode of Operation (check one):

Range-Range

Range-Visual

Range One (R<sub>1</sub>)      Old Bloody Point  
 Station I.D.      Rear Range

Range Two (R<sub>2</sub>)      Bloody Point Range  
 Station I.D.      Front Light

Lat.      32 °      04 '      33.337 "  
 Long.      80 °      51 '      41.141 "  
 Lat.      32 °      02 '      30.533 "  
 Long.      80 °      49 '      40.514 "

Hyperbolic (3-station)

Hyper-Visual

Slave One  
 Station I.D. \_\_\_\_\_

Master  
 Station I.D. \_\_\_\_\_

Slave Two  
 Station I.D. \_\_\_\_\_

Lat. \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "  
 Long. \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "  
 Lat. \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "  
 Long. \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "  
 Lat. \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "  
 Long. \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "

7. Location of Survey:

Range-Range

Imagine an observer is standing at R<sub>1</sub> Station and looking directly at R<sub>2</sub> (check one):

Survey area is to observer's Right  A=0

Survey area is to observer's Left  A=1

Hyperbolic

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		
<u>1277</u>	<u>211008</u>	<u>239</u>	<u>213454</u>	<u>239</u>	<u>2466</u>	to <u>2484</u>
_____	_____	_____	_____	_____	_____	to _____

~~P.O.~~ CHECKED BY 63 to \_\_\_\_\_  
 DATE 2/18/76  
 VERIFICATION BR., AMC

9. Remarks: \_\_\_\_\_

ATLANTIC MARINE CENTER  
ELECTRONIC CONTROL PARAMETERS

1. Project # OPR- 436    2. Reg. # H-9459    3. Field # AHP-10-5-74  
 4. Type of Control: Del Norte (103) (Hi-Fix, Raydist, EPI, etc.)  
 5. Frequency 1498.35 (for conversion of electronic lanes to meters)  
 6. Mode of Operation (check one):

Range-Range

Range-Visual

Range One (R<sub>1</sub>)    Tybee Knoll Cut  
 Station I.D.    Rear Range Light  
 Range Two (R<sub>2</sub>)    Old Bloody Point  
 Station I.D.    Rear Range

Lat.	<u>32</u> °	<u>01</u> '	<u>56.332</u> "
Long.	<u>80</u> °	<u>54</u> '	<u>26.372</u> "
Lat.	<u>32</u> °	<u>04</u> '	<u>33.337</u> "
Long.	<u>80</u> °	<u>51</u> '	<u>41.141</u> "

Hyperbolic (3-station)

Hyper-Visual

Slave One  
 Station I.D. \_\_\_\_\_  
 Master  
 Station I.D. \_\_\_\_\_  
 Slave Two  
 Station I.D. \_\_\_\_\_

Lat.	_____ °	_____ '	_____ "
Long.	_____ °	_____ '	_____ "
Lat.	_____ °	_____ '	_____ "
Long.	_____ °	_____ '	_____ "
Lat.	_____ °	_____ '	_____ "
Long.	_____ °	_____ '	_____ "

7. Location of Survey:

Range-Range

Imagine an observer is standing at R<sub>1</sub> Station and looking directly at R<sub>2</sub> (check one):

Survey area is to observer's Right     A=0

Survey area is to observer's Left     A=1

Hyperbolic

Looking from survey area toward Master Station:

Slave One must be to observer's Left;

Slave Two must be to observer's Right.

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This form applies to part of the data on this survey.

Vessel EDP #	From Time	Day	To Time	Day	Position Numbers (inclusive)
<u>1277</u>	<u>150621</u>	<u>226</u>	<u>194426</u>	<u>238</u>	<u>1629</u> to <u>2293</u>
<u>1277</u>	<u>155412</u>	<u>239</u>	<u>204545</u>	<u>239</u>	<u>2305</u> to <u>2465</u>
<u>1277</u>	<u>214429</u>	<u>239</u>	<u>184206</u>	<u>241</u>	<u>2485</u> to <u>2844</u>

9. Remarks: \_\_\_\_\_

P.O. CHECKED BY AS

DATE 2/19/76

VERIFICATION BR. AMC

FATHOMETER AND VELOCITY  
CORRECTION REPORT OPR-436  
July-August 1974

A. Equipment

A Raytheon fathometer, model number DE 723 D, serial number 1904 was used in Launch 1277 from Julian Days 203 thru 206. This fathometer failed to operate on Julian Day 207. A Raytheon fathometer, model number DE 723 D, serial number 1279 was received from the Atlantic Marine Center on Julian Day 211 and installed in Launch 1277 by launch personnel.

B. Velocity and Instrument Error Correctors

Depth corrections were obtained by averaging all bar check values excluding values which differed by more than 0.4 feet. A graph was constructed and velocity correctors were scaled in accordance with Table 2 of the Hydrographic Manual. The graph and abstract of corrector values are included with this report.

*+ transducer correction*  
A TRA correction of +1.5 feet was determined by drawing the bar check tightly against the transducer and measuring the bar depth. Frequent A to F scale checks were taken to check stylus arm length. All initial settings were adjusted to zero. Fathometer(1904) would not digitize in depths less than 7 feet. Fathometer(1279) on many occasions would not digitize in depths ranging from 4 to 6 feet. A difference of -.1 to -.3 feet was noted between the analog trace and digital depth. This problem made it extremely difficult to properly scan the fathograms. These problems should be corrected by EED prior to the start of another project.

C. Settlement and Squat Correctors

Settlement and Squat Correctors were obtained as outlined in section 5-108 of the Hydrographic Manual. The graph and abstract of corrector values are included with this report.

D. Miscellaneous

A constant water temperature of 84°F was observed throughout OPR 436. No appreciable changes in depth corrections occurred between the first and last days of hydrography, therefore bar check data was averaged and one velocity table was constructed which applies to all sounding data obtained during OPR 436.

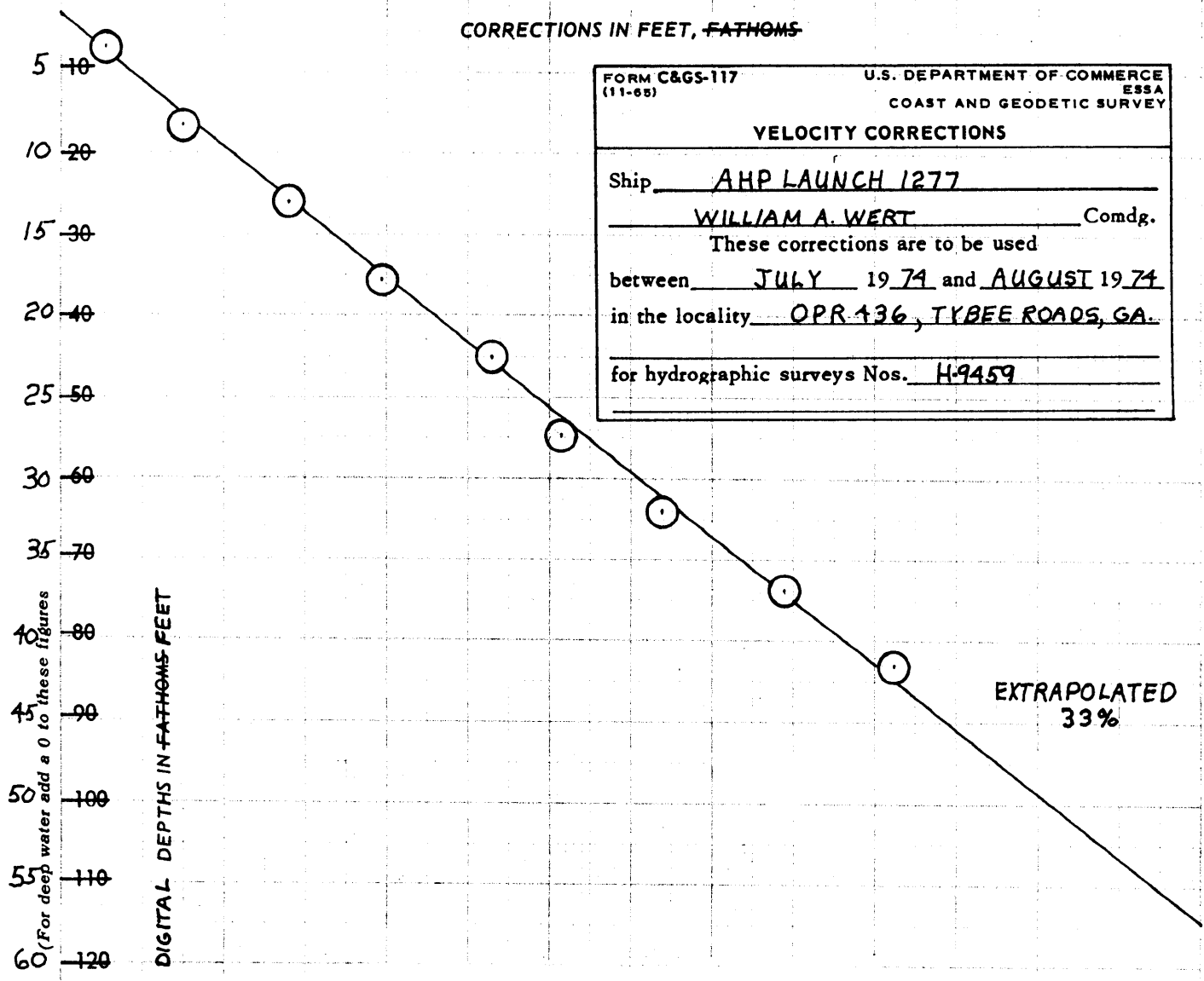
Respectfully Submitted

William A. Wert  
LTJG, NOAA  
OIC Launch 1277

0 .2 .4 .6 .8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6  
 (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 (11-65)	U.S. DEPARTMENT OF COMMERCE ESSA COAST AND GEODETIC SURVEY
<b>VELOCITY CORRECTIONS</b>	
Ship <u>AHP LAUNCH 1277</u>	
<u>WILLIAM A. WERT</u> Comdg.	
These corrections are to be used	
between <u>JULY 1974</u> and <u>AUGUST 1974</u>	
in the locality <u>OPR 136, TYBEE ROADS, GA.</u>	
for hydrographic surveys Nos. <u>H-9459</u>	

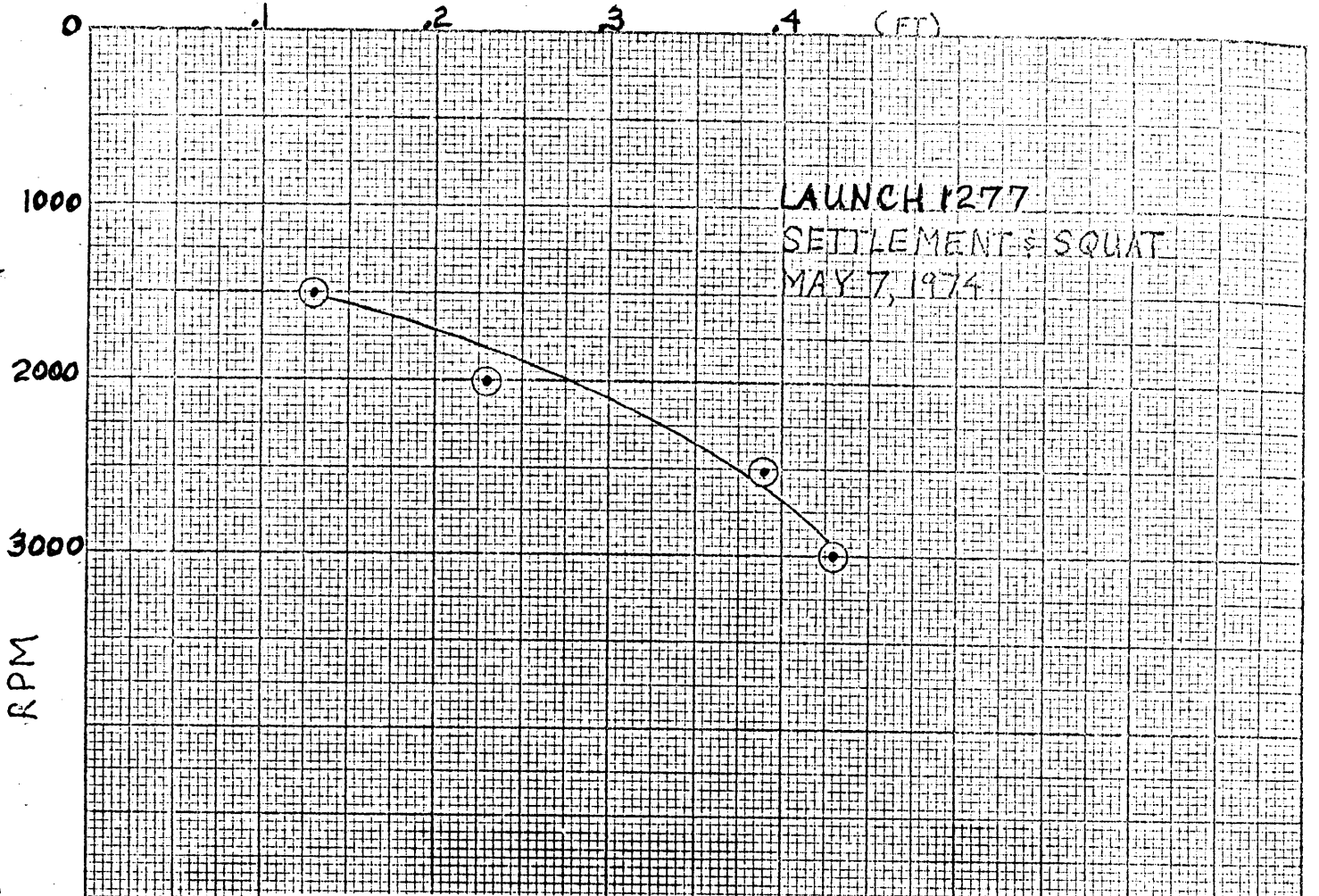


VELOCITY CORRECTION ABSTRACT

Depth (Feet)	Correction (Feet)
150	0.0- 5.6
	5.7- 9.5
	9.6-13.5
160	13.6-17.5
	17.6-21.5
	21.6-25.4
170	25.5-29.4
	29.5-33.4
	33.5-37.3
180	37.4-41.3
	41.4-45.3
	45.4-49.2
190	49.3-53.2
	53.3-57.2

OPR-436 BAR CHECK ABSTRACT JULY-AUGUST 1974

J.D.									
205	D.D. (FT)	8.3	13.0	17.8	22.5	27.4	32.0	36.8	41.6
	CORR. (FT)	+ .2	+ .5	+ .7	+ 1.0	+ 1.1	+ 1.5	+ 1.7	+ 1.9
206		8.5	13.0	17.9	22.6	27.4	32.2		
		.0	+ .5	+ .6	+ .9	+ 1.1	+ 1.3		
211		3.4	8.1	13.0	17.8	22.4	27.3	31.9	36.8
		+ .1	+ .4	+ .5	+ .7	+ 1.1	+ 1.2	+ 1.6	+ 1.7
213		3.4	8.3	13.1	17.8	22.6	27.4		
		+ .1	+ .2	+ .4	+ .7	+ .9	+ 1.0		
221		3.6	8.3	13.2	17.8	22.6	27.4	32.3	37.1
		- .1	+ .2	+ .3	+ .7	+ .9	+ 1.1	+ 1.2	+ 1.4
233		3.6	8.4	13.0	17.8	22.6	27.2		
		- .1	+ .1	+ .5	+ .7	+ .9	+ 1.3		
238		3.5	8.4	13.0	17.8	22.7	27.6	32.2	36.8
		.0	+ .1	+ .5	+ .7	+ .8	+ .9	+ 1.3	+ 1.7
240		3.6	8.2	13.1	17.9	22.4	27.2	31.6	36.5
		- .1	+ .3	+ .4	+ .6	+ 1.1	+ 1.3	(1.9)R	+ 2.0
241		3.5	8.2	13.0	17.7	22.5	27.3	32.1	
		0	+ .3	+ .5	+ .8	+ 1.0	+ 1.2	+ 1.4	
<b>AVE:</b>		<b>3.5</b>	<b>8.3</b>	<b>13.0</b>	<b>17.8</b>	<b>22.5</b>	<b>27.4</b>	<b>32.0</b>	<b>36.8</b>
		<b>+ .01</b>	<b>+ .20</b>	<b>+ .46</b>	<b>+ .69</b>	<b>+ .96</b>	<b>+ 1.13</b>	<b>+ 1.38</b>	<b>+ 1.68</b>



**Settlement and Squat Correction Abstract**

RPM	Correction (Feet)
0-1499	+0.0
1500-2000	+0.2
2001-3000	+0.4



POSITION DATA SHEET

LAUNCH 1277

SHEET AHP 10-5-74

REGISTRY NO. H-9459

Vol.	Jul. Day	First Pos. No.	Time (GMT)	Last Pos. No.	Time (GMT)	Development Positions	Detached Positions	Rejected Positions	Duplicate Positions	Omitted Positions	Bottom Sample
1	203	1	131623	43	144809	-	-	3 60, 62, 63, 147, 149, 155, 174, 178, 202	-	-	-
1	204	44	133215	208	192010	-	-	-	-	-	-
1	205	209	145736	367	191750	-	-	209, 227, 238	-	-	-
1	206	368	144957	488	190331	-	-	468	-	-	-
1	211	489	172842	526	192706	-	-	514	-	-	-
1	212	527	133843	673	174919	-	668 - 673	607	-	-	-
21	213	674	132637	765	155003	-	-	-	-	-	-
21	217	766	134521	914	173507	-	-	804 927, 1033, 1044	-	-	-
1	219	915	124215	1108	173649	-	989	1048, 1058, 1061 1076, 1095	-	-	-
1	220	1109	141429	1271	210947	-	1213	1112, 1127, 1115 1195, 1240	-	-	-
1	221	1272	151756	1450	193634	-	1406	1433	-	-	-
1	224	1451	194502	1569	223842	-	1500	-	-	-	1570 → 1575 1627 → 1628
1	225	1570	173129	1628	220609	-	-	-	-	-	-
1	226	1629	150621	1750	175803	-	-	-	-	-	-
1	227	1751	140200	1807	153035	-	1806, 1807	1773	-	-	-
1	233	1808	133829	1950	164734	-	-	1894	-	-	-





ATLANTIC MARINE CENTER  
 VERIFICATION OF SHOOTH TIDES

SURVEY H-9459

PLANE OF REFERENCE \_\_\_\_\_ MLW OR ~~KORAK~~  
 TIME MERIDIAN \_\_\_\_\_ GMT  
 HEIGHT DATUM ON STAFFS 1. 3.6 2. \_\_\_\_\_ 3. \_\_\_\_\_

TIDE STATIONS	POSITION	TYPE GAGE	TIME CORR.		HEIGHT CORR. *	
			H.W.	L.W.	H.W.	L.W.

1. Savannah Beach, Georgia  
 G ~~32°03'00"~~ 32°00'20"  
 Y 80°50.5'

2.   
 G   
 Y

3.   
 G   
 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 COMPELED  BY COMPUTER  
 MANUALLY

VERIFIED BY: GFT  
 VERIFIED BY: \_\_\_\_\_

HEIGHT OF MHW ABOVE PLANE OF REFERENCE 6.6

TIDE CORRECTIONS VERIFIED ON SOUNDING PRINTOUT BY: GFT

DATE OF VERIFICATION 3/20/75

\*COR RATIO

EXAMINED & APPROVED

Sheet 2 of 2

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

OCEANOGRAPHIC LOG SHEET - M  
BOTTOM SEDIMENT DATA

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

VESSEL	DATE	PROJ. NO.		YEAR	DEPTH Feet (Fathoms)	WEIGHT OF SAMPLER	AP- PROX. TRA- NSECTION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	CHECKED BY	DATE CHECKED	REMARKS (Unusual conditions, cohesiveness, distorted cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OS: (Unusual conditions, cohesiveness, distorted cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)
		LATITUDE	LONGITUDE											
AHP- Loh 1277		32°	80	74							WW			
	8-27-74	04° 07'	49° 30'	15	5 lb.	2"			br	fine S & brk Sh				
	"	03° 51'	50° 10'	12	"	"			br	fine S & brk Sh				
	"	03° 08'	50° 15'	12	"	"			br	fine S & M				
	"	03° 31'	49° 31'	15	"	"			br	fine S				
	"	02° 55'	48° 56'	20	"	"			br	fine S				
	"	02° 37'	49° 51'	18	"	"			br	fine S & brk Sh				
	"	02° 15'	50° 34'	34	"	"			br	fine S				
	"	01° 25'	25° 19'	5	"	"			br	M				
	"	01° 45'	51° 30'	3	"	"			br	fine S & P				
	"	02° 16'	51° 39'	30	"	"			br	fine S & brk Sh				
	8-28-74	01° 44'	50° 30'	5	"	"			br	fine S & brk Sh				
	"	02° 12'	52° 44'	18	"	"			br	fine S, M, brk Sh				
	"	01° 47'	49° 33'	8	"	"			br	fine S				
	8-29-74	04° 09'	51° 00'	3	"	"			br	fine S				
	"	03° 27'	51° 00'											
														30

27.

2/28/75

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for Form 362

Tide Station Used (NOAA Form 77-12): Savannah Beach

Period: July 22 - August 29, 1974

HYDROGRAPHIC SHEET: H-9459

OPR: 436

Locality: Georgia Coast

Plane of reference (mean ~~spring~~ low water): 3.8 ft. (7/1-7/25)  
3.6 ft. (7/30-8/29)

Height of Mean High Water above Plane of Reference is 6.6 ft.

Remarks: Zone direct.

P.O. CHECKED BY BJS  
DATE 2/18/76  
VERIFICATION BR., ANC

James R. Hubbard  
for Chief, Tides Branch

GEOGRAPHIC NAMES

H-9459

Name on Survey	Source of Information											
	A	B	C	D	E	F	G	H	K			
ATLANTIC OCEAN												1
BARRETT SHOALS ✓												2
BLOODY POINT ✓												3
BRADDOCK POINT ✓												4
CALIBOGUE SOUND ✓												5
COCKSPUR ISLAND ✓												6
DAUFUSKIE ISLAND ✓												7
GRENADIER SHOAL ✓												8
HILTON HEAD ISLAND *												9
MC QUEENS ISLAND ✓												10
NEW RIVER ✓												11
OYSTER BED ISLAND ✓												12
SAVANNAH RIVER ✓												13
SOUTH CHANNEL ✓												14
TURTLE ISLAND ✓												15
TYBEE ISLAND ✓												16
TYBEE KNOLL SPIT ✓												17
TYBEE ROADS ✓												18
LAZARETTO CREEK ✓												19
												20
												21
												22
												23
												24
												25

Approved  
 Char E. Harrington  
 Staff Geographer - CS1x2  
 2 July 1976

**HYDROGRAPHIC SURVEY STATISTICS**  
**HYDROGRAPHIC SURVEY NO. H-9459**

(AHP-10-5-74)

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & 2-Overlays		1	BOAT SHEETS		3 *	
DESCRIPTIVE REPORT		1	OVERLAYS		*	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
Accordion ENVELOPES	*		*			
CAHIERS	1 & P/O.		*			
VOLUMES	0					
BOXES			1			

T-SHEET PRINTS (List)

TP-00274, TP-00278

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				2844
POSITIONS CHECKED				
POSITIONS REVISED				
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		8		
JUNCTIONS		0		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		-		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		362		
<b>TOTALS</b>		<b>370</b>	<b>HIT 15</b>	
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
W.H. Guy, H.R. Smith	10/16/74		05/15/75	
VERIFICATION BY	BEGINNING DATE		ENDING DATE	
B.J. Stephenson	06/22/75		03/06/76	
REVIEW BY	BEGINNING DATE		ENDING DATE	
HIT, AMC	03/12/76		03/12/76	

Romeburg 39 hr 5/10/76

U.S. G.P.O. 1972-769-562/489 REG.#6



ATLANTIC MARINE CENTER  
APPROVAL SHEET  
FOR  
AUTOMATED SURVEY H-9459

- 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 1, 1976

Signed: William D. Jones

Title: 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 1, 1976

Signed: C. Dale North Jr.

Title: Chief, Processing Division

Reg. No. \_\_\_\_\_

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey the following shall be completed:

CARDS CORRECTED

DATE \_\_\_\_\_ TIME REQ'D \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

Reg. No. 9459

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE 10-12-82 TIME REQ'D. \_\_\_\_\_ INITIALS JAC

REMARKS:



### 3. Hydrography

- A. Crossings: Depths at crossings are in good agreement.
- B. Depth Curves: The standard depth curves were adequately delineated. The three (3) foot depth curve was added to help supplement the regular curves.
- C. Low-water Line: The Low-water line was delineated where hydrography permitted.
- D. Developments: The developments of bottom configuration and investigation of least depths are considered adequate.

### 4. Condition of the Survey

The sounding records, automated plotting and the Descriptive Report are adequate and conform to the requirements of the Provisional Hydrographic Manual, supplemented by the Atlantic Marine Center Manual.

### 5. Junctions

An adequate junction has been effected with H-9197 (1971) on the East and Southeast portions of the present survey. The junction was made utilizing strips plotted to scale on the Atlantic Marine Center Calcomp Plotter. Since H-9197 (1971) has been verified and forwarded to Rockville, the junction with that sheet should be considered before charting. There are no contemporary surveys to the West and Northwest.

### 6. Comparisons

A. Prior Surveys: H-5592 (1934) 1:10,000 and H-4154 (1920) 1:20,000. These prior surveys taken together cover the area of the present survey. A comparison between the prior and present surveys reveals variable differences of as much as sixteen feet. These differences are believed to be man made, because it appears that the shoal area in latitude 32° 04' 00"N, longitude 80° 48' 42"W has been dredged, and the area is deeper. The WHITING survey H-9197 (1971) would be needed to confirm if the deep water extends on through. The flat area appears to be basically stable with disagreements from ± 0-5 feet. There are several other areas that disagree. These areas are as follows:

South of Daufuskie Island in latitude 32° 04.3'N, longitude 80° 52.3'W. The six and twelve foot depth curves have shifted in a Northeast direction about 700 meters and extends further east. The low water spit Northeast of this deep water has receded and extends out further. The southern part of the previous twelve foot curve has filled in, and the deeper water now extends in an East-Southeast direction.

North of Tybee Island in latitude  $32^{\circ} 01.7'N$ , longitude  $80^{\circ} 51.3'W$ . The area at the end of the South jetty has filled in and the deeper water is closer to the shore between the South Channel Lights.

South of Braddock Point in latitude  $32^{\circ} 06' 00''N$ , longitude  $80^{\circ} 49' 30''W$ . The depth curves in this area indicate that the deeper water entering Calibogé Sound is moving eastward. The shoreline in this area has accreted and receded in a random fashion, varying from 50 to 450 meters. The more exposed points of land have undergone the greater changes as indicated below:

- (a) Tybee Island, Northern end, approximately latitude  $32^{\circ} 01.6'N$ , longitude  $80^{\circ} 51.0'W$ , receded south about 400 meters and accreted along the shore toward Lazaretto Creek.
- (b) Cockspur Island, East side, approximately latitude  $32^{\circ} 01.7'N$ , longitude  $80^{\circ} 53.0'W$ , near South jetty, accreted east about 450 meters.
- (c) Oyster Bed Island, East side, approximately latitude  $32^{\circ} 02.3'N$ , longitude  $80^{\circ} 53.3'W$ , near North jetty, receded west about 300 meters.
- (d) Oyster Bed Island, Northeast side, approximately latitude  $32^{\circ} 02.6'N$ , longitude  $80^{\circ} 53.6'W$  accreted north about 200 meters.
- (e) Turtle Island, East side, approximately latitude  $32^{\circ} 04.6'N$ , longitude  $80^{\circ} 53.0'W$ , receded about 25 to 100 meters with the larger amount on the north end.
- (f) Bloody Point, South end, approximately latitude  $32^{\circ} 04.8'N$ , longitude  $80^{\circ} 52.5'W$ , receded north between 50 and 60 meters.
- (g) Daufuske Island, East side, approximately latitude  $32^{\circ} 05.0'N$ , longitude  $80^{\circ} 52.0'W$  receded from 100 to 125 meters along the shore toward Calibogue Sound.
- (h) Hilton Head Island, Braddock Point, approximately latitude  $32^{\circ} 06.5'N$ , longitude  $80^{\circ} 49.0'W$  accreted south and west from 100 to 350 meters, with the larger amount on Calibogue Sound side.

These differences with the exception of those areas which appear to be dredged are mainly attributed to the redistribution of bottom sediments during storms and current activity in the area.

B. Published Chart #11512 (formerly C&GS 440, 38th edition, dated August 4, 1973.

(a) Hydrography

The charted hydrography originates with the previously discussed prior and U.S. Army Corps of Engineers surveys. Most of the comparison was covered in the prior survey section, except for a 22 foot sounding charted in latitude 32° 01' 41"N, longitude 80° 49' 25"W. It is believed that this was a charting error and it is recommended that this sounding be removed from the chart. Present survey shows eight feet in the area.

(b) Attention is directed to the following Pre-survey Review Items:

Item #13 Submerged Breakwater: in latitude 32° 02.3'N, longitude 80° 48.6'W. 50 meter spacing lines were run to verify this item. The submerged Breakwater is not a continuous underwater obstruction. The prominent least depths and positions are as noted:

<u>Depth</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Position Nos.</u>
✓7	32° 02' 42.8"N	80° 49' 12.8"W	1820-1821
✓9	32° 02' 19.1"N	80° 48' 38.8"W	1927-1928
✓9	32° 02' 05.6"N	80° 48' 09.9"W	2009-2010
✓10	32° 02' 12.73"N	80° 48' 27.05"W	1932-1933

The submerged Breakwater runs in the same direction as shown on C&GS 440, however it is located approximately twenty meters south of its present charted position. The submerged breakwater symbol should be retained. ✓

*from H-5592 (1934)*  
Item #14 Submerged Wreck: in latitude 32° 01.39'N, longitude 80° 50.20'W. 50 meter spacing lines were run to verify this item. A least depth of eight feet was found on the fathogram in the charted position (position nos. on present survey 2481-2482.) It is recommended that the submerged wreck symbol be retained until additional work such as wire drag or divers can ~~disprove~~ <sup>verify the</sup> least depth recorded by fathometer. *at the present survey position* ✓

Item #15 Seven Soundings: Three (3) of the seven soundings are covered by the present survey, and are listed below. The remaining four (4) were covered by H-9197 (1971).

- (1) The seventeen foot sounding charted in latitude 32° 02' 11"N, longitude 80° 49' 33"W. Disproved least depth found 21
- (2) The eighteen foot sounding charted in latitude 32° 02' 15"N, longitude 80° 49' 45"W. Disproved least depth found 23  
*By 43926 (1948)*
- (3) The sixteen foot sounding charted in latitude 32° 02' 22"N, longitude 80° 50' 33"W. Retain as charted, least depth of 21 feet found on a feature in this area. *Is 2112-2113*

These soundings were based on various U.S. Army Corps of Engineers surveys. The seventeen and sixteen foot soundings have probably been superseded by later Corps of Engineers surveys, ~~since they no longer appear on the latest chart edition.~~ However, 50 meter spaced lines were run to verify the circled soundings and no indications of these <sup>7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50</sup> depths were found. The verifier recommends that the eighteen foot sounding ~~also~~ be removed from the chart and superseded with ~~depths~~ from the present survey.

Item CC Piling: Old Bloody Point Rear Range (1913) bares eight feet at MHW in latitude 32° 04' 33.33"N, longitude 80° 51' 41.141"W, and consists of a twelve foot square steel platform. Refer to Horizontal Control Report, OPR-436, Tybee Roads, Georgia 1974.

There is a concrete piling baring two feet at MHW, northwest of the platform - position number 989.

The 28 foot sounding charted in latitude 32° 06' 13"N, longitude 81° 49' 58"W and the 22 foot sounding charted in latitude 32° 06' 42"N, longitude 81° 49' 50"W did not appear on the present survey, the eighteen foot curve is less than 100 meters east of the 22 foot sounding, and the controlling depth entering this area is less than 28 feet; however the 100 meter spaced lines were ~~not~~ adequate to disprove these soundings. It is recommended that these soundings be ~~retained as charted.~~ <sup>deleted from the</sup> retained as charted.

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

(c) Aids to Navigation

The charted positions of aids to navigation adequately mark the features intended.

7. Compliance with Instructions

This survey does comply with the Project Instructions.

8. Additional Field Work

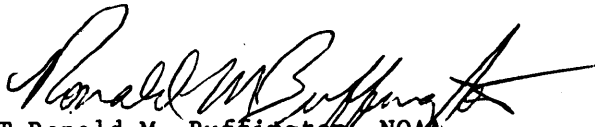
This is an excellent basic survey. Additional field work is not recommended.

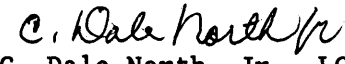
9. Hydrographic Inspection Team Comments

Hydrographic Inspection Team comments are included within this report and Verification deficiencies found, if any, have been corrected on the Smooth Sheet.

H-9459

Examined and Approved:  
Hydrographic Inspection Team  
Date: 3/12/76

  
CAPT Ronald M. Buffington, NOAA  
Chief, Operations Division


  
C. Dale North, Jr., LCDR, NOAA  
Chief, Processing Division

  
CDR Jeffrey G. Carlen, NOAA  
Chief, Coastal Mapping Division

  
Gregory R. Bass, LT, NOAA  
Chief, Electronic Data Branch

  
William L. Jonns  
Chief, Verification Branch

Approved/Forwarded

  
Alfred C. Holmes  
RADM, NOAA  
Director, Atlantic Marine Center



H-9459

Information for Future Presurvey Review

The bottom is subject to change from dredging and natural causes.

The following items warrant extra development, preferably with an improved wire drag, on future survey operations in this area to verify or disprove their existence:

<u>Item</u>	<u>Latitude</u>	<u>Longitude</u>	
1. Submerged wreck	32°01.39'	80°50.20'	
2. Submerged piling	32°03.67'	80°50.83'	on chart 440

<u>Position Index</u>		<u>Bottom Change Index</u>	<u>Use Index</u>	<u>Resurvey Cycle</u>
<u>Lat.</u>	<u>Long.</u>			
320	0810	4	4	25 years
320	0805	4	4	25 years



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

C352

May 10, 1976

TO: A. J. Patrick *ajp*  
Chief, Marine Surveys Division

THRU: Chief, Quality Control Branch

FROM: D. J. Romesburg *D. J. Romesburg*  
Quality Evaluator

SUBJECT: Quality Control Report, H-9459 (1974), Savannah, Tybee Roads,  
Georgia

A quality control inspection of H-9459 has been accomplished to evaluate the accuracy and adequacy of the survey with respect to data acquisition, delineation of the bottom, determination of least depths and navigational hazards, junctions, shoreline transfer, decisions and actions taken by the verifier, and cartographic presentation of data.

The following deficiencies are noted:

1. Because of the changeable bottom and time difference between surveys, a butt junction with H-9197 (1971) was made in latitude  $32^{\circ}03.1'$ , longitude  $80^{\circ}48.8'$  and latitude  $32^{\circ}06.42'$ , longitude  $80^{\circ}49.20'$ . Depths and curves in these areas should be charted from the present survey.
2. The name of the electronic positioning system utilized on the survey was unnecessarily shown on the smooth sheet. The proper symbolization and annotation of control stations are discussed under section 7.3.3 of the Provisional Manual.
3. A few islets, elevations, and low water line determinations were not transferred to the present survey from the photogrammetric manuscripts.
4. The elevation above MHW (65 feet) for the landmark in latitude  $32^{\circ}04.71'$ , longitude  $80^{\circ}52.96'$  was listed incorrectly on the smooth sheet.
5. The proper annotation of control stations on the control arc overlay was incomplete. Refer to section 4.2.6 of the Provisional Manual.



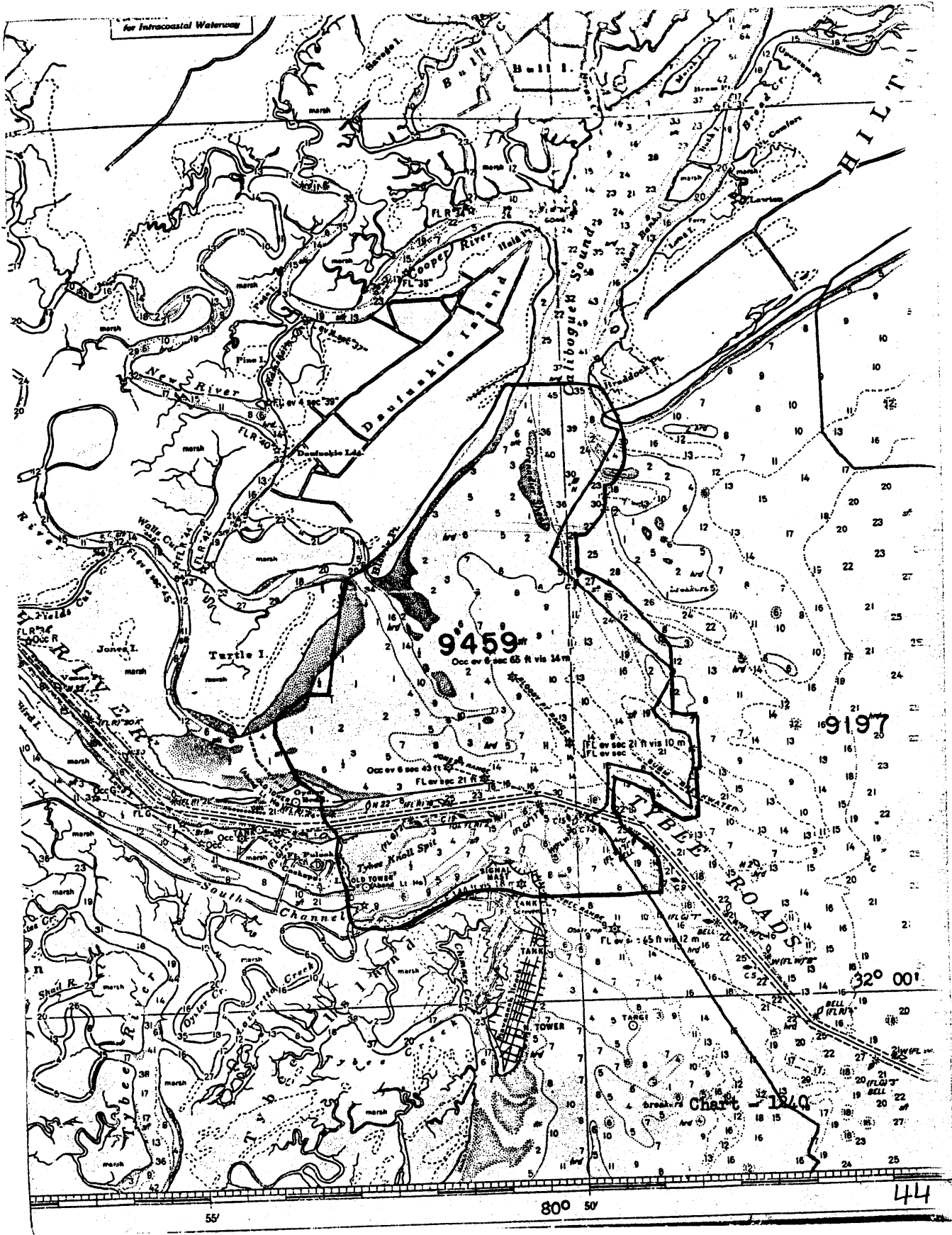
42

6. Soundings were carried forward from H-5592 (1934) to an unsurveyed area on the present survey in the general vicinity of latitude  $32^{\circ}03.35'$ , longitude  $80^{\circ}53.35'$ .

7. The piling charted in latitude  $32^{\circ}03.67'$ , longitude  $80^{\circ}50.83'$  are shown on photogrammetric manuscripts T-12621 of 1964-65. Apparently, these piling are no longer visible as they were not observed (or investigated) by the hydrographers on the present and adjoining surveys and do not appear on the contemporary photogrammetric manuscripts. These items have been transferred to the present survey from junctional survey H-9197 (1971) as submerged piling. Until their existence can be verified or disproved, it is recommended that the chart be revised to concur with the present survey.

Except as noted above, the survey is considered to be complete and adequate and to conform to the standards of the National Ocean Survey.

cc:  
C351



for Intracoastal Waterway

9459  
Occ. ov 6 sec 65 ft vis 14 m

9197

32° 00'

Chart 1540

800 50

44

