

9363

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. PE-40-1-73
Office No. H-9363

LOCALITY

State NORTH CAROLINA
General Locality OFF. HILTON HEAD I.
Locality VICINITY OF PORT ROYAL SOUND

1973

CHIEF OF PARTY

R. J. Land

LIBRARY & ARCHIVES

DATE 5/16/74

9363

HYDROGRAPHIC TITLE SHEET

H-9363

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.

PE 40-1-73

State South Carolina

General locality Off Hilton Head I.
~~Offshore South Carolina~~

Locality Vicinity of Port Royal Sound

Scale 1:40,000 Date of survey 27 Feb - 7 June 1973

Instructions dated 24 November 1973 Project No. OPR-436

Vessel NOAA Ship PEIRCE CSS-28

Chief of party CDR Ralph J. Land

Surveyed by CDR R. Land, LCDR J. Callahan, LT M. Mulhern, LTJG J. Barnhill,
LTJG G. Jamerson, LTJG R. Permenter, ENS. R. Floyd, ENS. K.

Soundings taken by echo sounder, ~~beam transducer~~ Raytheon Model 723, #928
Ross Model 200A, #201745

Graphic record scaled by Ships Personnel

Graphic record checked by Ships Officers

Protracted by ~~Atlantic Marine Center~~ inked Automated plot by Calcomp AMCA Plotter-618

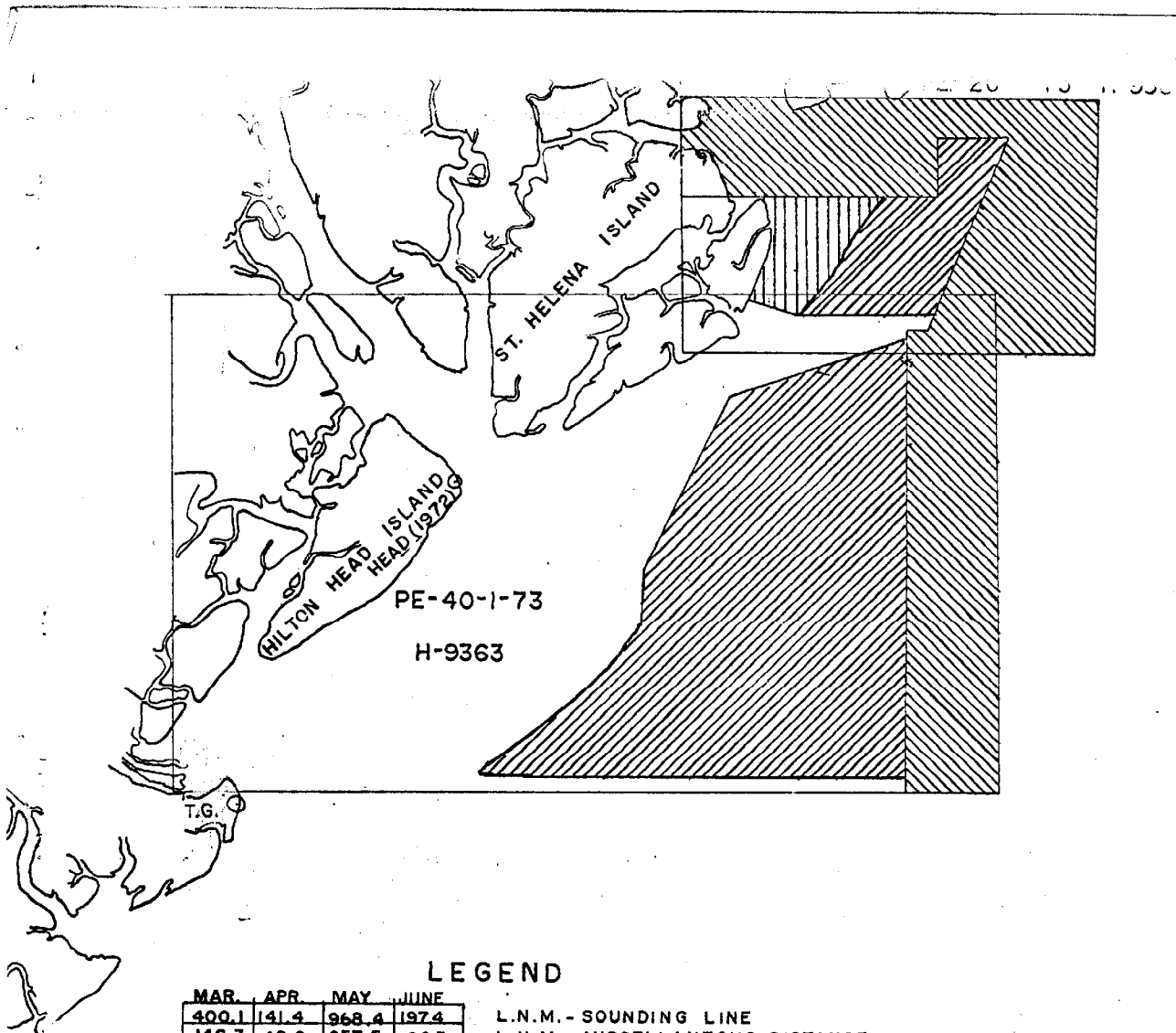
Soundings provided by Ships Officers

Soundings in ~~datum~~ feet at MLW ~~mark~~

REMARKS: Smooth Sheet plotted on .0075" Mylar, ARKWRIGHT
Drafting Film # 2102W

1111
1240
571




Applied to table 5-24-74
CAB



LEGEND

MAR.	APR.	MAY	JUNE
400.1	141.4	968.4	197.4
146.3	48.0	257.5	92.3
59.5	78.0	494.0	263.0
0	0	200.6	8.3
0	0	53	20.0
0	0	1	2.0
1	1	1	0
3	3	5	0
81.6	141.4	175.2	197.4
308.5	0	793.2	0.0

- L.N.M. - SOUNDING LINE
- L.N.M. - MISCELLANEOUS DISTANCE
- L.N.M. - DISTANCE TO & FROM
- SQ.N.M. - SOUNDINGS
- BOTTOM SAMPLES (GRAB).
- TDC CAST
- SERIAL TEMPERATURE CAST (NANSEN BOTTLE)
- WATER SAMPLES ANALYZED (SALINITY)
- LNМ - SOUNDING LINE - H-9364
- LNМ - SOUNDING LINE - H-9363

-  COMPLETED ON PREVIOUS SURVEYS
-  COMPLETED MAR. APR. MAY
-  COMPLETED JUNE

PROGRESS SKETCH
 SCOPE OPR-436
 COASTS OF SOUTH CAROLINA AND GEORGIA
 NOAA SHIP PEIRCE
 CDR. RALPH J. LAND COMDG.
 1973 FIELD SEASON
 SCALE OF CHART IIII

81° 00'
 + 31° 30'

80° 30'
 + 31° 30'

DESCRIPTIVE REPORT
To Accompany Hydrographic Survey H-9363
Field No. PE 40-1-73
Scale 1:40,000
Year of Survey 1973
NOAA Ship PEIRCE
CDR RALPH J. LAND, NOAA, COMDG

A. PROJECT

This survey was an integral part of Project SCOPE and was accomplished in accordance with Project SCOPE requirements, and with Project Instructions OPR-436-PE-73, Coast of South Carolina and Georgia, dated 24 November ~~1973~~ 1972. This survey is a continuation of surveys conducted by the PEIRCE at various times over the past eight years. No supplemental instructions or letters were issued.

B. AREA SURVEYED

The area surveyed is off the coast of South Carolina in the vicinity of St. Helena Sound, S. C. and Hunting Island, S. C.

The area surveyed roughly approximates a right triangle in shape, with the hypotenuse a line from Latitude 32°02.5' N, Longitude 80°39' W, trending northeast to Latitude 32°19.5' N, Longitude 80°19' W. This survey encompasses an area of approximately 180 square nautical miles. The survey began on 27 February 1973 and operations were completed on 7 June 1973, with a two (2) month delay for ship repairs intervening.

The survey is bounded on the northwest and south by contemporary surveys being conducted by the NOAA Ship WHITING. The survey is bounded on the east by a junction with prior survey H-9198, 1:40,000, 1971.

C. SOUNDING VESSEL

All soundings were obtained by the NOAA Ship PEIRCE without the use of launched or skiffs.

D. SOUNDING EQUIPMENT

Soundings for the first part of the survey, from day 058 through day 060, were observed with a Raytheon Survey Fathometer, Model 723, Serial Number 928. From day 128 through day 158, soundings

were recorded on a Ross Fathometer, Model 200-A, Serial Number 201745. The initial was maintained at zero on the Raytheon Survey Fathometer, but was not maintained at zero on the Ross Fathometer due to the calibration procedures used in conjunction with the Ross Fathometer. Soundings were all in feet, the depth varying from a minimum of 25 feet to a maximum of 100 feet. No problems were encountered with the fathometers which would seriously affect the accuracy of the soundings.

✓ Phase checks were performed on the Raytheon Survey Fathometer on 21 February 1973, 1 March 1973, and 7 March 1973 using DPC-1 Digital Phase Checker. Copies of the checks are included with the data.

✓ Phase checks were performed on the Ross Fathometer by each watch with the use of the Ross's calibration mode. In some cases results showed errors above the acceptable limits and corrections will be applied to the soundings. For details on this matter, refer to the Fathometer Report.

E. SMOOTH SHEET

✓ All field records were transmitted to the Atlantic Marine ✓
Center for smooth computer plotting.

F. CONTROL

✓ Raydist was used for horizontal control, operating on a frequency of 3294.400 KHz. Two portable Raydist shore stations were utilized. Pattern I was HEAD 1972, located at Hilton Head Island, S. C., Latitude 32°13'22.485" N, Longitude 80°40'14.996" W. Pattern II was LINS 1973, located at Edisto Beach, S. C., Latitude 32°30'11.480" N, Longitude 80°17'46.246" W. These sites were located by Photogrammetry Field Party 62. ✓

Calibration was accomplished by two methods, the first by using three point sextant fixes; the second involved circling an object of a known geographical position, in this case Savannah Light Tower. For further details on these methods, refer to the Electronic Position Control Report.

Calibration signals used were as follows:

<u>SIGNAL #</u>	<u>NAME</u>	<u>DESCRIPTION</u>
✓ 101	EDISTO BEACH WATER CO. TANK 1963	TANK

✓
F. CONTROL (continued)

<u>SIGNAL #</u>	<u>NAME</u>	<u>DESCRIPTION</u>
102	EDISTO BEACH MICROWAVE TOWER 1971	TOWER
105	HUNTING ISLAND LIGHTHOUSE 1902, 1963	LIGHTHOUSE
107	MOON, 1963	Tripod
108	HILTON HEAD FOREST BEACH WATER TANK 1963	TANK
211	SK-02B	24 ft. Tripod
224	SK-08	16 ft. Tripod
232	BOLT 1971	16 ft. Tripod
233	FRIPPS ISLAND WATER TANK 1971	WATER TANK
234	KS-07S	30 ft. wood twr, orange
235	DAYBEACON SOUTH OF BULL POINT	DAYBEACON

Signals 102, 211, 224, 232, 233, and 234 were located by Sub-Party, Photo Party 62 using third order traverse methods. Stations 101, 105, 107, 108, and 235 are listed in published triangulation data.

G. SHORELINE

There is no shoreline on this survey. ✓

H. CROSSLINES

Crosslines constitute approximately 5% of all hydrography done on this survey.

In several cases the crosslines were not in good agreement with those depths on regular sounding lines. In some cases a 2 to 4 foot difference was in evidence, these soundings were checked for possible errors in plotting or errors in applying tide correctors. No such errors were in evidence.

Crosslines are in good agreement

✓ Because of the extended period which the ship spent in the shipyard during this project, there is a substantial change in water characteristics between when the crosslines were run and when part of the regular hydrography was completed. Application of the velocity corrections may reduce the discrepancies in the crossings.

✓ It is also expected that when the soundings are reduced for smooth tides the crossings will improve.

In general for most of the survey crossings are very good.

✓ I. JUNCTIONS

The survey junctions with survey H-9198, 1971 and with contemporary surveys being conducted by the NOAA Ship WHITING. ✓
H-9145 to the South, H 9134 & H 9211 to the West
The junction soundings were in good agreement.

J. COMPARISON WITH PRIOR SURVEYS

There are two pre-survey review items to be considered within the bounds of this survey. They are items "JJ" and "KK". ~~AGREE~~

1. Item "JJ"

✓ This item listed as a "proposed fishing reef in Latitude 32°14.4' N, Longitude 80°20.2' W in the pre-survey review section of the project instructions. No indication was found of this feature, although it fell within an area that required development. CONCUR

✓ 2. Item "KK"

This item, listed as a "proposed fishing reef in approximate Latitude 32°03.9' N, Longitude 80°25.4' W fell within an area of regular sounding lines which gave no indication of any irregularities on the bottom. CONCUR

~~On the basis of this survey, it is recommended that these two features not be charted.~~ ✓

In addition, all soundings circled on the pre-survey review were considered when the results of this survey were compared with the following prior surveys: ✓

5134
H-~~5154~~, 1:40,000, 1931
H-3926, 1:80,000, 1915

NOTE: with the following exceptions the depths were in good agreement:

J. COMPARISON WITH PRIOR SURVEYS (continued)

<u>SURVEY</u>	<u>DEPTH SHOWN</u> FEET	<u>ACTUAL DEPTH</u> FEET	<u>LATITUDE</u> N	<u>LONGITUDE</u> W
H- 3926 3560	37	44 46	32°12.3'	80°22.5' CONCUR delete from chart
H-3926 3560	38 40 - this corrected by H-3560 by DEW 12/7/64	47	32°10.5'	80°27.0' CONCUR delete from chart
H- 3926 2260	38*	44 47	32°06.4'	80°32.4' CONCUR DELETE FROM CHART

*NOTE: this particular sounding fell within an area that was extensively developed, and the sounding from H-~~3926~~ is obviously in error.

<u>SURVEY</u>	<u>DEPTH SHOWN</u> FEET	<u>ACTUAL DEPTH</u> FEET	<u>LATITUDE</u> N	<u>LONGITUDE</u> W
5134 H- 5154	50	45 49	32°06.6'	80°31.9' CONCUR DISAGREE
5134 H- 5154	58	52 56	32°06.4'	80°31.7' CONCUR DISAGREE

The discrepancies in the depths are believed to be due to possibly poor horizontal control in survey H-3926, 1:80,000, 1915, and survey H-~~5154~~, 1:40,000, 1931, or the changeable nature of the bottom in this area. It should be noted that the two soundings from prior survey H-~~5154~~ were shown as being deeper than the present survey indicates.

✓ K. COMPARISON WITH THE CHART

A comparison was made with the largest scale chart of the area, Chart 1240, St. Helena Sound to Savannah River Entrance, 9th Edition, 9/1970. The following discrepancies were found:

<u>DEPTH ON CHART</u> FEET	<u>DEPTH ON THIS SURVEY</u> FEET	<u>LATITUDE</u> N	<u>LONGITUDE</u> W
51	47 ✓	32°13'	80° 20.8 ^{21.0} ' CONCUR
49	44 48 ✓	32°11.7'	80°24.2' CONCUR
50	45 47 ✓	32°10.8'	80°26.9' CONCUR
57	53 55 ✓	32°07.8'	80° 25.7 ^{26.1} ' CONCUR
52 58	55 57 ✓	32°06.2'	80°23.3' CONCUR
57	49 ✓	32°03.8'	80°29.4' DISAGREE NO 57' sdg charted in this area.

It should be noted that in all the above cases the charted depth is deeper than the depth given by this survey. These discrepancies are believed to be due to comparatively poor horizontal control on previous surveys (poor by modern standards), the changeable nature of the bottom, and/or the inherent error in transferring the soundings from the small scale chart. Application of the velocity corrections will tend to reduce these differences slightly.

L. ADEQUACY OF SURVEY

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

M. AIDS TO NAVIGATION

There are two aids to navigation within the bounds of this survey. They are buoy R"6HI" Fl. 6 sec. WHIS, and Buoy R"2PR" Fl, 6 sec. WHIS. Detached positions were taken on both with the following results which are in agreement with the positions listed in the Light List.

<u>BUOY</u>	<u>LATITUDE & LONGITUDE</u>	<u>DAY</u>	<u>TIME</u>	<u>POSITION NUMBER</u>
R"6HI"	32°12.5'N 80°19.6'W	144 24 May 1973	060610Z	Between 1252 & 1253 (1252.5)
R"2PR"	32°05.0'N 80°35.0'W	059 28 Feb. 1973	085315Z	190
R"2PR"		157 6 June 1973	123500Z	Between 2708 & 2709

N. STATISTICS

Total Number of Positions	2,860 ✓
Total Hydro Miles	1,862 NM
Total Crossline Miles	94.7 NM
Total Square Miles	179 Sq. NM
TDC Observations	3
Nansen Casts	3
Bottom Samples	21
Leadline Comparisons	2

O. MISCELLANEOUS

(1) All times were in Greenwich Mean Time. ✓

- (2) The northern portion of the boatsheet shows what appears to be a series of east-west trending sand ridges, with a depth difference of 4-5 feet. ✓

At the southern end of the boatsheet at approximately Latitude 32°03' N, Longitude 80°25' W there is an area of steeply sloping bottom ~~escarpment~~ approximately 4 NM in length. Drop-offs of 30 to 40 ~~of 30 feet~~ are common along the ^{eastern} ~~central~~ portion of this ^{steep} ~~escarpment~~ with drop-offs of 20 feet more common along the southwestern portion.

- (3) Due to a confusion regarding the format of the time interval on the predicted tide printout, tide correctors were frequently applied incorrectly during this survey. This would result in a maximum error of 0.5 following the whole number of the sounding. All such soundings affected were examined when they were in areas where confusion could result. ✓

- (4) Fathogram scanning was accurate throughout the project, with great care given to insure this accuracy. The fathogram was scanned by the OOD and Hydrographer at the end of each watch and compared to the printout for that watch. Any errors were then corrected and inserts of other significant soundings were made. This was then check scanned again, and any final corrections were then made and examined. ✓

- (5) Bottom samples were logged in the Sounding Volume and on the Print-Out tape. They were given position numbers as they occurred. ✓

P. RECOMMENDATIONS

It is recommended that this survey be considered adequate for charting purposes and that it supersede prior surveys. ✓

Q. REFERENCES TO REPORTS

For a detailed discussion of the methods used to determine the velocity corrections and the Raydist lane correctors, refer to the following reports. ✓

- (1) Fathometer Report
OPR-436, H-9363, Coast of South Carolina and Georgia, 1973 Field Season, NOAA Ship PEIRCE

- ✓
(2) Report on Raydist Electronic Position Control, ✓
OPR-436, H-9363 and H-9364, 1973 Field Season,
NOAA Ship PEIRCE

Respectfully submitted,

Jon M. Barnhill
Jon M. Barnhill
LTJG, NOAA

APPROVAL SHEET

Field Number PE-40-1-73



Registry Number H-9363

The field work and processing of data from this hydrographic survey was under my immediate daily supervision. The boatsheets and all records have been reviewed and are approved by me. This survey is complete and adequate to supersede all prior surveys of the area.

A handwritten signature in cursive script, appearing to read "Ralph J. Land", is written over the typed name.

Ralph J. Land
CDR, NOAA
Comdg., NOAA Ship PEIRCE

Tide Note, Project SCOPE, OPR-436, PE 20-1-73, PE 40-1-73

Predicted tides for this survey were computed by the ship with the onboard PDP-8 computer using the standard guage at Ft. Pulaski (Savannah River Entrance), Georgia, corrected to Fripps Inlet, Hunting Island, South Carolina. ✓

The tide guages operating in the area are as follows:

- 1.) Ft. Pulaski (Savannah River Entrance), Georgia
lat. 32 02.0'N, long. 80 54.1'W
- 2.) Savannah Light Station
lat. 31 57.0'N, long. 80 41.0'W
- 3.) Savannah Beach, Tybee Island, Georgia
lat. 32 00.3'N, long. 80 50.5'W
- 4.) Edisto Beach, Edisto Island, South Carolina
lat. 32 30.1'N, long. 80 17.8'W.

The guages were installed and maintained by Tides Section, Atlantic Marine Center, with some assistance from the ship.

Zoning between guages will be done by Atlantic Marine Center Processing Division CAM22 in accordance with automatic computer zoning techniques.

VELOCITY TABLE PRINTOUT
TABLE #1
27 FEB TO 01 MAR
PE-40-1-73, H-9363
Days 058-060

000250 0 0004 0001 000 283000 009363
000275 0 0006
000350 0 0008
000423 0 0010
000500 0 0012
000575 0 0014
000653 0 0016
000730 0 0018
000805 0 0020
000880 0 0022
000953 0 0024
001030 0 0026
999999 0 0028

VELOCITY TABLE PRINTOUT
TABLE #2
08 MAY TO 17 MAY
PE-40-1-73, H-9363
Days 128 - 137

000166 0 0006 0002 000 283000 009363
000213 0 0008
000258 0 0010
000305 0 0012
000352 0 0014
000399 0 0016
000446 0 0018
000493 0 0020
000540 0 0022
000586 0 0024
000622 0 0026
000680 0 0028
000727 0 0030
000775 0 0032
000823 0 0034
000870 0 0036
000917 0 0038
000965 0 0040
001012 0 0042
001059 0 0044
999999 0 0046

VELOCITY TABLE PRINTOUT
TABLE #3
23 MAY TO 03 JUN
PE-40-1-73, H-9363
Days -143 -154



000210 0 0010 0003 000 283000 009363
000250 0 0012
000290 0 0014
000330 0 0016
000370 0 0018
000410 0 0020
000450 0 0022
000490 0 0024
000533 0 0026
000575 0 0028
000615 0 0030
000655 0 0032
000697 0 0034
000735 0 0036
000776 0 0038
000817 0 0040
000856 0 0042
000897 0 0044
000936 0 0046
000976 0 0048
001017 0 0050
001058 0 0052
999999 0 0054

VELOCITY TABLE PRINTOUT
TABLE #4
04 JUN TO 07 JUN
PE-40-1-73, H-9363
Days 155-158



000210 0 0010 0004 000 283000 009363
000248 0 0012
000287 0 0014
000326 0 0016
000365 0 0018
000404 0 0020
000443 0 0022
000482 0 0024
000522 0 0026
000560 0 0028
000600 0 0030
000637 0 0032
000677 0 0034
000715 0 0036
000755 0 0038
000793 0 0040
000830 0 0042
000870 0 0044
000910 0 0046
000948 0 0048
000985 0 0050
001023 0 0052
999999 0 0054

SIGNAL LIST OPR-436 SOUTH CAROLINA
 PE-40-1-73 AND PE-20-1-73
 H-9363 AND H-9364

	°	'	" N	°	'	" W	
100	32	30	4124	080	17	5763	EDISTO BEACH STATE PARK WATER TANK 1963
101	32	29	0204	080	19	5570	EDISTO BEACH WATER CO TANK 1963
102	32	29	1892	080	19	1423	EDISTO ISLAND MICROWAVE TOWER (H-P) 1971
103	32	28	0311	080	26	0440	COMBAHEE BANK LIGHT 1955
104	32	24	1455	080	27	1077	HARBOR RIVER BRIDGE CENTER LIGHT 1955
105	32	22	3136	080	26	1569	HUNTING ISLAND LIGHTHOUSE 1902, 1963
106	32	20	3304	080	27	4779	KRELL 1963
107	32	16	5578	080	33	0344	MOON 1963
108	32	08	3233	080	45	2070	HILTON HEAD FOREST BEACH WATER TANK 1963
112	32	23	0364	080	25	5584	CAMP 1973
201	32	26	4904	080	25	5163	PELICAN BANK DAYBEACON A4
202	32	25	5981	080	26	3969	EGG BANK DAYBEACON A6
203	32	25	4788	080	26	1998	CRAB 1972
204	32	25	2420	080	26	2497	EGG BANK DAYBEACON A8
205	32	24	5996	080	26	1846	EGG BANK DAYBEACON A10
206	32	24	2192	080	27	3128	DARB 1972
207	32	24	1092	080	26	5986	RIDE 1972
208	32	24	0705	080	25	4941	SK-01B
209	32	23	4974	080	25	5248	SK-01ARS
210	32	23	3086	080	26	2261	SK-01
211	32	23	3177	080	25	4846	SK-02B
212	32	23	2435	080	25	5006	SK-02AR
213	32	23	1317	080	25	5228	SK-03
214	32	23	0882	080	25	5368	HUNT 1972
215	32	22	5176	080	25	5949	SK-03B
216	32	22	3671	080	26	0503	SK-03C
217	32	22	2531	080	26	1058	SK-05BR
218	32	22	1611	080	26	1468	SK-05AC
219	32	22	0309	080	26	1998	SK-06
220	32	21	4707	080	26	2748	SK-06A
221	32	21	3414	080	26	3446	SK-07S
222	32	21	2208	080	26	3992	SK-07A
223	32	21	0808	080	26	4590	SK-07B
224	32	20	4841	080	26	5599	SK-08
225	32	20	3011	080	27	0267	SK-08A
226	32	20	1624	080	27	1370	SK-10R
227	32	20	2210	080	27	2511	SK-11R
228	32	20	1268	080	27	5462	KF-28
229	32	19	5942	080	27	4799	KF-27
230	32	19	5232	080	27	3763	KF-26
231	32	19	3697	080	27	1964	KF-25
232	32	19	2668	080	27	1366	BOLT 1971
233	32	19	0280	080	28	4181	FRIPPS ISLAND WATER TANK 1971
234	32	18	2478	080	29	4947	KS-07S
235	32	14	4281	080	36	0766	DAYBEACON SOUTH OF BULL POINT
236	32	18	5360	080	28	4240	KS-04B

Positions for stations
 201 thru 236 were
 furnished by Photo
 Party 62, National Ocean
 Survey.

VERIFICATION NOTES ✓
SURVEY H-9363

GENERAL

This appears to be an excellent basic survey. The few minor problems experienced during verification are listed in the enclosed "Plotter Notes".

SMOOTH SHEET

In an effort to obtain a satisfactory medium for plotting smooth sheets, this survey was plotted on #2102W .0075" ARK-WRIGHT DRAFTING FILM, matte both sides. The plot was accomplished on the AMC CALCOMP-618 Plotter using a CALCOMP 7T3 (0.3mm) penpoint for the soundings and a Staedtler Duranite #75702 (0.2mm) penpoint for all other work.

Because of the apparent excellent results obtained on this product, no plot has been made on the conventional muslin back paper which is in short supply. The tape disks for this survey will be retained by AMC for at least 6 months and may be plotted on the conventional smooth sheet paper if requested.

April 6, 1974

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

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H- 9363 ✓

- 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: 6 May 1974

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

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

Date: 6 May 1974

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

11/21/73

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

JRH

TIDE NOTE FOR HYDROGRAPHIC SHEET

064
102
150 (2hrs)
SAV. BEACH

Processing Division: Atlantic Marine Center

Hourly heights are approved for Form 362

Tide Station Used (NOAA form 77-12): Edisto Beach
Savannah Beach
Savannah Light

SAV. Lt.
053 058
059 059
064 060

Period: Feb 22 - June 22, 1973

HYDROGRAPHIC SHEET: H-9363 H-9364

OPR: 436

Locality: Coast of South Carolina and Georgia

Plane of reference (mean ~~lower~~ low water):

Height of Mean High Water above Plane of Reference is

Remarks:

	(ft) MLW	(ft) MHW	Greenwich Intervals (Hrs)	
			HWI	LWI
Edisto Beach	2.4	6.0	12.26	6.13
Savannah Beach	1.6	6.6	12.55	6.63
Savannah Light	1.6* 8.9*	6.6	12.44	6.34

- * 1.6 ft. for March, April, May
- * 8.9 ft. for June

Recommend Multiple Gage Zoning

Computer Tide Zoning used.

C. J. Thurlow
Chief, Tides Branch

GEOGRAPHIC NAMES

H-9363

Name on Survey

A ON CHART NO.
B ON PREVIOUS SURVEY NO.
C ON U.S. QUADRANGLE MAPS
D FROM LOCAL INFORMATION
E ON LOCAL MAPS
F P.O. GUIDE OR MAP
G RAND McNALLY ATLAS
H U.S. LIGHT LIST
K

ATLANTIC OCEAN

1
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Approved by
Chas. E. Harrison
Staff Geographer
6 Aug 1974

DESCRIPTIVE REPORT DATA RECORD		
PART I SMOOTH SHEET PREPARATION		
	PREPARED BY/OPERATOR	DATE
A. PLOTTER OPERATOR		
B. DISTORTION MARKS PLOTTED		
C. PROJECTION INTERSECTIONS PLOTTED		
D. POINTS OF ELECTRONIC CONTROL ARCS PLOTTED		
E. OVERLAYS PREPARED BY		
1. POSITION NUMBER		
2. EXCESS SOUNDINGS		
3. PRELIMINARY SMOOTH PLOT		
4. LIST OTHERS		
A.		
B.		
F. SOUNDING SELECTION BY		
G. PLOTTER INPUT	PREPARED	
H.	CHECKED	
I. DESCRIPTIVE REPORT ADDENDUMS		
PART II SMOOTH SHEET COMPLETION		
	B.J. Stephenson	4-25-74
	CARTOGRAPHER	DATE
A. DISTORTION SCALE TICKS IDENTIFIED BY NOTE		
B. PROJECTION INTERSECTIONS VERIFIED BY	EDP-AMC B.J. Stephenson	3-15-74
C. PROJECTION LINES RULED BY	EDP-AMC	4-16-74
D. ELECTRONIC CONTROL ARCS RULED AND LOCATION VERIFIED	EDP-AMC B.J. Stephenson	4-16-74
E. OVERLAYS COMPLETED BY	B.J. Stephenson	4-8-74
1. POSITION NUMBER LEADERS ADDED	" "	4-8-74
2. EXCESS SOUNDING OVERLAY COMPARED	" "	4-8-74
3. PRELIMINARY SMOOTH PLOTS COMPARED	" "	4-8-74
4. OTHERS UTILIZED		
A.		
B.		
F. DESCRIPTIVE REPORT ADDENDUM	W.L. Jonns	5-7-74
G. CONTROL STATIONS VERIFIED	N.A.	
H. POSITIONS MANUALLY PLOTTED		
I. MANUAL PLOT VERIFIED		
J. SHORELINE APPLIED	None	
K. BOTTOM CHARACTERISTICS ADDED	B.J. Stephenson	4-24-74
L. NOTES AND DEPTH CURVES ADDED	" "	"

Fig. 19.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET & PNO 2-ESO		1	BOAT SHEETS	1 (2 parts)
DESCRIPTIVE REPORT		1	OVERLAYS	2

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ROBSON ROBSON ROBSON ENVELOPES	1					1
CAMERS			1			
VOLUMES	1					
BOXES			3 & Misc. Data			

T-SHEET PRINTS (List) **None**

SPECIAL REPORTS (List) **Raydist calibration abstracts**

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				2878
POSITIONS CHECKED		75	110	
POSITIONS REVISED		12	0	
DEPTH SOUNDINGS REVISED		114	30	
DEPTH SOUNDINGS ERRONEOUSLY SPACED		13	0	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED			0	
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		1	0	
JUNCTIONS		24	3	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS	* 10		* checking fath.	
SPECIAL ADJUSTMENTS			0	
ALL OTHER WORK		57	68	
TOTALS	10	82	71	

PRE-VERIFICATION BY D.E. Jenkins, R.G. Roberson	BEGINNING DATE 12-3-73	ENDING DATE 2-15-74
VERIFICATION BY B.J. Stephenson	BEGINNING DATE 3-19-74	ENDING DATE 4-25-74
REVIEW BY G M FRANK	BEGINNING DATE 8-22-75	ENDING DATE 9-23-75

INSPECTION BY **K.W. Wellman** 7-16-76
D.R. Eagle 9/1/75 9-1-76

USCOMM-DC 32271-P68
8-6-76 19 hrs.

REGISTRY NO. H-9363

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 REQUIRED _____ INITIALS _____

REMARKS:

REGISTRY NO. H-9363

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 12/2/80 TIME REQUIRED _____ INITIALS JAC

REMARKS:

H-9363

Items for Future Presurvey Reviews

None

<u>Position Index</u>		<u>Bottom Change Index</u>	<u>Use Index</u>	<u>Resurvey Cycle</u>
<u>Lat.</u>	<u>Long.</u>			
320	0804	4	2	25 years
320	0803	3	2	50 years
320	0802	2	2	50 years
321	0804	4	2	25 years
321	0803	5	2	25 years
321	0802	3	2	50 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

MODIFIED HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9363

FIELD NO. PE-40-1-73

South Carolina, off Hilton Head Island, Vicinity of Port Royal Sound

SURVEYED: February 27 - June 7, 1973

SCALE: 1:40,000

PROJECT NO.: OPR-436

SOUNDINGS: Raytheon DE-723 Echo Sounder
Ross 200A Echo Sounder

CONTROL: Raydist

Chief of Party	R. J. Land
Surveyed by	J. Callahan
.....	M. Mulhern
.....	J. Barnhill
.....	G. Jamerson
.....	R. Permenter
.....	R. Floyd
.....	K. Groepler
.....	P. Harman
Automated Plot by	Cal Comp 618 (AMC)
Verified by	B. J. Stephenson
Reviewed by	G. M. Frank
	Date: September 23, 1975
Inspected by	K. W. Wellman

1. Control and Shoreline

The source of control is given in paragraph F of the Descriptive Report.

No shoreline falls within the limits of the present survey.

2. Hydrography

A. Sounding line crossings are in good agreement.

B. The usual depth curves are adequately delineated.

C. The development of the bottom configuration and the investigation of least depths are adequate.

3. Condition of Survey

The sounding records, automated plotting, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual supplemented by the Instruction Manual - Automated Hydrographic Surveys.

4. Junctions

An adequate junction was effected with H-9145 (1973) on the south. The junctions with H-9144 (1973-74) on the southwest, H-9314 (1973) on the west, H-9211 (1973) on the northwest, and H-9198 (1971-72) on the east are discussed in the reviews of those surveys.

5. Comparison with Prior Surveys

A.	H-535	(1855-56)	1:20,000
	H-649	(1853-57)	1:40,000
	H-830	(1863)	1:20,000
	H-966	(1866)	1:40,000
	H-2260	(1896)	1:20,000
	H-3560	(1912-13)	1:100,000 (reconnaissance)
	H-3561	(1912-13)	1:50,000 (reconnaissance)

These surveys fall in the area of the present survey but are not discussed in the present review.

B.	H-3926	(1915-16)	1:80,000
	H-3983	(1916-17)	1:80,000
	H-3897	(1916)	1:40,000
	H-5134	(1931)	1:40,000

These surveys taken together cover the entire area of the present survey.

A comparison between the present and prior surveys reveals variable depth differences of \pm 1 to 4 feet. At the southern end of the present survey there is an area of steeply sloping bottom with dropoffs of 20 to 40 feet. In this area the present survey depths are 10 to 15 feet deeper than the prior surveys. These depth differences are attributed to the less detailed and less accurate methods employed on the prior surveys and actual bottom change.

The larger scale more completely developed present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 11513 (formerly chart 1240) latest print date, November 23, 1974

A. Hydrography

Most of the charted hydrography originates with the previously discussed prior surveys which require no further consideration, supplemented by the partial application of depths from the boat sheets and verified smooth sheet of the present survey. Two additional charted soundings originate with the prior surveys not discussed in section 5 of this review.

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

B. Aids to Navigation

The aids to navigation on the present survey are in substantial agreement with their charted positions and adequately mark the intended features.

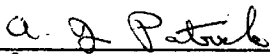
7. Compliance with Instructions

The survey adequately complies with the Project Instructions.

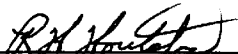
8. Additional Field Work

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

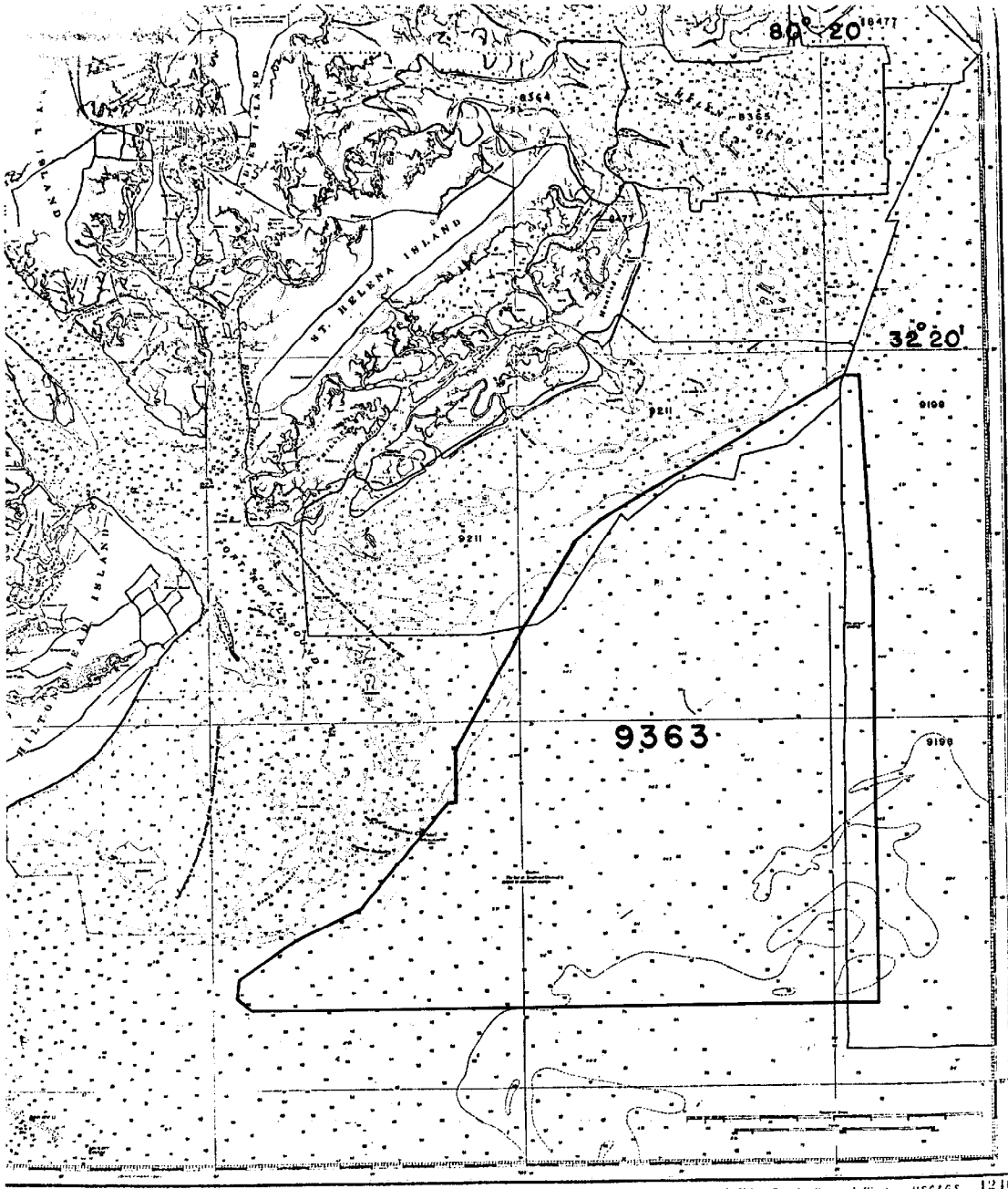
Examined and Approved:



Chief
Marine Surveys Division



Associate Director
Office of Marine Surveys
and Maps



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U.S. GOVERNMENT PRINTING OFFICE: 1975

INTERNATIONAL NAVIGATIONAL CHARTS

(St. Helena Sound to Savannah River) USCG 65 1210
PROJ. 12-6-61

(3 Sheets)

1240 No. 3

