8364

Diag. Cht. No. 1240-3.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ECFP-1156 *Office No.* H-8364

LOCALITY

State South Carolina

General locality St. Helena Sound

Locality Morgan River

19 56

CHIEF OF PARTY

M. T. Paulson

LIBRARY & ARCHIVES

DATE August 24, 1959

COMM-DC 61300

8364

8364

Form 537
(Ed. June 1946)

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-8364

Field No. ECFP-1156

State SOUTH CAROLINA

General locality ST. HELENA SOUND

Locality MORGAN RIVER

Scale 1:10,000 Date of survey 1-18-56 to 3-30-56

Instructions dated 13 October 1955, - Supplemental 16 Aug 1956

Vessel EAST COAST FIELD PARTY

Chief of party MARVIN T. PAULSON

Surveyed by C.W. TUPPER, R.A. LEWIS & D.L. CAMPBELL

Soundings taken by ~~fathometer~~ XXXXXXXX, graphic recorder, hand lead, ~~wire~~ XXX

Fathograms scaled by FIELD PERSONNEL

Fathograms checked by FIELD PERSONNEL & NORFOLK DISTRICT OFFICE

Protracted by FRED BEAN

Soundings penciled by FRED BEAN

Soundings in ~~fathoms~~ XXXXXX feet at MLW XXXXX and are true depths

REMARKS: This survey was smooth plotted by the Hydrographic Section of the Norfolk District Office.

U. S. GOVERNMENT PRINTING OFFICE 16—66520-1

DISCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET H-8364 (ECFP 1156)

East Coast Field Party
Project 13850

Marvin T. Paulson, CinC
Scale: 1;10,000

1/18/56 - 3/30/56

A. PROJECT

A basic survey of St. Helena Sound, South Carolina, and a portion of Harbor River and Morgan River was accomplished under instructions 22/MEK FP-East Coast dated 13 October 1955, 16 Aug 1956

B. SURVEY LIMITS & DATES

Field work on sheet H-8364 began 18 January 1956 and ended 30 March 1956. Work was performed in the Entrance to Morgan River and in the river itself. The survey extended north to 32° 28.6' and south to latitude 32° 24.2'. It extended to longitude 80° 34.8 on the west and made junction with H-8365 (ECFP 1256) on the east at longitude 80° 26.5'. (1956-57) and H-8477 (1956-57) on Harbor River.

C. VESSELS AND EQUIPMENT

Launch CS-175 was used entirely on sheet H-8364. It was operated from Village Creek for the entire season's work. Hydrography was run at a standard sounding speed of 5.8 knots and the launch had a turning radius of 50 meters at half rudder at this speed. Echo soundings were obtained with an Edo type fathometer (Serial No. 201) and also an 808j type (Serial No. 77). The transducer unit was mounted over the port side amidships.

D. TIDES AND CURRENT STATIONS

A portable automatic tide gage was maintained throughout the project at Edisto Beach. Also gages were established at Lucy Point Creek and at the north entrance to Harbor River. Tides at these two gages, as well as tides referred to Coffin Point and Village Creek, were used in reducing soundings to Mean Low Water.

See complete Tidal coverage attached.

For the area east of longitude 80° 29', the tides at Harbor River were used to control hydrography. The tides at Lucy Point Creek, Coffin Point, and Village Creek were used west of this dividing line.

Reference is made to the Director's letters No. 36-130-15d dated 21 March 1956 and No. 36-177-15d dated 24 April 1956.

No current stations were occupied during the survey.

E. SMOOTH SHEET

The smooth sheet will be plotted by the Norfolk Processing Office. Attachments, statistics, and field records will be sent to this office.

F. CONTROL STATIONS

Control consisted of 15 triangulation stations, 3 topographic stations, and 39 photo-topo signals. A complete list of control may be found in the front of Vol. 1, sheet H-8364, as well as in the attached Report of Photogrammetric Support. See H-8365 D.R.

G. SHORELINE AND TOPOGRAPHY

For the source of shoreline and topography, see the attached Report of Photogrammetric Support.

A sub-unit of Photogrammetric Party 1 was used in support of the East Coast Field Party and had charge of shoreline and topography. There were no changes in shoreline or topographic details as determined by this survey except in the case listed in "Comparison with Prior Surveys".

H. SOUNDINGS

Soundings were obtained with an EDO type recorder, an 808 type recorder, hand lead, and sounding pole. Bottom samples were obtained with an armed hand lead.

I. CONTROL OF HYDROGRAPHY

Visual fixes were used entirely on this sheet to control the hydrography.

J. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys for charting. The junction with the adjoining survey is satisfactory and the depth curves can be adequately drawn at the junction.

K. CROSSLINES

The percenta ge of crosslines is about 7% for the sheet as a whole. The crossings on the sheet were very good.

L. COMPARISON WITH PRIOR SURVEYS

Comparisons with prior surveys show few changes. The changes that did take place occured in shoal water while the deeper areas show almost the same depths as the prior surveys.

Comparisons were made with:

PRIOR SURVEY	DATE	SCALE
5721	May-July 1934	1:10,000
5718	May 1934	1:10,000
5565	June-July 1934	1:10,000

Project instructions 8-15-56 supp. to '55 indicate no revision of junctional Commitments

SURVEY 5721 See Review also

AREA	CHANGES	RECOMMENDATIONS
Lat. 32° 28.2' Long. 80° 26.6'	Area has become deeper from 4'-7'	Chart new depths

SURVEY 5718

No changes are noted between this survey and sheet H-8364. See Review

SURVEY 5565 See Review also

AREA ON PRIOR SURVEY	CHANGES	RECOMMENDATIONS
32° 27.65' Lat. 80° 27.63' Long.	Southern tip of 0' curve has receded NW 300 M.	Chart new depths
32° 27.~~30~~ 28' Lat 80° 28.~~50~~ to 47' Long	Southern edge of 0' curve has receded north ~~200~~ ~~300~~ 230? meters	Chart new depths
32° 27.28' Lat 80° 27.~~50~~ 49' Long		
32° 27.30' Lat 80° 27.10' Long	~~100 M. Dia.~~ shoals ~~which did become~~ awash at low water are ~~is~~ now covered 1'-2' at low water.	Chart new depths

SURVEY 5565 (Cont'd)

AREA ON PRIOR SURVEY	CHANGE	RECOMMENDATION
32° 27.1' Lat 80° 26.7' Long	Shoal was covered 2½ at low water now ~~bares 1'~~ low water	Chart new depths
32° 25.6' Lat 80° 26.9' Long to 32° 25.0' Lat 80° 26.5' Long	0' curve has shifted west ~~75-100~~ meters, decreasing the width of the passage west of Egg Bank.	Chart new depths
32° 24.75' Lat 80° 26.5' Long	High water line has shifted north 80 M.	Chart new position

M. COMPARISON WITH CHART

It is felt that the comparison with prior surveys is also a comparison with charts 1240 and 793 as there is very little difference between the prior surveys and the charts.

N. DANGERS AND SHOALS

There are no newly found dangers or shoals to report.

O. COAST PILOT INFORMATION

There is no new Coast Pilot information to report.

P. AIDS TO NAVIGATION

Aids to Navigation and Landmarks for Charts were submitted by Photo Party number 1.

Q. LANDMARKS FOR CHARTS

There are no new landmarks for charts to report.

R. GEOGRAPHIC NAMES

There are no new geographic names to report.

Z. TABULATION OF APPLICABLE DATA

The Bar Checks for the entire Project are attached.

Respectfully submitted

Lawrence L. Seal

Lawrence L. Seal
Ens., C&GS

Attachments:
1. Photo Report (Attached to Sheet ECFP 1256 Report) H-8565
2. Statistics
3. Fathometer Report
4. Tidal Note
6. Approval Sheet
7. Advance Report of Dangers

STATISTICS

Hydrographic Survey ECFP 1156 (1956)
Launch 175

Date	Day Letter	Volume No.	Fath. Pos.	H.L.	Statute Miles
1/18/56	a	1	88	0	11.5
1/20/56	b	1	74	0	12.1
1/25/56	c	1 & 2	86	0	8.1
1/26/56	d	2	15	0	2.8
1/27/56	e	2	6	0	0.7
1/30/56	f	2	18	0	3.8
1/31/56	g	2 & 3	142	0	23.9
2/ 2/56	h	3	113	0	16.3
2/ 3/56	j	4	64	0	12.7
2/ 6/56	k	4	121	0	18.3
2/15/56	l	5	13	0	2.3
2/21/56	m	5	124	0	18.8
2/22/56	n	5	12	0	2.0
3/ 1/56	p	6	15	0	2.1
3/ 2/56	q	6	9	0	1.3
3/ 5/56	r	6 & 7	188	0	27.4
3/ 6/56	s	7	23	0	3.5
3/ 7/56	t	7	84	0	10.8
3/12/56	u	7 & 8	183	0	30.6
3/13/56	v	8 & 9	153	1	15.3
3/14/56	w	9 & 10	139	0	19.0
3/15/56	x	10	6	0	0.7
3/16/56	y	10	3	0	
3/19/56	z	10 & 11	201	0	26.3
3/20/56	aa	11 & 12	207	0	25.0
3/21/56	ba	12 & 13	146	0	19.2
3/22/56	ca	13	8	0	1.2
3/28/56	da	13	111	12	11.4
3/29/56	ea	13 & 14	108	13	16.1
3/30/56	fa	14	76	3	12.3
			2532	29	355

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON 25, D. C.

IN REPLY ADDRESS THE DIRECTOR
COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO NO. 224/MEK
D-1-NK

15 April 1959

To: Norfolk District Officer
Coast and Geodetic Survey
102 West Olney Road
Norfolk 10, Virginia

Subject: Geographic position of TEER 1955

Reference: Your letter dated 7 April 1959, HLP:fs, to Chief, Geodesy Division

The position of shoran station TEER as located by LCDR Marvin T. Paulson in 1955 is latitude 32° 26' 23.380" (720.2 m.), longitude 80° 28' 28.591" (746.9 m.).

In all probability this is not a recoverable station and should not have been shown on boat sheet ECFP-1156 and black-line impression of T-10309 as triangulation .

Charles Quirk
FOR
H. Arnold Karo
Rear Admiral, C&GS
Director

NORFOLK PROCESSING OFFICE
LIST OF SIGNALS
H-8364

TRIANGULATION STATIONS

AGE	EGG BANK PASSAGE, DAYBEACON A9, 1955
ANK	PELICAN BANK, DAYBEACON A1, 1955
BAN	EGG BANK PASSAGE, DAYBEACON A7, 1955
BEA	EGG BANK PASSAGE, DAYBEACON A4, 1955
BOR	BOR, 1933-55
COFF	COFFIN, 1933-55
CON	EGG BANK PASSAGE, DAYBEACON A5, 1955
DAY	EGG BANK PASSAGE, DAYBEACON A11, 1955
GAN	GAN, 1933
HEE	COMBAHEE BANK LIGHT, 1955
HUNT	HUNTING ISLAND, HARBOR RIVER BRIDGE, CENTER LIGHT, 1955
MOR	MOR 3, 1933-55
PAR	PARROT 2, 1933
PEL	PELICAN BANK DAYBEACON A2, 1955
~~TEER~~	~~TEER, 1955~~ See Dr. Ltr. dated 8/15/54

MARKED TOPOGRAPHIC STATIONS

PINE, 1955
ZEAL, 1955

TOPOGRAPHIC STATIONS

(Apparently plotted on Blackline impressions)

SOURCE T-10300

Oil Ski

SOURCE T-10301

Ace	Bad	Box	Caw	Dun	Elk	Elm	Fid	Mad
Mop	Mud	Pal	Pix	Rye	Sal	Wow		

SOURCE T-10302

Doe Mit Tri Val

SOURCE T-10309

Ale	Amp	Bag	Boy	Dix	End	Peg	Pin	Quo
She	Tel	Tig	Vim	War	Win	Yon	Zip	

FATHOMETER REPORT FOR PROJECT

13850

East Coast Field Party
Project 13850

Marvin T. Paulson
Chief of Party

SHEET ECFP 1256

A Kato Converter was used with the Edo 255 fathometer on this sheet during the 1956-57 field season. It was discovered that the frequency could be varied as a bar check was taken so as to give true sounding values. This was done during the 1956-57 field season on ECFP 1256 but not the preceeding year. Hence, the only velocity corrections needed were for a few days during the 1955-56 season when the bar checks showed the echo sounder to be in error. No curves were drawn for sheet ECFP 1256.

SHEET 2156

The corrections determined by bar checks were averaged for the days hydrography was accomplished. The bar checks were very good with the exception of one day which was disregarded because of heavy seas and was felt to be unreliable. The average corrections for all depths were zero, hence no curves were drawn. Velocity corrections were zero for all days on this sheet.

SHEET 1156 H-8364

For seven ~~of~~ the twenty three working days on this sheet, the bar checks were erratic. On the remaining sixteen days the correction values were very nearly the same and all close or at zero. A zero correction was used for these sixteen days at all depths. For the days when the bar checks were erratic, separate velocity correction curves ~~were~~ drawn and the corrections entered in the sounding volumes. These curves are attached to the original only. All checks on the 8085 show zero correction.

SHEET 1157

As on sheet ECFP 1256, a Kato Converter was used with Edo 255 fathometer number 201. The frequency of the converter was changed to give soundings with no correction for all the hydrography accomplished on this sheet.

SHEET 1956

The corrections determined by bar checks were averaged for the days hydrography was accomplished on this sheet. The average correction for all depths was zero and no velocity correction curves were drawn.

VELOCITY CORRECTIONS

For days when bar check was not zero and corrections were computed separately

18 January 1956

Depth	Correction
0'-9'	-0.6
9.1'-12'	-0.4
12.1'-16'	-0.2
16.1'-20'	0.0

25 January 1956

Depth	Correction
0'-8'	-0.2
8.1'-11'	0.0
11.1'-13'	0.2
13.1'-15'	0.4
15.1'-16'	0.6
16.1'-18'	0.8
18.1'-	1.0

[illegible] March 1956

Depth	Correction
0'-18'	0.0
18.1'-22'	0.2
22.1'-26(	0.4
26.1'-	0.6

5 March 1956

Depth	Correction
0'-19'	0.0
19.1'-22'	0.2
22.1'-25'	0.4
25.1'-	0.6

12 March 1956

Depth	Correction
0'-16'	0.0
16.1'-21'	0.2
21.1'-	0.4

19 March 1956

0'-19'	0.0
19.1'-22'	0.2
22.1'-	0.4

29 March 1956

Depth	Correction
0'-30'	0.0
30.1'-35'	-0.2
35.1'-	-0.4

The corrections for the remaining days were averaged for both the Edo fathometer and the 80[illegible]j. These corrections were zero for all depths and this was considered the standard for the fathometers.

PROJECT 13850

BAR CHECKS
SHEET 1156

DATE	CORRECTIONS 6'	12'	18'	24'	30'	36'	42'	FATH.	REMARKS
1/18/56	-0.6	-0.3	0.0					Edo 255	*
20/56	0.0	0.2	0.2	0.2	0.0			#201	
25/56	-0.2	0.2	1.0					"	*
31/56	0.0	0.0	-0.2	0.0				"	
12/2/56	0.0	0.0	0.0	0.0	0.0			"	
2/6/56	0.0	0.0	0.0					808J #77	
15/56	0.0	0.0	0.0	0.0	0.0	0.0		Edo 255 #201	
21/56	0.0	0.0	0.0					"	
22/56	0.0	0.0	-0.25					"	
3/1/56	0.0	0.0	0.15	0.4	0.6			"	*
2/56	-0.1	0.0	0.0					"	
5/56	0.0	0.0	0.0	0.45	0.6			"	*
6/56	-0.2	0.05	0.1	0.05				"	
12/56	0.0	0.0	0.15	0.4	0.4			"	*
13/56	0.0	0.0	0.0	0.1				"	
14/56	0.0	-0.1						"	
15/56	0.0	0.0	0.0	0.1	0.0			"	
19/56	0.0	0.0	0.1	0.4	0.4			"	*
20/56	0.0	0.0	0.0	0.0				"	
21/56	0.0	0.0	0.0					"	
22/56	0.0	0.0	0.0	0.0	0.0			"	
28/56	0.0	-0.1	-0.1	0.0				"	
29/56	0.1	-0.1	0.0	0.1	-0.1	-0.4		"	*
				SHEET 2156					
11/28/56	0.0	0.0	-0.1					Edo 255 #201	
29/56	0.0	0.0	0.0	0.0				"	
12/3/56	0.0	0.0	0.0	0.0	0.0			"	
4/56	0.0	0.0	0.0	0.0	-0.3			"	
1/14/57	0.0	0.0	0.0	0.0				"	
22/57	0;0	-0.1	-0.8	-1.0	-1.0			"	Unreliable, sea rough
				SHEET	1956				
12/6/56	0.0	0.0	0.0	0.0	0.0	0.0		Edo 255 #201	
2/12/57	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Averages for sheets 1156, 1956, & 2156 for Edo 255(Omitting bar checks whose correction curves are drawn separately.)

TOTALS	-0.3	0.1	-0.3	0.45	-0.3	0.0	
NO. OF BAR CHECKS	21						
MEAN	0.0	0.0	0.0	0.0	010	0.0	

* Curves drawn separately

TIDAL NOTE TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8364 (ECFP 1156)

Tidal data for reduction of soundings were obtained from portable automatic tide gages maintained at Edisto Beach, Harbor River Bridge, and Lucy Point Creek as well as tide staffs at Village Creek and Coffin Point Creek.

TIDE GAGE	RANGE OF TIDE	LAT & LONG	MLW ON STAFF
Edisto Beach	9.0'	32° 30.1' 80° 17.8'	3.4' Off sheet
Harbor River ~~Bridge~~ Entrance	9.2'	32° 24.2' 80° 27.1'	2.5'
Lucy Point Creek	9.0'	32° 27.0' 80° 36.4'	2.1' Off sheet

STAFF	
Village Creek	32° 25.75' 80° 29.70'
Coffin Point ~~Creek~~	32° 26.19' 80° 28.22'

REFER HARBOR RIVER TO:

	ADD TIME	ADD HEIGHT
Coffin Point	0 Min.	0.0 feet
Village Creek	20 Min.	0.5 feet
Lucy Point Creek	1 Hour	0.7 feet
Edisto Beach	40 Min.	0.2 feet

Reference is made to the Director's letters No. 36-177-15d dated 24 April 1956, 36-130-15d dated 21 March 1956, and 36-78-15d dated 14 February 1956.

ATTACHMENT 5

APPROVAL SHEET BOAT SHEET ECFP 1156

This is a basic survey and is approved as adequate for revision of charts, and complies with instructions. The area of this sheet was covered by the survey party enroute from anchorage to sheet ECFP 1256. The general bottom characteristic is shifting sand that changes with each storm at the east end, note the attached copy of the advance report of dangers to be charged. No futher survey is necessary for the area covered.

Marvin T. Paulson
Chief of Party

Form 786
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
(Ed. 1948)

Dupl.
Chart letter
268(56)

ADVANCE REPORT OF DANGERS TO BE CHARTED

Survey (Sheet) No. ECFP 1156 Datum MLW Locality St. Helena Sound State South Carolina Date 4/11/56

I recommend that the following dangers to navigation be charted. The positions given have been checked after listing. Checked by Ltjg D.L.Campbell R.A.Lewis

Marvin T. Paulson *Chief of Party.*

TYPE OF DANGER	DEPTH (FEET) *		LATITUDE AND LONGITUDE		FROM CHARTED OBJECT OR NATURAL FEATURE †			CHART USED ‡		DATE OF LOCATION	REMARKS
	FATHOMETER	LEADLINE	° '	SECONDS (IN METERS)	TRUE BEARING	DISTANCE (METERS)	OBJECT OR FEATURE	No.	PRINT DATE		
Shoal	3.0		32 25 80 26	1360.0 1100.0	190	450.0	Egg Passage Day Beacon A4 , 1955	793	6/1/53	3/21/56	Controling depth see sketch
Shoal	2.0		32 25 80 25	100.0 1540.00	089	1080.0	Egg Passage Day Beacon A11, 1955	793	6/1/53	3/7/56	ditto

(Attached is sketch (tracing) of boat sheet showing representative soundings with the 6 foot curve drawn thereon. The area has been developed.)

* Record least depth over danger reduced to plane of reference of charted soundings, using observed tides, if available.
† Record location both by geographic position and by true bearing with distance from object or natural feature shown on chart.
‡ Use largest-scale chart and note print date given in lower left corner of chart.

NOTE.—This form to be used during the season for prompt reports of unc d dangers. If reports have been sent by wire, fill (is form and mail with confirmations. Enter dates of wires under "Remarks." Copies of reports on this fo. should be retained and submitted with the descriptive port.

554171 U. S. GOVERNMENT PRINTING OFFICE

NORFOLK PROCESSING OFFICE
FLOATING AIDS TO NAVIGATION

H-8364

BUOY	LATITUDE	LONGITUDE	DEPTH	POS. NO.	DATE
St. Helena Sound Buoy 12	32-28.20	80-26.79	18'	168-169u	3-12-56

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8364 (ECFP-1156)

GENERAL

This appears to be an excellent basic survey and no unusual conditions were encountered during the smooth plot. Agreement of soundings at crossing s are considered good in view of the irregular and changeable character of the bottom.

DISCREPANCIES

Lat. 32-24.7'; Long. 80-26.6' Soundings between positions 94 & 95ea were not smooth plotted. Position 95ea is a swinger.

Lat. 32-27.8'; Long. 80-32.9' Soundings between positions 12 & 13ba were not plotted due to radical course changes between positions.

Norfolk, Va.
17 August 1959

Respectfully submitted,

Hugh L. Proffitt
Cartographer

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8364

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	
South Carolina			(title)						BGN	1
St. Helena Sound			"							2
Harbor Island										3
Harbor River			(tide station)							4
Egg Bank										5
Morgan River										6
Morgan Island										7
Coffin Creek										8
Village Creek			(tide station)						BGN	9
Edding Creek									"	10
Jenkins Creek										11
Parrot Creek										12
Coosaw Island										13
			Names approved 9-25-59							14
			L. Heck							15
Tide stations:			this name has never been used on							16
Coffin Point			the charts. OK to identify tide							17
Off sheet:			station, but should not be charted							18
Edisto Beach										19
Lucy Point Creek										20
										21
										22
										23
										24
										25
										26
										27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8364

Records accompanying survey:

Boat sheets 1; sounding vols. 14; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 14-Envelopes

special reports, etc. 1-Smooth sheet and 1-Descriptive report.

.....

The following statistics will be submitted with the cartographer's report on the sheet:		Ver.	Rev.
Number of positions on sheet		2433	
Number of positions checked		187	
Number of positions revised		4	5
Number of soundings revised (refers to depth only)		77	8
Number of soundings erroneously spaced		25	8
Number of signals erroneously plotted or transferred		1	
Topographic details	Time	16	1
Junctions	Time	4	10*
Verification of soundings from graphic record	Time	24	3

Verification by John W. Knoop Total time** 50.0 hrs Date 2-10-61

** additional Corr. 24 hrs.

Reviewed by Ernest E. Thomas Time .75 Date 7/7/61

* Investigation of differences in depths at junction with unverified survey H-8365 (1956-57) because of horizontal control problems noted on that survey.

M-2232-1

OFFICE OF CARTOGRAHY

REVIEW SECTION-NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8364 FIELD NO. ECFP 11-56

South Carlona, St. Helena Sound, Morgan River

SURVEYED: Jan. 56 to Mar. 1956 SCALE: 1:10,000

PROJECT NO. 13850

SOUNDINGS: 808 & EDO Depth Recorders
Sounding Pole
Leadline

CONTROL: Sextant fixes on shore objects

Chief of Party----------M. T. Paulson
Surveyed by----------C. W. Tupper; R. A. Lewis
D. L. Campbell
Protracted by----------F. Bean
Soundings plotted by----------F. Bean
Verified and inked by----------J. W. Knoop
Reviewed by----------E. E. Thomas DATE 7-7-62
Inspected by----------R. H. Caratens

1. Description of the area

This survey is located in the vicinity of St. Helena Sound and covers a portion of Morgan River and the entrance to Harbor River.

At the river entrances the channels are bordered by extensive shoals which uncover in part. Sand ridges contribute to the bottom irregularity in the Morgan River channel. River and tidal currents provide a trasient character to sand and mud bottom features.

2. Control and Shoreline

The origin of the control is adequately described in the Descriptive Report.

The shoreline originates with the reviewed photogrammetric surveys T-10300, T-10301, T-10302, T-10308 and T-10309 of 1955.

The low-water curve from the contemporary photogrammetric surveys extends into present depths of 1-2 ft. in some areas. Where this occurs and the present depths do not delineate the actual curve, and approximate curve is indicated by a dashed orange line.

3. Hydrography

a. Depths at crossings are in good agreement.

b. The usual depth curves are adequately delineated. Many portions of the low-water curve originate with the contemporary photogrammetric surveys.

The 3-ft. curve was added to accentuate the many shoal features which characterize portions of the bottom.

c. The development of the bottom configuration and the investigation of least depths is considered adequate.

4. Condition of Survey

The field plotting, sounding records, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual.

5. Junctions

The junction with the unverified surveys H-8365 (1956-57) on the east and H-8477 (1956-57) on the southeast will be discussed in the reviews of those surveys. The remaining project surveys to the north, west and south have not been completed.

6. Comparison with prior surveys

A. H-620 (1856-57)1:15,000
H-649 (1853-57)1:40,000
H-744 (1860)1:10,000
H-1155a (1872)1:20,000

These prior surveys have been considered in the reviews of the 1934 surveys listed below and a comparison with the present survey is, therefore omitted.

B. H-5565 (1934)1:10,000
H-5718 (1934)1:10,000
H-5721 (1934)1:10,000

These surveys comprise the prior coverage of the area for comparison with the present survey. The comparison reveals generally minor changes in the Morgan River upstream from the entrance. In the vicinity of the entrance numerous changes have occurred.

The following differences with present depths are specifically noted:

a. Shoal areas

1. The extensive shoals adjacent to the Morgan River entrance, portions of which previously uncovered at MLW on H-5565 (1934), have eroded to depths from 1/2 to 3 ft. on the present survey.

2. The high-water features at lat. 32°26.1', long. 80° 26.4', and lat. 32°25.5', long. 80°26.8' on H-5565 (1934) have eroded and at lat. 32°26.11', long. 80°26.53' depths as great as 3-ft. exist on the present survey. In this immediate vicinity a comparison between the present and prior depths within the 6-18 ft. depths reveals both scouring and fill and is illustrative of the general transient character of the bottom.

3. The 1-ft. sounding from H-5565 (1934) in lat. 32°26.9', long. 80°26.65' is considered to have eroded to present depths of 6-9 ft. and should be disregarded. A 2-ft. sounding falls 250 meters northwest on the present survey.

4. The low-water bar from the present survey in lat. 32° 27.05', long. 80°26.7' falls in prior depths of 2 to 4 ft. on H-5565 (1934).

5. The 7-to 12-ft shoal charted in the vicinity of lat. 32° 28.15', long. 80°26.52' from H-5565 (1934) has eroded to depths of 14 to 15 ft. on the present survey.

b. Channel areas

1. The natural channel leading to the Coosaw River entrance is being constricted in the vicinity of lat. 32°28.02', long. 80°26.9'. Here 26-to 30-ft. depths from the present survey are found where prior depths of 36 to 39 ft. existed in 1934 (H-5565). Irregularity of the bottom configuration, on the present survey in this area is caused by sand ridges.

2. The low-water bar on the present survey at lat. 32° 27.45', long. 80°31.38' to 80°32.06', has remained practically unchanged in outline, but has shifted about 50 meters southward from the 1934 position (H-5718).

3. The 9-ft. sounding on the present survey in lat. 32° 27.49', long. 80°32.81' is indicative of sand ridges in this vicinity and accentuates the protusion of the shoal area into the natural channel. The general depths from the prior survey of 1934 (H-5718) for this common area were 14 to 17 ft.

4. The general depths of the natural channel of Morgan River have shoaled since 1934(H-5718 and H-5565) by as much as 2 to 5 ft., whereas the tributaries have had little or no significant changes.

The present survey is considered adequate to supersedes these prior surveys in the common area.

7. Comparison with chart 793 (Latest print date 3-7-60)
794 (Latest print date 4-21-58)

A. Hydrography

1. The charted hydrography for chart 793 originates with the previously discussed prior surveys supplemented by the partial application of the unverified smooth sheet and boat sheet information in Chart Letter 268 (1956).

2. The charted hydrography on chart 794 originates with the previously discussed prior surveys only.

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

B. Aids to navigation

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

8. Compliance with instructions

The survey adequately complies with the project instructions.

9. Additional field work

The survey is considered to be a good basic survey and no additional field work is necessary.

Examined and Approved:

Marvin A. Sanborn
Chief,
Nautical Chart Division

J. T. Harman
Assistant Director
Office of Cartography

John O. Shelton
Projects Officer,
Operations Division

Max B. Kastens
Assistant Director,
Office of Oceanography

RHC.

Form 712
(11-30-55)

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens 7 October 1959

Plane of reference approved in
14 volumes of sounding records for

HYDROGRAPHIC SHEET 8364

Locality St. Helena Sound, South Carolina

Chief of Party: M. T. Paulson in 1956

Plane of reference is mean low water, reading

2.5 ft. on tide staff at Harbor River Entrance

15.4 ft. below B.M. 2 (1956)

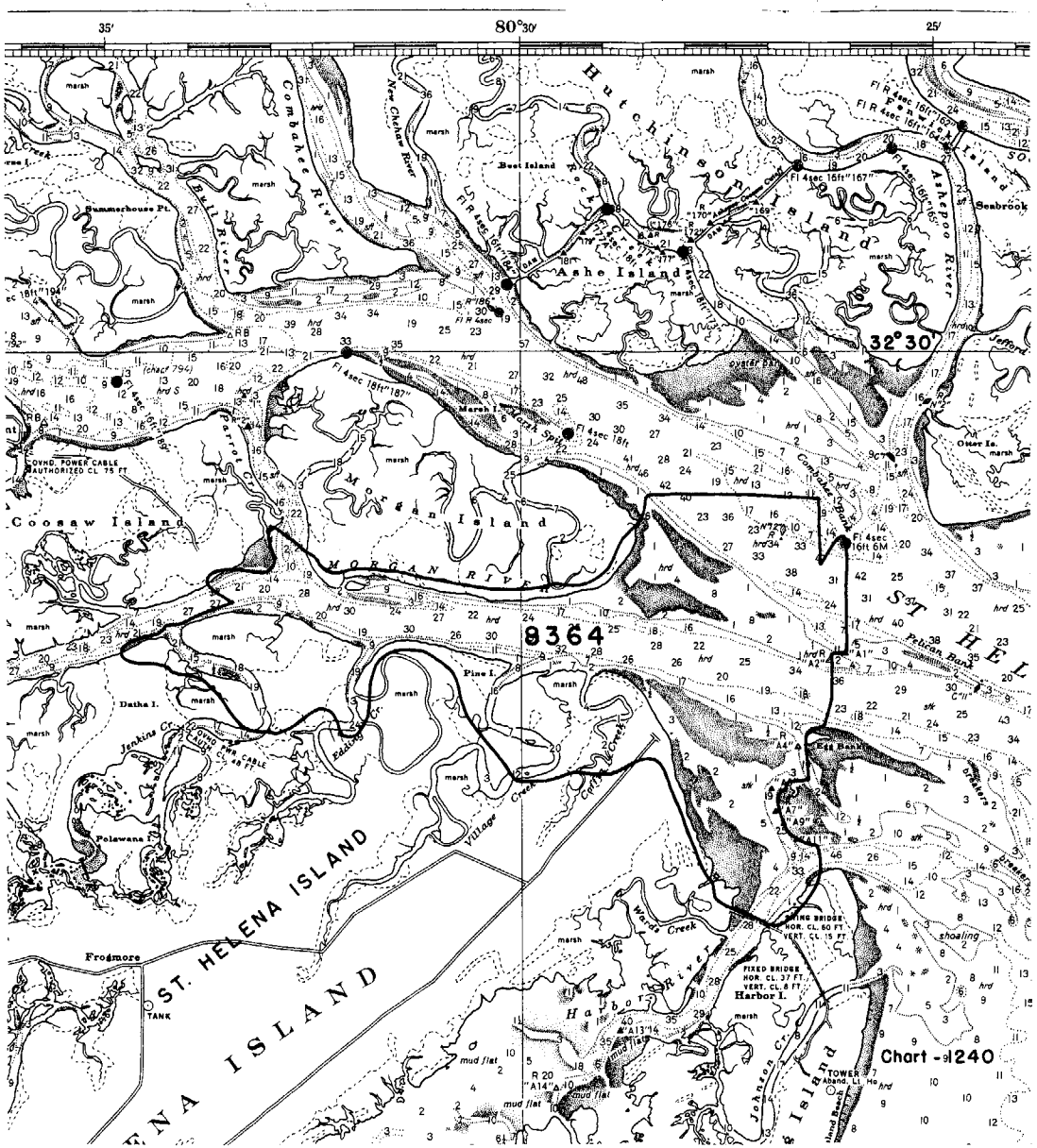
Height of mean high water above plane of reference is 6.1 ft.

Condition of records satisfactory except as noted below:

William Shofnos
Signature

Chief, Tides Branch

Comm-DC 34330



35'
80°30'
25'
Hutchinson Island
Combahee River
New Chehaw River
Bull River
Summerhouse Pt.
Ashe Island
Ashepoo River
Seabrook
32°30'
Morgan Island
Coosaw Island
MORGAN RIVER
8364
Pine I.
Datha I.
Polawana I.
Jenkins Cr.
Village Creek
Coffee Creek
Egg Bank
Pelican Bank
Otter Is.
Harbor I.
Harbor River
Wards Creek
Johnson Cr.
Frogmore
TANK
ST. HELENA ISLAND
ENA ISLAND
Chart - 1240

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8364

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8/26/59	838	HWB	Before ~~After~~ Verification and Review Partially applied.
9/3/59	793	R.K.D.	Before ~~After~~ Verification and Review Partially applied.
7-18-61	794	R. E. Elkins	Before ~~After~~ Verification and Review Partly applied ten sdgs revised.
~~6-16-62~~			
6-16-62	793	HMQuimby	~~Before~~ After Verification and Review Fully applied. Hydro and Topo - shoreline
12/13/63	1240	O. Svendsen	~~Before~~ After Verification and Review Fully applied thru Chart 793 Jenkins Cr. 32°27' 80°34' sdgs. Scaled from smooth sheet
3/17/64	794	F.B. Powers	~~Before~~ After Verification and Review Fully applied
5-8-64	837-SC	A. J. Hoffman	~~Before~~ After Verification and Review Fully applied thru Ch 794
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

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.

Ch. 838 - HWB - 26/59 - Partially Applied - Critical Cor. only

Cut 793 RKD 9-3-59 Part appl

Cut 1240 G.A.K. 11-4-59 Part applied - Before V&R ✓ RKD