

8818

Diag. Cht. No. 1238-2.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. WH-20-1-64 Office No. H-8818

LOCALITY

State South Carolina

General locality Cape Romain

Locality _____

19_64

CHIEF OF PARTY

H. R. Lippold Jr.

LIBRARY & ARCHIVES

DATE DEC 22 1965

8818

HYDROGRAPHIC TITLE SHEET

H-8818

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.

WH-20-1-64

State South Carolina

General locality Cape Romain

Locality _____

Scale 1:20,000 Date of survey 1964

Instructions dated 27 December, 1963 Project No. OPR-436

Vessel WHITING

Chief of party LCDR H. R. Lippold, Jr.

Surveyed by ship's officers

Soundings taken by echo sounder, ~~tripod~~ pole _____

Graphic record scaled by ship's personnel

Graphic record checked by " "

Protracted by Dorothy C. Calland (Norfolk Hydro Branch)

Soundings penciled by Dorothy C. Calland " " "

Soundings in ~~fathoms~~ feet at MLW ~~depth~~ _____

REMARKS: _____

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-8818
FIELD No. WH-20-1-64

Cape Romain, South Carolina

Scale 1:20,000
Ship WHITING

H. R. LIPPOLD JR.
Commanding 1964

Surveyed By:

LCDR H. R. Lippold Jr.
LT R. M. Buffington
LT J. Collins
LTJG J. W. Drosendahl
LTJG D. G. Hickerson
ENS J. D. Boon

A. PROJECT

The authority for this survey is contained in the instructions for OPR-436, Coast of South Carolina and Georgia, dated 27 December 1963.

B. AREA SURVEYED

The area surveyed is along the east coast of South Carolina from Cape Romain northward to about 2 miles south of Winyah Bay South jetty from the shoreline seaward to approximately the 18 foot curve. For area surveyed see attached section of C&GS Chart 1238.

The survey by this party commenced 23 March 1964 and terminated 18 May 1964.

Junction was made with prior surveys H-4522, 1:20,000, 1925; H-6710, 1:40,000, 1941 on the north; H-7085, 1:40,000, 1945-46 on the east. Junction was also made with contemporary survey WH-20-2-64 on the south.

C. SOUNDING VESSELS

The WHITINGs two 26' survey launches and a 17 foot Boston Whaler were used during this survey. A blue lower-case day letter was used by launch #1 while launch #2 had a red lower-case day letter and the skiff a green lower-case day letter.

D. SOUNDING EQUIPMENT

All soundings obtained by the launches were taken by echo sounders of the Raytheon type DE-723. Launch #1 had #249 aboard while launch #2 used #251. Those soundings obtained by the skiff were by means of sounding pole. Velocity corrections were derived from bar checks taken daily.

E. SMOOTH SHEET

The smooth sheet projection and hiran curves were drawn by the Washington Office. The smooth sheet will be transferred to the Norfolk Processing Office for plotting.

by Norfolk Branch

F. CONTROL

Hydrography was controlled in part by visual three-point fixes and the remainder by Hiran. All signals were located photogrammetrically from radial plotting on manuscripts T-12278 and T-12275.

G. SHORELINE

The shoreline was transferred to the boat sheet from blue-line manuscript T-12278 and has been field verified or corrected by delineating areas which are bare at low water. *Smooth sheet shoreline from T-12278, T-12275 & T-6231*

part used in this survey was corrected on recent photos

H. CROSSLINES

Crosslines were run to the extent of about seven percent of the regular scheme of sounding lines with good agreement throughout the survey.

I. JUNCTIONS

The junctions made with H-4522 and H-7085 agreed within one foot as did the junction made with contemporary survey WH-20-2-64.

J. COMPARISON WITH PRIOR SURVEYS

In general, there is good agreement with prior surveys in the deeper water but considerable disagreement inshore. No detailed investigation was made since this area is obviously changing frequently due to the flow of water and silt from the North and South Santee Rivers.

Concerning the pre-survey review, the results may be described as follows:

1. Item 4 - The 6ft sounding charted at Lat $33^{\circ} 09.10'N$, Long $79^{\circ} 11.6'W$ did not exist after our survey, hence it has been disproven. *Smooth sheet shows 9 ft. sounding falls between lines run by launch. No development work. Sound cone would not cover area.*

2. Item 5 - The two piles charted near the entrance to the South Santee River in aprx. Lat $33^{\circ} 07.5'N$, Long $79^{\circ} 16.4'W$ no longer exist.

K COMPARISON WITH THE CHART

Comparison with G&S Chart 1238 shows good agreement except in inshore areas which have shoaled considerably. *some areas have deepened -*

L. ADEQUACY OF SURVEY

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

M. AIDS TO NAVIGATION

There are no aids to navigation on this sheet.

N. STATISTICS

<u>Vessel</u>	<u>Number of Positions</u>	<u>Nautical Miles Sounding Lines</u>
Launch #1	1143	204.2
Launch #2	1465	273.5
Skiff	123	12.0
	<u>2731</u>	
Total Area Surveyed -----		
Number of bottom samples -----		27
Tide Stations -----		2
Current Stations -----		2

Respectfully submitted,

D. Hickerson
LTJG, USCGS

TIDE NOTE

Both a Bubbler Gage at Cedar Island and a portable-automatic gage at Georgetown L.H. were installed using $75^{\circ}W$ (ZD +5) as the time meridian. The Bubbler gage located at $33^{\circ} 07.20'N$, $79^{\circ} 16.30'W$ was used as the basic control with the data obtained from the Georgetown L.H. gage applied where no record was available from the Bubbler gage.

The staff zero for the Bubbler gage was 1.8 with no time correction necessary. A factor of 0.9H was used as the staff MLW for the Georgetown L.H. gage in addition to the fact that the tide at Georgetown Lighthouse is 20 minutes later than at Cedar Island.

Both gages were set 1.0 foot above the staff leading; therefore, the staff MLW plus 1.0 ft. should be subtracted from all heights recorded on the Mariagrams.

ABSTRACT OF VELOCITY CORRECTIONS
 OPR 436 H-8818 (WH-20-1-64)

LAUNCH #1

date	Depth Up to	Tablet #	Corr'n
Bgn Season thru 9 April	6.2	1	-0.6
	7.9		-0.4
	10.0		-0.2
	30 26.0		0.0
10 Apr - 1 May	6.0	2	-0.6
	7.2		-0.4
	8.9		-0.2
	11.5		0.0
	19.9		+0.2
	24.5		+0.4
	50.0 30.0		+0.6
2 May - End Season	6.0	3	-0.6
	7.2		-0.4
	8.2		-0.2
	9.9		0.0
	14.7		+0.2
	21.4		+0.4
	50.0 45.0		+0.6

LAUNCH #2

Bgn Season thru 9 April	6.1	4	-0.6
	7.3		-0.4
	8.8		-0.2
	19.9		0.0
	23.5		+0.2
	36.5		+0.4
24 Apr - End of Season	6.2	5	-0.6
	7.2		-0.4
	8.2		-0.2
	9.7		0.0
	14.0		+0.2
	20.8		+0.4
	50.0 45.0		+0.6

ABSTRACT OF HIRAN CORRECTIONS
 OPR-436 H-8818 (WH-20-1-64)

	Station MAIN		Station DELTA	
	Corr'n	Distance	Corr'n	Distance
Launch #1	-.010	0.0 - 3.4	+.020	0.0 - 1.4
	-.015	3.4 - 5.6	+.015	1.4 - 1.8
	-.020	5.6 - 9.6	+.010	1.8 - 3.0
	-.015	9.6 - 11.6	+.005	3.0 - 4.3
	-.010	11.6 - ---	.000	4.3 - 5.7
			-.005	5.7 - 7.0
		-.010	7.0 - 8.4	
		-.015	8.4 - ---	
Launch #2	+.020	0.0 - 2.8	25 Mar - 28 Apr	
	+.015	2.8 - 4.3	+.005	0.0 - 4.19
	+.010	4.3 - 5.8	+.010	4.2 - 8.39
	+.005	5.8 - 7.2	+.015	8.4 - 12.5
	.000	7.2 - 8.7	29 Apr - 12 May	
	-.005	8.7 - 10.1	+.015	1.2 - 5.0
	-.010	10.1 - 11.6	+.020	5.0 - 8.15
	-.015	11.6 - 13.1	+.025	8.16 - 12.3
			13 May - 18 May	
			+.020	0.0 - 2.19
		+.025	2.0 - 5.6	
		+.030	5.6 - 8.9	
		+.035	8.9 - 12.3	

SETTLEMENT & SQUAT CORRECTION
(Launches Only)

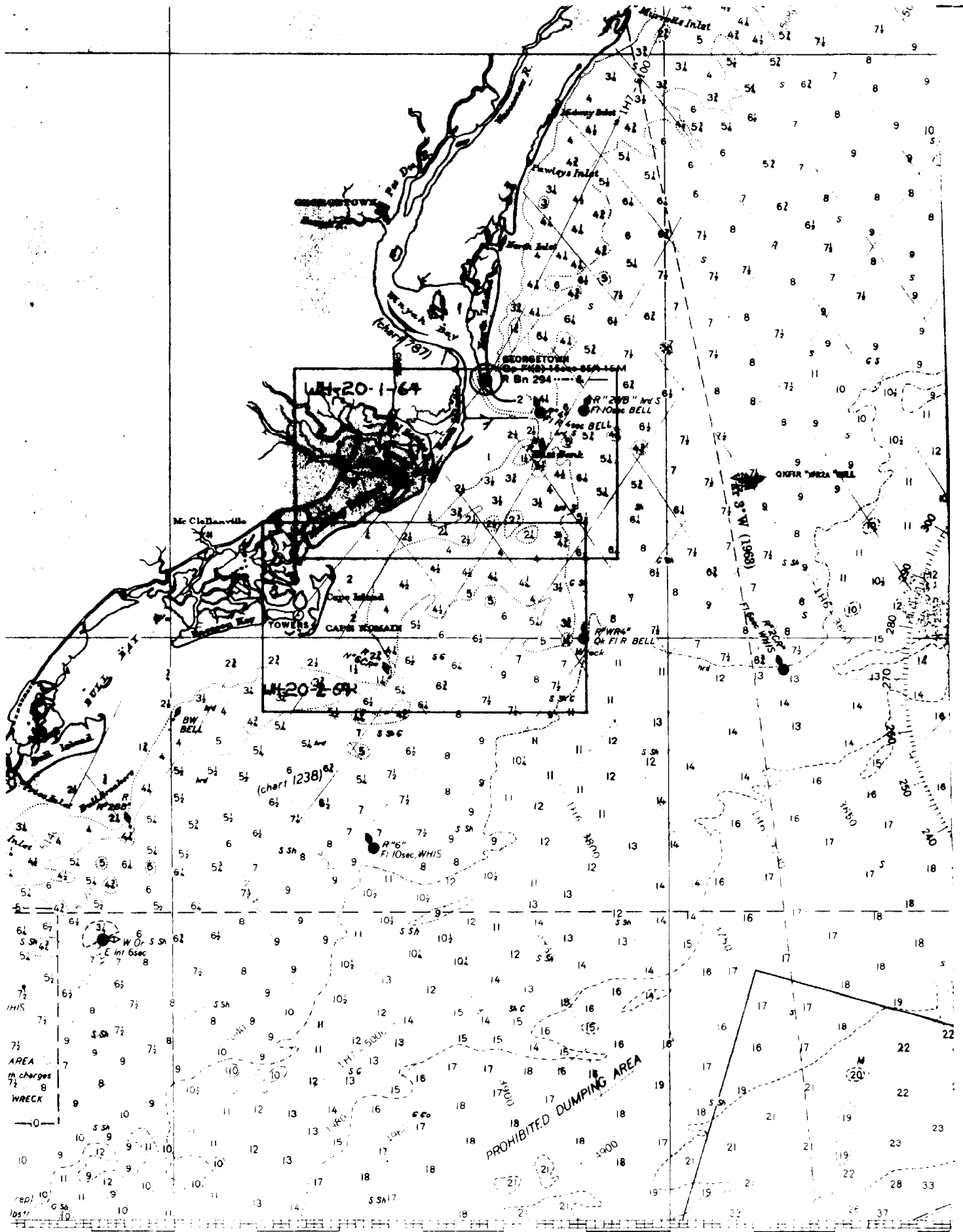
Speed (RPM)	Correction (Feet)
0 - 1000	0.0
1000 - 2400	+0.2
2400 - ----	0.0

LIST OF SIGNALS

NAME USED

ORIGIN OF STATION

X ABE	T 12278
ART <i>Not used</i>	? <i>Not used</i>
BAT	T 12278
Δ BLACK or ACK	BLACK 2, 1963 T-12278
✓ BUS	T 12278 T-12275
Δ CANE or CAN	CANE, 1933
✓ CAP	T 12278
✓ CAT	T 12278 T-12275
Δ DEL or DELTA	DELTA 2, 1963
✓ DOG	T 12278
✓ DON	T 12278 T-12275
EAT (H) <i>Vol. 11 pp. 35-36</i>	T
✓ EGO	T 12278
✓ FEZ	T 12278 T-12275
✓ FOX	T 12278
✓ GAL	T -12275
✓ GAS	T 12278
Δ GEO <i>Falko's sheet</i>	GEORGETOWN L.H. 1925
✓ HOP	T 12278
✓ HUG	T 12275
✓ ICE	T 12275
✓ IDA	T 12278
✓ JOE	T 12278
✓ JUG	T 12275
✓ KEY	T 12278
✓ KID	T 12275
✓ LEG	T 12275
✓ LEO	T 12278
✓ MAG	T 12278
✓ MAW	T 12275
✓ NIX	T 12278
✓ OAK	T 12278
Δ PAR	PAR, 1934
✓ PEG	T 12278
✓ QUO	T 12278
✓ RAG	T 12278 T-12275
✓ SOX	T 12278
✓ TAP	T 12278
✓ USE	T 12278



NORFOLK HYDROGRAPHIC PROCESSING BRANCH
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8818 (WH 20-1-64)

GENERAL

This appears to be an excellent basic survey. Soundings at crossings are considered to be in good agreement in this exposed area of irregular and changeable bottom.

CHART COMPARISON

The more significant changes are as follows:

			<u>CHART</u>	<u>H-8818</u>
Lat. 33-09.10'	Long. 79-10.22'		6'	9'
" 06.70	" 14.40		2	9 - 12
" 06.55	" 14.50		5	11
" 06.55	" 14.90		1½	11
" 06.70	" 14.70		4	8

DISCREPANCIES

Lat. 33-08.5 Long. 79-14.5 The 4' sounding on position 25s(red) appears to be displaced. In addition, soundings between 25 and 26s do not agree at crossing with 89 to 90p(red).

Respectfully submitted,

Hugh L. Proffitt
Hugh L. Proffitt
Carto-Tech

Norfolk, Va.
Dec. 14, 1965

TIDE NOTE FOR HYDROGRAPHIC SHEET

August 18, 1966

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
14 volumes of sounding records for

HYDROGRAPHIC SHEET 8818

Locality: Cape Romain, South Carolina

Chief of Party: H. R. Lippold Jr. (1964)

Plane of reference is mean low water

Tide Station Used (Form C&GS-681):

Georgetown Lighthouse, South Carolina
Cedar Island Point, South Carolina

Height of Mean High Water above Plane of Reference is as follows:

Georgetown Lighthouse	4.0 feet
Cedar Island Point	4.1 feet

Remarks


Chief, Tides and Currents Branch

GEOGRAPHIC NAMES
Survey No. H-8818

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
Alligator Crk.											1
Bird Bank Creek											2
Cane Island											3
Cape Island											4
Cape Island Pt.											5
Cedar Island											6
Murphy Island											7
North Santee Bay											8
North Santee River											9
Santee Point											10
South Island											11
South Santee Is.											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names approved 3-30-66
Frank W. Probst

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 8818

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

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

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1. FATIGUES					
VOLUMES	14					
BOXES						

T-SHEET PRINTS (List)

SPECIAL REPORTS (List)

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				
POSITIONS CHECKED				
POSITIONS REVISED				
DEPTH SOUNDINGS REVISED				
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS				
JUNCTIONS				
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS				
SPECIAL ADJUSTMENTS				
ALL OTHER WORK				
TOTALS				
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY	BEGINNING DATE		ENDING DATE	
REVIEW BY	BEGINNING DATE		ENDING DATE	

VERIFIER'S REPORT
HYDROGRAPHIC SURVEY, H-8818

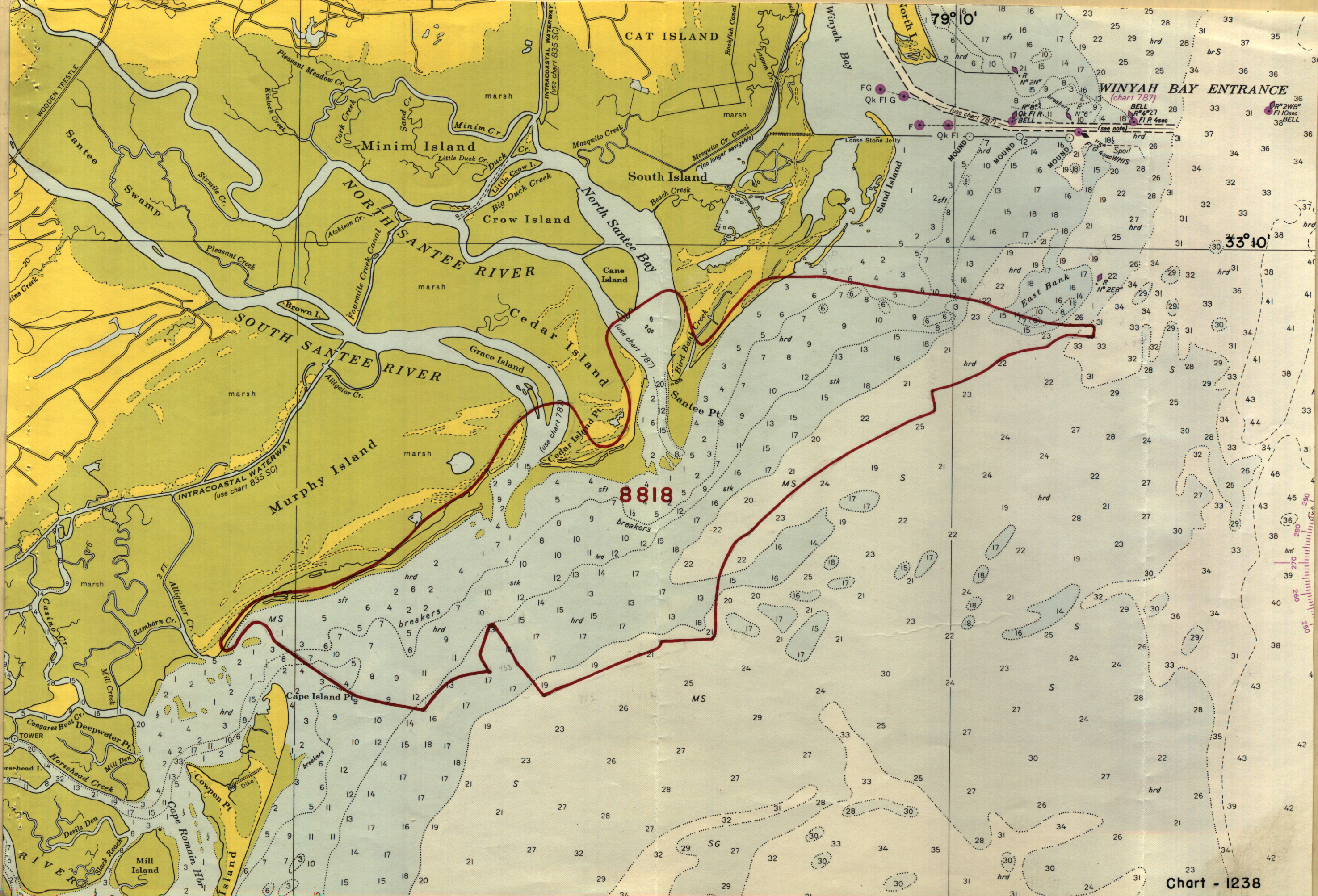
INSTRUCTIONS - This form serves to identify items of a check list in verification together with items which are separately reported to the Reviewer. The form is not to be forwarded to the Reviewer. A report, which is prepared for the Reviewer, should identify items by number and letter and will be filed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

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

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

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

Part V - PROTRACTING (Continued)	CL	R	Part VIII - AIDS TO NAVIGATION	CL	R
<p>16. The protracting was satisfactory except as follows:</p> <p>Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.</p>			<p>26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey.</p> <p>Remarks Required: -- Conflicts of any nature listed.</p>		
<p>17. The protractor has been checked within the last three months.</p> <p>Remarks Required: -- Date of check, type of protractor and number.</p>			<p>27. All floating aids listed in the Descriptive Report should be verified and checked in soft black pencil, including latitude and longitude and position identification.</p> <p>Remarks Required: -- None</p>		
<p>Part VI - SOUNDINGS</p> <p>18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings.</p> <p>Remarks Required: -- None</p>			<p>Part IX - BOAT SHEET</p> <p>28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information.</p> <p>Remarks Required: -- None</p>		
<p>19. Sounding line crossings were satisfactory except as follows:</p> <p>Remarks Required: -- Discuss adjustments.</p>			<p>29. Heights of rocks awash were correctly reduced and compared with topographic information.</p> <p>Remarks Required: -- Note excessive conflicts with topographic information.</p>		
<p>20. The spacing of soundings as recorded in the records was closely followed;</p> <p>Remarks Required: -- None</p>			<p>Part X - GENERAL</p> <p>30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2).</p> <p>Remarks Required: -- None</p>		
<p>21. The scanning, reduction, spacing, plotting of questionable soundings have been verified.</p> <p>Remarks Required: -- None</p>			<p>31. Unnecessary pencil notes have been removed from the sheet.</p> <p>Remarks Required: -- None</p>		
<p>22. The smooth plotting of soundings was satisfactory except as follows:</p> <p>Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.</p>			<p>32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet.</p> <p>Remarks Required: -- None</p>		
<p>Part VII - CURVES</p> <p>23. The depth curves have been inspected before inking.</p> <p>Remarks Required: -- By whom was the penciled curves inspected.</p>			<p>33. The bottom characteristics are adequately shown.</p> <p>Remarks Required: -- None</p>		
<p>24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following:</p> <ul style="list-style-type: none"> a. From T-Sheet in dotted black lines b. From soundings in orange c. Approximate position of sketched curve is dashed orange d. Approximate position of shoal area not sounded in black dashed <p>Remarks Required: -- None</p>			<p>Part XI - NOTES TO THE REVIEWER</p> <p>34. Unresolved discrepancies and questionable soundings.</p>		
<p>25. Depth curves were satisfactory except as follows: (This statement should not refer to the manner in which the curves were drawn).</p> <p>Remarks Required: -- Indicate areas where curves could not be drawn completely because of lack of soundings. For some inshore areas a general statement is sufficient.</p>			<p>35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.</p>		
<p>Verified by _____</p>			<p>36. Supplemental information.</p>	<p>Date _____</p>	



8818

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8818

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

- 1. Letter all information.
- 2. In "Remarks" column cross out words that do not apply.
- 3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
787	1-11-66	De Lawder	Part Before Verification Review Inspection Signed Via Drawing No.
1238	7/11/66	J.A.H. Wood	Part Before Verification Review Inspection Signed Via Drawing No. Revised 1 sdg, app thru chart 787 Pwg # 15
1110	7/11/66	J.A.H. Wood	Part Before Verification Review Inspection Signed Via Drawing No. Exam thru 1238, No corr - <i>Inshore hydro</i> <i>Reviewed without going thru chart 1238 to meet schedule.</i>
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.

Part approved before V&R 1-11-66 RKD.