9676

Diag. Cht. No. 1239-2

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. HSB-5-1-77

Office No. H-9676

LOCALITY

State ..... SOUTH CAROLINA

General Locality ... COOPER RIVER

Locality ..... GOOSE CREEK TO SNOW POINT

1977

CHIEF OF PARTY
J.O. Rolland & W.R. Daniels

LIBRARY & ARCHIVES

DATE ..... June 20, 1978

☆ U.S. GOV. PRINTING OFFICE: 1976—669-441

9676

FORM 77-28 (11-72) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-9676

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.

HSB-05-1-77

State South Carolina

General locality Cooper River

Locality Goose Creek to Snow Point

Scale 1:5,000 Date of survey 3/11/77 - 5/19/77

Instructions dated 14 February 1977 Project No. SP-AMC-1-HFP-77

Vessel HSB Launch 1260

Chief of party J. O. Rolland and W. R. Daniels

Surveyed by S. R. Iwamoto

Soundings taken by echo sounder, hand lead, pole All

Graphic record scaled by LCG, RS, GN, RT, JK, SRI

Graphic record checked by SRI, LCG

Protracted by Field Sheet - LCG Automated plot by AMC CALCOMP-616

Verification by AMC - Verification Branch J S Bradford

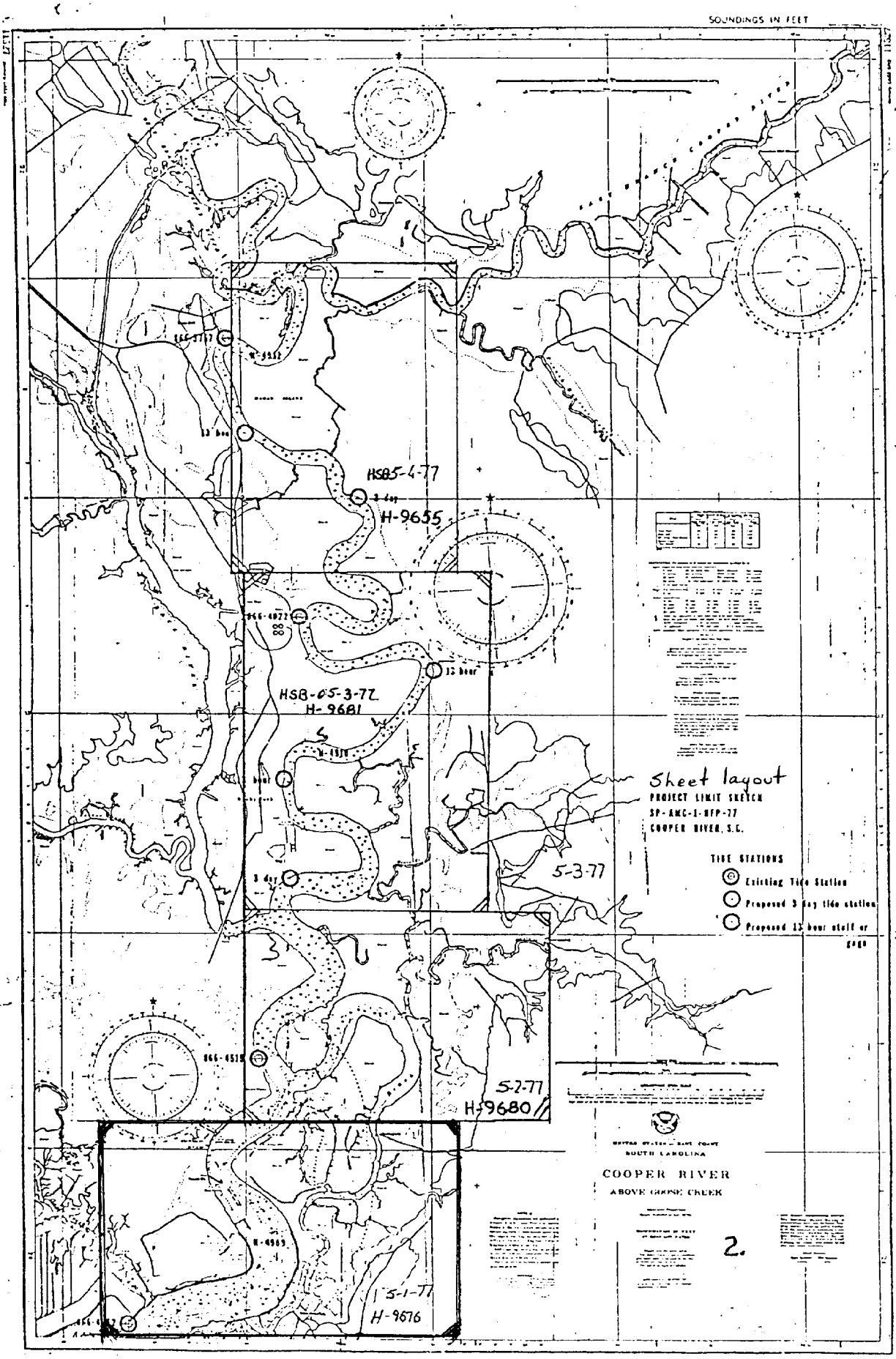
Soundings in ~~fathoms~~ feet at MLW ~~MEAN~~ May 19, 1978

REMARKS:

Approved 10/26/78

NOAA FORM 77-28 SUPERSEDES FORM C&GS-937.

U.S.G.P.O. 1972-769-565/518 REG. #5


SOUNDINGS IN FEET
HSB5-4-77
H-9655
HSB-05-3-77
H-9681
5-3-77
5-2-77
H-9680
5-1-77
H-9676
Sheet layout
PROJECT LIMIT SKETCH
SP-AMC-1-RFP-77
COOPER RIVER, S.C.
TIDE STATIONS
Existing Tide Station
Proposed 3 day tide station
Proposed 12 hour staff or gage
SOUTH CAROLINA
COOPER RIVER
ABOVE GOOSE CREEK
2.

DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SURVEY H-9676 (HSB-05-1-77)

Scale: 1:5,000 HFP-3- NOAA Launch 1260
Lt. Cdr. William R. Daniels Chief of Party

A. PROJECT

This survey was conducted in accordance with project instructions SP-AMC-1-HFP-77 dated 2/14/77, and CHANGE No. 1 dated 2/25/77.

B. AREA SURVEYED

The survey includes the main body of the Cooper River from approximately 32°54'15"N to 32°51'15"N. The shoreline is primarily marsh with mud or clay banks. Survey operations began 11 March 77 and ended 19 May 77.

C. SOUNDING VESSEL

NOAA Launch 1260 was used to obtain all soundings.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following equipment was used to obtain soundings.

723 D Fathometer	S/N 2928
ECU	S/N 37013

The ECU circuitry was modified at EED, AMC, Norfolk, VA, in order to obtain a narrow initial trace, for shallow water sounding. This modification uses a two transducer system.

A settlement and squat test was run in the Cooper River on 14 March 77. It was determined that no correction need be applied.

Instrument initial was kept at zero on line. Any variations from zero were recorded during scanning and are applied on the TC/TI Tape.

A static draft of 1.0 feet is applied via the TC/TI tape. The draft correction was not applied to soundings on the field sheet.

Velocity corrections were determined by bar checks taken when there was slack current and calm water. Velocity table 01 contains corrections for instrument error and velocity of sound. The bar check was calibrated 14 March 77 and checked 2 May 77.

E. HYDROGRAPHIC SHEETS

Field sheets were prepared by AMC, Norfolk, VA. Shoreline was transferred to the field sheets from enlargements of chart 11527. One overlay sheet was prepared at the scale of Chart 11527 (1:20,000) for

reconnaisance soundings in Goose Creek. (Pos. 675-689, 32°55'N, 79°57'W).

Data was manually logged in the field and will be sent to AMC, Norfolk, for reformatting and final processing.

F. CONTROL STATIONS

All stations were located by third-order accuracy. Records of computations and Control Report have been submitted by Operations Division, AMC, Norfolk.

G. HYDROGRAPHIC POSITION CONTROL

Sounding lines were run with Range-Azimuth control. A Wild T-1 (S/N 13014) read to the nearest minute of arc, was used to determine an azimuth. Del Norte was used for distance measures. The master unit and DMU were on the launch while the remote unit was located at the station occupied by the T-1.

The following Del Norte equipment was used:

Master 277
Remote 251 Code 76
Remote 256 Code 72
DMU 159

Del Norte was calibrated on inverse distances computed from known stations or geodimetered distance. Correctors were maintained near zero by means of the zero adjusting pot on the DMU. Correctors were recorded and averaged when necessary for each day.

At the time of this survey the two Navy tenders charted at positions 32°55'00"N, 79°55'42" and 32°55'16", 79°56'00" were moved temporarily and soundings were obtained at their charted locations.

Reconnaisance lines were run along the centerline of all creeks in the survey area which have soundings plotted on Chart 11527. The reconnaisance line in Goose Creek, Pos. 675-689 was done by "See Boat Sheet" methods. Soundings were plotted on an overlay of Chart 11527, 1:20,000.
Overlay not received in Wash. office 1/18/78 JHS

The U.S.S. Savannah was moored to the Army Depot pier at approximate position 32 54.5'N, 79 57.1'W. Leadline soundings were taken along the pier at this location. Pos. 942-953.

H. SHORELINE

Shoreline was transferred to the field sheet from enlargements of Chart 11527. No shoreline manuscripts were available at the time of this survey.

I. CROSSLINES

Crosslines were run at 10% of the regular lines. Agreement was good, generally 0.1 feet at crossings. Predicted tides were applied

incorrectly to soundings from pos. 699-761, JD 089. This data occurs at approximately 32°55'30"N, 79°56'00"W, soundings were incorrect by a minus one foot.

J. JUNCTIONS

This survey junctions at the southern limit with prior survey H-5448, 1:10,000, 27 January-27 April, 1934. The current survey is approximately 8 feet deeper than survey H-5448 along the west side of the river. This difference is a result of dredging operations which have taken place since the prior survey.

This survey junctions at the northern limit with contemporary survey HSB 5-2-77. The junction is good with agreement of soundings within 1 foot. H-9680

K. COMPARISON WITH PRIOR SURVEYS

Numbered item 11 was located on Pos. 209. Cooper River Light FLR "70" in 21 feet of water at 32°55.21'N, 79°55.74'W. Numbered item 12, an obstruction charted at approximately 32°55.59'N, 79°55.15'W, was searched for by wire drag Pos. (883-902). A 500 meter section of Yellow House Creek was covered with no obstruction being found and it is recommended that it be deleted from the chart . Also the six dolphins charted at this location have been removed and no evidence of their remains was found. It is recommended that these dolphins be deleted from the chart. concur

The 18 foot sounding charted at 32°54.32'N, 79°56.90W should be supplemented with the 18 foot shoal at 32°54.34'N, 79°56.94'W. when prior survey is superseded by present survey this will be shown as a 18' curve.

The 11 foot sounding charted at 32°54.40'N, 79°56.80'W was searched for on split lines Pos. 779-782, channel lines Pos. 48-50, 533-534, no evidence of significant shoaling was found. The least depth at this location is a 20 foot sounding Pos. 49. ✓concur

The 15 foot sounding charted at 32°54.52'N, 79°56.58'W was searched for on split lines Pos. 789 to 784. The least depth found was an 18.9 foot sounding between Pos. 158-159. this was a very faint trace on fathgr, and a leadline sounding should have been taken?

The 7 foot sounding charted at 32°54.62'N, 79°55.71'W should be replaced by a least depth of 6 foot Pos. 941, a pole sounding. ✓concur Presurvey Review Item

The shoal indicated by a dashed circle at approximately 32°54.70'N, 79°56.10'W, has since been dredged and the area is now generally 20-30 ft. deep. ✓concur

The shoal indicated by a dashed circle at approximately 32°55.3'N, 79°55.7'W was developed by a series of split arcs. There has been shoaling along the bank of the river from 200-300 meters offshore. The area adjacent to the dredged channel appears unchanged. ✓concur

The current survey ~~bears~~ pattrays little resemblance with prior survey H-5448, 1:10,000, 27 January-27 April 1934. Dredging operations have significantly altered the main channel as indicated on Chart 11527. concur

L. COMPARISON WITH THE CHART See Verifier's Rept.

The largest scale chart with which this survey was compared with is Chart 11527, 8th Edition, February 14, 1976, 1:20,000. The changes mentioned in prior surveys apply here. The limits and controlling depths indicated on the chart are adequate.

M. ADEQUACY OF SURVEY

This survey was intended to be a navigable area survey. The survey is complete and adequate to supercede prior surveys of such area.

N. AIDS TO NAVIGATION See Verifier's Rept.

Reference copy of letter to U. S. Coast Guard regarding changes in locations of bouys in the survey area at end of this report. Bouys "69" and "68" were found to be noticably off their charted position. Ranges A-B-C are correct as indicated in the Light List 1977.

O. STATISTICS

Positions	966
Miles of sndg line	86.7 miles
Square miles of hydro	1.5 sq. miles
Bottom samples	40

P. MISCELLANEOUS

Significant shoaling has occured along the west bank of the river in the vicinity of Light 70 and DBN 70A~~M~~. The shoaling occurs from 100 to 300 meters from shore and is generally characterized by depths of 5-8 feet. concur The wire drag used on Pos. 883-902 consisted of two 1'x2' trawl boards connected by 25' of drag chain and two 100' rope towing lines.

Q. RECOMMENDATIONS

No attempt was made during this survey to establish shoreline. It is recommended that photogrammetric work be done in this area.

The U. S. Army Corps of Engineers has planned dredging operations to a controlling depth of 50', in the near future for the area covered by this survey.

R. AUTOMATED DATA PROCESSING

Data was manually logged and plotted in the field.

S. REFERENCE TO REPORTS

Control Report submitted by Operations Division - AMC.

Respectfully Submitted,

Robert Lewis

for/ Stanley R. Iwamoto
LTJG, NOAA
OIC, HFP 3

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

+0.1 +0.2 0.3 0.4 0.5

CORRECTIONS IN FEET, ~~FATHOMS~~

FORM C&GS-117 (4-62) U.S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY

VELOCITY CORRECTIONS

Ship NOAA Launch 1260

~~Comdg.~~

These corrections are to be used between 11 March 1977 and 28 Apr. 1977 to the locality Cooper R.

for hydrographic surveys Nos. S-2-77 H-9676

Velocity Table 01 Curve

5 10 10 20 15 30 20 40 25 50 30 60 35 70 40 80 45 90 50 100 110 120 130 140 150 160 170 180 190

DEPTHS IN FATHOMS

45.8

(For deep water add a 0 to these figures)

NOAA 59-1T

LAUNCH 1260 SETT & SQUAT 14 Mar 77

5-1-77

	RPM		LEVEL RDG	AVE RDG @ 0 RPM	S&S Underway		TRA CORR		
1700 GMT	0		5.25						
	1000			5.25	5.33		0.08		
	0		5.25						
	1500			5.28	5.37		0.09		
	0		5.31						
*	2000			5.31	5.45		0.14 *		
	0		5.31						
*	2000			5.30	5.44		0.14 *		
	1500			5.27	5.37		0.10		
	1000			5.26	5.30		0.04		
	0		5.25						

* standard hydro speed

Atlantic Marine Center
Hydrographic Surveys Branch
439 West York Street
Norfolk, Virginia 23510

May 12, 1977 CAM11/SRI

TO: Commander
Seventh Coast Guard District

FROM: CDR John O. Rolland
Acting Chief, Hydro. Surveys Branch, CAM11

SUBJECT: Information pertinent to navigation in the Cooper River, S.C.

The following information is a result of a current National Ocean Survey hydrographic survey of the Cooper River. The project includes the Cooper River as indicated on NOS chart 11527. Survey operations will be conducted from March-June, 1977. All information is subject to final verfication after the survey is completed.

Navigation Aids:

Lighted Buoy 67; Qk.Fl.G. was found to be 100 meters north of the charted position. Charted position lat. 32°54.72'N
lon. 79°55.93'W

surveyed position lat. 32°54.78'N
(survey pos. no. 212 5-1-77) lon. 79°55.93'W

Lighted Buoy 68; Fl.P.,4s was found to be 65 meters SW of the charted position. Charted position lat. 32°54.72'N
lon. 79°55.80'W

survey position lat. 32°54.70'N
(survey pos. no. 213 5-1-77) lon. 79°55.83'N

Day beacon 79, LNM no. 40, 1976 reports DBN at lat. 32°57.45'N lon. 79°55.22'W the present survey has the position 100 meters to the west at lat. 32°57.42'N, lon. 79°55.28'W in 20ft of water. (survey pos. no. 246, 5-2-77)

Day beacon 80 reported in LNM no. 35, 1976 is gone and the following two aids have been established in this area;

Buoy 80	lat. 32°57.97'N	(survey pos. 446, 5-2-77)
	lon. 79°55.36'W	
Day beacon 82	lat. 32°58.12'N	in 8ft. of water
	lon. 79°55.53'W	(survey pos. 441, 5-2-77)

Day beacon 81 reported in LNM no. 35, 1976 was found to be numbered 83 at the time of this survey.

The following range markers are partially obscured by trees and shrubs.

Rear Range E light	E. Int. R. 6 sec 22ft.
Rear Range G light	RW

The following are significant shoal soundings which should be mentioned in LNM.

4' lat. 32°56.63'N lon. 79°55.48'W(survey pos. 596 5-2-77)

4' lat. 32°59.04'N lon. 79°55.26'W; the shoal which has developed at this location should be marked with a red even numbered day beacon.

NOAA FORM 76-40 (8-74)
Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

- [X] TO BE CHARTED
- [ ] TO BE REVISED
- [ ] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
NOAA Launch 1260 HFP-3	South Carolina	Goose Creek	4 May 77

The following objects HAVE [ ] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
SP-AMC-1-HFP-77	5-1-77	H-9676	NA 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° / //	POSITION LONGITUDE ° / //	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
QK FL R 23 ft	Channel A F.R.	32° 54 35.8145	79° 55 39.2444		Recovered 3/2/77	11527
E INT R 6 Sec 35ft	Channel A.R.R.	32° 54 37.2765	79° 55 28.1330		Recovered 3/2/77	11527
QK FL G 16 ft.	Channel B F.R.	32° 54 26.3333	79° 56 07.4185		Recovered 3/2/77	11527
E Int G 6 Sec	Channel B R.R.	32° 54 22.9601	79° 56 10.303[illegible]		Recovered 3/2/77	11527
QK FL G 25 ft.	Channel C F.R.	32° 56 00.5897	79° 56 22.[illegible]		Recovered 3/2/77	11527
E INT G 6 Sec 35 Ft.	Channel C R.R.	32° 56 05.6587	79° 56 26.549[illegible]		Recovered 3/2/77	11527
Cooper River Tower	ligthning arrester tower approximately two hundred feet high	32° 55 40.5556	79° 56 15.2430		Recovered 3/2/77	11527

24.

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	R. Stachon (AMC)	☐ PHOTO FIELD PARTY ☐ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED		FIELD ACTIVITY REPRESENTATIVE R. Stachon/ LTJG S.Iwamoto(HSB)
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

GEOGRAPHIC NAMES

5-1-77

H-9676

Goose Creek

Yellow House Creek

Yellow House LDG

Woods Point

Slack Reach

Venning LDG

Back Slack Reach

APPROVAL SHEET

Survey H-9676 (HSB-05-1-77)

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

No direct supervision was given by me during field work.

This survey is complete and adequate with no additional field work recommended.

W. R. Daniels
LCDR, NOAA
Chief, Hydrographic Surveys Branch

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

H-9676

GEOGRAPHIC NAMES

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	
CLOUTER CREEK ✓										1
COOPER RIVER ✓										2
GOOSE CREEK ✓										3
WOODS POINT ✓										4
YELLOW HOUSE CREEK ✓										5
YELLOW HOUSE LANDING ✓										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
					APPROVED					17
					Chas. E. Harrington					18
					CHIEF GEOGRAPHER - C3x8					19
					28 Aug 1978					20
										21
										22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

✡ U.S. G.P.O. 1972-769-565/516 REG.#6

NOAA FORM 77-27 (5-77) | U. S. DEPARTMENT OF COMMERCE NOAA | HYDROGRAPHIC SURVEY NUMBER

HYDROGRAPHIC SURVEY STATISTICS

H-9676

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	1
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	2

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES	1					1-Tides & misc data
CAHIERS	1 with Printouts		X			
VOLUMES	4					
BOXES	1		1-Smooth			

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*	*TOTALS*
POSITIONS ON SHEET			966
POSITIONS CHECKED	47	21	
POSITIONS REVISED		12	
SOUNDINGS REVISED		65	
SOUNDINGS ERRONEOUSLY SPACED		13	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	15		
VERIFICATION OF CONTROL		3	
VERIFICATION OF POSITIONS		38	
VERIFICATION OF SOUNDINGS		67	
COMPILATION OF SMOOTH SHEET		24	
APPLICATION OF TOPOGRAPHY		1	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		6	
COMPARISON WITH PRIOR SURVEYS & CHARTS		6	
VERIFIER'S REPORT		5	
OTHER		4	
TOTALS	15	154	169

Pre-Verification by J. Wilson, F. Saunders, S. Kelley	*Beginning Date* 07/06/77	*Ending Date* 05/15/78
Verification by J. Bradford	*Beginning Date* 05/15/78	*Ending Date* 06/04/78
Verification Check by G. Trefethen	*Time (Hours)* 5	*Date* 06/05/78
Marine Center Inspection by Hydrographic Inspection Team (AMC)	*Time (Hours)* 21	*Date* 06/06/78
Quality Control Inspection by F.P. SAULSBURY	*Time (Hours)* 53	*Date* 7/25/78
Requirements Evaluation by J Baumgartner	*Time (Hours)* 4	*Date* 10/6/78

V 6*M

REGISTRY NO. H-9676(1977)

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-9676

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 5/6/81 TIME REQUIRED_____ INITIALS PEK

REMARKS: Reference the Computer Output microfilm - Control Signals or Stations:
Disregard anomalous entries in the "Type" field; e.g. 27, 28 44 etc. These numbers are meaningless and do not adversely affect the validity of other information in the digital file

K.W.W. 5-20-81

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. H-9676 FIELD NO. HSB-5-1-77

Cooper River, Goose Creek to Snow Point

SURVEYED: March 11 through May 19, 1977

SCALE: 1:5,000 PROJECT NO.: SP-AMC-1-HFP-77

SOUNDINGS: Raytheon DE-723D
Sounding Pole
Leadline

CONTROL: Del-Norte
Range-Azimuth

Chief of Party ..... J. O. Rolland
..... W. R. Daniels
Surveyed by ..... S. R. Iwamoto
..... L. C. Gilden
..... R. Snow
Automated Plot by ..... CALCOMP-618 Plotter (AMC)
Verified and Inked by ..... J. S. Bradford JSB
May 31, 1978

1. Introduction

No unusual problems were encountered during verification. The red changes in the Descriptive Report were made by the verifier. The projection parameters have been revised and inserted in the Descriptive Report.

A telephone conversation on September 8, 1977 between CAM31 and C351 precluded the need to show reconnaissance hydrography on the smooth sheet. Reconnaissance hydrography is to be charted from survey field sheet.

2. Control and Shoreline

a. Section F of the Descriptive Report states that control accuracy was third order accomplished by Operations Division. Geodetic position of range lights was furnished by the U. S. Army Corps of Engineers and verified by Operations Division, but no record was kept on file. Because of the inability to obtain these records Cooper River Range B Front Light, Cooper River Range A Rear Light, Cooper River Range C Front Light were shown as cartographic code 254.

b. Shoreline was transferred, in brown, to the smooth sheet from an enlargement of Chart 11527. Also, a pier extension and catwalk was added in red from field sheet.

3. Hydrography

a. Depths at crossings are in good agreement.

b. The standard depth curves are adequately delineated, with the inclusion of several brown curves to delineate certain features.

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

4. Condition of Survey

The sounding records, smooth field sheet, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual, with a few exceptions:

a. The extremely fine trace on fathograms made it difficult for scanning least depths of features.

b. A list of signals and signal names was not included in the Descriptive Report.

c. The hand-plotted smooth field sheet showed a noticable difference when compared to the verified smooth sheet. By replotting random positions on the field sheet, it was determined that either poor plotting techniques or faulty plotting equipment was used.

d. One crossline was not plotted on the field sheet.

5. Junctions

An adequate junction has been effected with H-9680 (1977) to the north.

No contemporary survey joins H-9676 to the south.

6. Comparison With Prior Surveys

H-5448 (1934) 1:10,000
H-4909 (1928) 1:10,000

These prior surveys cover the majority of the area of the present survey. A comparison between the present survey and the prior surveys reveals very little similarity; however, there are scattered indications of consistant depths alongshore. The hydrographer states this is mainly caused from extensive dredging operations in the main channel.

The Descriptive Report for H-9676 was well written and adequately disposes of Presurvey Review items, both numbered and unnumbered dashed-circles, under Section K.

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

7. Comparison With Chart 11527 (8th Edition, February 14, 1976)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys, supplemented by Corps of Engineers surveys and other miscellaneous sources, and requires no further consideration.

The present survey is considered adequate to supersede the charted hydrography within the common area; however, the following information is brought to your attention:

NOAA Form 76-40 was not provided for the following landmarks and aids to navigation. Their present charting disposition will have to be ascertained by Marine Charts Division (C32).

(1) Two towers charted in the vicinity of latitude 32° 56.2', longitude 79° 56.2' were apparently located on the present survey field sheet but not described. They appear to be stations COE-WIN in latitude 32° 56' 08.24", longitude 79° 56' 18.19" and COE-WHEEL in latitude 32° 56' 16.05", longitude 79° 56' 09.31" from the list of Recovered Corps of Engineers control in the Control Report for SP-AMC-1-HFP-77. These stations are not shown on the present survey smooth sheet because of inadequate field descriptions available at the time of survey processing.

(2) The charted fixed aids to navigation (Navy maintained), FG 14 ft "A" in latitude 32° 56.12", longitude 79° 56.32' and FG 14 ft "B" in latitude 32° 56.27', longitude 79° 56.13' were not located by the present survey. Do not concur See QC Critique

(3) A tower charted in latitude 32° 55.75', longitude 79° 56.38' was not located nor described by the present survey. Do not concur See QC Critique

b. Aids to Navigation

The aids to navigation on the present survey are in agreement with their charted positions, with the exception of buoys "68" and "69". These buoys appear to have been moved for safer navigation. The present survey locates buoy "68"50 meters to

the west of charted position and buoy "69" 70 meters to the southeast of the charted position.

The hydrographer took a detached position on a large Navy maintained mooring buoy located at latitude 32° 55' 14.9", longitude 79° 55' 56.5". Chart 11527 shows a Navy tender in this area; however, at the time of the survey, this tender was not moored. Since the Navy tenders are not permanently moored, it is recommended that the mooring buoy be charted or that it be charted in addition to the Navy tender.

8. Compliance With Instructions

This survey adequately complies with the Project Instructions.

9. Additional Field Work

This is an excellent "Navigable Area Survey" and additional field work is not recommended.

APPROVAL SHEET
FOR
SURVEY H-9676

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.

B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual. Exceptions are listed in the Verifier's Report.

Date: 6/9/78

Signed: Harry R. Smith

Title: Chief, Verification Branch

Inspection Report
H-9676

Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. HIT comments regarding quality of field work, compliance with instructions, and adequacy of the survey have been incorporated within the Verifier's Report.

Examined and Approved:
Hydrographic Inspection Team
Date:

Robert A. Trauschke, CDR, NOAA
Chief, Processing Division

Absent
Charles H. Nixon, CAPT, NOAA
Chief, Operations Division

R. D. Sanocki
Technical Assistant
Processing Division

C. Douglas Mason, LT, NOAA
Chief, Electronic Data
Processing Branch

Billy J. Stephenson
Team Leader
Verification Branch

Approved/Forwarded

Robert C. Munson
RADM, NOAA
Director, Atlantic Marine Center

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

C352/FPS

July 25, 1978

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

THRU: Chief, Quality Control Branch

FROM: F. P. Saulsbury
Quality Evaluator

SUBJECT: Quality Control Report for H-9676 (1977), South Carolina, Cooper River, Goose Creek to Snow Point

A quality control inspection of H-9676 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, shoreline transfer, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data. In general, it was found to conform to the National Ocean Survey's standards and requirements except as stated in the Verifier's Report, the HIT Report, and as follows:

1. The verifier applied elevations to the dolphins in Cooper River without tide reducers. Revised elevations plus descriptions "5-ft. in diameter" were added during quality control inspection.

Elevations were added to dolphins plotted in Yellow House Creek during quality control inspection.

2. Contrary to the verifier's statement that Cooper River Pier A, Lights "A" and "B" were "not located on the present survey," notes in the sounding volume described these features to be on top of 5-foot diameter dolphins. Light List names describing these aids in latitude 32°56.13', longitude 79°56.31' and latitude 32°56.28', longitude 79°56.13', respectively, were added to the smooth sheet during quality control inspection.

3. The location of Cooper River Ammunition Pier Light was erroneously identified by the verifier as falling on a nearby dolphin, 15 meters south of the light's true position. Its correct location in latitude 32°55.68', longitude 79°56.25' was identified during quality control inspection.

The locations of some of the dolphins in the vicinity of this light, located by detached positions, are in conflict with a sketch drawn in the

sounding volume. Positions of these dolphins should be checked when photography is available.

4. The tender and the drydock, identified as a tender on the boat sheet of the present survey, charted from a miscellaneous source prior to the date of the present survey in latitude 32°55.30', longitude 79°56.00' and latitude 32°55.00', longitude 79°55.69' respectively, were not plotted on the smooth sheet because they were not in position at the time of the survey.

5. The two lightning arresting towers charted from a miscellaneous source prior to the present survey in the vicinity of latitude 32°55.70', longitude 79°56.30' were identified by the hydrographer; but no positions were obtained on the survey. Charted positions were transferred to the smooth sheet and a descriptive note added during quality control inspection.

6. The pier charted from T-5172 (1933) in latitude 32°54.33', longitude 79°55.73' was not mentioned by the hydrographer. This feature was carried forward to the smooth sheet during quality control inspection. It should be retained on the chart.

7. The pier with a boathouse at its end charted in latitude 32°56.13', longitude 79°54.60' from a miscellaneous source was verified in the survey records and is to be retained as charted.

8. The dashed line area and a pile symbol charted from a miscellaneous source prior to the present survey in latitude 32°54.39', longitude 79°57.29' is apparently superseded by subsequent construction of a catwalk as delineated in red on the present survey. New construction has altered the character of the pier, charted just south of this feature. The pier is shown in red on the present survey.

*8A
The dashed red lines in latitude 32°56.20', longitude 79°56.22' were transferred to the smooth sheet from the boat sheet during quality control inspection and apparently represent construction in the area. Survey information furnishes no adequate description.

9. The piles charted in latitude 32°56.29', longitude 79°56.11' and latitude 32°56.12', longitude 79°56.32', respectively, from a miscellaneous source, are apparently dolphins located on the present survey that fall very close to these charted positions. Delete piles and chart dolphins as shown on the present survey.

10. The piles charted in latitude 32°54.26', longitude 79°56.79' from T-5172 (1933) were not investigated on the present survey and were brought forward to the smooth sheet during quality control inspection.

11. The two piers charted from Chart Letter 2160 (1975) in the vicinity of latitude 32°54.50', longitude 79°55.53' were not investigated on the present survey and are to be retained as charted.

12. The following items charted from miscellaneous sources prior to the present survey were not investigated on the present survey:

	Latitude	Longitude
Obstruction	32°54.78'	79°55.42'
Obstructions	32°54.31'	79°56.05'
Two piles	32°54.39'	79°56.10'
Dolphin	32°55.06'	79°55.20'
Landmarks	Throughout the survey area	

13. Presurvey Review Item 11 - The position of Cooper River Light No. 70 was established by detached position on the present survey in latitude 32°55.21', longitude 79°55.73' and should be charted at this location.

14. Presurvey Review Item 12 - The area containing the six pile symbols and two annotations "Obstrs" charted in the vicinity of latitude 32°55.56' from longitude 79°55.29' to 79°54.88' was cleared by a drag and stated to be free of obstructions on the present survey. These items should be deleted from the chart.

15. Cooper River dredged channel has undergone some shoaling along its edges.

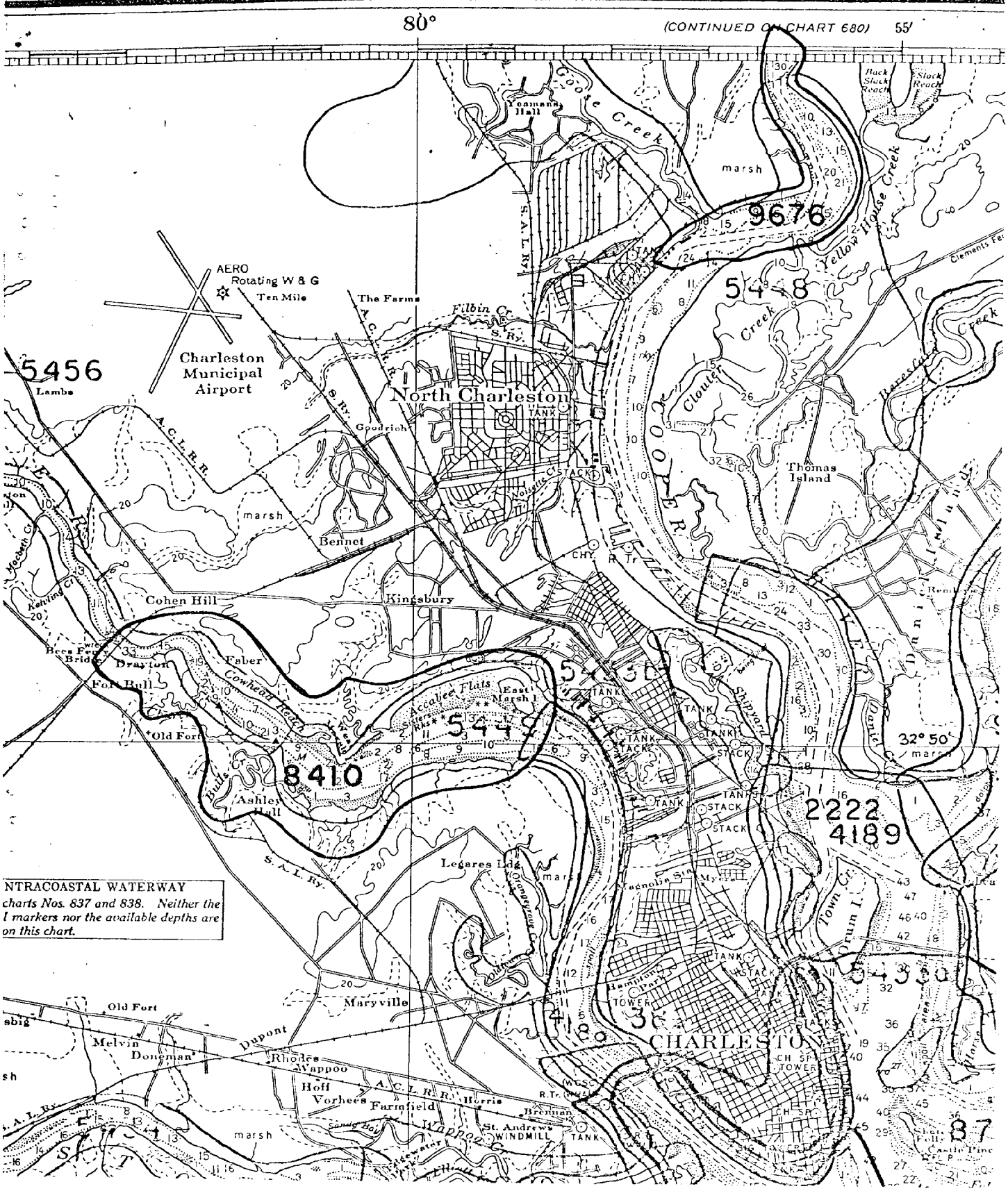
16. The junction on the north with H-9680 (1977) will be addressed in the inspection of that survey.

17. Reconnaissance hydrography in Yellow House Creek and Clouter Creek is not plotted on the smooth sheet but is available, if needed, on Bp-104416 (a copy of the present survey boat sheet).

Reconnaissance hydrography was accomplished in Goose Creek, but no record of this work was found in the survey records.

18. With the addition of items carried forward to the present survey from T-5172 (1933) and the exception of items 11 and 12 of this critique, the present survey is adequate to supersede charted information.

cc:
C35
C351


80°
(CONTINUED ON CHART 680)
55'
AERO
Rotating W & G
Ten Mile
Charleston Municipal Airport
The Farms
Filbin Cr.
S. Ry.
A.C.L.R.R.
North Charleston
TANK
STACK
Goodrich
Noisette Cr.
Goose Creek
Foxmans Hall
marsh
9676
Yellow House Creek
Back Stack Reach
Stack Reach
5488
Creek
Clouter Creek
Hanscum Creek
Clements Ferry
5456
Lambs
Thomas Island
COOPER R.
Daniel Island
Bennet
Cohen Hill
Kingsbury
Ashley R.
Macketh Cr.
Kenilling Cr.
Bees Ferry
Drayton
Faber
Cowhead Reach
Fort Bull
Old Fort
Accabee Flats
East Marsh
5449
5456
8410
Bulls
Ashley Hall
Shipyard
32° 50'
2222
4189
Legares Ldg.
Grimesgrove L.
Town Cr.
Hampstead Park
TOWER
CHARLESTON
CH SP
5436
Old Fort
Maryville
Melvin
Doneman
Dupont
Rhodes
Wappoo
Hoff
Vorhees
Farmfield
Horris
Brennan
St. Andrews
WINDMILL
Wappoo Cr.
Sandy Bay
Ashley R.
Old Fort
sbig
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S. A. L. Ry.
A. C. L. R. R.
S. Ry.
NTRACOASTAL WATERWAY
charts Nos. 837 and 838. Neither the
l markers nor the available depths are
on this chart.

(3-25-63) NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. 9676

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 Revie

CHART	DATE	CARTOGRAPHER	REMARKS
11524	1/17/79	[signature]	Full ~~Part Before~~ After Verification Review Inspection Signed Via
9	C		Drawing No.
11527	1/19/79	[signature]	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. thru 11524
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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