

6539

6539

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. H-6539
Hydrographic }

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

NOV 16 1940

Acc. No.

State North Carolina - South
Carolina

LOCALITY

Cape Fear to Cape Romain

193 2 - 40

CHIEF OF PARTY

R. P. Eyman and H. A. Karo

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H - 6539

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. 81

REGISTER NO. H - 6539

H6539

State North Carolina - South Carolina

General locality Offshore
~~Off North Carolina - South Carolina Coast~~

Locality Cape Fear to Cape Romain

Scale 1/80,000 Date of survey Nov. 8, 1939 - Apr. 10, 1940

Vessel Ship LYDONIA

Chief of Party R. P. Eyman and H. A. Karo

Surveyed by Ship's Officers

Protracted by L. W. Paul and R. M. Rader

Soundings penciled by R. M. Rader

Soundings in ~~XXXXXX~~ XXXXXX feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by _____

Inked by C.E. Dennis

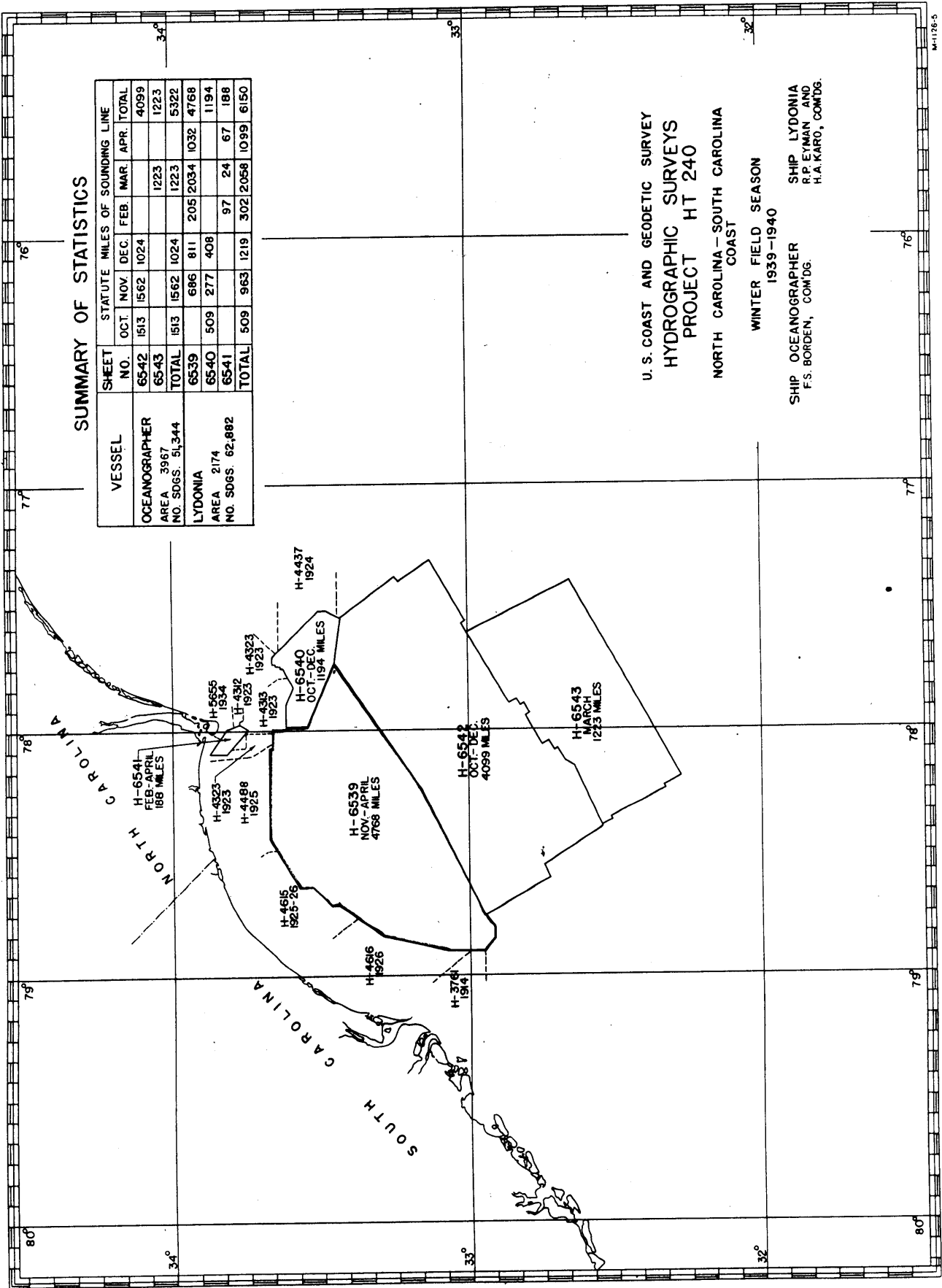
Verified by C.E. Dennis

Instructions dated September 2, 1939

Remarks: Plotted and soundings penciled at the Norfolk Processing Office.

SUMMARY OF STATISTICS

VESSEL	SHEET NO.	STATUTE MILES OF SOUNDING LINE							TOTAL
		OCT	NOV	DEC	FEB	MAR	APR	TOTAL	
OCEANOGRAPHER	65-42	1513	1562	1024					4099
AREA 3967	65-43					1223			1223
NO. SDGS. 51,344	TOTAL	1513	1562	1024		1223			5322
LYDONIA	65-39		686	811	205	2034	1032		4768
AREA 2174	65-40	509	277	408					1194
NO. SDGS. 62,882	65-41				97	24	67		188
	TOTAL	509	963	1219	302	2058	1099		6150



U. S. COAST AND GEODETIC SURVEY
 HYDROGRAPHIC SURVEYS
 PROJECT HT 240
 NORTH CAROLINA—SOUTH CAROLINA
 COAST

WINTER FIELD SEASON
 1939-1940

SHIP OCEANOGRAPHER
 F.S. BORDEN, COM'DG.

SHIP LYDONIA
 R.P. EYMAN AND
 H.A. KARO, COM'DG.

DESCRIPTIVE REPORT
to accompany
SHEET H-6539 (1939-40)

DATE OF INSTRUCTIONS

The hydrography on this sheet was done in accordance with Instructions, Project HT-240, dated September 2, 1939.

DATE OF SURVEY

The work on this sheet was done from November 8, 1939 to April 10, 1940.

LOCALITY AND LIMITS

The area covered by this sheet is off the North Carolina and South Carolina Coasts, between Cape Fear and Cape Romain. The limits of the area are outlined in red on the attached sketch.

SURVEY METHODS

The work on this sheet was done with the Ship LYDONIA. The hydrography was controlled by R A R, using sono radio buoys. All buoys except EASY, ITEM and JAKE were located by taut wire-sun azimuth traverse. The three buoys mentioned were located by bombed distances from buoys on the traverse line.

All soundings on this sheet were obtained with the Dorsey No. 1 Fathometer.

SMOOTH PLOTTING

Theoretical velocities in accordance with the British Admiralty Tables were used for the R A R velocities on this sheet. The bottom temperatures and salinities were used in computing the velocities.

In plotting the sheet the velocities were divided into four periods as follows: November 8 - 24, December 1 - 20, ⁽¹⁹³⁹⁾ February 25 - March 13 and March 20 - April 10. ⁽¹⁹⁴⁰⁾ The bottom velocities were plotted on overlays (one for each period) of the boat sheet at the positions where observations were made and curves of equal velocity were drawn. Over these sheets were placed overlays on which the sono buoys used for the period were plotted and by means of radial lines from the buoys average velocity curves from each buoy were drawn. These sheets were then laid over the boat sheet and the velocity to each position taken off for the buoy concerned.

Distance circles were drawn with pencil on the smooth sheet for each sono buoy at intervals of five seconds corresponding to a velocity of 1510 meters per second for the first two periods, November 8 to December 20, and 1495 meters per second for the remainder of the sheet, February 25 to April 10. The two sets

of circles were drawn in order to reduce the amount of correction to apply to the bomb distances in changing them to the uniform plotting velocity.

Distance arcs to the positions were drawn in colored ink, each buoy having a distinctive color. The distance arcs were plotted in seconds, each distance being corrected to the uniform velocity at which the circles were drawn.

The sounding lines were dead reckoned on tracing paper and superimposed over the bomb arcs. For small differences the arcs were assumed to be correct but were rejected where obviously in error.

FATHOMETER CORRECTIONS

The corrections for temperature and salinity, draft, settlement and index were combined and entered as one correction in the sounding records. These corrections are contained in a separate report entitled "Fathometer Corrections" & positions of survey buoys"

TIDE DATA

Hourly heights for the Charleston, S. C., tide gage, referred to a datum of 2.3 feet on the tide staff, were used in the reduction of soundings on this sheet. The time of the tide for this area was taken as occurring one-half hour earlier than at Charleston, and the range as 0.8 of that at Charleston.

DISCREPANCIES

In general the crossings on this sheet are satisfactory. Those in excess of three feet are listed as follows;

Positions	Soundings (feet)	Remarks
102-103P 84-85H	68-66 63-64.5	Irregular bottom ✓
18-19HH 44AA	92-87 89-86 96	" " ✓
{ 36-37LL 16AA-17AA	{ 96 99-103	{ " " ✓ Crossings 150 meters apart.
{ 5 ⁵ 6 53-54LL 16-17AA	{ 98 103	{ " " ✓ Shal sdgs accepted The 103 foot sdg probably recorded 1 fm too deep. See sdg Vol 9 page 13. HFS.

The actual discrepancy is 2 ft. 64 ft and 66 ft.

φ - 33°-35'0
λ - 78°-02'5

φ - 33°-19'
λ - 78°-17'
Crossing satisfactory

φ - 33°-10'
λ - 78°-20'

JUNCTION WITH CONTEMPORARY SURVEYS

This sheet joins Sheet H-6542⁽¹⁹³⁹⁾ on the south and Sheet H-6540⁽¹⁹³⁹⁾ on the east. The junctions with these sheets are satisfactory in *Junction with H-6540 (1939) is very good.*

general. The bottom for a large part of the junction is irregular so there are differences up to three feet, with one exception. At Latitude $33^{\circ} 03'$, Longitude $78^{\circ} 33'$, on the end of one sounding line on Sheet H-6542 the soundings are 111-111-109 feet. The soundings in the vicinity on this sheet are 98 to 100 feet. As sheet H-6542 had gone to the Office before this discrepancy was discovered the writer has not been able to check for error on that sheet.

*Junction
with H-6542
(1939) will
be considered
in the review
of that survey*

COMPARISON WITH PREVIOUS SURVEYS

A comparison was made with Charts 1237 and 1110. In general the soundings agree very well with those on the charts.

*Except as noted
in review*

John H. Brittain
John H. Brittain
Lieut. (j.g.) C. & G.S.
Norfolk Processing Office.

*The smooth plotting of this sheet was done at
the Norfolk Processing Office.*

*Raymond H. Egan.
C.O. Lydonia.
to Jan. 16, 1940.*

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6529**

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

Number of positions on sheet	4155.
Number of positions checked	...0...
Number of positions revised	...0...
Number of soundings recorded	47489
Number of soundings revised	³ .131...
Number of soundings erroneously spaced	..3...
Number of signals erroneously plotted or transferred	...0...

Date: 5/28/41

Verification by C.E. Dennis

Review by H.F. Stegman

6/25/41

Time: 107 $\frac{1}{2}$ hr

Time: 52 $\frac{1}{4}$ hrs.

HYDROGRAPHIC SURVEY NO. H6539

Smooth Sheet One

Boat Shoet One

Records; Sounding 22 Vols., Wire Drag Vols., Bomb 14 Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) No

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service No
(Circular Nov.30, 1933)

Hydrography: Total Days 48; Last Date April 10, 1940

Remarks _____

Remarks

Decisions

	Remarks	Decisions
1		338 779
2		330 793 U.S.B.
3		
4		
5		
6		
7		
8		
9		
10		
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27		

GEOGRAPHIC NAMES
Survey No. **H6539**

Name on Survey	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous survey No.	On U. S. Maps	U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
<u>Cape Fear</u>										1
<u>Cape Romain</u>										2
										3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red
by Lebeck on 2/27/41

STATISTICS FOR SHEET H-6539 (Field No. 81)

Project HT-240

L Y D O N I A - 1939, 1940

R. P. Eyman, Comdg.

H. A. Karo, Comdg.

Day	Date	Vol.No.	Stat.Miles	Soundings	Positions	Sq. St. Miles
A	Nov. 8	1	115.7	1215	118	
B	14	1	42.0	431	48	
C	15	1	26.5	276	28	
D	18	1&2	16.1	154	14	
E	19	2	41.3	437	43	
F	20	2	48.9	516	51	
G	21	2&3	138.0	1332	125	
H	22	3	157.6	1577	138	
J	23	3&4	68.1	622	55	
K	24	4	31.6	305	22	
L	Dec. 1	4	90.8	910	87	
M	3	4&5	85.1	896	94	
N	4	5	163.4	1676	148	
P	5	5&6	104.3	1060	104	
Q	6	6	89.9	1487	118	
R	7	6&7	18.8	191	28	
S	15	7	40.2	392	38	
T	16	7	15.3	157	15	
U	18	7	3.4	39	4	
V	19	7&8	186.9	1868	163	
W	20	8	12.7	131	13	

Day	Date	Vol.No.	Stat.Miles	Soundings	Positions	Sq. St. Miles
X	Feb. 24	8	43.7	403	41	
Y	25	8	51.8	516	44	
Z	26	8&9	48.1	462	43	
AA	27	9	62.0	922	69	
BB	Mar. 5	9&10	126.4	1211	105	
CC	6	10	113.6	1089	91	
DD	7	10-11	170.3	1583	135	
EE	8	11	21.6	206	18	
FF	9	11	130.0	1221	97	
GG	10	12	175.2	1572	139	
HH	11	12&13	75.7	745	67	
JJ	13	13	121.6	1154	100	
KK	20	13&14	143.0	1361	124	
LL	21	14	75.7	783	68	
MM	22	14	113.8	1060	94	
NN	23	15	184.0	1632	147	
PP	26	¹⁵ 16	163.0	1544	136	
QQ	27	16&17	224.4	2080	179	
RR	28	17&18	195.6	1980	159	
SS	Apr. 3	18	101.8	1061	79	
TT	4	18&19	164.0	1561	135	
UU	5	19&20	188.6	2129	153	
VV	6	20	127.7	1217	104	
WW	7	20&21	189.5	1814	157	
XX	8	21 & 22	100.0	1171	90	
YY	9	22	152.0	1272	119	

Day	Date	Vol.No.	Stat.Miles	Soundings	Positions	Sq.St.Miles
ZZ	Apr. 10	22	8.5	82	7	

TOTALS
FOR
SHEET

48		22	4768.2	47489	4155	1912.5
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80-AB

July 3, 1941.

To: Commandant,
U. S. Coast Guard,
Washington, D. C.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Position of Cape Romain Lighted
Whistle Buoy "2CR".

The following position (about 1 mile N.W. of its charted position) of Cape Romain Lighted Whistle Buoy "2CR" was obtained by the U.S.C. & G.S.S. OCEANOGRAPHER in April 1940:

Lat. 32° 53' 745 meters
Long. 78° 53' 290 "

The buoy was used as a station in the main buoy control scheme for the survey of that locality and was accurately located by a taut wire connection to shore control.

It is understood that the fact that the buoy was not in its charted position was reported to your local district office by the Commanding Officer of the OCEANOGRAPHER at the time of its location, and it is requested that you inform this office as to whether the buoy has been shifted to its present charted position or whether the buoy symbol on the charts should be shifted to the position determined by the survey party. It appears that either position would adequately mark the feature intended.

The buoy was located approximately on the 10-fathom curve which was found to be charted about 1 mile too far south in that locality. The new survey has not yet been applied to the charts.

Director.

80

ADDRESS THE COMMANDANT, U. S. COAST GUARD
AND REFER TO NO.



TREASURY DEPARTMENT

OP-626
62

UNITED STATES COAST GUARD

WASHINGTON

21 August, 1941

HEADQUARTERS AUG 23 AM 8:36

The Director,
U. S. Coast and Geodetic Survey,
Department of Commerce,
Washington, D. C.

Dear Sir:

Reference is made to your letter of July 3rd relative to the position of Cape Romain Lighted Whistle Buoy 2 CR. It is noted that the position of this buoy as obtained by the OCEANOGRAPHER in April of 1940 was as follows:

Latitude 32°58'24.2"
Longitude 78°53'11.3"

The position in which the buoy was found by the OCEANOGRAPHER is considered to be a satisfactory location and it is the recommendation of this office that its position on the charts be made to agree. The record in the Light List when next reprinted will be changed to correspond.

Very truly yours,

L. C. COVELL,
Rear Admiral, U. S. Coast Guard,
Assistant Commandant.

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H **H6539**
~~No. H~~

received Nov. 25. 1940
registered Nov. 25. 1940
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22	✓ <i>Comdr Eymon</i>	<i>RE</i>	
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
----	------------

✓ *TBR*

R.P.C.
HVE

TIDE NOTE FOR HYDROGRAPHIC SHEET

December 4, 1940

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. H. R. Edmonston

Plane of reference approved in
22 volumes of sounding records for

HYDROGRAPHIC SHEET

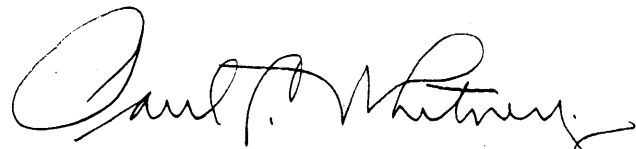
6539 (1939-40)

Locality Cape Fear to Cape Romain, off North Carolina Coast.

R.P. Eyman in 1939-40
Chief of Party: H. Arnold Karo in 1939-1940
Plane of reference is mean low water reading
2.3 ft. on tide staff at Charleston (Time 1/2 hour earlier, Range 0.8)
10.9 ft. below B. M. 6

Height of mean high water above plane of reference is 5.1 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H-6539 (1939-40)

Verified and Inked by *C.E. Dennis*

Date *5/28/41*

1. The descriptive report was consulted and appropriate action taken. ✓
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude. ✓
3. All references to survey sheets mentioned in the descriptive report include the registry number and year. ✓
4. Geographic names of hydrographic features are in slanting lettering and of topographic features in vertical lettering. ✓
5. All items effecting 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. ✓
6. All positions verified instrumentally were check marked in the sounding records. ✓
7. All critical soundings are clear and legible. ✓
8. The metal protractor has been checked within the last three months. ✓
9. The protracting and plotting of all bad crossings were verified. ✓ *Crossings satisfactory*
10. All detached positions locating critical soundings, rocks or buoys were verified. ✓
11. The boat sheet was compared with the smooth sheet. ✓
12. The spacing of soundings as recorded in the records was closely followed. ✓
13. The bottom characteristics were shown on outstanding shoals. ✓
14. The reduction and plotting of doubtful soundings were checked. ✓

15. The transfer of contemporary topographic information was carefully examined.
16. All junctions were transferred. ✓ *Except that with H-6542(1939) which is not yet verified.*
17. The notation "JOINS H " was added for all contemporary adjoining or overlapping sheets now registered. ✓
18. The depth curves have been drawn to include the significant depths. ✓
19. All triangulation stations and transfer of topographic and hydrographic signals were checked by the field party. ✓
20. Heights of rocks were checked against range of tide. *None*
21. Rocks transferred from topographic survey have a dotted curve where *None* shown thereon.
22. Unnecessary pencil notes have been removed. ✓
23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet.
24. The low water line and delineation of shoal areas have been properly shown (see letter of October 20, 1934).
25. Degree and minutes values and symbols have been checked. ✓
26. Source of shoreline and signals (When not given in report).
27. Depth curves were satisfactory except as follows: ✓

28. Sounding line crossings were satisfactory except as follows:

As there were jumps of as great as 10 ft. in the sounding lines the tolerance on crossings is rather large. Crossings mentioned in the descriptive report were checked and found ok.

29. Junctions with contemporary surveys were satisfactory except as follows:

Butt junctions were made with all surveys but H6540 because of the age of the surveys. H3761 (4914) was left in pencil. The junctions were never the less found to be very good.

30. Condition of sounding records was satisfactory except as follows: ✓

31. The protracting was satisfactory except as follows: ✓

32. The field plotting of soundings was satisfactory except as follows: ✓

131 soundings were changed.

33. Notes to reviewer: The sheet had several bad wrinkles and one ripped spot when received.

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY NO. H-6539 FIELD NO. 81

North Carolina - South Carolina - Cape Fear to Cape Romain
Surveyed in November 1939 to April 1940, Scale 1:80,000
Instructions dated September 2, 1939

Soundings: Dorsey No. 1 Control: RAR Sono Radio Buoys
Fathometer

Chief of Party - R. P. Eyman, H. A. Karo
Surveyed by - Ship's Officers
Protracted by - L. W. Paul, R. M. Rader
Soundings plotted by - R. M. Rader
Verified and inked by - C. E. Dennis
Reviewed by - H. F. Stegman, June 23, 1941
Inspected by - H. R. Edmonston

1. Shoreline and Signals

This is an offshore survey and no shoreline is shown.

Buoys were located by taut wire-sun azimuth traverse or by bomb distances from buoys on the traverse line.

2. Sounding Line Crossings

General agreement of sounding line crossings is within 3 feet (See D.R., page 2).

3. Depth Curves

The usual depth curves may be satisfactorily drawn.

4. Junctions with Surveys

- a. The junction with H-6540 (1939) on the northeast is satisfactory.
- b. The junction with H-6542 (1939) on the southeast will be considered in the review of that survey.
- c. Along the north and west the inshore limit of the present survey makes a satisfactory abuttal junction with H-4313 (1923), H-4323 (1923), H-4488 (1925), H-4615 (1925-26), and H-4616 (1926).

5. Comparison with Prior Surveys

- a. H-694 (1859), H-717 (1858), and H-768 (1860);
scales 1:300,000 and 1:500,000

Portions of each of these early surveys cover part of the area of the present survey. They contain no information not adequately superseded by the present survey.

- b. H-3761 (1914); scale 1:80,000

This survey covers a small portion of the area of the present survey near Lat. $32^{\circ} 55'$, Long. $78^{\circ} 50'$. Agreement between the two surveys is fairly good except in the vicinity of Lat. $32^{\circ} 58'$, Long. $78^{\circ} 52'$, where the 10-fathom curve has moved northwestward about 1,200 meters. There are differences of about 5 fathoms between the two surveys in this vicinity due to the fairly steep slope evidently caused by scouring action. The present survey supersedes this survey in the common area.

- c. H-4313 (1923), H-4323 (1923), H-4488 (1925),
H-4615 (1925-26) and H-4616 (1926); scale 1:40,000

These well developed surveys taken together cover the inshore portion of the present survey area. General agreement of depths is within 3 feet. However, in areas of uneven bottom, differences of as much as 6 feet occur as at Lat. $33^{\circ} 36'$, Long. $78^{\circ} 35'$, where a 56-ft. sounding on H-4615 falls near 62-ft. depths on the present survey. It is believed that these differences are due to natural changes and therefore no soundings have been carried forward. The present survey supersedes these surveys in the common area except that bottom characteristics should be retained where necessary.

- d. H-4437 (1924), H-4523 (1925), and H-4617 (1926)
scales 1:40,000 and 1:100,000

These surveys taken together cover most of the area of the present survey outside of the 10-fm. curve. General agreement of depths is within 1 to 2 fathoms.

As noted in the review of H-6540 (1939), page 3, the soundings of H-4437 (1924), within the area of the present survey, should have a correction

of minus 6 feet applied to them. The application of this correction would greatly improve the agreement with the present survey.

Because of its more rigid control and closer development the present survey supersedes these surveys in the common area. Bottom characteristics, however, should be retained wherever necessary.

6. Comparison with Charts

1236	(Latest print dated 3-1 -41)
1237	(" " " 8-28-40)
1238	(" " " 7-31-40)
1110	(" " " 4-24-41)

a. Hydrography

Hydrography shown on the charts originates with surveys discussed in the preceding paragraphs. The only additional necessary comment is concerning the following charted soundings:

1. The 55-ft. sounding on chart 1236 in Lat. $33^{\circ} 36'$, Long. $78^{\circ} 16.5'$.
2. The 12-fathom sounding on chart 1110 in Lat. $32^{\circ} 58.5'$, Long. $78^{\circ} 51'$.

These soundings originate with H-694 (1859) and are about 2 fathoms shoaler than the depths on the present survey. These areas are adequately developed on the present survey and show no indication that the charted depths exist. The soundings should therefore be expunged from the charts.

b. Aids to Navigation

The only aid to navigation within the area of the present survey is the lighted whistle buoy "2CR." This buoy was located on the present survey by taut wire-sun azimuth traverse and the following position obtained:

Buoy "2CR" (Survey Buoy Unk) Lat. $32^{\circ} 58' 744.7$ m.
Long. $78^{\circ} 53' 290.6$ m.

The above location is about 1 nautical mile northwest of the charted position and the position in the 1941 Light List but satisfactorily marks the general features intended. (See attached copy of letter dated July 3, 1941, to U. S. Coast Guard.)

See attached
reply by
U.S.C.G.
dated
Aug 2, 1941
HFS.

7. Condition of Survey

- a. The sounding records are neat and legible and conform to the requirements of the hydrographic manual.
- b. The field plotting was satisfactory.
- c. The Descriptive Report is clear and satisfactorily covers all matters of importance.

8. Compliance with Instructions for the Project

Compliance with instructions for the project is satisfactory. The present survey, however, extends inshore of the limits specified in the instructions with a sounding line spacing of about 800 meters in depths of 8 to 11 fathoms. When the area inshore of H-6539 is resurveyed the instructions should provide for additional sounding lines to be run within the area of the present survey to depths of approximately 11 fathoms in order to satisfy the requirement of 400-meter spacing in this area of lumpy bottom.

9. Additional Field Work Recommended

When work on this project is resumed, southwest of the present survey, hydrography should extend inshore to the 10-fathom curve in the vicinity of Lat. 33° 00', Long. 79° 00'.

10. Superseded Surveys

H- 694 (1859)	in part	H-4437 (1924)	in part
H- 717 (1858)	" "	H-4488 (1925)	" "
H- 768 (1860)	" "	H-4523 (1925)	" "
H-3761 (1914)	" "	H-4615 (1925-26)	in part
H-4313 (1923)	" "	H-4616 (1926)	" "
H-4323 (1923)	" "	H-4617 (1926)	" "

Examined and approved:

Thos Reed

Chief, Surveys Section

J. S. Borden

Chief, Division of Charts

C. K. Green

Chief, Section of Hydrography

G. W. de

Chief, Division of Coastal Surveys

applied to Cht 1087. Mar. 1941. J.K.G.
 Applied to Cht. 1237 Apr. 15/41 (Sheet partially index + not reviewed)
 B.R.
 " " " 1110 " 21/41 (same GR.)
 " " " 1236 " 25/41 (" GR.)
 " " " 1238 Feb. 15. 1945. after review L.A.M.
 (no corr. made)