8247

Diag. Cht. Nos. 1233-2 & 1234-2

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. .....PBS-2255.....

Office No......H-8247.....

LOCALITY

State .....NORTH CAROLINA.....

General Locality ...CAPE LOOKOUT.....

Locality .....CAPE LOOKOUT SHOALS.....

.....

1955

CHIEF OF PARTY
John C. Mathisson

LIBRARY & ARCHIVES

DATE .....March 16, 1960.....

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

8247

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-8247

Field No. PBS-2255

State NORTH CAROLINA

General locality CAPE LOOKOUT

Locality CAPE LOOKOUT SHOALS

Scale 1:20,000 Date of survey 19 Apr. - 18 May 1955

Instructions dated 28 Jan. 1955

Vessel PARKER, BOWEN & STIRNI

Chief of party JOHN C. MATHISSON

Surveyed by K.S. Ulm, C.R. Reed, H.J. Seaborg, D.G. Rushford, J.P.Plaggmier & W.R. Kachel

Soundings taken by ~~echo sounder,~~ graphic recorder, hand lead, ~~XXX~~

Fathograms scaled by SHIP PERSONNEL

Fathograms checked by NORFOLK DISTRICT OFFICE

Protracted by SHIP PERSONNEL & FRED BEAN

Soundings penciled by FRED BEAN

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

REMARKS: Drag Strips sub-divided and inked by W.W. Feazel

AWOIS and SURF ✓ 12/85 RWD

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

Field Notes for Descriptive Reports to Accompany 1955 Wire Drag and Hydrographic Sheets - Ships PARKER, BOWEN, STIRNI - Cdr. John C. Mathisson, Chief of Party

A. PROJECT - Original instructions for Project No. CS-377 addressed to the Commanding Officer of the Ships PARKER, BOWEN, and STIRNI are dated 28 January 1955. Project number was later changed to 1377.

B. SURVEY LIMITS AND DATES - The following sheets are included in the 1955 seasons work of the Ships PARKER, BOWEN, and STIRNI.

(a.) Hydrography and Wire Drag: PBS 2255 (H-8247) Cape Lookout Shoals - North End

PBS 2355 (H-8248) Cape Lookout Shoals - South End

(b.) Hydrography: PBS 2455 (H-8249) Diamond Shoals

(c.) Wire Drag:
PBS-4155 W.D. South of Cape Lookout, N. C.
PBS-4255 W.D. East of Cape Lookout, N.C.
PBS-4355 W.D. Off Ocracoke Inlet, N.C.
PBS-4455 W.D. Cape Hatteras, N.C.
PBS-4555 W.D. Northeast of Cape Hatteras, N.C.
PBS-4655 W.D. Offshore - East of Cape Fear, N.C.
PBS-4755 W.D. Inshore - East of Cape Fear, N.C.

(d.) Reconnaissance Hydrography: PBS-4855 - Offshore - Southeast of Cape Lookout, N.C.

No work was accomplished on sheet PBS-2155 W.D. - Northwest of Cape Henry, Virginia.

A special hydrographic investigation was made in Core Sound, north of Ocracoke Inlet. It is the subject of a special report previously submitted.

A special wire drag investigation was made in the Pasquotank River, ~~Virginia~~ N.C. This is also the subject of a special report already forwarded.

Plotting of the wire drag boat sheets was not completed in the field. Shoalest hangs and deepest clearances on wrecks will have to be determined after plotting has been completed. Wreck letters submitted during the field season give preliminary values based on predicted tides and approximate lifts.

A comparison of boat sheet depths with charted depths in the case of hydrographic sheets serves no useful purpose at this time. The comparison should be made after the completion of the smooth sheets.

SHORAN CORRECTIONS:

The shoran equipment in all three vessels was calibrated at frequent intervals during the season. Three "Dinoplex" calibration sheets were used. One each in the vicinities of Cape Hatteras, Cape Lookout, and Cape Fear. Calibrations were taken each time the shoran stations were moved and at other intervals when thought necessary.

Once a shoran correction was determined, this correction was applied to all shoran readings until a new calibration was taken. The new connection was then applied to all subsequent shoran readings. Zero checks were made at the time of each calibration and at frequent intervals while using shoran control. No abnormal deviation from the zero set was found.

A tabulation of the shoran corrections used for the three ships follows: Shoran corrections were rounded off to the nearest 0.005 mile when entering corrections in volumes.

Tabulation of Shoran Calibrations - STIRNI:

see note Verifax Report.

Date	Recorded in Vol. Sheet No.	Monitor No.	Sta. 36	Corr'n	Sta. 37	Corr'n
4-26-55	2255	1	SAM	-0.021	KNOL	+0.012
5-9-55	8155	1	SAM	+0.001	KNOL	+0.010
5-25-55	8155	1	SAM	+0.002	KNOL	-0.009
6-3-55	4455	1	CLUB	+0.007	PEA	-0.045
6-6-55	4455	2	CLUB	+0.008	PEA	-0.016
7-22-55	2455	2	CLUB	+0.061 (r)	PEA	+0.021 (r)
7-29-55	4355	2	CLUB	-0.031	LOLA	-0.029
8-31-55	4255	2	SAM	+0.004	LOLA	-0.019
9-26-55	4155	2	DEY	-0.040	KNOL	-0.030
10-20-55	4755	2	SURF	-0.008	OAK	-0.034
		PARKER:				
		1	SAM	-0.003	KNOL	-0.026
4-18-55	2355	2	SAM	-0.016	KNOL	-0.008
4-27-55	2355	1	SAM	-0.009	KNOL	-0.011
5-25-55	4155	1	SAM	-0.008	KNOL	-0.016
5-31-55	2455	1	CLUB	-0.020	PEA	-0.055
6-6-55	4555	2	CLUB	-0.001	PEA	-0.032
7-22-55	4455	2	CLUB	-0.023	PEA	-0.032
7-28-55	4455	2	CLUB	-0.004	LOLA	-0.034
8-31-55	4255	2	SAM	-0.001	LOLA	-0.042
9-28-55	4155	2	DEY	-0.015	KNOL	-0.043
10-18-55	4755	2	SURF	-0.061	OAK	-0.022

Tabulation of Shoran Corrections Entered in Volumes - STIRNI:

	Sta. 36	Sta. 37
Begin season thru 5-8-55	-0.020 (SAM)(Set #1)	+0.010 (KNOL (Set #1)
5-9-55 - 6-1-55	0.000 (SAM) "	+0.010 (KNOL) "
6-2-55 - 6-5-55	+0.005 (CLUB) "	-0.045 (PEA) "
6-6-55 - 7-28-55	+0.010 (CLUB) Set #2	-0.015 (PEA) Set #2
7-29-55 - 8-5-55	-0.030 (CLUB) "	-0.030 (LOLA) "
8-6-55 - 9-25-55	+0.005 (SAM) "	-0.020 (LOLA) "
9-26-55 - 10-5-55	-0.040 (DEY) "	-0.030 (KNOL) "
10-6-55 - Season End	-0.010 (SURF) "	-0.035 (OAK) "
	PARKER:	
4-18-55 0900 - 1130	-0.005 (SAM)(Set #1)	-0.015 (KNOL)(Set #1)
1401 - 1520	-0.015 (SAM)(Set #2)	-0.010 (KNOL)(Set #2)
1520 - 1650	-0.005 (SAM)(Set #1)	-0.015 (KNOL)(Set #1)
1650 - end	-0.015 (SAM)(Set #2)	-0.010 (KNOL)(Set #2)
4-19-55 - 5-2-55 at 10:55	-0.005 (SAM)(Set #1)	
5-2-55 1055-1115	-0.015 (SAM)(Set #2)	
1115 - end	-0.005 (SAM)(Set #1)	
4-19-55 - 1600 4-26-55		-0.015(KNOL)(Set #1)
4-20-55 1600 - 1650		-0.010 (KNOL)(Set #2)
1650 - end		-0.015 (KNOL)(Set #1

	STA. 36	STA. 37
5-3-55 - 5-25-55	-0.005 (SAM)(Set #1)	
4-27-55 - 5-25-55		-0.015 (KNOL)(Set #1)
5-31-55 - 6-5-55 1300	-0.020 (CLUB)(Set #1)	
6-5-55 1300-1945	-0.015 (CLUB)(Set #2)	
5-31-55 - 6-7-55		-0.045 (PEA)(Set #1)
6-13-55 - 7-23-55		-0.040 (PEA)(Set #2)
6-6-55 - 6-14-55 1400	-0.015 (CLUB)(Set #2)	
6-14-55 1400 to end	-0.020 (CLUB)(Set #1)	
7-26-55 - 9-2-55		-0.040 (LOLA)(Set #2)
6-15-55 - 8-4-55	-0.015 (CLUB)(Set #2)	
9-7-55 - 10-5-55		-0.045 (KNOL)(Set #2)
8-8-55 - 9-18-55	0.000 (SAM)(Set #2)	
9-21-55 - 10-4-55	-0.015 (DEY)(Set #2)	
10-5-55 - 10-27-55	-0.060 (SURF)(Set #2)	
10-6-55 - 10-25-55		-0.020 (OAK)(Set #2)
8,12,&28 July 1955	STIRNI as Shore Station (STIR I, STIR II, STIR III)	-0.020
	BOWEN:	
4-18-55 0900 - 1130	-0.020 (SAM)(Set #1)	∕0.005 (KNOL)(Set #1)
1130 - 1345	-0.015 (SAM)(Set #2)	∕0.005 (KNOL)(Set #2)
1345 - End	-0.020 (SAM)(Set #1)	∕0.005 (KNOL)(Set #1)
4-19-55 - 4-20-55	-0.020 (SAM)(Set #1)	∕0.005 (KNOL)(Set #1)
4-21-55 - 5-2-55 1055	∕0.010 (SAM)(Set #1)	
1055-1115	∕0.005 (SAM)(Set #2)	
5-2-55 1115-end	∕0.010 (SAM)(Set #1)	
4-19-55 - 4-26-55 at 1600		-0.005 (KNOL)(Set #1)
1600 - 1650		∕0.005 (KNOL)(Set #2)
4-26-55 1650 - end		-0.005 (KNOL)(Set #1)
4-27-55 - 5-25-55		-0.005 (KNOL)(Set #1)
5-3-55 - 5-25-55	∕0.010 (SAM)(Set #1)	
5-31-55 - 1300 6-5-55	-0.010 (CLUB)(Set #1)	
6-5-55 - 1300 - end	-0.010 (CLUB)(Set #2)	
5-31-55 - 6-7-55		-0.040 (PEA)(Set #1)
6-13-55 - 7-23-55		-0.015 (PEA)(Set #2)
6-6-55 - 1400 6-14-55	-0.010 (CLUB(Set #2)	
6-14-55	-0.010 (CLUB)(Set #1)	
6-15-55 - 8-4-55	-0.010 (CLUB)(Set #2)	
7-26-55 - 9-2-55		-0.025 (LOLA)(Set #2)
8-8-55 - 9-18-55	∕0.010 (SAM) (Set #2)	
9-7-55 - 10-14-55		-0.015 (KNOL)(Set #2)
∕-21-55 - 10-4-55	-0.005 (DEY)(Set #2)	
10-5-55 - 10-27-55	-0.035 (SURF)(Set #2)	-0.015 (OAK)(Set #2)

Settlement and Squat Corrections:

The settlement and squat corrections were the same as used in previous years for all three ships. The correction depending upon the speed and the water depth. Tabulation of corrections follows:

(Next Page)

SETTLEMENT & SQUAT CORRECTIONS (ALL ✓)

PBS

SPEED (RPM)	CORRECTION (FEET)	FROM DEPTH TO DEPTH (FEET)
400	0.2	all depths
450	0.2	all depths
500	0.2	all depths
600	0.4	6.0 to 14.5
	0.2	15.0 and over
650	0.4	11.5 to 17.0
	0.2	17.5 and over
700	0.6	12.5 to 15.0
	0.4	15.5 to 19.5
	0.2	20.0 and over
750	0.8	12.5 to 14.0
	0.6	14.5 to 16.5
	0.4	17.0 to 21.5
	0.2	22.0 to 31.5
	0.4	32.0 and over
800	1.0	12.5 to 13.0
	0.8	13.5 to 15.5
	0.6	16.0 to 19.0
	0.4	19.5 and over
850	1.0	12.5 to 13.5
	0.8	14.0 to 16.5
	0.6	17.0 to 22.5
	0.4	23.0 and over
900	1.0	12.5 to 14.5
	0.8	15.0 to 20.5
	0.6	21.0 to 34.0
	0.4	34.5 and over
1000	1.0	6.0 to 21.5
	0.8	22.0 to 31.5
	0.6	32.0 and over

TIDES:

Final tides were either furnished by the Washington Office for the periods needed, or were tabulated in the field from observed tides.

Tide reducers for the Cape Hatteras Area were based on tide staff readings for Hatteras Inlet (Outside).

Tide reducers for the Cape Lookout Area were based on the portable gage installed at Lookout Bight.

Tide reducers for the Cape Fear Area were interplated by the Washington Office, Division of Tides and Currents.

All tide reducers were referred to the plane of mean low water.

On the hydrographic surveys, tide reducers were entered to 0.2 ft. On the wire drag surveys, tide reducers were intered to 0.5 feet.

ECHO CORRECTIONS:

The echo corrections for all three ships were determined by bar checks at intervals during the season. Standard methods were used and the leadlines on the bars were checked and found to be the correct length so no correction was necessary to leadline lengths.

Bar checks were not taken as often as would be expected for a hydrographic party due to the nature of operations and lack of suitable weather along the open coast. However, sufficient tests were made to provide accurate corrections for the various fathometers and scales. see Review b P 1f

The Edo fathometer on the STIRNI was not used for hydrographic work, but was tested and separate reports submitted to the Washington Office on 30 September 1955 and 20 June 1956.

On the BOWEN and STIRNI fathometers No. 160SPX, 100S and ~~161SPX~~ 151 inserted on Fathograms for Stirni work, the corrections on the A scale varied with the depths and were so entered. On the PARKER fathometer No. 1175, the A scale corrections were uniform regardless of depth so one correction for the entire A scale was determined and used. On the B, C, and D scales of all fathometers, a single correction was determined for each scale.

On the PARKER, fathometer No. 1175 no D scale correction could be determined as no return could be gotten from the bar at that depth in D scale. On the PARKER, the D scale was used only for a few soundings during the following periods:

6 June 1955 Sheet PBS-4455 Vol. I Position 8 on B day
12 July 1955 Sheet PBS-4455 Vol. II Pos. 46 to 49 on D day } do not fall on H-8247
12 July 1955 Sheet PBS-4455 Vol. II Pos. 57 to 62 on D day

On 11 June 1956, a bar check was obtained under ideal conditions and one check on the D scale at 110 feet was obtained. The correction was -2.0 feet. It is suggested that this correction be used in the above few positions. These positions had no correction entered in the Volumes at the time the volumes were transferred to the Norfolk District Office.

A tabulation of the corrections applied to the fathometer soundings follows:

A. PARKER — Fath. No. 1175 Type 808

A scale -0.2 feet

B scale -0.6 feet

C scale -0.2 feet

D scale See Report *

B. BOWEN — Fath. No. 160SPX Type 808

A scale	-0.2 feet.	0 to 16.9 ft.
	0.0 ft.	to 27.2 ft.
	∠0.2 ft.	to 33.8 ft.
	∠0.4 ft.	to 39.4 ft.
	∠0.6 ft.	to 45.2 ft.
	∠0.8 ft.	to 50.9 ft.
	∠1.0 ft.	to 55.0 ft.
B scale	∠1.5 ft.	to 57.8 ft.
	∠2.0 ft.	to 90.0 ft.
C scale	∠2.5 ft.	
D scale	∠2.5 ft.	

Fath. No. 100S Type 808

A scale	0.0 ft.	to 22.0 ft.
	∠0.2 ft.	to 35.5 ft.
	∠0.4 ft.	to 48.9 ft.
	∠0.6 ft.	to 55.0 ft.
B scale	∠1.0	
C scale	∠1.5	

C. STIRNI — Fath. No. ~~161~~ 151 SPX Type 808

A scale	0.0 ft.	0 to 13.5 ft.
	∠0.2 ft.	to 24.0 ft.
	∠0.4 ft.	to 33.0 ft.
	∠0.6 ft.	to 42.5 ft.
	∠0.8 ft.	to 49.0 ft.
	∠1.0 ft.	to 55.0 ft.
B scale	0.0 ft.	
C scale	-2.5 ft.	
D scale	-4.5 ft.	

NORFOLK PROCESSING OFFICE
LIST OF SIGNALS
H-8247

TRIANGULATION STATIONS

CAPE	CAPE LOOKOUT LIGHTHOUSE, 1933
DEY	DEY (USE), 1943
EAST	BEACH HOTEL, EAST TOWER, 1933
FORT	FORT MACON, COAST GUARD CUPOLA, 1933
REAR	MOREHEAD CITY, CHANNEL RANGE REAR LIGHT, 1952-55
SAM	SAM 2, 1949

TOPOGRAPHIC STATIONS

Cup	T-8744 (N)
Nic	origin unknown

HYDROGRAPHIC STATIONS

Wes	Vol. 2, pg. 4&5
Lax	Vol. 2, pg. 4&5

NORFOLK PROCESSING OFFICE
FLOATING AIDS TO NAVIGATION
H-8247

BUOY	LATITUDE	LONGITUDE	DEPTH	POS. NO.	DATE
Lighted Whistle Buoy "2BI"	34-38.69' (moved south 110 meters)	76-40.55'	49'	1F (pur)	4/27/55 ~~5/3/55~~ No record
Beaufort Inlet L'td. Buoy 7	34-40.60' moved 40 meters west, 193 meter south	76-40.29'	- No depth taken	1F (gr) N.M. 27 (1955)	5/16/55
Cape Lookout Breakwater L'td. Buoy 2	34-37.15' moved 90 meter S. 55 W	76-33.58'	38'	42E (gr) N.M. 6 1955	5/2/55 Prior to survey date
Cape Lookout Shoals Wreck L'td. Buoy WR6	34-32.97' moved 15 north, 230 meters east	76-36.30'	55'	101F (pur) 17G (gr) N.M. 46 (1952)	4/27/55 9/30/55
*Cape Lookout Slough Appr. L'td. Buoy 1	34-33.22' Now on "N" 1665 meters West, 1280 meter North	76-32.37'	36' MM 21/70	30C (pur) 34°33'45" 76°32'18"	4/21/55
**Cape Lookout Slough North End L'td. Buoy 3	34-35.57' Discontinued N.M. 46 (1955)	76-31.24'	21'	62A (pur)	4/19/55

*Renumbered and relocated since this survey
**No longer charted

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8247 (PBS-2255)

GENERAL

The plot of this survey was started in the Field as a smooth boat sheet and when received at this office, the positions in the three volumes done by Ship Stirni were already plotted. Some slight displacement was noted in this work due to the use of preliminary shoran corrections.

This Office finished the plotting using final shoran corrections and finished the smooth sheet. All fathograms were check scanned and the soundings were reduced with templates using a twenty second interval. Agreement of soundings at crossings is good considering the continuous wave action encountered in this exposed area.

Numerous cuts to breakers were not plotted as they located shoal areas which have been adequately delineated on the adjoining contemporary survey done by the East Coast Field Party.

CHART COMPARISONS

Lat. 34-35.95' Long. 76-36.7' The 49 foot sounding #1494 falling between positions 51 to 52F (purple) should be given further consideration as the fathogram shows some of the characteristics of wreckage.

Lat. 34-35.9' Long. 76-33.1 The 5 foot sounding charted at this point was not confirmed.

In general, there is a general deepening of the waters in the area of this survey. See the attached chart section for additional comparisons.

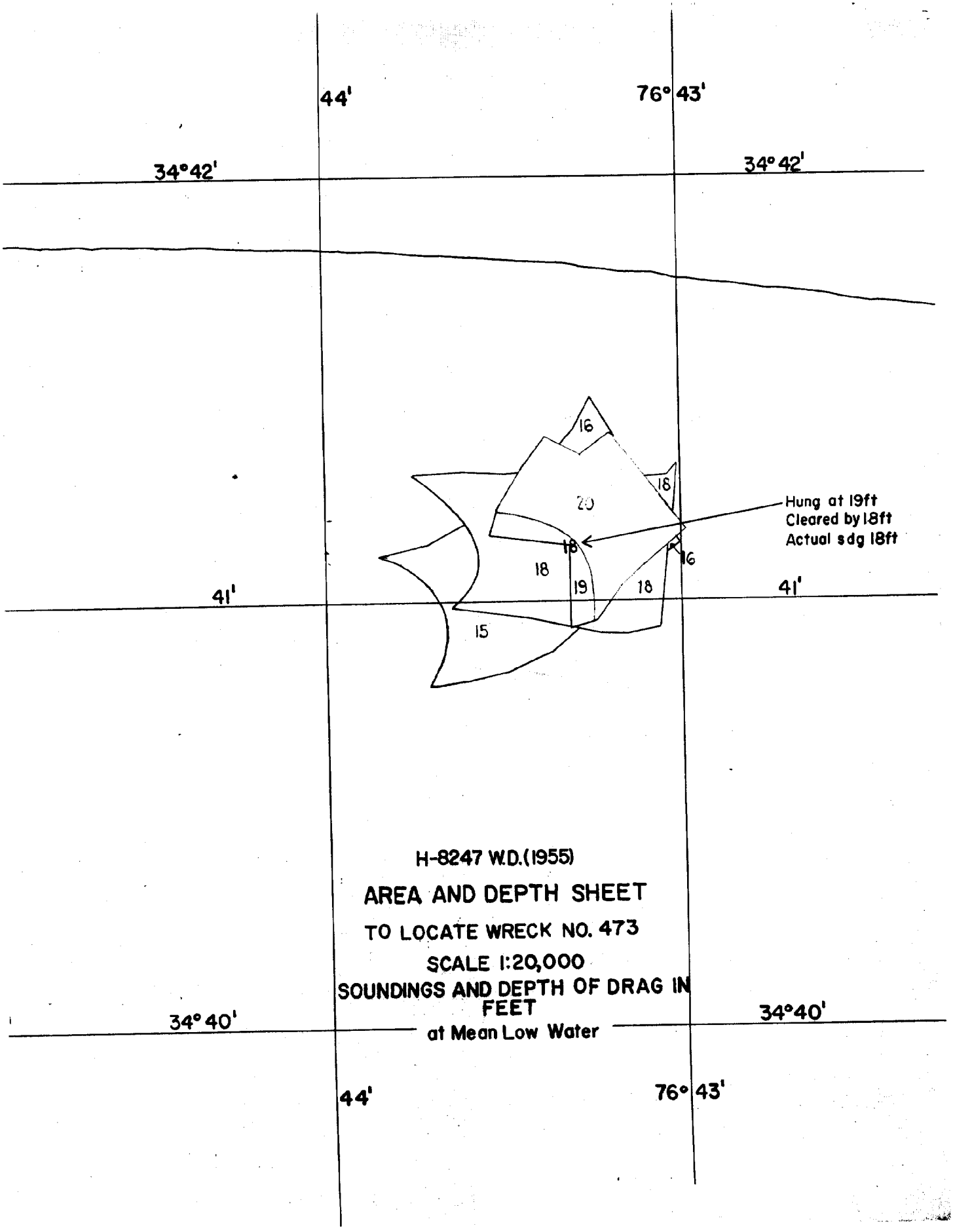
WIRE DRAG

The Guide and End Launch positions on the wire drag examination of wreck number 473 were plotted by the field party using visual fixes. All sub-division of drag areas and inking was accomplished in this Office. Due to the lack of adequate notes concerning grounds and clears, and to the extremely staggered settings on the drag, the longer lines were shown as "swept areas" on the smooth sheet. The shorter lines, showing minimum hangs and maximum clears on the wreckage, were treated in the conventional manner.

Norfolk, Va.
10 March 1960

Respectfully submitted,

Hugh L. Proffitt
Cartographer


44'
76° 43'
34° 42'
34° 42'
16
18
20
Hung at 19ft
Cleared by 18ft
Actual sdg 18ft
18
16
18
19
18
41'
41'
15
H-8247 W.D.(1955)
AREA AND DEPTH SHEET
TO LOCATE WRECK NO. 473
SCALE 1:20,000
SOUNDINGS AND DEPTH OF DRAG IN FEET
at Mean Low Water
34° 40'
34° 40'
44'
76° 43'

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

25 May 1960

~~Division of Coast and Geodetic Surveys~~

Division of Charts: R. H. Carstens

Plane of reference approved in
9 volumes of ~~sounding~~ records for
wire drag

HYDROGRAPHIC SHEET 8247

Locality Cape Lookout, N.C.

Chief of Party: J. C. Mathisson in 1955
Plane of reference is mean low water, reading
2.6 ft. on tide staff at Lookout Bight
8.5 ft. below B. M. 5 (1926)

Height of mean high water above plane of reference is 3.7 feet.

Condition of records satisfactory except as noted below:

William Shofner
Chief, Tides Branch
~~Chief, Division of Tides and Currents.~~

U. S. GOVERNMENT PRINTING OFFICE 877938

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8247

Name on Survey	A On Chart No.	B On previous survey No. 1233	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	
CAPE LOOKOUT ✓	✓									1
CAPE LOOKOUT SHOALS ✓	✓									2
CAPE POINT ✓	✓									3
Bogue Banks ✓										4
Core Banks ✓										5
Lookout Bight ✓										6
Shackleford Banks ✓										7
BARDEN INLET ✓										8
BEAUFORT INLET ✓										9
FORT MACON ✓										10
ONSLOW BAY ✓										11
SHACKLEFORD POINT ✓										12
WRECK POINT ✓										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

George M. Bacon
Geographic Names
6 April 1966

APPROVED
Jno E. Harrington
GEOGRAPHER - C3 X8
16 JUNE 1978
Francis W. Precott

Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8247....

Records accompanying survey: Smooth sheets ..1..;

boat sheets .1...; sounding vols. ..7..; wire drag vols. ..2..;

Descriptive Reports ..1..; graphic recorder envelopes ..8...;

special reports, etc. .1-Boat sheet overlay.....

.....

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

Number of positions on sheet		1,292
Number of positions checked		157
Number of positions revised		0
Number of soundings revised (refers to depth only)		547
Number of soundings erroneously spaced		15
Number of signals erroneously plotted or transferred		0
Topographic details	Time	1
Junctions	Time	64 hs
Verification of soundings from graphic record	Time	~~TBA~~
Special adjustments	Time	0

Verification by Fannie B. Powell Total time 216 Date August 7, 1970

Reviewed by Dennis J. Romesburg Time 130 Date Feb. 12, 1971

Cursory Insp. George Myers Time 70 Date June 15, 1978

US COMM C&GS DC

H-8247

Items for Future Presurvey Reviews

The 49-foot sounding located at latitude 34°35.96', longitude 76°36.68' on the present survey should be specifically investigated at an opportune time in the future.

Position Index		Bottom Change	Use	Resurvey
Lat.	Long.	Index	Index	Cycle
343	0764	2	2	50 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8247 FIELD NO. PBS-2255

North Carolina, Cape Lookout, Cape Lookout Shoals

SURVEYED: April 19 - May 18, 1955

SCALE: 1:20,000 PROJECT NO.: CS-377 (1377)

SOUNDINGS: 808 Depth Recorder
Hand Lead
Wire Drag

CONTROL: Sextant Angeles on
Shore Signals
Shoran

Chief of Party	J. C. Mathisson
Surveyed by	K. S. Ulm
	C. R. Reed
	H. J. Seaborg
	D. G. Rushford
	J. P. Plaggmier
	W. R. Kachel
Protracted by	F. Bean
Soundings Plotted by	F. Bean
Verified and Inked by	F. B. Powers
Reviewed by	D. J. Romesburg
	Date: February 12, 1971
Cursory inspection made--survey processing considered complete	G. K. Myers June 14, 1978

1. Description of the Area

This survey covers areas on the east and west of Cape Lookout. Inshore depths in the eastern area located north of Cape Lookout are from 18 to 24 feet. Bottom development in this portion of the survey delineates the 30-foot depth curve. Here, sand ridges are evident. The remaining area covered by the present survey in Onslow Bay extends westerly from least depths of 6 to 12 feet along the cape to depths of 30 to 50 feet in spoil areas located about 2 miles offshore at Beaufort Inlet. The bottom slope in this area is gradual, except for a sharp gradient with depths of 7 to 30 feet in an area a quarter mile offshore.

Sand is the predominant bottom characteristic of the area.

2. Control and Shoreline

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

The shoreline originates with final reviewed photogrammetric manuscripts T-8743, T-8744 N/2, T-8744 S/2, T-8745 S/2, T-8746 N/2, T-8746 S/2, and T-8818 N/2 of 1946-49.

3. Hydrography

a. Depths at crossings are in good agreement.

b. The usual depth curves were adequately delineated. The 24- and 36-foot depth curves were added to more adequately define the bottom configuration.

c. The development of the bottom configuration and investigation of least depths is considered adequate. However, the 49-foot sounding at latitude 34°35.96', longitude 76°36.68' in surrounding depths of 54 and 55 feet was not fully developed to ascertain the least depth.

4. Condition of Survey

The field plotting, sounding records, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual except for the following:

a. Stamp No. 36 was not entered in the sounding records for most days by the ship BOWEN.

b. Only one bar check was recorded by the Ship STIRNI.

5. Junctions

Partial butt junctions were effected with H-9042 (1969) on the south and west; and H-7963 (1952-53) and H-6798 (1943) on the north where differences of 2 to 6 feet were noted. In the area west of Cape Lookout a butt junction was made with H-6798 where differences of as much as 10 feet exist. These differences are considered to have been caused by the shifting of sand due to current activity during storms. A junction was effected with H-8253 (1955) in the area south of Cape Lookout, except in the immediate vicinity of latitude 34°33.5', longitude 76°29.6' where a holiday exists.

No contemporary surveys exist on the east; however, present depths are in harmony with charted depths.

6. Comparison with Prior Surveys

a. H-419 (1854) 1:10,000
H-577 (1857) 1:40,000
H-849 (1864) 1:40,000
H-885 (1865-66) 1:40,000

The prior surveys taken together cover part of the present survey. A comparison between prior and present soundings reveals differences of less than 4 feet in areas of deep depths. However, drastic changes in areas in close proximity to Cape Lookout have occurred. Here, the peninsula has shifted about one quarter to one half mile east, while its northwestern portion has accreted about a mile in a northwesterly direction. The present survey is adequate to supersede the prior surveys within the common area.

b. H-3374 (1912) 1:10,000
H-4802 (1928) 1:10,000

A comparison between the prior and present surveys in the common area of the sand spit located on the northwestern shore of Cape Lookout reveals the migration of this feature about 800 meters in a westerly direction. A rock jetty was constructed in this area after 1912. In other areas along the western side of the cape, significant changes in the configuration of the bottom have occurred inshore of the 36-foot depth curve. Present depths in the common area with H-4802 on the east are in substantial agreement with prior depths, except in a few spots where variable differences of 2 to 4 feet are found. The present survey is adequate to supersede the prior surveys within the common area.

7. Comparison with Chart 420, 38th Edition, August 15, 1970
1233, 16th Edition, August 15, 1970

a. Hydrography

Most of the charted hydrography originates with the previously discussed surveys which require no further consideration, supplemented by partial application of depths from the boat sheet.

The 40-foot cleared depth and wreck charted in latitude 34°33.08', longitude 76°36.00' from Chart Letter 436 of 1944 were not proved or disproved on the present survey. This feature should be retained on the chart.

Except as noted above, the present survey is adequate to supersede the charted hydrography within the common area.

b. Topography

(1) The pier charted in latitude 34°36.74', longitude 76°32.35' originates with Chart Letter 7 of 1965 subsequent to the date of the survey and should be retained on the chart.

(2) The pier charted in latitude 34°36.77', longitude 76°31.88' originates with Bp-61995 subsequent to the date of the present survey and should be retained on the chart.

(3) The pier ruins charted in latitude 34°36.86', longitude 76°31.80' originate with Chart Letter 1270 of 1961 subsequent to the date of the present survey and should be retained on the chart.

(4) The pier charted in latitude 34°41.75', longitude 76°43.63' originates with Chart Letter 633 of 1959 subsequent to the date of the survey and should be retained on the chart.

(5) Two piers charted in latitude 34°41.66', longitude 76°42.33' and latitude 34°41.75', longitude 76°43.83' originate with Chart Letter 856 of 1952 and Chart Letter 481 of 1955, respectively. These manmade features were constructed subsequent to the date of the topographic surveys in this area and, therefore, should be retained on the chart.

(6) Inasmuch as the delineation of the shoreline in the area of the present survey has subsequently changed, the shoreline as shown on the chart from air photo revisions since 1955 should be retained.

c. Aids to Navigation

(1) The Cape Lookout Slough East Lighted Buoy E charted in latitude 34°34.06', longitude 76°30.00' originates with Notice to Mariners 21 of 1970 subsequent to the date of the present survey.

(2) Cape Lookout Slough North End Lighted Buoy No. 3 located on the present survey in latitude 34°35.57', longitude 76°31.24' has been discontinued per Notice to Mariners 46 of 1955.

(3) Cape Lookout Slough Approach Lighted Buoy No. 1 located on the present survey in latitude 34°33.22', longitude 76°32.37' has been renamed Cape Lookout Slough West Lighted Buoy "W" and relocated in latitude 34°33.75', longitude 76°32.80' subsequent to the date of the present survey by Notice to Mariners 21 of 1970.

(4) Morehead City Channel Range Rear Light located on the present survey in latitude 34°41.28', longitude 76°39.55' has been relocated by triangulation subsequent to the date of the present survey in latitude 34°41.31', longitude 76°39.51'.

(5) Beaufort Inlet Channel Buoy 7 located in latitude 34°40.60', longitude 76°40.29' on the present survey has been relocated subsequent to the date of the present survey by Notice to Mariners 27 of 1955.

(6) The floating aids to navigation located on the present survey in the positions indicated below disagree with their charted positions but continue to mark the features intended adequately.

(a) Cape Lookout Shoals Wreck Lighted Buoy WR6 was established by Notice to Mariners 46 of 1952. Positioned on the present survey in latitude 34°32.97', longitude 76°33.61', it falls approximately 205 meters west of its charted position.

(b) Beaufort Inlet Lighted Whistle Buoy 2BI was established by Notice to Mariners 40 of 1954. Positioned at latitude 34°38.69', longitude 76°40.55' on the present survey, it falls approximately 140 meters north of its charted position.

(c) Cape Lookout Breakwater Lighted Bell Buoy 2 was established by Notice to Mariners 6 of 1955. Positioned on the present survey in latitude 34°37.14', longitude 76°33.61', it falls approximately 110 meters northeast of its charted position.

8. Compliance with Instructions

The feature located at latitude 34°35.96', longitude 76°36.68' should have been thoroughly investigated to satisfy certain requirements of the project instructions.

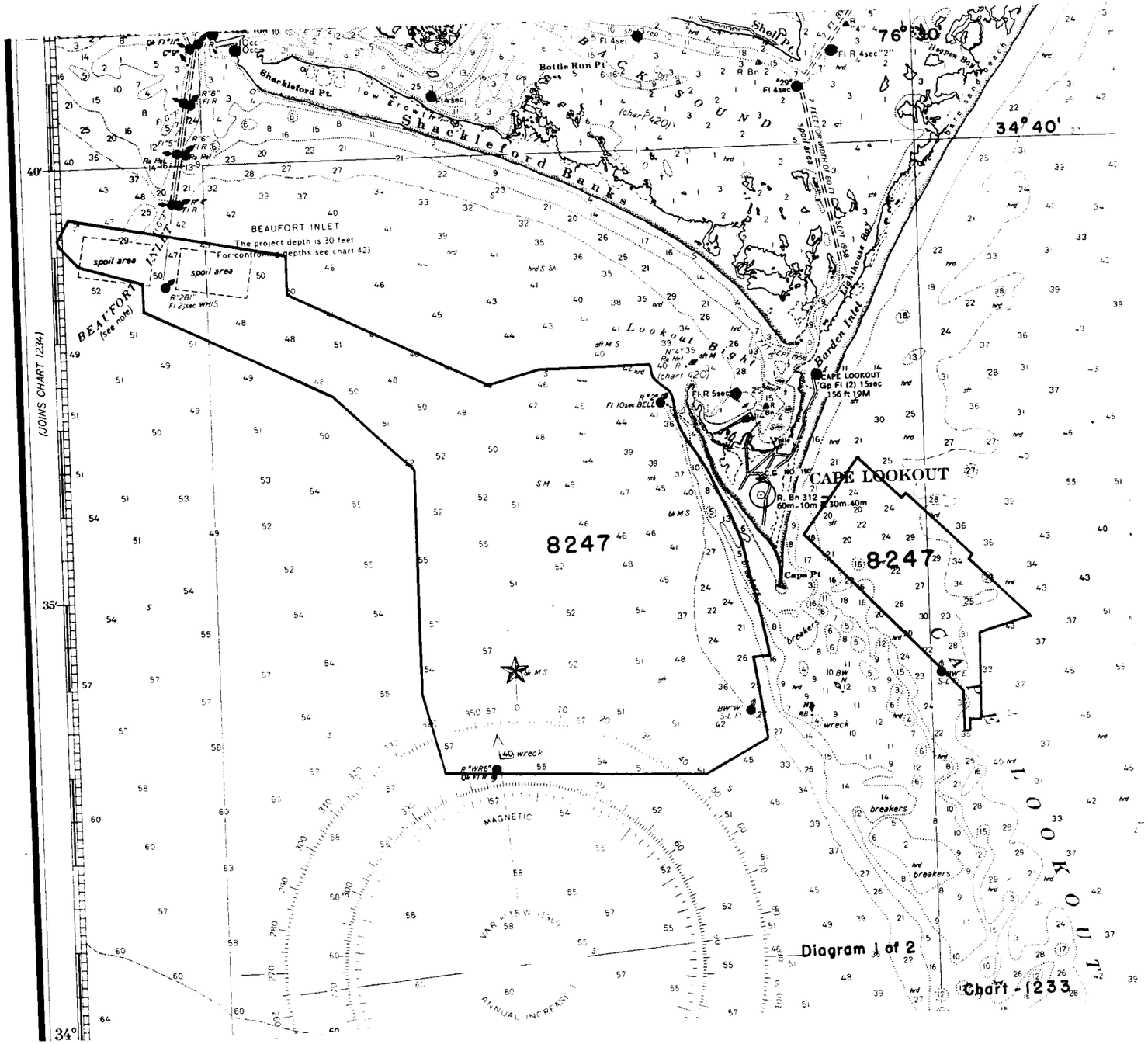
9. Additional Field Work

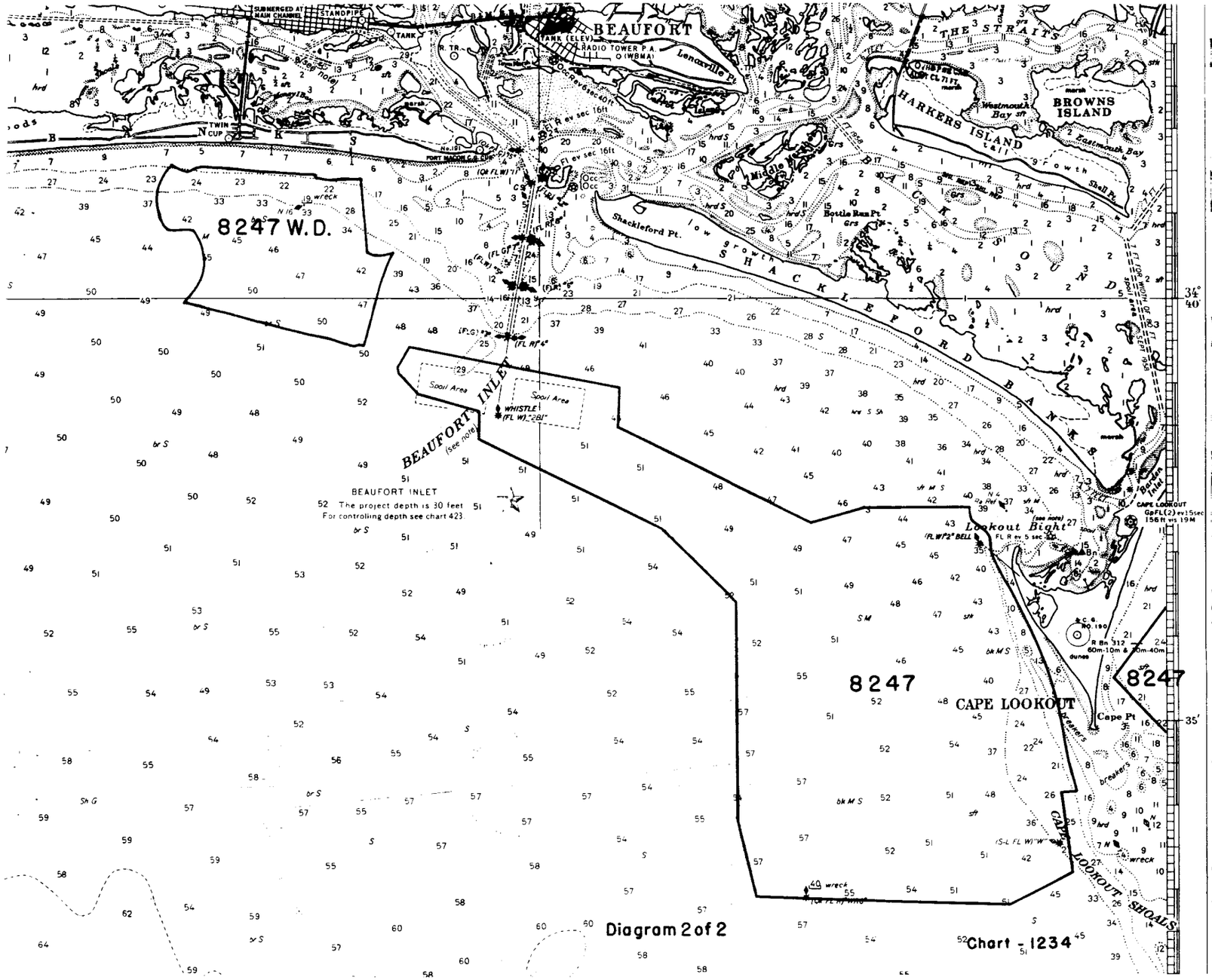
This survey is considered a good basic survey. No additional field work is recommended; however, any future survey in this area should include development for least depth in the shoal depth of 49 feet in latitude 34°35.96', longitude 76°36.68'. #AWOIS 1494 ✓

Examined and Approved:

Roy F. Matsushige
Chief
~~Marine Surveys Division~~
Hydrographic Surveys Branch

L. Curtis Yeager
~~Associate Director~~
~~Office of Marine Surveys and Maps~~
Chief
Nautical Charting Division


76° 30'
34° 40'
40'
35'
34°
BEAUFORT INLET
The project depth is 30 feet
For controlling depths see chart 423
spoil area
spoil area
BEAUFORT INLET (see note)
(JOINS CHART 1234)
Shackleford Banks
Bogue Banks
Bogue Sound
Bottle Run Pt
Shackleford Pt.
Sheal Pt.
Hoopers Bay
Lighthouse Bay
Barden Inlet
Lookout Bight
(chart 420)
CAPE LOOKOUT
Gp Fl (2) 15sec
156 ft 19M
Fl R 5sec
Fl 10sec BELL
R Bn 312
60m-10m
30m-40m
Cape Pt
8247
8247
CAPE LOOKOUT
breakers
wreck
40 wreck
MAGNETIC
VAR 15 W (1975)
ANNUAL INCREASE 1
Diagram 1 of 2
Chart - 1233


BEAUFORT
THE STRAITS
HARKERS ISLAND
BROWNS ISLAND
8247 W.D.
Shackleford Pt.
SHACKLEFORD BANKS
BEAUFORT INLET
(see note)
BEAUFORT INLET
52 The project depth is 30 feet
For controlling depth see chart 423
Lookout Bight
CAPE LOOKOUT
Cape Pt
8247
CAPE LOOKOUT SHOALS
34° 40'
35'
Diagram 2 of 2
Chart - 1234

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8247

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5/19/60	1110	[illegible]	Before ~~After~~ Verification and Review Exam no crit Corr.
6/8/60	420	E.E. Thomas	Before ~~After~~ Verification and Review Exam, No critical revisions
			Before ~~After~~ Verification and Review
12/31/60	1233	E.E. Thomas	Exam, minor Revision, Partial appld.
~~2/28/61~~	~~423~~	~~J.W. Eaton~~	~~Before After Verification and Review~~
2/28/61	423	J.W. Eaton	Revised cleared depth over wreck. Before ~~After~~ Verification and Review
7/11/63	423	O. Svendsen	Part. app. sdgs. in 2 Disposal areas & vicinity :- Before ~~After~~ Verification and Review 34° 38'-39' 76° 39'-42'
9/10/63	833(A)	A.J. Hoffman	Applied 2 sndgs in Disp. Area thru 423. Before ~~After~~ Verification and Review
5/23/70	1234	Irene Beeler	Part Before ~~After~~ Verification and Review Exam Thru cht 420 Dwg # , No Corr
5/25/70	1233	Irene Beeler	Part Before ~~After~~ Verification and Review Deleted Shoal Sdgs from Boat Sheet (Bp52878) Thru 1234; Sdgs taken
5-13-71	423	B. Fernandes	~~Before~~ After Verification and Review before insp Consider Fully appd. pending inspection
5-17-71	420	B. Fernandes	Consider Fully appd. after verification, and review, pending inspection.
6-1-71	1233	B. Fernandes	Consider fully appd. after Verification, Review and pending inspection
1/27/72	1234	B. Fernandes	Consider fully appd. after Verification, Review and pending inspection
11-1-72	1110	R.A. Lillis	Consider fully appld after Verification, Review and pending inspection
7/30/83	11530	Mary Green	Consider fully appd three Charts 11543 & 11544 after Chronry Inspection. Partially superseded by H-9042

M-2158-1

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.

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. A-8247

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
~~35641~~	~~3-17-76~~	~~E.M. Bodmer~~	~~Full Part Before After Verification Review Inspection Signed Via~~ ~~BF~~ ~~Drawing No. 17~~
~~11507~~	~~10-85~~	~~B.F. Andrews~~	~~Full Part Before After Verification Review Inspection Signed Via~~ before Drawing No. ~~49 Consider fully applied #520~~
11547	1/9/89	Barry D Adams TA	Full Part Before After Verification Review Inspection Signed Via Drawing No. 33 Consider fully applied.
11545 ~~6-5-90~~	6-5-90	E. SPENCER	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 49 CONSIDER FULLY APPLIED ~~AS~~ #420 5-17-71 B.F.
11544	5-13-96	Dan Fleish	Full ~~Part Before~~ After Verification Review Inspection Signed Via Drawing No. 46 CONSIDERED FULLY APP'D.
			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.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63