

8249

Diag. Sht. No. 1232-2.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PBS-2455 Office No. H-8249

LOCALITY

State NORTH CAROLINA

General locality CAPE HATTERAS

Locality DIAMOND SHOALS

19 55.

CHIEF OF PARTY

JOHN C. MATHISSON

LIBRARY & ARCHIVES

DATE MAY 4 1960

COMM-DC 61300

8249

Form 537
(Ed. June 1946)

Note: Because of frequent bottom changes on Diamond Shoal
this survey is considered as fully applied to chart 1232 thru the
application of the boat sheet, Aps 52735-37 applied to
dry 11 Sept 1955.

DEPARTMENT OF COMMERCE

R. E. Elkins
2-8-63

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-8249

Field No. PBS-2455

State NORTH CAROLINA

General locality CAPE HATTERAS

Locality DIAMOND SHOALS

Scale 1:20,000 Date of survey 31 May to 22 July 1955

Instructions dated 28 January 1955

Vessel SHIPS PARKER, BOWEN & STIRNI

Chief of party JOHN C. MATHISSON

Surveyed by D.G. RUSHFORD, H.J. SEABORG, J.R. PLAGGMIER, C.R. REED
& W.R. KACHEL

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

Fathograms scaled by SHIP PERSONNEL

Fathograms checked by NORFOLK PROCESSING OFFICE

Protracted by SHIP PERSONNEL & R.D. LYNN

Soundings penciled by R.D. LYNN

Soundings in ~~XXXXXX~~ feet at MLW ~~XXXXXX~~

REMARKS:

Note: a reconnaissance survey of May 1962 is
filed as chart letter 575/1962 in Nautical chart Div.

Handwritten initials

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: PBS2255 (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 Curacoek 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 Curacoek Inlet. It is the subject of a special report previously submitted.

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

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 correction 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 through ships follows: Shoran corrections were rounded off to the nearest 0.005 mile when entering corrections in volumes.

Tabulation of Shoran Calibrations - STIRNI:

| 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 |
| 7-21-55 | 2455 | 2 | CLUB | /0.061 (r) | PEA | /0.021 (r) |
| 7-29-55 | 4355 | 2 | CLUB | -0.031 | LCLA | -0.029 |
| 8-31-55 | 4255 | 2 | SAM | /0.004 | LCLA | -0.019 |
| 9-26-55 | 4155 | 2 | DEY | -0.040 | KNOL | -0.030 |
| 10-20-55 | 4755 | 2 | SURF | -0.008 | CAK | -0.034 |

PARKER:

| | | | | | | |
|----------|--------|---|------|--------|------|--------|
| 4-18-55 | 2355 | 1 | SAM | -0.003 | KNOL | -0.026 |
| | | 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 | LCLA | -0.034 |
| 8-31-55 | 4255 | 2 | SAM | -0.001 | LCLA | -0.042 |
| 9-28-55 | 4155 | 2 | DEY | -0.015 | KNOL | -0.043 |
| 10-18-55 | 4755 | 2 | SURF | -0.061 | CAK | -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 (LCLA) " |
| 8-6-55 - 9-25-55 | /0.005 (SAM) " | -0.020 (LCLA) " |
| 9-26-55 - 10-5-55 | -0.040 (DEY) " | -0.030 (KNOL) " |
| 10-6-55 - Season End | -0.010 (SURF) " | -0.035 (CAK) " |

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) |
| 4-26-55 | 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) | -0.015 (KNOL)(Set #1) |
| 4-27-55 - 5-25-55 | | |
| 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:

| | | |
|---------------------------|----------------------------------|-----------------------------------|
| -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 - 10-4-55 | | -0.015 (KNOL)(Set #2) |
| 9-21-55 - 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 \neq)

PBS

| <u>SPEED (RPM)</u> | <u>CORRECTION (FEET)</u> | <u>FROM DEPTH TO DEPTH (FEET)</u> |
|------------------------|---------------------------------|---|
| 400 | 0.2 | all depths |
| 450 | 0.2 | all depths |
| 500 | 0.2 | all depths |
| 600 | 0.4 0.2 | 6.0 to 14.5 15.0 and over |
| 650 | 0.4 0.2 | 11.5 to 17.0 17.5 and over |
| 700 | 0.6 0.4 0.2 | 12.5 to 15.0 15.5 to 19.5 20.0 and over |
| 750 | 0.8 0.6 0.4 0.2 0.4 | 12.5 to 14.0 14.5 to 16.5 17.0 to 21.5 22.0 to 31.5 32.0 and over |
| 800 | 1.0 0.8 0.6 0.4 | 12.5 to 13.0 13.5 to 15.5 16.0 to 19.0 19.5 and over |
| 850 | 1.0 0.8 0.6 0.4 | 12.5 to 13.5 14.0 to 16.5 17.0 to 22.5 23.0 and over |
| 900 | 1.0 0.8 0.6 0.4 | 12.5 to 14.5 15.0 to 20.5 21.0 to 34.0 34.5 and over |
| 1000 | 1.0 0.8 0.6 | 6.0 to 21.5 22.0 to 31.5 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 Lockout Area were based on the portable gage installed at Lockout 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 entered 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.

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 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
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 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.

H-8249 (1955)

Parker

Fath. 808-1175

A Scale
Table #1

| Depth | Corr. | Positive Constant |
|-------|-------|-------------------|
| 0-55 | -0.2 | +0.2 = 0.0 |

B Scale
Table #2

| Depth | Corr. | Positive Constant |
|-------|-------|-------------------|
| 35-90 | -0.6 | +0.6 = 0.0 |

Bow^e
an

Fath. 808-160

A Scale
Table #3

| Depth | Corr. | Positive Constant |
|-----------|-------|-------------------|
| 0-16.9 | -0.2 | +1.0 = +0.8 |
| 17-27.2 | 0.0 | +1.0 = +1.0 |
| 27.3-33.8 | +0.2 | +1.0 = +1.2 |
| 33.9-39.4 | +0.4 | +1.0 = +1.4 |
| 39.5-45.2 | +0.6 | +1.0 = +1.6 |
| 45.3-50.9 | +0.8 | +1.0 = +1.8 |
| 51.0-55.0 | +1.0 | +1.0 = +2.0 |

B Scale

#4

| Depth | Corr. |
|---------|-------|
| 0-57.8 | +1.5 |
| 57.9-90 | +2.0 |

Fath. 808-100

Table #5

A Scale

| Depth | Corr. |
|-----------|-------|
| 0-22.0 | 0.0 |
| 22.1-35.5 | +0.2 |
| 35.6-48.9 | +0.4 |
| 49.0-55.0 | +0.6 |

B Scale

Table #6

| Depth | Corr. |
|-------|-------|
| 35-90 | +1.0 |

Fath. 808 161

A Scale

Table #7

| Depth | Corr |
|-----------|------|
| 0-13.5 | 0.0 |
| 13.6-24.0 | +0.2 |
| 24.1-33.0 | +0.4 |
| 33.1-42.5 | +0.6 |
| 42.6-49.0 | +0.8 |
| 49.1-55.0 | +1.0 |

B Scale

Table #8

| Depth | Corr. |
|-------|-------|
| 35-99 | 0.0 |

NORFOLK PROCESSING OFFICE
STATISTICS
H-8249

| <u>VOLUME</u> | <u>DAY LTR.</u> | <u>DATE</u> | <u>NO. POS.</u> | <u>STAT. MI. SDGS.</u> |
|--------------------|-----------------|-------------|-----------------|------------------------|
| <u>SHIP PARKER</u> | | | | |
| 1 | A blue | 7 June 1955 | 66 | 13.8 |
| 1 | B | 16 " | 92 | 31.0 |
| 2 | C | 20 " | 59 | 22.3 |
| 2&3 | D | 28 " | 161 | 48.8 |
| 3 | E | 29 " | 93 | 31.3 |
| 3&4 | F | 30 " | 140 | 39.3 |
| 4 | G | 6 July | 123 | 39.9 |
| 5 | H | 19 " | 124 | 34.5 |
| 5&6 | J | 20 " | 149 | 37.7 |
| 6 | K | 22 " | 7 | 5.8 |
| | | TOTAL | 1015 | 304.4 |
| <u>SHIP BOWEN</u> | | | | |
| 7 | A purple | 3 June 1955 | 211 | 41.1 |
| 7 | B | 4 " | 93 | 21.9 |
| 7&8 | C | 16 " | 112 | 34.3 |
| 8 | D | 20 " | 39 | 15.0 |
| 8&9 | E | 28 " | 201 | 69.4 |
| 9&10 | F | 29 " | 244 | 66.5 |
| 10 | G | 30 " | 124 | 40.4 |
| 11 | H | 1 July | 75 | 25.3 |
| 11 | J | 6 " | 97 | 29.2 |
| 11 & 12 | K | 19 " | 84 | 28.0 |
| 12 | L | 20 " | 65 | 17.7 |
| 12 | M | 22 " | 71 | 18.0 |
| | | TOTAL | 1416 | 406.8 |
| <u>SHIP STIRNI</u> | | | | |
| 13 | A red | 1 July 1955 | 55 | 14.6 |
| 13 | B | 19 " | 63 | 17.2 |
| 13 | C | 20 " | 103 | 32.2 |
| 14 | D | 22 July | 112 | 24.0 |
| | | TOTAL | 333 | 88.0 |
| GRAND TOTAL | | | 2764 | 799.2 |

NORFOLK PROCESSING OFFICE
FLOATING AIDS TO NAVIGATION
H-8249

| <u>BUOY</u> | <u>LATITUDE</u> | <u>LONGITUDE</u> | <u>DEPTH</u> | <u>POS. NO.</u> | <u>DATE</u> |
|--|-----------------|------------------|--------------|-----------------|-------------|
| Outer Diamond Shoal Lighted Bell Buoy 2 | 35-08.19' | 75-24.14' | 43' | 1C | 6/16/55 |

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8249 (PBS-2455)

GENERAL

The plot of this survey was started in the Field as a smooth boat sheet. When it was received at this Office the positions in volumes 1,2,13 and 14 had been plotted. It is apparent that preliminary shoran corrections were applied to these positions as they differ slightly in relative location from those plotted in this Office.

In addition to reducing and checking the shoran distances, this Office completely rescanned the fathograms at twenty second intervals and reduced all soundings with templates.

CONDITION OF SURVEY

This appears to be an excellent basic survey and no unusual conditions were encountered during the smooth plot. Soundings are in good agreement at crossings although the bottom is made up of almost continuous sand-waves and most of the fathograms show evidence of considerable wave action.

CHART COMPARISON

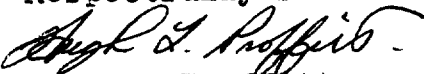
Except for minor and relatively unimportant changes, the smooth sheet is in agreement with chart 1232, corrected to 11/30/59. See the attached section of chart 1232 showing comparative smooth sheet depths in red ink.

CONTROL

All positioning was by shoran on stations:

| | | |
|------|--------------------|---------------------|
| CLUB | Lat. 35-12'-27.00" | Long. 75-42'-23.14" |
| PEA | Lat. 35-41'-00.7" | Long. 75-28'-52.6" |

Norfolk, Va.
21 April 1960

Respectfully submitted,

Hugh L. Proffitt
Cartographer

GEOGRAPHIC NAMES

Survey No. H-8249

On Chart No. 1232
 On previous survey No.
 On U. S. quadrangle Maps
 From local information
 On local Maps
 P. O. Guide or Map
 Rand McNally Atlas
 U. S. Light List

Name on Survey

| | A | B | C | D | E | F | G | H | K | |
|-----------------------|---|---|---|---|---|---|---|---|---|----|
| CAPE HATTERAS (Title) | | | | | | | | | | 1 |
| HATTERAS SHOALS | ✓ | | | | | | | | | 2 |
| HATTERAS SLOUGH | ✓ | | | | | | | | ✓ | 3 |
| INNER DIAMOND SHOALS | ✓ | | | | | | | | ✓ | 4 |
| DIAMOND SHOALS | ✓ | | | | | | | | ✓ | 5 |
| DIAMOND SLOUGH | ✓ | | | | | | | | ✓ | 6 |
| OUTER DIAMOND SHOALS | ✓ | | | | | | | | ✓ | 7 |
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George M. Buee
 Geographic Names Section
 15 June 1960

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8249

Records accompanying survey: Smooth sheets 1

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

Descriptive Reports 1; graphic recorder envelopes 14;

special reports, etc. 2-Shoran Calibration sheets A & B.

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

Number of positions on sheet

Number of positions checked

Number of positions revised

Number of soundings revised (refers to depth only)

Number of soundings erroneously spaced

Number of signals erroneously plotted or transferred

Topographic details Time

Junctions Time

Verification of soundings from graphic record Time

Special adjustments Time

Verification by Total time Date

Reviewed by Time Date

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H- 8249

The verifier should deal with the present hydrographic survey only, as the reviewer considers its relation to previous surveys and published charts. He should be thoroughly familiar with Chapters 3, 7 and 9 of the Hydrographic Manual.

1. The descriptive report was consulted and appropriate notes were made in soft pencil regarding action taken.
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude.
3. All reference to survey sheets mentioned in the descriptive report include the registry number and year.
4. Geographic names of hydrographic features if on sheet are in slanting lettering and of topographic features in vertical lettering.
5. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken.
6. All positions verified instrumentally were check marked in the sounding records.
7. All critical soundings are clear and legible and are a little larger than the adjacent soundings.
8. The metal protractor has been checked within the last three months.
9. The protracting and plotting of all bad crossings were verified.
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 and overlapping curves made identical.
17. The notation "JOINS H- (19--)" was added in ink for all contemporary adjoining or overlapping sheets now registered. Those not verified are shown in pencil.
18. The depth curves have been inspected before inking.
19. All triangulation stations and transfer of topographic and hydrographic signals were checked.
20. Heights of rocks were checked against range of tide.
21. Rocks transferred from topographic surveys have a dotted curve where shown thereon. Rocks located accurately by hydrographer are encircled by dotted red curve.
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.
25. Degree and minutes values and symbols have been checked.
26. Questionable soundings have been checked on the fathograms.

27. Source of shoreline and signals (when not given in report).
28. All notes on sheet are in accordance with figure 171 in the Hydrographic Manual.
29. All aids located, with those on contemporary topographic sheets, have been shown on survey.
30. Depth curves were satisfactory except as follows:
31. Sounding line crossings were satisfactory except as follows:
32. Junctions with contemporary surveys were satisfactory except as follows:
33. Condition of sounding records was satisfactory except as follows:
34. The protracting was satisfactory except as follows:
35. The field plotting of soundings was satisfactory except as follows:
36. Notes to reviewer:

Verified by

Date

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

23 June 1960

Division of Charts: R. H. Carstens

Plane of reference approved in
14 volumes of sounding records for

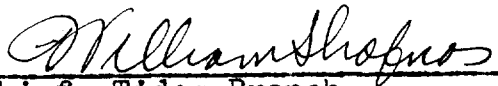
HYDROGRAPHIC SHEET 8249

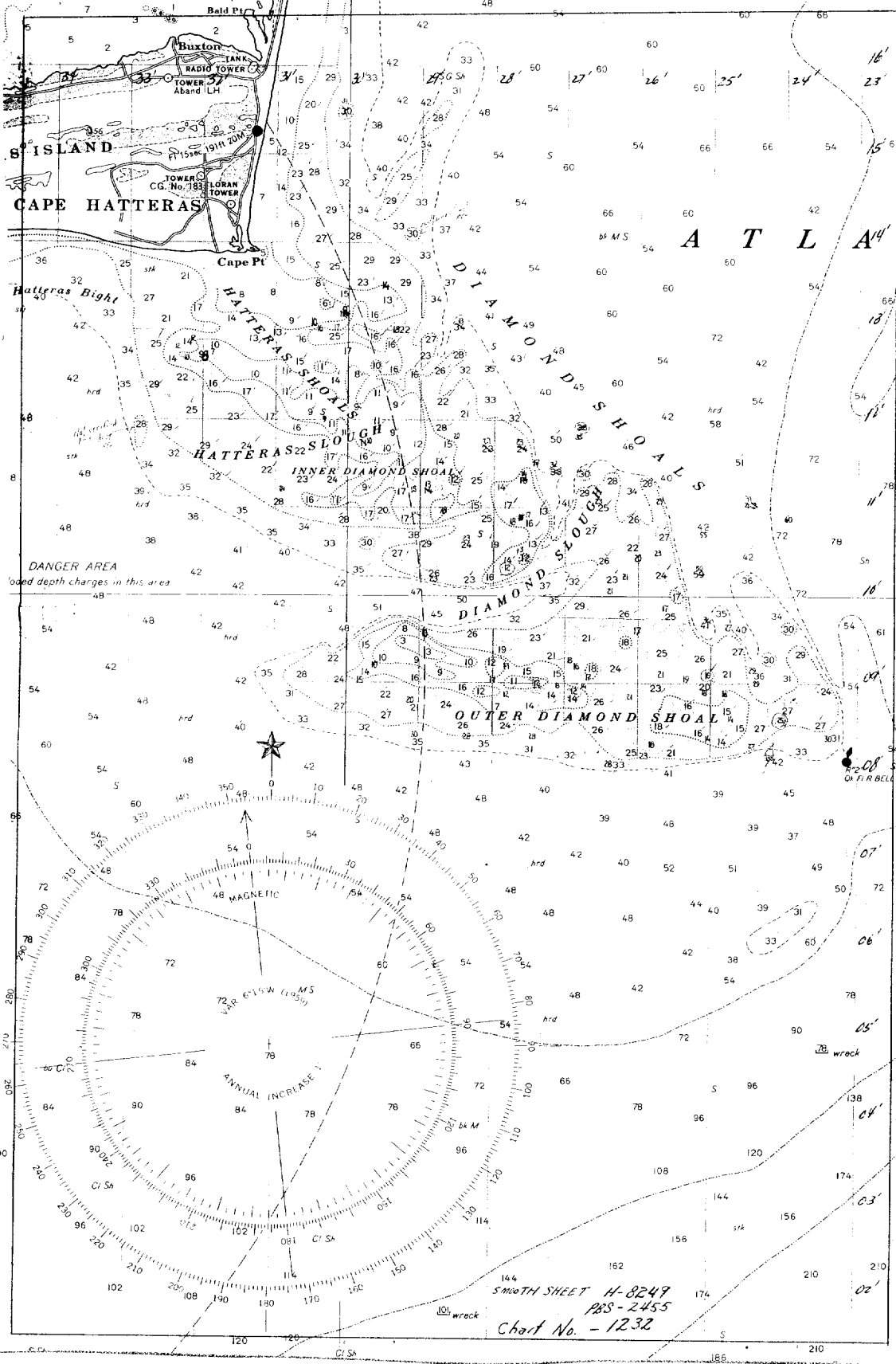
Locality Cape Hatteras, N.C.

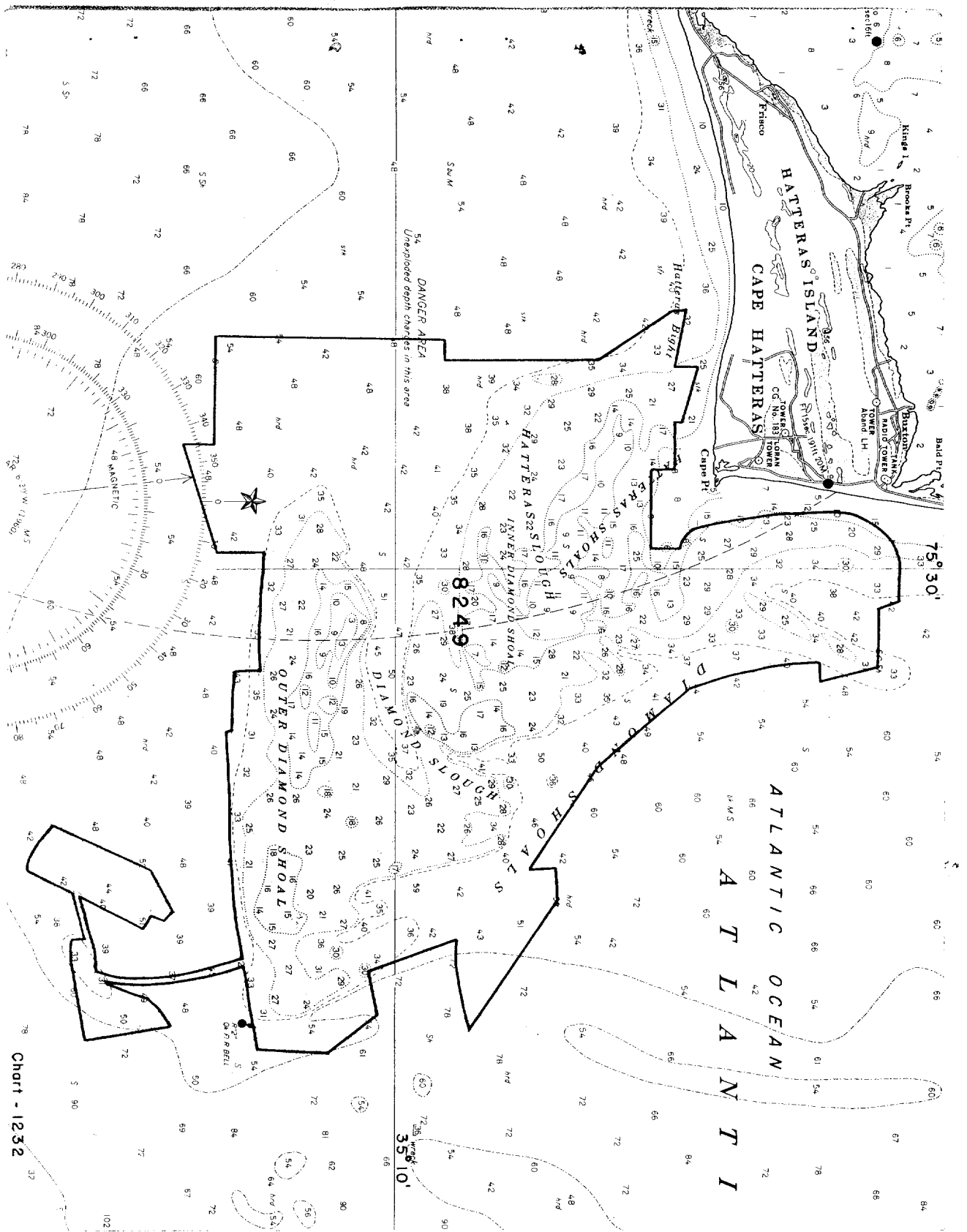
Chief of Party: J. C. Mathisson in 1955
Plane of reference is mean low water, reading
2.1 ft. on tide staff at Hatteras Inlet (Ocean)
7.6 ft. below B. M. 1 (1955)

Height of mean high water above plane of reference is 3.4 feet.

Condition of records satisfactory except as noted below:


Chief, Tides Branch
~~Chief, Division of Tides and Currents~~





NAUTICAL CHARTS BRANCH

SURVEY NO. H-8249

Record of Application to Charts

CATEGORY I

| DATE | CHART | CARTOGRAPHER | REMARKS |
|--|------------------|---------------------------|--|
| 5-19-60 | 1110 | <i>E. P. H. Hoggins</i> | Before After Verification and Review Exam no crit Corr. |
| 6/28/60 | 1000 | <i>J. F. Walker</i> | Before After Verification and Review Exam - no critical corr - thru 1110 ^{crit corr} |
| 9-22-60 | 1001 | <i>Chas R. Wittmann</i> | Before After Verification and Review Examined - No corr. |
| 10-17-60 | 1109 | <i>O. Svendsen</i> | Before After Verification and Review Examined. No critical corr. ^{3rd} |
| 2-25-61 | 1232 | <i>O. Svendsen</i> | Before After Verification and Review Applied only critical edges . |
| 1-14-63 | 1232 | <i>G. R. Johnson</i> | Before After Verification and Review No revision Partly Appd. |
| <p>Note: Because of frequent bottom changes in Diamond Shoal, this survey is</p> | | | Before After Verification and Review considered |
| <p>as fully applied to chart 1232, thru the application of the boat sheet, Bps 5-2735-37</p> | | | Before After Verification and Review applied to |
| <p>dry 11 Sept 1955.</p> | | | |
| | 11520 | <i>M. J. Frier</i> | <i>RE. Elkins 1-8-63</i> Before After Verification and Review Considered ^{adequately} fully |
| | | | appd thru Chart 11535 (see note above) |
| | | | Before After Verification and Review |
| 1-17-63 | 11009 | B. F. Anderson | Considered adequately applied through chart |
| 2/17/63 | 11009 | <i>B. F.</i> | Adequately applied ³ |

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.