

8343

Diag. Cht. Nos. 1245 and 1246

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PBS-2656 Office No. H-8343

LOCALITY

State FLORIDA

General locality ATLANTIC OCEAN

Locality CAPE CANAVERAL

194/ 56

CHIEF OF PARTY

John C. Ellerbe

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DATE MAR 29 1957

8343

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-8343

Field No. PBS-2656

State Florida
General locality Atlantic Ocean
Locality Cape Canaveral
Scale 1:20000 Date of survey 10/19/56 - 12/18/56
Instructions dated 24 August 1957
Vessel PARKER - BOWEN - STIRNI - Launch #180
Chief of party ~~K.S. Ulm, C.R. Reed, & J.C. Ellerbe~~
Surveyed by R.C. Darling, D.G. Rushford, O.L. Doster, W.M. Lee, E.R. Scyoc, L.L. Seal, & J.S. Baker & C.R. Reed
Soundings taken by fathometer, graphic recorder, and lead wire
Fathograms scaled by Field Party
Fathograms checked by Norfolk District Processing Office
Protracted by A.K. Schugeld
Soundings penciled by A.K. Schugeld
Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~ and are true depths
REMARKS: This survey was processed and smooth plotted by the Hydrographic Section of the Norfolk District Office.

712

Descriptive Report to Accompany Hydrographic Surveys

H-8340 (Field No. PBS-1156) 1957
H-8341 (Field No. PBS-2156)
H-8342 (Field No. PBS-2556)
H-8343 ✓ (Field No. PBS-2656)
H-8344 (Field No. PBS-2756)
H-8345 (Field No. PBS-4556)
(Field No. PBS-4556 WD)
(Field No. PBS-4656 WD)

These Surveys were accomplished by Coast & Geodetic Survey Ships PARKER, BOWEN, STIRNI, and Launch No. 180. Chiefs of Party during the project were CDR. Kenneth S. Ulm, CDR. Clarence R. Reed, and CDR. John C. Ellerbe.

A. PROJECT: Project No. 10000-804. Original instructions dated 24 Aug. 1956. Supplemental instructions dated 3 October 1956 and 9 October 1956.

B. SURVEY LIMITS AND DATES: This project is in the general vicinity of Cape Canaveral, Florida. Field work was begun on 12 October 1956 and ended 3 January 1957. The progress of the work was hampered as the project was in a restricted area of the guided missile range. Work could only be accomplished when missile tests were not being conducted. At other times, shoran operations had to be stopped, because it was causing some interference with the Air Force. As a result, long hours and weekend work was necessary.

C. VESSELS AND EQUIPMENT: The Ships PARKER, BOWEN, STIRNI, and Launch No. 180 were used in the survey. All vessels based at Port Canaveral, Florida, in the immediate project area. The majority of soundings were taken with 808 type fathometers. The following instruments being used: 100S, 1125, 151 SPX, 160 SPX, and 164. Edo Fathometer No. 215 was used for part of the work on Launch No. 180.

D. TIDE AND CURRENT STATIONS: A portable automatic tide gage was maintained at the Air Force Wharf, Port Canaveral, Florida. MLW as furnished by the Washington Office was 1.0 Ft. on the Tide Staff. No other time or range corrections were applied. Three current stations were occupied by the Ship STIRNI using a combination of Roberts Radio Current Buoys and Current Pole. Currents were very weak at all three stations.

E. SMOOTH SHEET: Smooth sheet projections were constructed by hand at the Norfolk District Processing Office.

F. CONTROL STATIONS: Shoran control was used for the entire project. Three shoran stations were erected. Each station was located near a triangulation station. The shoran mast was located by azimuth and distance from the adjacent triangulation station and G.P.'s computed using standard methods. This location work was done by Lt. Nygren's Geodetic Party based at Patrick Air Force Base.

G. SHORELINE AND TOPOGRAPHY: Shoreline details will be taken from Topographic *Review, P1* Manuscripts compiled from recent photographs.

H. SOUNDINGS: All depths were measured by fathometers using standard methods.

I. CONTROL OF HYDROGRAPHY: Shoran control was used for the entire project. Three stations were used in various combinations as the work progressed.

J. ADEQUACY OF SURVEY: This survey is considered complete and adequate to supersede prior surveys for charting. Some additional development could have been made of the shoal areas if time had permitted. Junctions with adjoining surveys are satisfactory and depths curves can be adequately drawn at the junctions.

K. CROSSLINES: Approximately 5 - 8% crosslines were ran.

L. COMPARISON WITH PRIOR SURVEYS: No comparison had been made at the time of this report. Comparisons will be made after smooth sheets are plotted. Review, #5

M. COMPARISON WITH CHART: See Section "L". Review, #6

N. DANGERS AND SHOALS: No new dangers or shoals were found. All charted dangers, shoals, and bare rocks were found as charted; no shoaler depths were found except for those listed in L, M, and N. Review, #5

O. COAST PILOT INFORMATION: This information will be submitted as a separate report.

P. AIDS TO NAVIGATION: All floating aids to navigation were located by shoran or sextant fixes. Form 567 was submitted to W. O. 1/3/57.

Q. LANDMARKS FOR CHARTS: Washington Office requested CDR. James C. Tison, C&GS liaison officer with U. S. Air Force, to furnish information for landmarks directly.

R. GEOGRAPHIC NAMES: This information will be submitted on a separate report.

S. SILTET AREAS: Not applicable.

T. BY-PRODUCT INFORMATION: Wire Drag investigations were made of several items in the area in conjunction with the hydrographic surveys. A separate report (C.L. 21, 1957) "Investigation of Wrecks" was submitted to the Washington Office on 12/11/56, covering this phase of the work. Standard wire drag methods were used. Shoran provided the control for both the guide and end vessels. The STIRNI was used as tender and tests were made according to standard procedures.

The following Wire Drag Investigations were Made:

Sheet PBS-4556 WD, Wreck Nos. 495, 501, 845, & 1221

Sheet PBS-4656 WD, Wreck No. 502

WRECK NO. 495: Wreck located at latitude 28° 34.22' - longitude 80° 18.95'.

A least depth of 60 feet was obtained on the wreck by fathometer. Wreck was hung at 65.0 feet effective depth and cleared at 56.0 feet effective depth.

WRECK NO. 501: Wreck located at latitude 28° 23.30' - longitude 80° 17.72'. A least depth of 46 feet was obtained on the wreck by fathometer. Wreck was hung at 55.5 feet effective depth and cleared at 43.0 feet effective depth.

WRECK NO. 845: Wreck is in two sections. The northern and shoalest section lies at latitude 28° 28.70' - longitude 80° 22.00'. The deeper section lies at latitude 28° 28.66' - longitude 80° 21.95'. The wreck was hung at 49.5 feet effective depth and cleared at 46.0 feet effective depth. The deeper section has a depth of 53 feet by fathometer. Wreck is marked by obstruction buoy WRSA. Buoy location at time of survey: latitude 28° 28.51' - longitude 80° 21.84'.

WRECK NO. 1221 (Obstruction): This obstruction was not found by sonar search or dragging operations. The immediate area of the reported position was dragged to an effective depth of 41.5 feet in a general bottom depth of 44 to 50 feet.

Not applicable to pres. survey
See F.E. #3 (1957) W.D.

WRECK NO. 502: This wreck was not found. The area was dragged by four strips with effective depths ranging from 60.0 to 66.5 feet with negative results. F.E. #4(57)
W.D.

U. TABULATION OF APPLICABLE DATA: See following pages.

Respectfully submitted,

William R. Kachel

William R. Kachel
Lt., C&GS

NOTE: The above named officer was not present during any of the work covered by this report. This report was written prior to the plotting of the smooth sheets.

APPROVED AND FORWARDED:

(with additional note, see below!)

Clarence R. Reed

Clarence R. Reed
CDR., C&GS

WRK:fl

Conditions under which hydrography was accomplished on the Cape Canaveral project were a little unusual. Early completions of the project was urgent and work "around the clock" was often necessary in order to dovetail the work to avoid interference with military operations. The ships were not designed for continuous operation and, due to shortage of personnel and time, the records were not as complete as could be desired for submission to the Norfolk Processing Office. However, on this date (7 February 1957) it is believed that records have been placed in good condition by office personnel under the supervision of Lt. W. R. Kachel. Although Mr. Kachel was not present during the Florida field season, his previous experience has proved very valuable.

INVENTORY OF DATA - PROJECT 10000-80A

1. BOAT SHEETS:

1 ea. Sheet	Field No.	PBS-1156
1 ea.	"	PBS-2456
1 ea.	"	PBS-2556
1 ea.	"	PBS-2656
1 ea.	"	PBS-2756
1 ea.	"	PBS-4556
1 ea.	"	PBS-4556 WD
2 ea.	"	PBS-4656 W.D.
1 ea. Sheet,	Dinaplex,	Calibration

<u>2. Sounding Volumes:</u>	<u>PARKER</u>	<u>BOWEN</u>	<u>STIRNI</u>	<u>Launch 180</u>	<u>Total</u>
PBS 1156	0	0	0	1	1
PBS 2456	12	0	3	3	18
PBS 2556	0	16	0	0	16
PBS 2656	11	1	3	6	21
PBS 2756	0	11	0	0	11
PBS 4556	4	1	0	0	5
PBS 4656	0	1	0	0	1
PBS 4556 WD	1	2	1	0	4
PBS 4656 WD	1	1	0	0	2
Calibrations & Bar Checks	1	1	2	1	5

TOTAL - 84 Volumes

3. Fathograms:

Ship PARKER	26 Envelopes
Ship BOWEN	36 Envelopes
Ship STIRNI	7 Envelopes
Launch 180	14 Envelopes

TOTAL - 83 Envelopes

4. TIDES:

Marigrams 15 Oct. - 17 Nov. 1956 Sent to W. C. 12-1-56
Marigrams 17 Nov. - 3 Jan. 1957 " 1-21-57
Sea Level record and Sea Report of Tide Station for Air Force
Wharf, Port Canaveral, Florida - Sent to W. C. 10-23-56

5. CURRENTS:

3 ea. Form 270, Record of Current Observations and 28 ea. Tapes,
Chronograph Sent to W. C. 1-22-57

6. MAGNETICS:

Special Report - Magnetism Sent to W. C. 1-10-57

7. TRIANGULATION:

Mis. Triangulation data for location of Sheran Stations.

INVENTORY OF DATA - PROJECT 10000-804 (cont.)

8. WRECKS:

Special Report - Investigation of Wrecks - Sent to W. O. 12-11-56

SHORAN CORRECTIONS

Numerous calibrations were made by each vessel during the course of project to determine the correctors to be applied to the shoran distances.

The calibration was accomplished by taking a series of simultaneous visual (sextant) and shoran fixes. The visual fixes were then plotted on a dinaplex calibration sheet. The values were scaled off in statute miles and compared with the values as read on the shoran. The corrections thus determined were fairly consistent and a mean correction was determined for each vessel for the entire project.

Three station sites were occupied during the course of the work. In each case, the G.P. of the shoran mast was determined by computation using a near-by triangulation station and measuring azimuth and distance to the mast itself.

The positions were determined as follows:

Station PAT (Also known as BASE in some of the computations) was computed using Patrick Air Force Base, SOUTH WATER TANK.

Station DUM was computed using DUMMIT, 1934

Station COR was computed using COURTENAY, 1953

Final G.P.'s for Shoran Stations:

PAT	Lat.	28° 15' 08.602"
	Long.	80° 36' 30.550"
DUM	Lat.	28° 41' 47.565"
		80° 43' 20.268"
COR	Lat.	28° 28' 20.532"
		80° 42' 34.733"

The same shoran monitors were used at Stations COR and DUM during the entire project. Monitor #2 at COR and Monitor #4 at DUM. At station PAT, Monitor #3 was used except on 10, 11, & 12 December when Monitor #1 was put in use to facilitate repairs on Monitor #3. Corrections were computed for all four monitors where necessary.

TIDE NOTE

A portable automatic recording tide gage was in operation at Port Canaveral, Fla. for the entire project. The plane of mean low water corresponds to 1.0 feet on the staff for this station as furnished by the Washington Office in letter of 7 December 1956.

All tides needed for the periods of hydrography and wire drag were scaled from the marigrams before submitting the marigrams to the Washington Office. Curves were drawn after applying the 1.0 foot correction and tides were tabulated to 0.2 feet for hydrography and 0.5 ft. for wire drag.

TIDE NOTES (CONT.)

The tide gage was continued in operation after the project was finished and was transferred to Lt. Nygren's Geodetic Party for servicing in order to obtain a longer series of observations.

FATHOMETER CORRECTIONS

Numerous bar checks were taken by each vessel as the work progressed. These bar checks were limited primarily to the A & B scales. The bar checks were meaned, curves drawn, and correctors tabulated for each fathometer used. Correctors were tabulated to 0.2 ft. for hydrography and 0.5 ft. for wire drag.

The following fathometers were used:

Ship PARKER:	Model 808 No. 1125	19 Oct. thru 8 Nov. 1956
	Model 808 No. 164	16 Nov. thru 18 Dec. 1956
Ship BOWEN:	Model 808 No. 160XFS	Entire project
Ship STIRNI:	Model 808 No. 151SPX	Entire project
Launch No. 180:	EDO No. 215	26 Nov. thru 10 Dec. 1956
	Model 808 No. 100S	11 Dec. to End

On 17 Dec. 1956 two bar checks were taken by the PARKER using fathometer 808, No. 164. These were taken on the edge of the Gulf Stream in order to have sufficient water depth for C & D scale check. Due to the difference in temperature and salinity, the correctors resulting from these two bar checks were considerably different from the other correctors determined for this fathometer. It was decided not to use this set of correctors for reducing the soundings unless difficulty was encountered in obtaining satisfactory line crossing.

A tabulation was made of the phase shift ^{error} even between C & D scales to determine the D scale corrections.

FATHOMETER VELOCITY CORRECTIONS
 SHIPS PARKER, BOWEN, & STIRNI
 PROJECT 10,000-804
 CAPE CANAVERAL, FLORIDA

SHIP PARKER

808 FATH. #1125

19 Oct. thru 8 Nov. 1956

A SCALE

0.0 to 15.0
 -0.2 to 25.0
 -0.4 to 35.0
 -0.6 to 55.0

B SCALE

-1.2 to 40.0
 -1.4 to 60.0
 -1.6 to 90.0

C SCALE

-1.6 all

D SCALE

-1.6 all

SHIP PARKER

808 FATH. #164

16 Nov. thru 18 Dec. 1956

A SCALE

0.0 to 11.8
 -0.2 to 15.8
 -0.4 to 20.0
 -0.6 to 25.4
 -0.8 to 30.4
 -1.0 to 40.0
 -1.2 to 43.4
 -1.4 to 46.2
 -1.6 to 48.4
 -1.8 to 49.6
 -2.0 to 51.0

B SCALE

-1.0
~~-0.1~~ to 40.0
 -1.2 to 50.0
 -1.4 to 80.0

C SCALE

-1.4 all

D SCALE

-1.4 all

SHIP PARKER

808 Fath. #164

* 17 December 1956 only

A SCALE

0.0 to 12.4
~~0.2~~ to 17.4
~~0.4~~ to 22.0
~~0.6~~ to 27.4
~~0.8~~ to 40.0
~~1.0~~ to 47.6
~~1.2~~ to 52.0
~~1.4~~ to 55.0

B SCALE

~~1.8~~ to 60.0
~~1.6~~ to 62.4
~~1.4~~ to 64.0
~~1.2~~ to 65.8
~~1.0~~ to 67.2
~~0.8~~ to 68.4
~~0.6~~ to 69.6
~~0.4~~ to 71.0

C SCALE

0.0 to 71.4
 -0.2 to 75.4
 -0.4 to 80.0
 -0.6 to 83.2
 -0.8 to 87.4
 -1.0 to 125.0

D SCALE

-0.5 all

* These correctors determined from bar checks taken outside the working area on edge of Gulf Stream. Not to be used for reducing soundings unless other correctors for Fath. No. 164 give poor crossings.

SHIP BOWEN

808 FATH. 160 XPS

ENTIRE PROJECT

A SCALE

-0.2 to 14.4'
 0.0 to 30.0'
 *0.2 to 36.4'
 0.4 to 43.0'
 0.6 to 50.0'
 0.8 to 55.0'

B SCALE

* 0.4 to 40.0'
 0.6 to 46.6'
 0.8 to 52.6'
 1.0 to 57.6'
 1.2 to 62.0'

* Corrections additive

FINAL SHORAN CORRECTIONS - CAPE CANAVERAL PROJECT

Ship PARKER

Station PAT:

~~0.010~~ Monitor #1
-0.040 Monitor #1
~~0.025~~ Monitor #3
-0.020 Monitor #3

(Monitor #1 used 10,11,12 Dec. only)

Station on left dial (left side of page)
Station on right dial (right side of page)
Station on left dial (left side of page)
Station on right dial (right side of page)

Station COR:

-0.010 Monitor #2

Station DUM:

-0.025 Monitor #4

Ship BOWEN

Station PAT:

0.000 Monitor #3
~~0.020~~ Monitor #3

Thru November 11, 1956
12 November on

Station COR:

-0.020 Monitor #2

Station DUM:

-0.020 Monitor #4

Ship STIRNI

Station PAT: Monitor #3 0.000
Station COR: Monitor #2 -0.025
Station DUM: Monitor #4 -0.015

LUANCH NO. 180

Station PAT: Monitor #1 -0.010 (Monitor #1 used 10,11,12 Dec. only)
Monitor #3 ~~0.005~~
Station COR: Monitor #2 -0.025
Station DUM: Monitor #4 -0.025

FATHOMETER
VELOCITY CORRECTIONS

SHIP STIRNI

808 FATH. # 151SPX

ENTIRE PROJECT

A SCALE

0.0 to 20.0'
/ 0.2 to 50.0'

LAUNCH 180

E.D.O. PATH.

BEGINNING TO 10 DEC. 1956

A SCALE

*0.0 to 17.6'
0.2 to 21.0'
0.4 to 23.0'
0.6 to 25.0'
0.8 to 30.0'
1.0 to 31.4'
1.2 to 32.2'
1.4 to 32.8'
1.6 to 33.4'
1.8 to 34.4'
2.0 to 50.0'

*Corrections additive

LANUCH 180

808 FATH. 100S

11 DEC. 1956 only

A SCALE

-0.8 to 19.0'
-0.6 to 23.2'
-0.4 to 26.8'
-0.2 to 35.0'
-0.4 to 40.0'

LAUNCH 180

808 FATH. 100S

12 DEC. 1956 to end

A SCALE

0.0 to 37.5'
-0.2 to 50.0'

STATISTICS
H-8343

SHIP PARKER

<u>VOL. NO.</u>	<u>DAY LTR.</u>	<u>DATE</u>	<u>NO. POS.</u>	<u>MILES SDGS.</u>
1,2,3	A	10/19/56	352	116.7
3,4,5,6	B	10/20/56	648	200.9
6,7,8,9	C	10/21/56	555	167.6
9,10,11	D	10/22/56	302	90.6

SHIP BOWEN

12	A	10/22/56	71	17.6
12	B	10/19/56	10	(transferred from records of H-8344)

SHIP STIRNI

13	A	10/30/56	38	12.0
13	B	10/31/56	54	15.5
13, 14	C	11/ 1/56	106	27.0
14	D	11/ 6/56	58	17.1
14,15	E	11/ 7/56	145	52.7

LAUNCH 180

16	a	11/26/56	24	5.2
16	b	11/27/56	96	17.0
16,17	c	11/28/56	162	44.0
17,18	d	11/29/56	113	25.7
18	e	12/ 6/56	100	17.5
19	f	12/10/56	70	26.5
19,20	g	12/11/56	148	48.5
20	h	12/12/56	27	5.6
20	j	12/13/56	172	56.2
21	k	12/14/56	100	32.3
21	l	12/18/56	3	00.0

GRAND TOTAL 334₅ 996.3

FLOATING AIDS TO NAVIGATION
H-8343

<u>BUOY</u>	<u>LAT.</u>	<u>LONG.</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
S.E. Shoal Ltd. Bell Buoy 4	28-23.45	80-29.21	-	446B	10/20/56
Canaveral Eight Wreck Ltd Buoy WR5	28-24.07	80-32.19	-	254C	10/21/56
*Entr. Ltd. Bell Buoy 6	28-23.85	80-33.47	36'	1L	12/18/56
*Entr. Buoy 7	28-23.76	80-33.62	36'	2L	12/18/56
**Buoy WR6	28-23.51	80-32.22	38'	3L	12/18/56

* See note in addendum

** Not charted or in 1956 Light List.

PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8343 (Field No. PBS-2656)

GENERAL

With the exception of discrepancies listed below, this appears to be an excellent basic survey. Soundings checked very well at crossings and agree with charts 1245 and 1246 except in the area covered by Southeast Shoal. Numerous changes have occurred there and some soundings are shoaler than shown on the charts. ✓

DISCREPANCIES

Positions 1 thru 3L, Vol. 21, pg. 41

These positions, locating floating aids to navigation, were plotted on the smooth sheet to conform with record books and boat sheet. They are believed to be in error by one statute mile. *Review, PGB* ✓

Positions 9 thru 15e, Vol. 18, pages 31 thru 33

These positions were not plotted as shoran returns are questionable. ✓

Positions 93 thru 100k, Vol. 21, Pages 35 thru 38

Positions were not plotted as shoran returns, course and time are all questionable. The adjoining survey adequately covers this area. ✓

SOUNDINGS

All fathograms were scaled and soundings reduced with templates in the Processing Office. ✓

SHORELINE

Shoreline, in the vicinity of Cape Canaveral Harbor, was omitted from the smooth sheet as revised compilation T-10541 has not been received by this Office. *Review, #1*

BAR CHECKS

Additional fathometer corrections were compiled in the Processing Office for work done by Ship Parker on this survey. The Field Party apparently over-looked four bar checks observed during the period 10/19/56 and 10/22/56. The corrections used are as follows: ✓

FATH. NO. 164, SHIP PARKER, PERIOD 10/19/56 to 10/22/56

A SCALE

0.0 to 16.0
-0.2 to 25.0
-0.4 to 36.0
-0.6 to 55.0

B SCALE

-1.2 to 41.0
-1.4 to 60.0

Norfolk, Va.
25 March 1957

Respectfully submitted,
Hugh L. Proffitt
Hugh L. Proffitt
Cartographer.

COMPARISON WITH CHARTS

1245 & 1246

PBS-2656

H-8343

POSITION No and DATE	LAT.	LONG	SMOOTH SHEET	CHART
50-51d 58-59d 11/29/56	28°23.75'	80°29.26'	5 ft.	11 ft.
95-96e 12/6/56	28°25.68'	80°31.10'	12 ft.	17 ft.
48-49c 11/28/56 6-7d 11/29/56	28°26.0'	80°32.10'	6 ft.	9 ft.
20-21e 12/6/56	28°26.55'	80°32.40'	6 ft.	7 ft.
4-5e 12/6/56 100-101d 11/29/56	28°26.95'	80°30.33'	2 ft.	4 ft.
118c 11/28/56	28°26.18'	80°29.92'	2 ft.	9 ft.
12 11/28/56 131-132c 11/28/56 149-150c 11/28/56	28°26.0'	80°29.30'	6 ft.	9 ft.
3-4e 12/6/56 102-103d 11/29/56	28°27.10'	80°30.80'	6 ft.	8 ft.
89-90g 12/11/56	28°25.30'	80°27.88'	12 ft.	17 ft.
87-88e 12/6/56	28°26.30'	80°27.68'	22 ft.	24 ft curve 240 M WEST
5ig 12/11/56	28°26.5'	80°28.0'	18 ft.	18 ft
70-71d 11/29/56 57-58g 12/11/56	28°26.75'	80°28.77'	12 ft.	15 ft sdq 390 M NNE
	28°27.40'	80°28.68'	24 ft.	26 ft.
332-333C 10/21/56	28°27.52'	80°28.92'	24 ft.	28 ft
48-49D 10/22/56	28°27.6'	80°29.2'	23 ft	27 ft
15h 10/12/56	28°28.03'	80°31.18	4 ft.	4 ft
35-36k 12/14/56	28°29.2'	80°31.5	12 ft.	12 ft.
54-55k 58-59k 12/14/56	28°29.7'	80°31.9'	11 ft	12 ft 300 M W
35-36E 11/1/56	28°30.0'	80°30.5'	29 ft	30 ft 160 M W
43-44C 11/1/56	28°29.78'	80°30.58'	30 ft	34 ft
30-31D 10/22/56	28°28.8'	80°28.9'	35 ft	35 ft
434-435C 11/21/56	28°28.7'	80°29.05'	29 ft.	30 ft.

GEOGRAPHIC NAMES

Survey No. **H-8343**

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
Florida									1
Atlantic Ocean									2
									3
Cape Canaveral									4
Canaveral Harbor									5
Port Canaveral				(village)	(tide station)				6
Southeast Shoal									7
									8
				Names approved 4-30-57					9
						L. Heck			10
									11
									12
									13
									14
									15
									16
									17
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									20
									21
									22
									23
									24
									25
									26
									27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. *H-8343*

Records accompanying survey:

Boat sheets *1*...; sounding vols. *7*...; wire drag vols. *0*...;
 bomb vols. *0*...; graphic recorder rolls *13 envelopes*
 Material for Hydro. Sheets 8340 to 8345:
 special reports, etc. ~~5 x 10 envelopes and 1 x 10 envelopes of Shoran material~~
 1-Cahier with Shoran Computations (Shoran Correction Report and
 Velocity Correction Report), 1-Observation of Horizontal Directions,
 5 Vols.-Shoran Calibrations and Bar Checks, and 1-Smooth Sheet.

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

Number of positions on sheet	.....	<i>3354</i>
Number of positions checked	.....	<i>50</i>
Number of positions revised	.....	<i>0</i>
Number of soundings revised (refers to depth only)	.....
Number of soundings erroneously spaced	.....	<i>0</i>
Number of signals erroneously plotted or transferred	.....	<i>0</i>
Topographic details	Time	<i>1</i>
Junctions	Time	<i>16</i>
Verification of soundings from graphic record	Time	<i>2</i>
Verification by <i>James C. Clachant</i>	Total time	Date <i>4-19-57</i>
Reviewed by <i>J. A. Dinsmore</i>	Time <i>28</i>	Date <i>4-30-57</i>

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8343

FIELD NO. PBS-2656

Florida, Atlantic Ocean, Cape Canaveral

Project No. 10,000-804

Surveyed - 10/19/56 - 12/18/56

Scale 1:20,000

Soundings:

Control:

808 Fathometer

Shoran

Chief of Party - J. C. Ellerbe

Surveyed by - C. R. Reed, R. C. Darling, D. G. Rushford, O. L. Doster,
W. M. Lee, E. R. Scyoc, L. L. Seal and J. S. Baker

Protracted by - A. K. Schugeld

Soundings plotted by - A. K. Schugeld

Verified and inked by - J. E. Gearhart

Reviewed by - T. A. Dinsmore 30 April 1957

Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with unreviewed air-photographic surveys T-10541, RS-553 (Bp. 54937) and RS-556 (Bp. 54940), all of which are compiled or revised from 1956 photographs.

The origin of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

The prominent shoal extending southeasterly from Cape Canaveral is known as Southeast Shoal. Sharp bottom irregularities in the form of sand ridges and depressions indent the north slope of the shoal. Except for these conspicuous features, the remaining area is quite smooth.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with the following surveys:

H-8341 (1956) on the north
 H-8342 (1956) on the north
 H-8344 (1956) on the east
 H-8340 (1956-57) on the west at the approaches to Canaveral Harbor

At the project limits on the south, charted depths are in harmony with depths at the limits of the present survey.

5. Comparison with Prior Surveysa. H-234 (1850) 1:20,000

This early reconnaissance survey may be disregarded as lacking sufficient reliable information for a comparison of any cartographic value.

b. H-1411 a&b (1878-81) 1:20,000	H-4946 (1929) 1:40,000
H-1488 a (1881) 1:40,000	<u>H-5034 (1930) 1:40,000</u>
<u>H-4916 (1929) 1:40,000</u>	

The surveys of 1929-30 provide the most complete prior coverage of the surveyed area. A comparison of the prior and present surveys reveals some bottom changes particularly in the area of Southeast Shoal. Lesser depths were generally obtained on Southeast Shoal than previously existed. This is exemplified in lat. $28^{\circ}23.75'$, long. $80^{\circ}29.3'$, where present depths of 5 - 6 ft. supersede prior depths of 12 - 13 ft. in 1929. The crests of the shoals throughout the area of Southeast Shoal have noticeably receded westward or southwestward since the earlier surveys. Present depths throughout the surveyed area are generally 1 to 3 ft. less than the prior depths.

The sunken wreck charted in lat. $28^{\circ}29.7'$, long. $80^{\circ}32.5'$, originates with T-4442 a. (1929). Advance information covering the investigation of wrecks in the project area stated that as of 11 December 1956 (C.L. 21, 1957) no indication of this inshore wreck had been found. The wreck falls in depths of 7 - 8 ft. in an undeveloped area on the present survey. Inasmuch as some remains of the wreck may still exist, the wreck symbol has been carried forward to the present survey and should be retained on the chart.

Omit from cht 1112

Except as noted in the preceding paragraph, the present survey is adequate to supersede the prior surveys within the common area.

c. F. E. No. 5 (1944) W.D.

This wire-drag field examination investigated the wreck "Mohican" in lat. $28^{\circ}23.85'$, long. $80^{\circ}32.15'$. No conflicts are noted between the present depths and the effective drag depths on the field examination. The least depth obtained on the wreck has been carried forward to the present survey. A sonar contact and fathometer depth of $32\frac{1}{2}$ ft. on a portion of this wreckage was reported in Chart Letter 963 (1956). See next paragraph ¹³⁰¹

6. Comparison with Chart 1245 (Latest print date 1/28/57)
Chart 1246 (" " " 10/29/56)A. Hydrography

Charted hydrography originates principally with the previously discussed surveys which need no further consideration.

The following critical soundings charted from advance information of the present survey reported in H. O. Notice to Mariners No. 13 (1957) have been revised during verification as indicated:

<u>Latitude</u>	<u>Longitude</u>	<u>Charted depths</u>	<u>Smooth-sheet depths</u>
$28^{\circ}26.9'$	$80^{\circ}30.3'$	1	2
$28^{\circ}24.2'$	$80^{\circ}28.35'$	6	7
$28^{\circ}23.77'$	$80^{\circ}29.27'$	4	5

The clearance depth of 30 ft. charted over the wreck in lat. $28^{\circ}23.85'$, long. $80^{\circ}32.15'$, from F. E. No. 5 (1944) should be retained on the chart. ✓

Except as noted, the present survey supersedes the charted information.

B. Aids to Navigation

The two buoys charted in the vicinity of lat. $28^{\circ}24.6'$, long. $80^{\circ}33.8'$, and marking the entrance to Canaveral Harbor were located almost one mile southeastward on the present survey.

The buoy charted in lat. $28^{\circ}27.6'$, long. $80^{\circ}27.7'$, was not located on the present survey.

The buoy located in lat. $28^{\circ}23.52'$, long. $80^{\circ}32.22'$, on the present survey does not appear on the charts.

Except as noted, the aids to navigation located on the present survey are in substantial agreement with the charted aids and adequately mark the features intended.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was accurately done.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

The survey is considered to be basic and no additional field work is necessary.

Examined and Approved:

Max G. Ricketts
Max G. Ricketts
Chief, Nautical Chart Branch

Charles A. Schanck
Charles A. Schanck
Chief, Division of Charts

Karl B. Jeffers
Karl B. Jeffers
Chief, Hydrography Branch

Samuel B. Greppell
by J. Bowie
Samuel B. Greppell
Chief, Division of Coastal Surveys

EAC

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

1 April 1957

Plane of reference approved in
21 volumes of sounding records for

HYDROGRAPHIC SHEET 8343

Locality Cape Canaveral, Florida

Chief of Party: J. C. Ellerbe in 1956

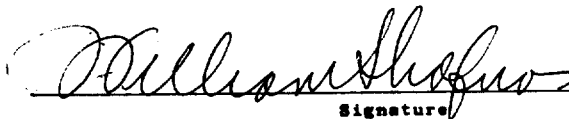
Plane of reference is mean low water, reading

1.0 ft. on tide staff at Canaveral Harbor

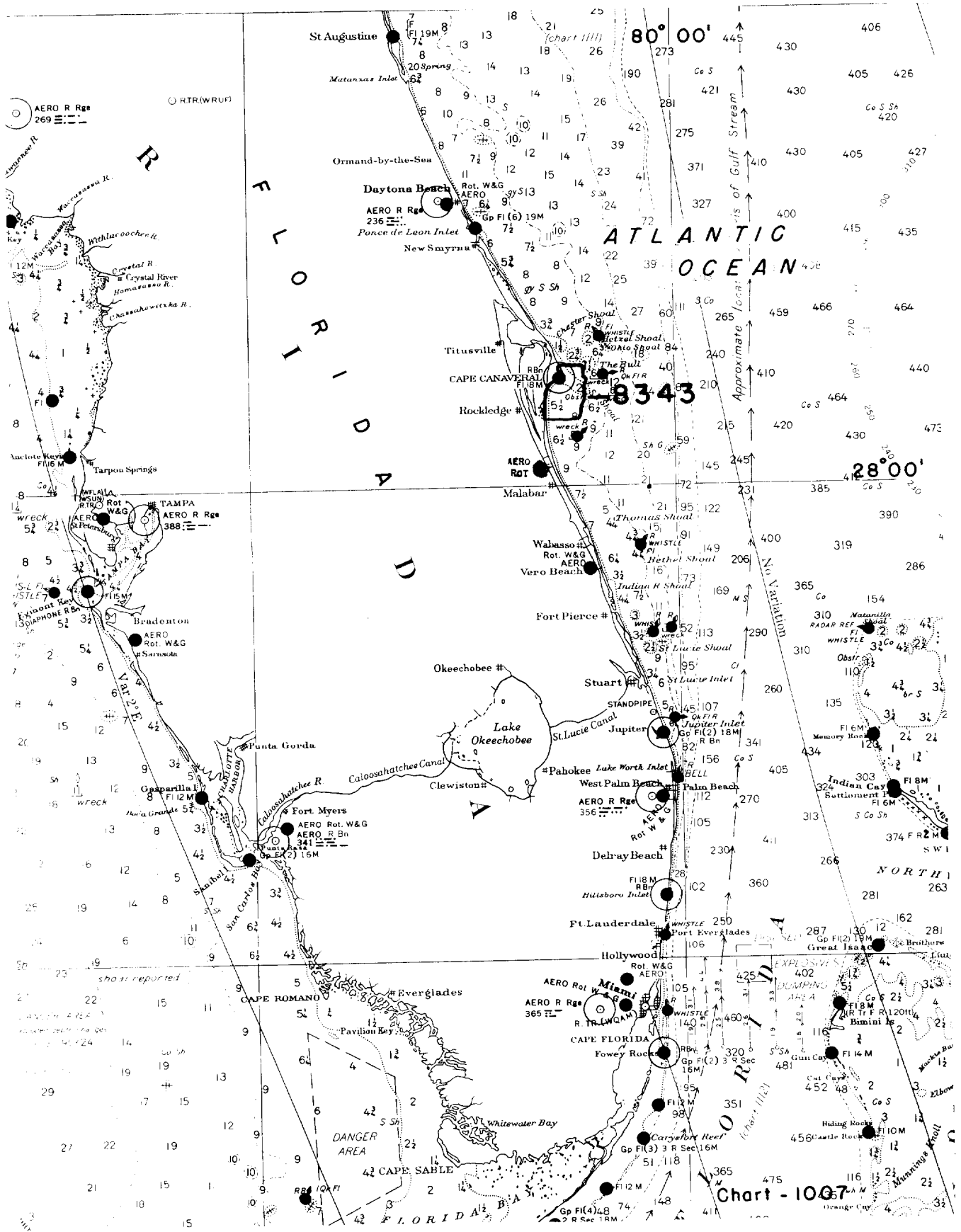
10.9 ft. below B.M. 1 (1956)

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

Condition of records satisfactory except as noted below:


Signature

Chief, Tides Branch



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8343

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
5-28-57	New Cht 456	R.K. Anderson	Before After Verification and Review Completely
4/11/57	1246	H.W. Burgoyne	Before After Verification and Review Partially applied
10/15/57	457	J.G. McLean	Before After Verification and Review Completely applied.
1/28/57	1245	J.H. Benson	Before After Verification and Review Completely applied thru ch. 457
Apr. '58	1112	L.S.S.	Before After Verification and Review ^{Ver. of 28° 21' N 1245} S. " " direct ^{DMA}
7/7/58	1007	H.W. Burgoyne	Before After Verification and Review thru Ch 1112 completely applied
7/9/58	1111	Jen	Before After Verification and Review
Dec. 1958	1246	T.A.D.	Before After Verification and Review completely thru Ch. 457
12-17-58	1001	T.A.D.	Before After Verification and Review completely applied
8/15/00	11481	Mark D. Giffni	Before After Verification and Review completely applied to new area

M-2168-1

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.