

8366

& ~~Additional~~ Work

Diag. Cht. No. 1210-3

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. ECFP-1257
Office No..... H-8366 & Ad. Wk.

LOCALITY

State Rhode Island
General Locality ... Narragansett Bay
Locality ... Sakonnet River Entrance

19 57-63

CHIEF OF PARTY
M.T. Paulson, E.K. McCaffrey

LIBRARY & ARCHIVES

DATE May 19, 1959

☆ U.S. GOV. PRINTING OFFICE: 1976-869-441

8366

& Additional Work

Check 1
CENT
13221
13218
13223

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-8366

Field No. ECP-1257

State Rhode Island

General locality Narragansett Bay

Locality Sakonnet River Entrance

Scale 1:10,000 Date of survey 1 May to 21 October 1957

Instructions dated 22/MEK, FP-East Coast, dated 31 January 1956

Vessel East Coast Field Party

Chief of party Marvin T. Paulson

Surveyed by A. G. Davis

Soundings taken by ~~echo-sounder~~ echo-sounder, graphic recorder, hand lead, wire, sounding pole

Fathograms scaled by Party Personnel

Fathograms checked by Party Personnel

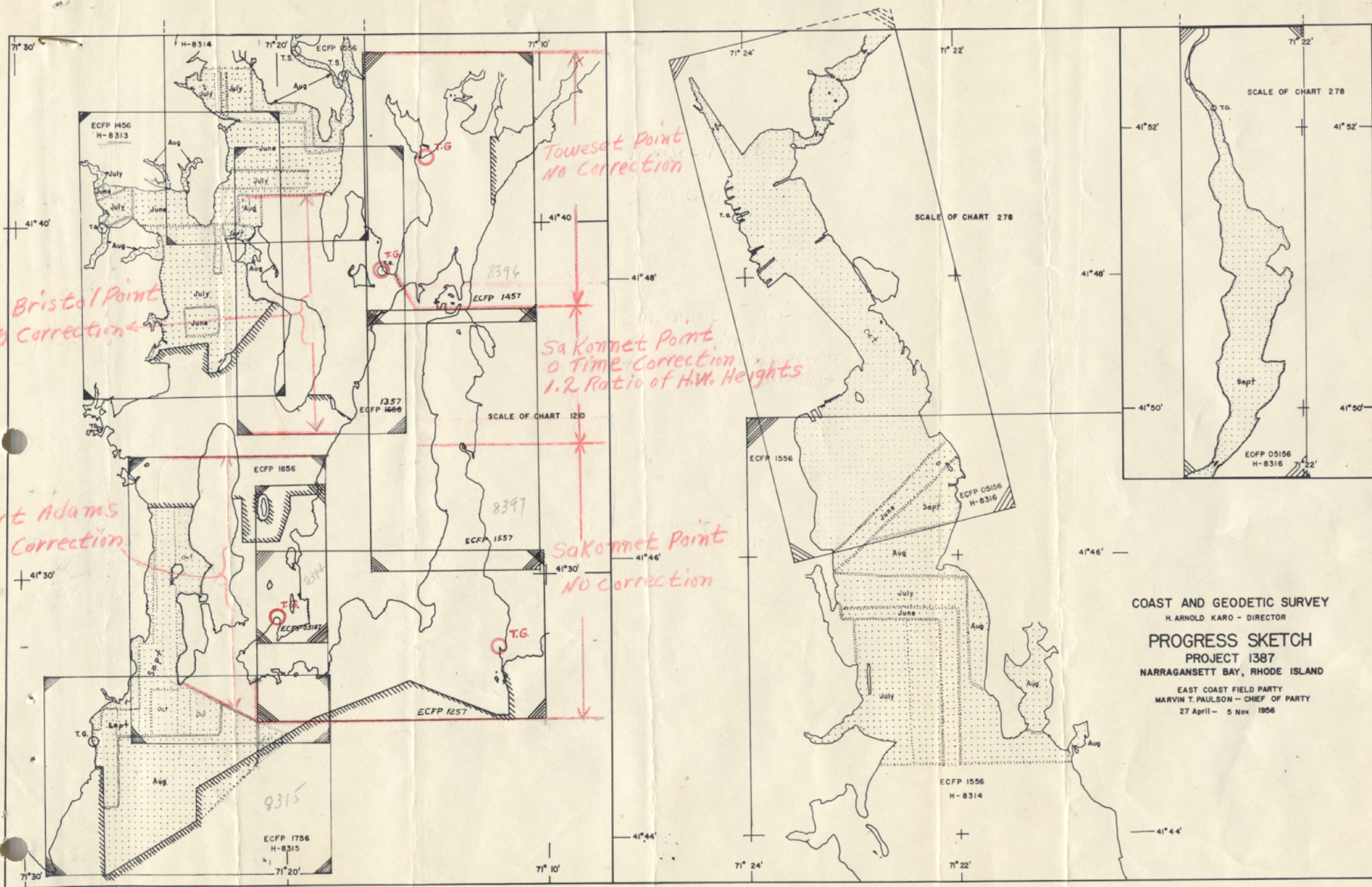
Protracted by Earl R. Scyoc

Soundings penciled by Earl R. Scyoc

Soundings in ~~fathoms~~ feet at MLW MLLW and are true depths.

REMARKS:

XNW 11/1/57



*Bristol Point
No Correction*

*Fort Adams
No Correction*

*Toweset Point
No Correction*

*Sakonnet Point
0 Time Correction
1.2 Ratio of H.W. Heights*

*Sakonnet Point
No Correction*

COAST AND GEODETIC SURVEY
 H. ARNOLD KARO - DIRECTOR
PROJECT 1387
 NARRAGANSETT BAY, RHODE ISLAND
 EAST COAST FIELD PARTY
 MARVIN T. PAULSON - CHIEF OF PARTY
 27 April - 5 Nov 1956

DESCRIPTIVE REPORT
TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8366, FIELD NO. ECFP-1257
Narragansett Bay, Rhode Island

PROJECT 13870

SCALE 1:10,000

EAST COAST FIELD PARTY

1957

M. T. PAULSON, CH. OF PTY.

SURVEYED BY: A. G. Davis

A. PROJECT

Work on Project 13870 was executed in accordance with instructions 22/MEK;FP-East Coast, dated 31 January 1956; Also Supplemental instructions, Project 13870 dated 15 February 1957. ✓

B. SURVEY LIMITS AND DATES

The area covered by this survey is in the vicinity of Sakonnet River. The limits are from latitude $41^{\circ} 30.5'$ on the north to $41^{\circ} 26.0'$ on the south, longitude $71^{\circ} 11.4'$ on the east to $71^{\circ} 19.0'$ on the west. An index of hydrographic sheets for this project is attached to this report under appendix F. Hydrography on this sheet began 1 May 1957 and ended 21 October 1957. ✓

C. VESSELS AND EQUIPMENT

Launch CS-82 and skiff were used for the entire survey. The launch was based at Fort Adams, Gooseberry Cove and Sakonnet Harbor for the entire survey. Launch CS-82, a 30 foot wooden launch, has a turning radius of 50 meters at half rudder and standard speed. ✓

A 16 foot skiff was used in obtaining detached positions and shore line only. This skiff was powered by 2, 3 hp outboard motors and had a standard speed of 2 to 3 knots ✓

On launch CS-82 EDO-255 Type fathometers, serial numbers 202 and 201 were used with transducers mounted in a "Fish" extended over the starboard side just aft of amidship. *A separate fathometer report is being submitted. This report covers all the surveys of this project. Soundings from the skiff were pole soundings or leadlines. ✓

See H-8394 for Report

* THERE IS NO "SEPARATE FATH. REPORT" AVAILABLE IN THIS OFFICE-(4.3-61)

D. TIDE AND CURRENT STATIONS

A portable automatic tide station at Sakonnet Harbor, Rhode Island (Latitude $41^{\circ} 27.89'$, Longitude $71^{\circ} 11.62'$) was used without time or range corrections. Where Sakonnet Harbor tides were not available, Fort Adams tides were used in accordance with letter No. 36-315-156.2 dated 15 August 1957. See tide note, Appendix C.

No current stations within the limits of this survey were occupied this season.

E. SMOOTH SHEET

The smooth sheet was plotted by the East Coast Field Party. The projection for this smooth sheet was made by Ruling Machine in the Washington Office (by J.R.H.). The shoreline was transferred from blue-line tracings T-11430, T-11433, and T-11434. The topographic signals were also transferred to the smooth sheet from these blue-line tracings, and the triangulation control was plotted by standard method of Dm's and dp's. The transfer of shoreline and topographic details was verified in accordance with paragraph 757 of the Hydro Manual.

See P2
Review.

F. CONTROL STATIONS

Control consisted of triangulation, topographic and photo, and hydrographic stations. The following is a list of triangulation stations and the source of control for each.

STATION	G.P. PAGE	VOL. NO.	CH. OF PTY.
Cheatham's House N. Gable, 1917	99	1	R.I. Geod.S.
Radio Tower, 1954			
James Estate Flag Pole, 1943	71	1	Desc. (846-1)
White Barn Capola, 1917	100	1	R.I. Geod.S.
Little Compton Cong. Church Spire, 1943	56	1	W.D.P.
Sakonnet Light House, 1897	55	1	W.D.P.
St. George Spire N.W. (Stone), 1940			
Balch's House N. Chimney, 1869	146	1	R.I. Geod.S.
Sakonnet Harbor Light, 1957			

Special note should be made as to the new location of Sakonnet Harbor Light.

Latitude $41^{\circ} 27' 59.889''$
Longitude $71^{\circ} 11' 45.004''$

Location by Photo Party, attached East Coast Field Party. (See Report of Photogrammetric Support to East Coast Field Party Project CS-13870, 1957 for location sketch.)

All topographic control was transferred from topographic sheets T-11430, T-11433, and T-11434, compiled from air photos and graphic control sheets.

G. SHORELINE AND TOPOGRAPHY

The shoreline and topography for smooth sheets was transferred from photogrammetry manuscripts List No. T-11430, T-11433 and T-11434. All areas where the low water line was not completely defined was due to steep sloping and rocky shore line.

See
TP2
Review

H. SOUNDINGS

All soundings on this sheet were made by fathometer as listed in section C except for a few isolated soundings taken in connection with bottom sampling and verification of least depths, or those taken too shoal for the fathometer. All soundings too shoal for fathometer were taken with a pole graduated in feet.

I. CONTROL OF HYDROGRAPHY

All hydrographic control was visual by sextant angles on shore objects. Positions were usually taken at 1/2 minute intervals. No unusual methods or adjustments were used.

See TP2 Review

J. ADEQUACY OF SURVEY

This survey is considered complete and adequate to supersede all prior surveys for charting purposes. Junctions with prior and contemporary surveys are satisfactory and depth curves can be drawn at junctions.

K. CROSSLINES

Crosslines were run to the extent of 6 to 8% of the regular systems of lines excluding developments and agreement was satisfactory.

L. COMPARISON WITH PRIOR SURVEYS

This survey was compared with prior surveys H-5553, 1934; H-1790, 1887; H-3995, 1917, 1:10,000 and H-6444, 1939, 1:40,000. In general, the soundings shown on the old surveys are in fair agreement with those on the new. Since the old surveys are not as complete as the new, much of the necessary detail was omitted. Several shoals not found on the prior surveys are listed in section N. of this report. All known shoals and preliminary review items were proved. During this survey no items were disproved and therefore there are no deletions to be made.

See
P6 of
Review

M. COMPARISON WITH CHART

A comparison with Chart No. 353, 18th Edition, Print date 8/27/56 shows no important differences except for additions as listed in section N of this report.

See
TP7A
Review

N. DANGERS AND SHOALS

Following is a tabulation of important, newly found dangers, previously uncharted and not found on prior surveys; and charted dangers whose least depth by this survey is less than the charted depth. All of these items were previously reported on Form 786, Advance Report of Dangers to be Charted dated 10/10/57. (A revised Form 786 concerning these same items is contained in Appendix G of this report) The positions and depths listed here and in Appendix G (Form 786) are taken from the smooth plot and are to be considered final. Chart 353, 18th Edition, 8/27/56 was used for the comparison.

TYPE OF DANGER	LAT. & LONG	DEPTH meters	DATE LOCATED	POS. NO.	REMARKS
✓ Sunken Rock	41 - 26 71 - 18	1569 1064 82	30-7 7/25/57	171 s	Chart depth is 20' 100 e + Chart rock location and depth. ✓
✓ Elbow Ledge (South Pt.)	41 - 27 71 - 15	585 566 868 811	2120 approx 60m eastward 8/21/57	57 v	Chart depth is 25' Prior Survey 27' Chart new depth
✓ Elbow Ledge (Shoalest Pt.)	41 - 27 71 - 15	910 ✓ 1007 ✓	11 ✓ 8/21/57	69 v	Chart depth is 12' Prior Survey 12' Chart new depth
• ✓ Submerged Rock	41 - 27 71 - 15	1214 1195 555 545	13 12 ✓ 8/21/57	79 v	Chart depth is 22' Chart rock location and depth.
✓ Shoal	41 - 26 71 - 14	1196 ✓ 815 ✓	15 48 7/11/57	24 m 1st out	This depth was obtained several hundred meters south of project limits. It was not developed. Chart depth is 54'.
✓ Shoal or Rock	41 - 28 71 - 12	166 166 824 824	27 27 9/10/57	49fa 2nd out	Chart depth is 40' Chart rock location and depth.

NAME OF AID	LAT. & LONG		DEPTH (feet)	POS. NO.	DATE LOCATED	FIX DATA
	°	' meters				
Sakonnet Harbor ✓ Rock Buoy "3"	41 29	912	26'	64ha	9/16/57	Tone 07 - 22 Sew Pat 56 - 26 Sew-Ped 67 - 12
Sakonnet Harbor Rock Buoy "4" (Bell) ✓	41 29	907	23'	37ea	9/9/57	Sako 65 - 57 Silo Tone 31 - 39 Silo-Two 40-27
Schuyler Ledge Bell Buoy "2" ✓	41 26	743	53'	128n	7/12/57	Sako 32 - 17 Gin Barn 27 - 16 Silo-Gin 51-59

Q. LANDMARKS FOR CHARTS

There is one new landmark to report: Sakonnet Harbor Light, 1957.
 The position of this light was determined by the photogrammetric field party using a short traverse from the recoverable triangulation station, Sakonnet Harbor Light, 1934. Reference is made to the "Report of Photogrammetric Support" submitted by the Photo party for Project CS-13870 and dated 10 September 1957. A sketch and description of the location procedure is contained in said report. The geographical position of the Light as computed by the Photo party is:

SAKONNET HARBOR LIGHT, 1957
 Lat. 41° 27' 59.889"
 Long. 71° 11' 45.004"

R. GEOGRAPHICAL NAMES

There are no new geographical names to report.

S. SILTED AREAS

Not Applicable.

T. BY-PRODUCT INFORMATION

Not Applicable

U. MISCELLANEOUS (Smooth Sheet)

The greater part of the plotting and penciling of soundings for the smooth sheet was done by former Lt(jg) Earl R. Scyoc who resigned at the time he completed this phase of the work. The descriptive report was completed by various members of the East Coast Field Party who were engaged in the field work of this survey. ✓

V. MISCELLANEOUS (Fathometer corrections)

Bar check tabulation, velocity curves and fathometer information are being transmitted as a separate report. (See Fathometer Report, 1957 Season, Project 13870). An abstract of the velocity corrections which were applied to the echo soundings is included under section D of this report. ✓

*See H-8394 ✓
H-8367 ✓*

W-Y (Not Applicable)

Z. TABULATION OF APPLICABLE DATA

(See Item V above)

Respectfully Submitted,

John J. McCay

ENS.
C&GS.

For Earl R. Scyoc, Lt(jg), C&GS

ATTACHMENTS

APPENDIX

*See Rep
See 56/137*

- A. List of Controls
- B. Statistics
- C. Tide Note
- D. Velocity Correction Abstract
- E. Two(2) Copies Coast Pilot Notes
- F. Index of Hydro Sheets
- G. Report of Dangers to be Charted
- H. Approval Sheet

APPENDIX A
LIST OF SIGNALS
TO ACCOMPANY

HYDROGRAPHIC SURVEY SHEET H-8366, (FIELD NO. ECFP 1257)

TRIANGULATION

STATION	ORIGIN	MANUSCRIPT
ABLE	CHEATHAM'S HOUSE N.GABLE, 1917	T-11434
ADIO	RADIO TOWER, 1954	T-11433
AMES	JAMES ESTATE FLAG POLE, 1943	T-11433
BARN	WHITE BARN CUPOLA, 1917	T-11434
CHIM	BALCH'S HOUSE N.CHIMNEY, 1869	T-11433
COMP	LITTLE COMPTON CONG. CHURCH SPIRE, 1843	T-11430
SAKO	SAKOMNET LIGHT HOUSE, 1897	T-11434
TONE	ST GEORGES SPIRE NW (STONE), 1940	T-11433

RECOVERABLE TOPOGRAPHIC		
CAP	WHITE CHIMNEY, 1936	T-11430
DIM	WEST CHIMNEY, 1954	T-11433
SILO	SILO, 1954	T-11434

PHOTO-HYDRO	PHOTOGRAPH	
ALE	54-W-1176	T-11434
ARK	54-W-1167	T-11433
BAT	54-W-1119	T-11433
BRO	54-W-1119	T-11433
CAN	54-W-1176	T-11434
FOR	54-W-1177	T-11434
END	54-W-1119	T-11433
GAB	54-W-1119	T-11433
GAL	54-W-1168	T-11433
GIN	54-W-939	T-11434
HUT	54-W-1119	T-11434
JIL	54-W-1176	T-11434
KAY	54-W-1176	T-11434
LEM	54-W-1176	T-11434
LOW	54-W-1120	T-11433
MET	54-W-1158	T-11433
NAP	54-W-1176	T-11434
NEY	54-W-1119	T-11433
OLA	54-W-1119	T-11433
ONE	54-W-1119	T-11433
PAT	54-W-1186	T-11430
PED	54-W-1186	T-11430
RAN	54-W-1119	T-11433
RAY	54-W-1121	T-11433
REE	54-W-1119	T-11433
SAM	54-W-1120	T-11433
SEW	54-W-1185	T-11434
SOT	54-W-1119	T-11433
SLY	54-W-1157	T-11433
TIP	54-W-1119	T-11433
TWO	54-W-1185	T-11434
WED	54-W-1184	T-11434
YEA	54-W-1119	T-11434
SHU	54-W-1157	T-11433

APPENDIX B
STATISTICS
Hydrographic Sheet H-8366 (ECFP-1257)

LAUNCH CS-82

DATE 1957	VOL. NO.	DAY LTR.	NO. POSITIONS FATH.	D.P.	STATUTE MI. SDG.
5/1/57 ²⁰¹	1	a	66	1	9.0
5/3/57 ²⁰¹	1	b	140	1	16.7
5/6/57 ²⁰¹	2	c	29	-	4.4
5/14/57 ²⁰¹	2	d	44	6	5.8
5/17/57 ²⁰¹	2	e	99	1	13.0
6/4/57 ²⁰²	3	f	104	13	15.4
6/5/57 ^{B.C. 202}	3&4	g	133	2	15.6
6/6/57 ^{B.C. 202}	4	h	109	2	16.1
6/17/57	4&5	j	96	0	12.0
7/3/57	6	k	11	0	1.0
7/10/57 ²⁰²	6&7	l	199	1	31.7
7/11/57 ²⁰¹	7	m	78	1	11.5
7/12/57	8	n not verified.	168	1	25.4
7/18/57 ^{B.C.}	9	p verified 4/26/60	165	0	24.2
7/23/57	10	q <u>Stops 9</u>	151	0	23.6
7/24/57	10&11	r	160	2	23.3
7/25/57 ^{B.C.}	11&12	s	170	1	26.0
7/26/57 ²⁰²	12	t	61	0	6.5
8/20/57 ^{B.C.}	13	u	68	0	5.8
8/21/57	13	v	111	6	13.7
8/22/57 ²⁰²	14	w	138	2	19.0
8/23/57 ^{B.C.}	15	x	145	0	22.6
8/26/57 ²⁰²	16	y	22	0	3.6
8/28/57 ^{B.C.}	17	z	150	1	22.5
8/29/57 ²⁰²	18	aa	102	5	11.5
8/30/57 ^{B.C.}	18&19	ba	140	0	19.1
9/5/57	19	ca	115	0	17.2
9/6/57 ^{B.C. 202}	20	da	130	0	18.4
9/9/57 ^{B.C. 202}	20&21	ea	189	2	25.6
9/10/57	21&22	fa	148	0	19.5
9/12/57	22	ga	27	0	2.0
9/16/57	22	ha	128	0	15.8
9/26/57 ^{B.C.}	23	ja	74	0	8.9
9/27/57	24	ka	20	0	2.8
10/18/57	24	la	15	0	1.0
10/21/57	24	ma	105	0	12.6
TOTALS			3,810	68	522.8

35%
Verified.

SKIFF

5/14/57	25	a	47	72	2.0
6/9/57	25	b	0	47	0.0
9/19/57	26	c	0	41	0.0
9/25/57	26	d	0	16	0.0
TOTALS			47	176	2.0

APPENDIX C

TIDAL NOTE FOR HYDROGRAPHIC SURVEY
H-8366 (ECFP 1257)

All tidal data for reducing soundings was obtained from portable tide gages at FORT ADAMS, RHODE ISLAND, and SAKONNET POINT, RHODE ISLAND.

FORT ADAMS, R.I.

Gage Location: Lat. $41^{\circ}28.89'$
Long. $71^{\circ}20.23'$

Staff: Mean low water corresponds to 5.8 ft. on staff.

SAKONNET POINT, R.I.

Gage Location: Lat. $41^{\circ}27.89'$
Long. $71^{\circ}11.60'$

Staff: Mean low water corresponds to 3.1 ft. on staff. ✓

The SAKONNET POINT gage was used to control the hydrography on this survey. The FORT ADAMS gage was used interchangeably with the SAKONNET POINT gage with the following correction: (Referred to SAKONNET POINT)

Correction: Time corr: - 5 min
Height ratio 1.1

The method of determining the tide reducers is in accordance with the following letter:

36-315-15b.2 dated 15 August
1957 ✓

A sketch of the various tide zones used on Project 13870 is attached.

APPENDIX D

ABSTRACT OF VELOCITY CORRECTIONS
H-8366 (ECFP 1257)

#201 used
not listed here.

(A) Beginning of season to 29 July, 1957
Using Kato converter, Edo 202 fathometer

Depth (ft)	Correction (ft)	
0.0 to 47.0	0.0	5 bar checks (H-8367)
47.1 to 62.0	+0.2	Group VI 202 7/10-7/29/57 vibropac - 60-61 cycles err all depths 0.0
62.1 and beyond	+0.4	

(B) From 30 July to end of season
Using Vibropac converter, Edo 202 fathometer

Depth (ft)	Correction (ft)	
0.0 to 18.0	0.0	Group VI 202 - 4/17 - 7/29/57 (H-8367) Kato 60.5 cycles 0.0 - 46.0 - 0.0 46.1 - 54.0 - +0.2 54.1 - 62.0 - +0.4 62.1 - 66.0 +0.6 66.1 & deeper +1.0
18.1 to 24.0	+0.2	
24.1 to 30.0	+0.4	
30.1 to 36.0	+0.6	
36.1 to 42.0	+0.8	
42.1 to 48.0	+1.0	
48.1 to 55.0	+1.2	
55.1 to 60.0	+1.4	
60.1 to 200.0 66.0	+2.0	
66.1 - 200.0	+2.0	

7 bar checks.

H-8394

EDO-201

KATO (59.0)

all depths 0.0

Kato (60) Group VIII (H-8397)

all depth 0.0

H-8396

Kato (61.0)

9/17 - 9/19

all depths 0.0

H-8397

10/10 - 10/15

0.0 - 47.0 = 0

47.0 - 55.0 +0.2

55.0 - 63.0 +0.4

63.0 - 66.0 +0.6

66 deeper +0.8

all corr. subject
to re-observation
during Verification.

APPENDIX E

COAST PILOT NOTES

FROM SAKONNET RIVER ENTRANCE TO MT.HOPE BRIDGE

(Page 199, Line 12 to Page 200, line 10. Note Supplement Fifth Edition, Serial 736/6 page 30 is incorrect and is deleted. Numerous changes were noted during a resurvey of the River and the entire paragraph is rewritten.)

READ:

Sakonnet River, on the easterly side of Narragansett Bay, is between the mainland and the eastern shore of Aquidneck Island. The width of the river varies from 0.7 mi. to 2 mi., except at its northern limit where a least width of 0.3 mi. is found. The river is little used except by fishing vessels and small craft. The easterly side of the southerly entrance to the river is marked by TOWER (Aband. L.H.). The tower, 68 ft. above the water and visible 14 miles is a white conical tower on a brown cylindrical pier at the edge of the shoal area westward of Sakonnet Point.

The channel of the Sakonnet River is good for a depth of *¹ feet from the mouth to Mt. Hope Bay. There are numerous shoals and outlying rocks, but the dangers are well marked by buoys. Except for the breakwater light off SAKONNET HARBOR, no lighted aids are in the river and strangers should not attempt to navigate it at night.

Good anchorage for vessels of 20 ft. draft or less can be had in mid-river, about 5 miles above TOWER and just below HIGH HILL POINT in depths of 21 to 28 ft. Although open to the southward, a heavy sea seldom reaches as far as this anchorage. In a southeasterly gale, the water is comparatively smooth inside the mouth of the river. Fishermen seeking shelter frequently anchor on the flats in the bight northward of FOGLAND POINT in depths of 10 to 14 ft.

The railroad bridge over Sakonnet River, a mile south of Mt. Hope Bay, has a swing span with a horizontal clearance of 99 ft. in the west opening and a vertical clearance of 12 ft. The overhead power cable at the bridge has a permit clearance of 95 ft.

About 200 feet south of the railroad bridge is a fixed highway bridge across the channel mouth with clearances of 57 to 71 ft. vertically over a middle span of about 275 ft.

Nearly a mile south of the railroad bridge, two stone breakwaters extend from each shore to the channel. There is a pass of 150 ft. horizontal clearance between the breakwaters which pass is marked by buoys. The pass has a depth of *² ft.

*¹ See smooth sheet H-8397 (ECFP 1557)

*² See smooth sheet H-8396 (ECFP 1457)

(Page 200, line 25 to 32. Note Supplement Fifth Edition, Serial 736/6 page 30 is incorrect and is deleted. Numerous changes were noted during a resurvey of the river and the entire paragraph is rewritten.)

READ:

SAKONNET HARBOR is a small boat harbor 0.8 miles northeastward of TOWER (Aband. L.H.) off Sakonnet Point. A breakwater, extended in 1957, is marked at its outer end by a light and extends northeasterly from the western part of the harbor. Depths in the harbor range from 18 ft. at the entrance to a 4 ft. depth 100 yards from its head. The harbor anchorage area has been dredged to a depth of 12 ft. Private piers on the west shore have a depth of 9 ft. alongside. Gasoline and some provisions may be obtained all year on the east shore. A yacht club wharf has a depth of 5 ft. alongside. Little protection can be found in the harbor from northerly winds.

(Page 200, lines 41 & 42)

READ:

The western portion of the river from MCCURRY POINT to the stone breakwaters is shoal with least depth of *³ ft.

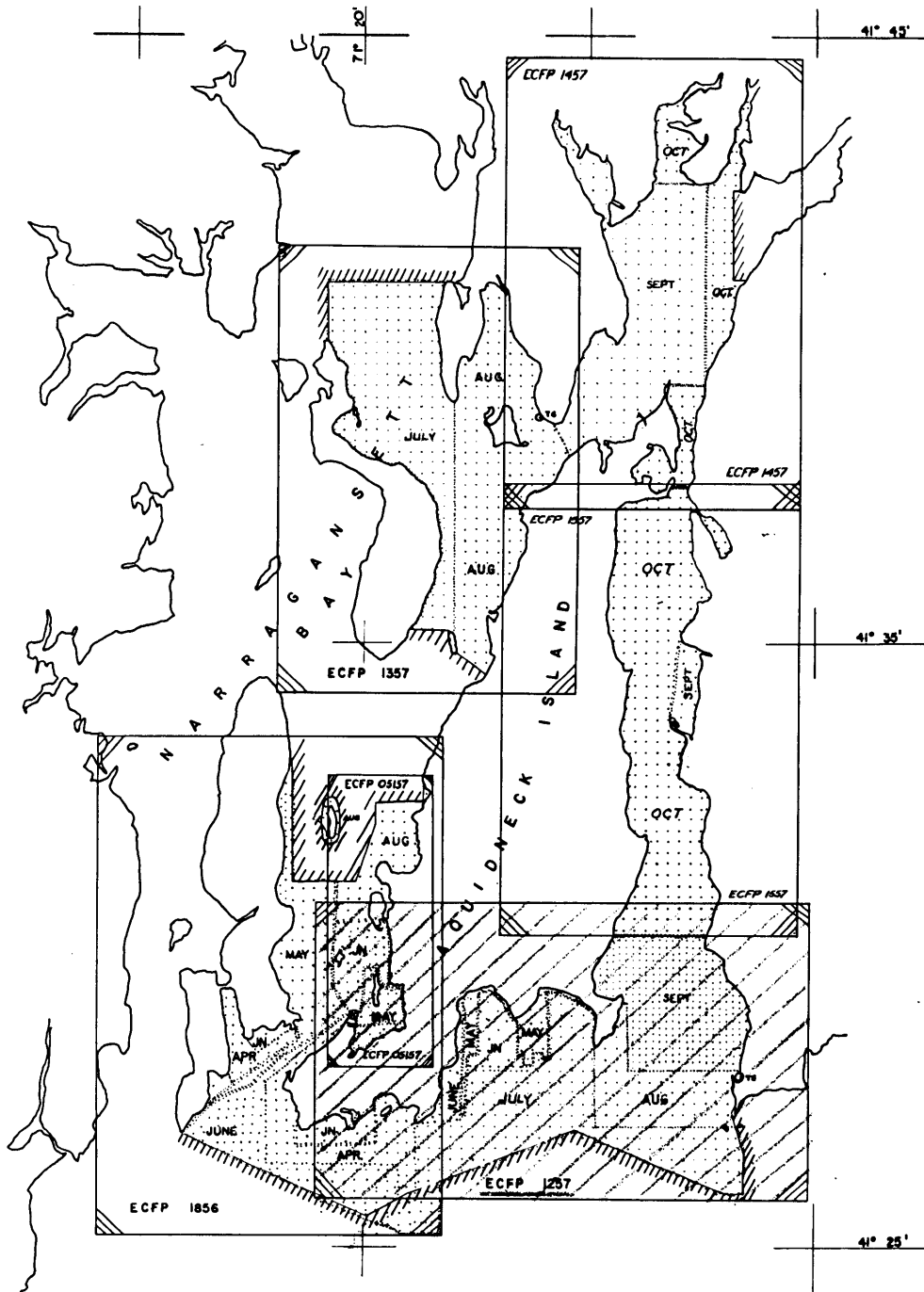
(Page 201, lines 22 & 23)

READ:

TIVERTON is a town on the eastern bank of the Sakonnet River between the bridges and the breakwaters. Gasoline, diesel fuel, small marine railways and supplies are available.

*³ See smooth sheet H-8397 (ECFP 1557)

Appendix F
Index of Sheets
Project 13870



SCALE OF CHART 120

COAST AND GEODETIC SURVEY
H. ARNOLD KARO — DIRECTOR
PROGRESS SKETCH
PROJECT 13870
NARRAGANSETT BAY, RHODE ISLAND
EAST COAST FIELD PARTY
MARVIN T. PAULSON — CHIEF OF PARTY
8 APRIL - OCTOBER 25
1957

Appendix G

(Revised)

~~ADVANCE~~ REPORT OF DANGERS TO BE CHARTED

Survey (Sheet) No. H-8366 Datum Mean Low Water Locality Sakonnet River Entrance State Rhode Island Date 5 May 1957

I recommend that the following dangers to navigation be charted. The positions given have been checked after listing. Checked by

Howard S. Cole

Chief of Party.

TYPE OF DANGER	DEPTH (FEET) *		LATITUDE AND LONGITUDE		FROM CHARTED OBJECT OR NATURAL FEATURE †			CHART USED ‡		DATE OF LOCATION	REMARKS	
	FATHOMETER	LEAD-LINE	°	'	SECONDS (IN METERS)	TRUE BEARING	DISTANCE (METERS)	OBJECT OR FEATURE	NO.			PRINT DATE
Sunken Rock	10.3	10.3	41 26 71 18		1569 1569 1082	131	2655	Flagpole	353	9/19/55	7/25 1957	Chart Depth is 24' Chart new depth
Elbow Ledge South Point	21.4	21.2	41 27 71 15		583 868	209	2510	Silo	353	9/19/55	8/21 1957	Chart depth is 25' Chart new depth
Elbow Ledge Shoalest Point	11.0	11.0	41 27 71 15		910 1007	216	2209	Silo	353	9/19/55	8/21 1957	Chart depth is 12' Chart new depth
Submerged Rock	13.2	13.2	41 27 71 15		1214 555	210	1806	Silo	353	9/19/55	8/21 1957	Chart depth is 22' Chart location and depth
Shoal	49.4	None	41 26 71 14		1196 815	176	3441	Silo	353	9/19/55	7/11 1957	This chart depth is 24' This sounding was found while running outside the project limits-not invest.
Shoal or Rock	27.3	None	41 28 71 12		166 82	004 XXXXX	1698	Tower	353	9/19/55	9/10 1957	Chart depth is 40' Chart location & depth
Shoal or Rk.	27.5	27.0	41 28 71 12		123 124	006	1641	Tower	353	9/19/55	1957 10/21	Chart depth is 40' Chart location & depth
Sunken Rock	11.9	11.9	41 29 71 12		363 106	071	3893	Silo	353	9/19/55	9/26 1957	Uncharted Charted depth is 28'
Sunken Rock	7.4	7.4	41 29 71 13		340 1253	042	1725	Silo	353	9/19/55	9/16 1957	Uncharted Charted depth is 28'

* Record least depth over danger reduced to plane of reference of charted soundings, using observed tides, if available.

† Record location both by geographic position and by true bearing with distance from object or natural feature shown on chart.

‡ Use largest-scale chart and note print date given in lower corner of chart.

Chart locations & depths

NOTE.—This form to be used during the season for prompt reports of uncharted dangers. If reports have been sent by wire, fill out this form and mail with confirmations.

Enter dates of wires under "Remarks." Copies of reports on this form should be retained and submitted with the descriptive report.

APPENDIX H
APPROVAL SHEET
HYDROGRAPHIC SURVEY H-8366 (ECFP 1257)

The Hydrographic survey of sheet H-8366 is approved and forwarded
as complete and adequate.

Howard S. Cole

Howard S. Cole
LCDR, C&GS
Officer-in-Charge
East Coast Field Party

GEOGRAPHIC NAMES
Survey No. H-8366

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
<u>Rhode Island</u>			(Title)						BGN	1	
<u>Narragansett Bay</u>			"						"	2	
<u>Sakonnet Point</u>									"	3	
<u>Sakonnet Harbor</u>			(Tide station)							4	
<u>Church Cove</u>										5	
<u>Church Point</u>										6	
<u>Sakonnet River</u>									BGN	7	
<u>Sachuest Point</u>										8	
<u>Sachuest Bay</u>										9	
<u>Easton Point</u>										10	
<u>Easton Beach</u>									BGN	11	
<u>Lands End</u>										12	
XX <u>Acquidneck Island</u>										13	
										14	
			Names approved 6-10-59								15
<u>Tide Station off sheet</u>									L. HECK	16	
<u>Fort Adams</u>										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

If additional names are desired, all on the 1958 ^{revision} ~~edition~~ of chart 353 are approved.

Flint Pt.
East Island
West Island
Ochre Pt.
Flint Pt. Ledge
Old Bull
Elbow Ledge

over

Cormorant Rk
Cormorant Reef
Gull Rk
Schuyler Ledge
Sheep Pt.
Marys Seat

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ...8366.

Records accompanying survey:

Boat sheets 1...; sounding vols. 26...; wire drag vols.; bomb vols.; graphic recorder rolls 19-Envelopes special reports, etc. 1-Smooth sheet and 1-Descriptive report.

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

Number of positions on sheet

3857 (23,146 sds)

Number of positions checked

metallic traces 8 Vols.

289 .53...

Number of positions revised

109 .18...

Number of soundings revised (refers to depth only)

Bar Ck - Approx 5630 2360 sds B.C.
Tide corr. Approx 2150 215 sds change
Intermed. Sdgs Added 132 219 Same & add.
Erroneously READ 55

132 .219...

Number of soundings erroneously spaced

40 .16...

Number of signals erroneously plotted; added or transferred

SHU transferred from
END Boat Sheet

Topographic details all topo should be ckd in Review in lieu of discrepancies

Time 48 .20 hrs.

Junctions noted at time of verification of this survey.

Time 16 .6...

Verification of soundings from graphic record

Time 50 .18 hrs.

Verification by E. Thomas 7. Saclsbury Total time

157 Report 1/28/60
493 Date 4-3-61

Reviewed by [Signature] Time

148 Date 6-5-61

Approx. 64 hrs in cleaning, retouching sds., penciling & inking depth curves

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8366

FIELD NO. ECFP-1257

Rhode Island, Narragansett Bay, Sakonnet River Entrance

SURVEYED: May - October 1957

SCALE: 1:10,000

PROJECT NO. 13870

SOUNDINGS: Edo Depth Recorder
Sounding Pole
Leadline

CONTROL: Sextant fixes
on shore signals

Chief of Party ----- M. T. Paulson
Surveyed by ----- A. G. Davis
Protracted by ----- E. R. Scyoc
Soundings plotted by ----- E. R. Scyoc
Verified and inked by ----- E. E. Thomas; F. Saulsbury
Reviewed by ----- I. M. Zeskind DATE 6-5-61
Inspected by ----- R. H. Carstens

1. Description of the Area

This survey covers the entrance to Sakonnet River and vicinity. The bottom generally is very irregular inshore in depths less than 30 feet and fairly irregular offshore in greater depths where many of the major irregularities rise abruptly from an even bottom. Submarine features such as ledges, reefs, ridges, shoals and pinnacles contribute to the bottom irregularity. This bottom irregularity is attributed to glacial scouring and moraine.

2. Control and Shoreline

The source of the control is given in the Descriptive report. Topographic signals END and SHU were not shown on the penciled smooth sheet. These signals were transferred from the boat sheet to the smooth by the verifier, because the photogrammetric manuscripts on which these signals were plotted could not be found in the Washington Office.

The shoreline originates with reviewed photogrammetric surveys T-11430 (1954-55), T-11434 (1954-56) and T-11433E and T-11433W of 1954-55.

3. Hydrography

Depths at crossings are in good agreement. The usual depth curves were adequately delineated, except close inshore where the foul character of the bottom sometimes prevented development to the low-water line. The least depths on shoals and the bottom configuration were in general adequately developed. No development was made of the 17 ft. depth rising from 26-27 ft. in Lat. $41^{\circ}28.91'$ Long. $71^{\circ}16.0'$.

*See Adj
Mark*

A. Differences in the topographic and hydrographic survey elevation of the reef in Lat. $41^{\circ}26.95'$ Long. $71^{\circ}18.8'$ could not be resolved because of conflicts in the original information furnished by the field parties. The elevation from the hydrographic survey is shown on the smooth sheet.

4. Condition of Survey

a. The sounding records are complete except as follows:

1. The fathometer corrections submitted with the Descriptive Report differed on some days with those entered in the sounding volumes. The values determined by the field party were frequently not in accordance with the bar checks and, therefore, a large number of revisions to the fathometer corrections had to be made in the Washington Office.

2. Erroneous tide corrections were applied by the field party to a number of positions (414) which affected the soundings as much as 1 ft. These depths were revised in the sounding volumes and on the smooth sheet.

b. The following deficiencies in the smooth plattting were noted:

1. A number of sunken rocks were originally shown on the smooth sheet as rocks awash. These features were revised to soundings with a characteristic "RK" during verification of the smooth sheet.

2. A considerable number of "strays" on the Edo record were erroneously shown on the smooth sheet as soundings. These were rejected and the sounding volumes were accordingly corrected. A practice of extensive inspection of the Edo records was followed in order to eliminate this deficiency and provide proper interpretation of the record.

3. An excessive number (109) of positions which were misplotted on the smooth were revised during verification.

5. Junctions

An adequate junction was effected with H-6444 (1939) on the south. The junctions with H-8397 (1957) on the north and with H-8367 (1956-57) on the west will be considered in the reviews of those surveys. The survey extends to the limits of the project on the east where charted depths are in adequate agreement with present depths.

6. Comparison with Prior Surveys

A.	H-153 (1844), 1:20,000	H-1787 (1887), 1:40,000
	H-205 (1848), 1:10,000	H-1790 (1887), 1:10,000
	H-1443 (1879), 1:10,000	H-1791 (1887), 1:10,000

These early prior surveys cover the area of the present survey. They are of a reconnaissance nature, except over shoals and close inshore where close development of the bottom was generally accomplished.

A comparison between the prior and present surveys generally reveals differences in depths of 2-4 ft., although in several areas differences of as much as 6 ft. are noted. These differences in depths are attributed occasionally to the incorrect spacing of soundings between fixes on the prior surveys, and generally to the different methods of obtaining soundings on the prior and present surveys. The soundings on the prior surveys were obtained by leadline, whereas those on the present survey were obtained by depth recorders.

Attention is specifically directed to the following differences between the prior and present surveys:

1. The bare rock charted in Lat. $41^{\circ}28.42'$, Long. $71^{\circ}15.12'$ from H-1790 (1887) is shown on the present survey as a rock awash uncovering 2 ft. at MLW. The charted feature should be revised to a rock awash.

2. The 21-ft. sounding charted in Lat. $41^{\circ}28.22'$ Long. $71^{\circ}14.85'$ from H-1790 (1887) is in error. The sounding should actually be 31 ft. The sounding has been revised to 31 ft. on the prior survey and is superseded by the present depth.

Six soundings, eight rocks awash, and a number of bottom characteristics have been carried forward from the prior surveys to the present survey. With these additions the present survey is adequate to supersede the prior surveys.

- B. H-3995 (1917), 1:10,000
H-5553 (1934-35), 1:10,000

These prior surveys cover that portion of Sakonnet River which falls on the present survey east of Long. $71^{\circ}15.0'$. A comparison between the prior and present surveys reveals differences similar in amounts and are attributed to the same causes given in paragraph A above. Attention, however, is specifically directed to the following differences between the prior and present surveys:

1. The 2 bare rocks charted in the vicinity of Lat. $41^{\circ}28.97'$, Long. $71^{\circ}11.52'$ originates with a reef symbol on H-3995 (1917) to which it was apparently transferred from the boat sheet. The feature is considered displaced in position and should actually fall about 50 meters southward where 2 rocks awash are shown on the present survey.
2. The rock awash charted in Lat. $41^{\circ}30.02'$, Long. $71^{\circ}12.46'$ from H-3995 (1917) falls on the present survey 40 meters off a ledge in depths of 5 ft. The feature is not shown on photogrammetric surveys T-5601 (1934-36) or T-11430 (1954-55) and was not noted on a present survey sounding line 20 meters distant ran at 1 ft. tide. The prior note of boulders probably referred to a foul area rather than to a rock awash. The present delineation is considered adequate to supersede the charted rock awash.
3. The 2 rocks awash charted in the vicinity of Lat. $41^{\circ}29.75'$, Long. $71^{\circ}12.50'$ from H-3995 (1917), fall in present depths of 7-11 ft. The prior records may have referred to type of bottom rather than rocks awash. These rocks awash are not shown on photogrammetric surveys T-5601 (1934-36) or T-11434 (1954-56). The area on the present survey is adequately developed to disprove the existence of the 2 charted rocks awash and they, therefore, should be deleted from the chart.
4. The rock awash charted in Lat. $41^{\circ}29.2'$, Long. $71^{\circ}14.2'$ originates with H-3995 (1917) where a note in the sounding record gives an estimated distance from a sounding line to a "rocky point". The rock awash is not shown on the present survey or photogrammetric survey T-11434 (1954-56). An examination of the photographs covering this area on T-11434 also failed to reveal the existence of this rock. The above note in the sounding records of H-3995 is believed to refer to the ledge shown on the present survey in the vicinity of Lat. $41^{\circ}29.18'$, Long. $71^{\circ}14.28'$. The rock awash should be deleted from the chart.

Two soundings, 5 rocks awash, and a number of bottom characteristics have been carried forward to the present survey. With the addition of these features, the present survey is adequate to supersede the prior surveys within the common area.

C. Wire Drag Surveys

H-4006 WD (1917), 1:20,000

There are no conflicts between the present survey soundings and the effective wire-drag depths. Six soundings have been carried forward from the wire drag survey to the present survey.

7. Comparison with Chart 353 (Latest print date 4-10-61)
236 (Latest print date 6-19-61)

A. Hydrography

The charted hydrography originates principally with the prior surveys previously discussed which need no further consideration, supplemented by critical data from the boat sheet (Bp. 55827) of the present survey. Attention is directed to the following discrepancies between the charted information and the present survey:

1. The 18-ft. sounding charted in Lat. $41^{\circ}29.32'$, Long. $71^{\circ}12.30'$ from the boat sheet (Bp. 55827) of the present survey originates with a stray trace on a fathogram. The sounding is not shown on the smooth sheet and should be deleted from the chart.
2. The 18-ft. sounding charted in Lat. $41^{\circ}28.70'$, Long. $71^{\circ}11.75'$ from the boat sheet (Bp. 55827) of the present survey was revised to 24 ft. during verification and review of the present survey.
3. The rock awash charted in Lat. $41^{\circ}27.68'$, Long. $71^{\circ}18.13'$ from the boat sheet (Bp. 55827) of the present survey is plotted out of position. The feature was relocated on the smooth sheet of the present survey about 100 meters inshore from its boat sheet position. The location of the rock awash on the chart should be revised.

4. The 2 rocks awash charted in Lat. $41^{\circ}28.4'$, Long. $71^{\circ}17.8'$ from the boat sheet (Bp. 55827) of the present survey symbolize a ledge. The present survey after verification and review shows the ledge extending from shore only as far as the rock awash charted closest to shore. The outer rock awash should, therefore, be deleted from the chart.

5. The sunken rock charted in Lat. $41^{\circ}28.66'$, Long. $71^{\circ}16.62'$ from the boat sheet (Bp. 55827) of the present survey was revised to "2 RK" during verification and review of the present survey. The sunken rock symbol should be deleted from the chart and "2 RK" should be charted in its stead.

6. The sunken rock awash charted in Lat. $41^{\circ}27.23'$, Long. $71^{\circ}12.08'$ from the boat sheet (Bp. 55827) of the present survey was revised to a rock awash uncovered 1 ft. at MLW.

7. The sunken rock charted in Lat. $41^{\circ}28.50'$, Long. $71^{\circ}15.11'$ from the boat sheet (Bp. 55827) was revised to "3 RK" during the verification and review of the present survey. The sunken rock symbol should be deleted from the chart and in its stead a 3-ft. sounding should be plotted.

8. The 25-ft. sounding charted in Lat. $41^{\circ}28.35'$, Long. $71^{\circ}14.55'$ from the boat sheet (Bp. 55827) of the present survey originates with a line of soundings whose location was shifted northward about 60 meters during verification and review of the present survey. The 25-ft. sounding is superseded by the present smooth sheet depths.

9. The island charted in Lat. $41^{\circ}29.08'$, Long. $71^{\circ}14.21'$ from planetable survey T-3678 (1917) is neither shown on photogrammetric survey T-11434 (1954-56), nor is it confirmed by the present survey. An examination of colored photographs of this area taken in 1960 also failed to reveal the existence of this feature. The island is considered to be plotted in error on T-3678 and should, therefore, be deleted from the chart.

10. The rock awash charted in Lat. $41^{\circ}29.28'$, Long. $71^{\circ}11.88'$ from the incomplete manuscript of photogrammetric survey T-11434E (1954-55) is neither shown on the reviewed manuscript of T-11434E nor on the present survey. The feature is considered to be non-existent and should, therefore, be deleted from the chart.

11. The rock awash charted in Lat. $41^{\circ}28.80'$, Long. $71^{\circ}11.49'$ from the advance manuscript of photogrammetric survey T-11434E (1954-55) is neither shown on the reviewed manuscript of T-11434E nor on the present survey. The rock awash should be deleted from the chart.

12. The 2 bare rocks charted on a reef in the vicinity of Lat. $41^{\circ}26.95'$, Long. $71^{\circ}18.77'$ from the advance manuscript of photogrammetric survey T-11433W (1954-55) should be deleted from the chart. These features were found to be rocks awash and should, therefore, be so charted.

13. The 2 bare rocks charted in the vicinity of Lat. $41^{\circ}27.05'$, Long. $71^{\circ}18.45'$ from photogrammetric survey T-11433E (1954-55) should be shown as reefs. These features are shown on both photogrammetric survey T-11433E and the present survey as being awash at MHW. ✓

14. The charted delineation of rock detail in the vicinity of Lat. $41^{\circ}27.55'$, Long. $71^{\circ}18.05'$ from H-1790 (1887) should be revised to agree with that shown on the present survey.

15. The Rock "ED" charted in Lat. $41^{\circ}28.92'$, Long. $71^{\circ}16.80'$ from advance manuscript of photogrammetric survey T-11433E (1954-56), should be deleted from the chart. The rock was not found during the present survey and an examination of the photographs covering this area also failed to reveal the existence of this rock.

16. The 2-ft. sounding charted on CORMORANT ROCK in Lat. $41^{\circ}27.36'$, Long. $71^{\circ}14.85'$ from a source not readily ascertainable, should be deleted from the chart and in its stead the 4-ft. sounding found on the present survey should be charted. The charted sounding is probably a "reported" sounding, whereas the 4-ft. sounding is a pole sounding on the rock obtained at MLW. The present depth is considered more reliable than the charted depth.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

The present survey positions of aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended. Buoy "2A" charted in Lat. $41^{\circ}27.72'$, Long. $71^{\circ}12.92'$ is not shown on the present survey. This buoy was charted subsequent to the present survey in accordance with HON to M27, 1958.

8. Compliance with Project Instructions

This survey adequately complies with the Project Instructions.

9. Additional Field Work

The survey is considered basic except for the lack of adequate delineation and least depth on the 17-ft. feature in Lat. $41^{\circ}28.91'$, Long. $71^{\circ}16.0'$. Additional development of this feature should be made.

*See 1963
Ad. Wk.*

Examined and Approved:

J. E. Keough 9/28/61
Chief,
Nautical Chart Division

J. T. Jarman 10/24/61
Assistant Director,
Office of Cartography

J. W. Richards 10/31/61
Projects Officer,
Operations Division

Max S. Ricketts 11/7/61
Assistant Director,
Office of Oceanography

KHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

22 June 1959

~~DIVISION OF COAST AND GEODETIC SURVEYS~~

Division of Charts: R. H. Carstens

Plane of reference approved in
26 volumes of sounding records for

HYDROGRAPHIC SHEET 8366

Locality Narragansett Bay, R.I.

Chief of Party: M. T. Paulson in 1957
Plane of reference is mean low water, reading
5.8 ft. on tide staff at Fort Adams
17.9 ft. below B. M. 1 (1957)

3.1 ft. on tide staff at Sakonnet Point
8.4 ft. below B.M. 1 (1957)

Height of mean high water above plane of reference is as follows:

Fort Adams = 3.4 feet

Sakonnet Point = 3.1 feet

Condition of records satisfactory except as noted below:

NOTE: Tide reducers for the positions listed below have been revised in red and verified.

<u>Vol.</u>	<u>Positions</u>	<u>Vol.</u>	<u>Positions</u>
17 ✓	1 z - 83z Applied 7.P.S.	24 ✓	1 la - 17 la Applied 7.P.S.
20 ✓	80 ea - 87 ea Applied 7.P.S.		1 ma - 108 ma Applied 7.P.S.
21 ✓	88 ea - 191 ea Applied 7.P.S.	25 ✓	1 b - 44 b Applied 7.P.S.
22 ✓	115 fa - 148 fa Applied 7.P.S.	26 ✓	1 d - 16 d Applied 7.P.S.

~~Checked by Division of Tides and Currents~~

414 pas
approx 2484 soundings
Corr.

William Hofner
Chief, Tides Branch

8366

Additional Work

Diag. Cht. No. 1210-3.

Form 504	
U. S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	Hydrographic
Field No.	Office No. H-8366 Ad.WL
LOCALITY	
State	Rhode Island
General locality	Rhode Island Sound
Locality	Sakonnet River
<u>19 63</u>	
CHIEF OF PARTY	
E. K. McCaffrey	
LIBRARY & ARCHIVES	
DATE	December 1963

USCOMM-DC 5087

8366

Additional Work

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-8366 Ad. Wk.

Field No. ECFR-1257

State Rhode Island

General locality Rhode Island Sound

Locality Sakonnet River

Scale 1:10,000 Date of survey 6/20/63 to 7/6/63

Instructions dated 3/19/63

Vessel WAINWRIGHT - HILGARD, LAUNCH CS-181, SKIFF CS-771

Chief of party E. K. McCaffrey

Surveyed by J.S. Midgley, D.W. Crawford, E.J. Murphy

Soundings taken by fathometer, ~~graphic recorder~~, hand lead, ~~wire~~ pole

Fathograms scaled by

Fathograms checked by

Protracted by

Soundings penciled by

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~

REMARKS:

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.....

Adm. WK R. 14-5346

TO: The Director
Coast and Geodetic Survey

2 December 1963

FROM: Commanding Officer
USC&GSS WAINWRIGHT & HILGARD

SUBJECT: SPECIAL REPORT to Accompany H-8366, (ECFP 1257), Project 22-62

REF: 1. INSTRUCTIONS, SP 1-63, Dated March 19, 1963

In accordance with the above instructions, additional hydrographic investigations were carried out on H-8366 (ECFP 1259) as noted on the accompanying bromide. The results of the investigations are as follows:

LAUNCH CS181, a Day, 20 June 1963

- 1. Two rocks were verified at Lat: $41^{\circ}29.15'$, Long: $71^{\circ}14.08'$ and Lat: $41^{\circ}29.18'$, and Long: $71^{\circ}14.10'$ (Pos. 1a & 2a). *See review of Ad WK.*
- 2. Position 3a (Lat: $41^{\circ}29.98'$, Long: $71^{\circ}14.10'$) through position 12a are rocks outlining foul area. The area enclosed is a continuation of the boulder strewn ledge forming Church Point and is foul with rocks too numerous to locate. A thorough investigation was carried out and no indication of islets could be found. *Concur. See review of Ad WK*
- 3. A rock was verified at Lat: $41^{\circ}29.48'$, Long: $71^{\circ}12.68'$ (Pos. 13a). Actually this position was at the shoalest point of three or four closely spaced rocks seeming to form one. *This rock is awash at MLW.*
- 4. A rock was verified at Lat: $41^{\circ}28.47'$, Long: $71^{\circ}11.67'$ (Pos. 14a). *concur See review of Ad WK*

HILGARD, A Day, 25 June 1963

- 1. A hydrographic investigation (Pos. 1A - 84A) was carried out in the vicinity of Lat: $41^{\circ}28.3'$, Long: $71^{\circ}15.5'$ to verify or disprove the charted 18, 20 and 21 foot soundings. *The investigation implemented 50 meter or less, line development with the DE-723 Depth Recorder.*
 - 5.a. Several 18- and 19-foot soundings were obtained on and around the charted 18 ft. (Lat: $41^{\circ}28.35'$, Long: $71^{\circ}15.49'$) *confirming the 18-ft depth from the 1957 work.*
 - 6.b. A 19-foot sounding was obtained in the area of the charted 20 ft. *from the 1967 work* (Lat: $41^{\circ}27.96'$, Long: $71^{\circ}15.65'$). *this confirming the 20-ft. depth.*
 - 7.c. A 21-foot sounding was obtained on the charted 21 ft. (Lat: $41^{\circ}28.13'$, Long: $71^{\circ}15.62'$), *from the 1957 work and confirms the 20-ft depth.*

METHODS AND EQUIPMENT

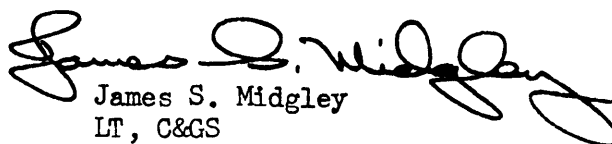
Accepted hydrographic procedures were followed in carrying out these investigations. Pole or leadline soundings were taken where needed and check angles were taken on all located features.

Existing control on hydrographic survey sheet H-8366 (ECFP 1259) was utilized for all investigations. *See Ad Wk Review section 2.*

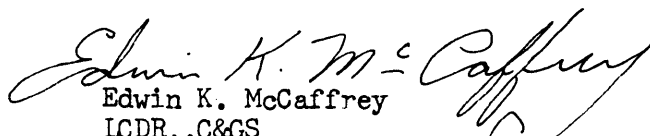
The following vessels and sounding equipment was used:

<u>VESSEL</u>	<u>RAYTHEON DE-723</u>	<u>DAY LETTERS</u>
<i>Vol. I</i> HILGAPD	257	BLUE (1-138A)
<i>Vol. I and II</i> CS 181	211	blue (1-140, 1-256)
<i>Vol. III</i> HYDRO SKIFF	541	red (1-519)

Respectfully submitted,


James S. Midgley
LT, C&GS

APPROVED:


Edwin K. McCaffrey
LCDR, .C&GS
Commanding Officer, WA-HI

TIDE NOTE

The standard tide gage at Newport, Rhode Island was used for all tidal corrections, with hourly heights furnished by the Washington Office. Because of the significant geographical difference, the following corrections were taken from the C&GS Tide Tables for Sakonnet, Rhode Island, and applied to the furnished tides:

HIGH WATER - 10 min. and -0.4 ft.

LOW WATER + 4 min. and 0.0 ft.

ABSTRACT OF ECHO CORRECTIONS

HILGARD - DE 723 No. 257

<u>Depth (ft.)</u>	<u>Corr. (ft.)</u>
0.0	0.0
3.9	+0.2
17.5	+0.4
30.0	+0.6
40.5	+0.8
ON	

PHASE CORR. A - B +0.2 ft.

CS 181 - DE 723 No. 211

<u>Depth (ft.)</u>	<u>Corr. (ft.)</u>
0.0	+0.0
6.3	+0.2
14.3	+0.4
20.3	+0.6
26.1	+0.8
32.7	+1.0
40.0	+1.2
47.1	+1.4
55.3	+1.6
65.3	+1.8
ON	

PHASE CORR. A - B 0.0ft.

HYDRO SKIFF DE 723 No. 541

<u>Depth (ft.)</u>	<u>Corr. (ft.)</u>
0.0	(-)1.0
ON	

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8366 Ad. Wk. (1963)

Records accompanying survey: Smooth sheets;
 boat sheets 1...; sounding vols. 3...; wire drag vols.;
 Descriptive Reports 1...; graphic recorder envelopes 3...;
 special reports, etc. 1-Bromide copy of H-83666

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 <i>Hydrographic Signals Gal and Site</i>	<u>2</u>
Topographic details	Time
Junctions	Time
Verification of soundings from graphic record	Time
Special adjustments	Time

Verification by M. J. Friese..... Total time 96 hr. Date 6/4/76

Reviewed by M. J. Friese..... Time 48 hr Date 6/14/76

Cur. Inspection D. J. Ronesburg 9-15-77 35 hrs.
D. R. Ertle 6-27-79 16 hrs.

aforementioned sounding displacement was attributed to distortion in the boat sheet and the use of relatively weak fixes.

For unknown reasons, the new positions determined by the hydrographer were plotted on the smooth sheet and utilized by the verifier for plotting two additional work developments in preference to the topographic signal positions of 1957. The differences between the signal positions were not considered significant to adversely affect the quality of the additional work and no revisions were attempted during review.

3. Results of Survey

The existence of most of the questionable rocks and soundings has been verified or disproved by the present work. A discussion of certain items follows and is supplemental to information in the Descriptive Report:

a. Item 1 - The two rocks awash carried forward from H-3995 (1917) in approximate latitude $41^{\circ}29.15'$, longitude $71^{\circ}14.10'$ were investigated. The southerly of the two rocks was verified and is now shown on the smooth sheet as 2 Rk. The northerly rock was not considered to be adequately investigated by the additional work and is therefore being retained.

b. Item 2 - The rocks awash in latitude $41^{\circ}29.9'$, longitude $71^{\circ}12.4'$ originate with H-3995 (1917) and H-8366 (1957). This area was investigated, its limits determined, and was noted as foul with boulders. The ledge was extended seaward by 40 meters in latitude $41^{\circ}29.98'$, longitude $71^{\circ}12.45'$. One rock located in latitude $41^{\circ}29.82'$, longitude $71^{\circ}12.35'$ is shown as 2 Rk. The prior rocks and ledge of the 1957 work are being retained within the foul area investigated. An islet from T-5601 (1934-36) falling within the foul area in latitude $41^{\circ}29.89'$, longitude $71^{\circ}12.38'$ was revised to a rock awash by virtue of the additional work.

c. Item 4 - The rock awash carried forward from T-5601 (1934-36) in latitude $41^{\circ}28.47'$, longitude $71^{\circ}11.67'$ was confirmed by the present work. However, the present position plots 20 meters northwest of its previous position and appears to be less accurate with respect to the adjacent soundings. The rock, therefore, is retained in its original position.

d. Item 8 - Several additional shoal soundings of 15, 18, 19, and 20 feet were found by the present investigation. The 15-foot sounding was indicated on a turn (pos. 69-70A) in approximate latitude $48^{\circ}27.85'$, longitude $71^{\circ}15.64'$ and was added to the smooth sheet.

e. Item 12 - The 6- and 12-foot soundings in the vicinity of latitude $41^{\circ}28.4'$, longitude $71^{\circ}15.2'$ originate with prior survey H-1790 (1887)

and the 1957 work respectively. Neither was confirmed nor disproved by the present survey. The 6-foot depth is a lead line sounding on position supported by a crossline on H-1790 and should be retained as shown on the present survey. The 12-foot depth is from the 1957 work of the present survey, but was isolated by a sounding line on the 1963 work, and is shown accordingly on the present survey.

f. The 25-foot sounding in latitude $41^{\circ}28.59'$, longitude $71^{\circ}16.41'$ which falls on the eastern limits of this investigation should be retained also.

g. The 24- and 26-foot shoal soundings in latitude $41^{\circ}28.75'$, longitude $71^{\circ}15.97'$ were added to the survey during inspection.

4. Additional Field Work

The work accomplished in 1963 adequately satisfies most of the questionable items and no immediate additional work is recommended.

Examined and Approved:

R.H. Carstens

Acting Chief
Hydrographic Surveys Division

TIDE NOTE FOR HYDROGRAPHIC SHEET

February 5, 1964

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 8366 Add.wk.

Locality Sakonnet River
Rhode Island Sound

Chief of Party: E. K. McCaffrey (1963)

Plane of reference is Mean low water

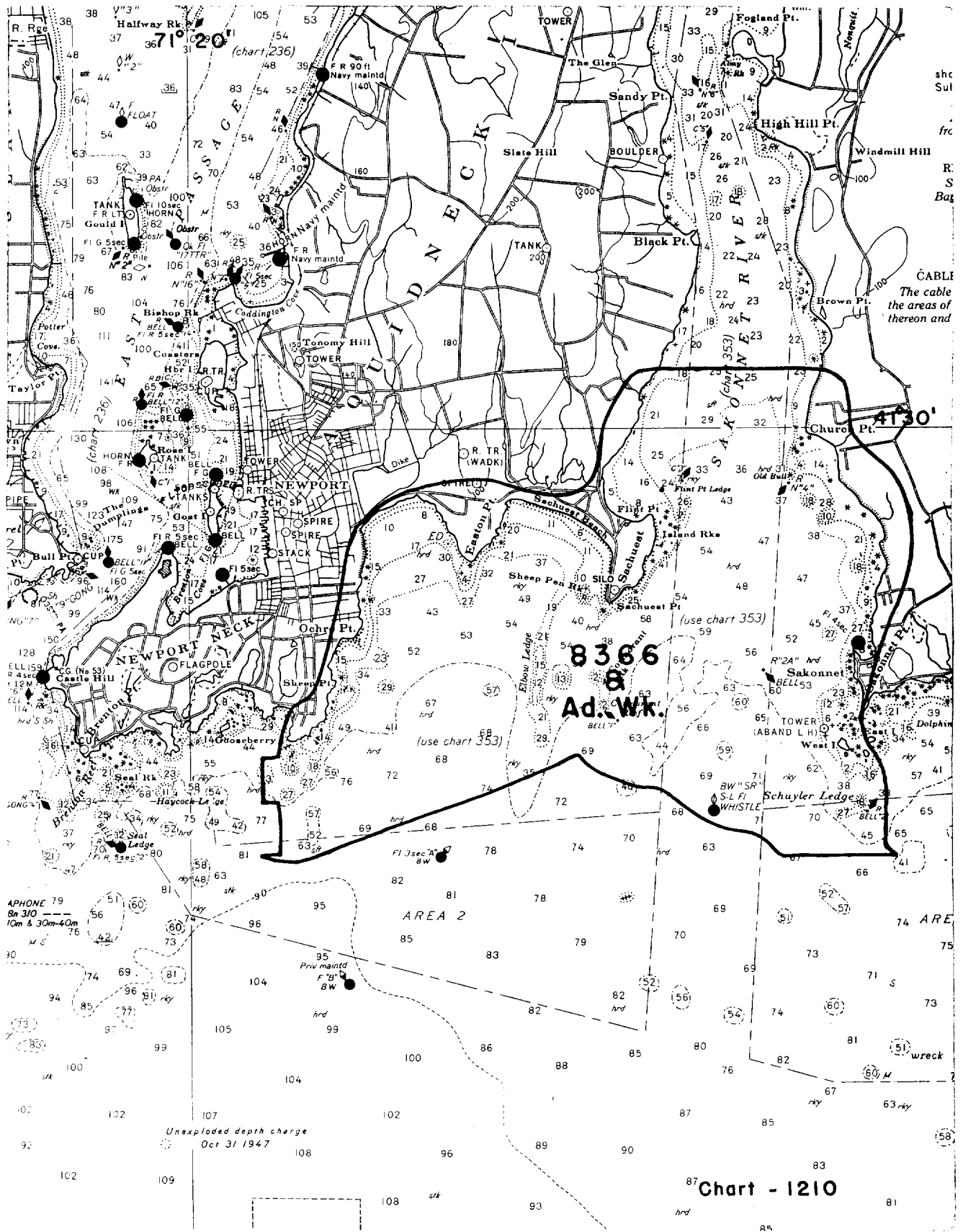
ft. on tide staff at

ft. below B. M.

Height of mean high water above Plane of reference
at the working grounds is 3 feet.

Condition of records satisfactory except as noted below:


Chief, Tides and Currents Branch



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CABLE
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 thereon and

4130'

8366
 Ad. Wk.

AREA 2

74 ARE

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Unexploded depth charge
 Oct 31 1947

Chart - 1210

@ time Smooth sheet was received - surface was distorted
with large creases off chuck point

12/28/59

