

8316

Diag. Cht. No. 1210-3 Insert

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ECFP-05156 Office No. H-8316

LOCALITY

State Rhode Island

General locality Narragansett Bay

Locality Providence & Seekonk Rivers

1956

CHIEF OF PARTY

M. T. Paulson

LIBRARY & ARCHIVES

DATE OCT 2, 1959

USCOMM-DC 5087

8316

872
182

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-8316

Field No. ECFP-05156

State RHODE ISLAND

General locality NARRAGANSETT BAY

Locality PROVIDENCE & SEEKONK RIVERS

Scale 1:5,000 Date of survey 9-6-56 to 11-9-56

Instructions dated 31 Jan. 1956 & 27 June 1956

Vessel Launches 168 & 82

Chief of party MARVIN T. PAULSON

Surveyed by C.W. TUPPER

Soundings taken by ~~tachometer~~, graphic recorder, hand lead, ~~wire~~ Pole

Fathograms scaled by PARTY PERSONNEL

Fathograms checked by NORFOLK DISTRICT OFFICE

Protracted by A.K. SCHUGELD

Soundings penciled by A.K. SCHUGELD

Soundings in ~~XXXXXX~~ fathoms feet at MLW ~~XXXXXX~~ and in true depth.

REMARKS:

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201

DESCRIPTIVE REPORT
TO ACCOMPANY

Hydrographic Survey H-8316 Field No. ECFP-05156
Narragansett Bay

EAST COAST FIELD PARTY

MARVIN T. PAULSON, CHIEF OF PARTY

PROJECT 13870

SCALE 1:5,000

9/6/56 to 11/9/56

* * * * *

A. PROJECT

A basic survey of the Rhode Island - Connecticut Coast. The survey to progress from Pawtucket, Rhode Island southward to the entrance to Narragansett Bay and Westward to the Thames River Connecticut. The area included on this sheet as set forth under item B. Survey Limits and Dates was accomplished under instructions as follows:

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

Addressed to: Officer in Charge, East Coast Field Party

Supplemental Instructions: 22-SRO; FP-East Coast; dated 27 June 1956

Addressed to: Officer in Charge, East Coast Field Party

B. SURVEY LIMITS AND DATES

Field work on Sheet H-8316 commenced on 9/6/56 and terminated on 11/9/56. Work was accomplished in the Providence and Seekonk Rivers located in the upper reaches of Narragansett Bay, Rhode Island.

The southern limit on this sheet makes junction with contemporary survey H-8314. The junction line lies in a direction approximately north-east from latitude $41^{\circ} 46.08$ on the west side of the river to latitude $41^{\circ} 46.82$ on the east side of the river. The survey extends north from this junction line to the head of navigation in the Seekonk River.

Field work on this sheet makes satisfactory junction with prior Surveys No. H-880 (1:10,000 date 1865); H-878 (1:5,000 date 1865); H-865 (1:5,000 date 1865); and H-1326 b (1:2,400 date 1874).

C. VESSELS AND EQUIPMENT

Two launches were used on this sheet. Launch CS-168 was used on 99% of the work and launch CS-82 was used on the remaining 01%. The launches were operated from a mooring at Providence State Pier No. 1 near latitude $41^{\circ} 48.44$ for the entire survey on this sheet.

Launch CS-168 was operated at a standard sounding speed of 2000 r.p.m. unless otherwise noted in the sounding record volume. At this speed (5.1 knots) and with half rudder it had a turning radius of 20 meters. Soundings were obtained with an EDO-255 type fathometer No. 201 and an 808J type fathometer No. 77. The transducer units for the former were mounted in a fish suspended over the side of the launch and placed on the starboard side immediately forward of the engine.

When the 808J type was used the transducer units were placed in wells for that purpose in the bilges approximately 3 feet forward of the engine.

Launch CS-82 was operated at a standard sounding speed of 1800 r.p.m. unless otherwise noted in the sounding record volume. At this speed (5.5 knots) and half rudder she had a turning radius of 50 meters. Soundings were obtained with an EDO-255 type fathometer No. 202 and an 808J type fathometer No. 77. The transducer units for the former were mounted in a fish suspended over the starboard side of the launch and placed just aft of the engine. The transducer units for the latter were placed in the bilges

on each side of the keel just aft of the engine.

A discussion of strays and bottom characteristics picked up with the EDO-255 type fathometers is included under item U-Y Miscellaneous.

D. TIDES AND CURRENTS

Portable automatic tide gages were maintained at Providence State Pier No. 1 and Pawtucket State Pier No. 2. Tidal data was taken directly from State Pier No. 1 with no time or height corrections applied for the area from the southern limit of the sheet as defined in item B. to lat. $41^{\circ} 50.34$ including the area north and west of Fox Point. Tidal data was taken directly from State Pier No. 2 with no time or height corrections applied for the area from latitude $41^{\circ} 50.34$ north in the Seekonk River to the head of navigation.

A tidal note is appended to this report. All smooth tide curves and hourly heights for Project 13870 will be submitted in a separate report.

E. SMOOTH SHEET

The smooth sheet will be plotted by the Norfolk Processing Office.

F. CONTROL STATIONS

Control stations consisted of triangulation, topographic and/or photo-hydro stations.

A list of signals with their origins is appended to this report as appendix A.

G. SHORELINE AND TOPOGRAPHY

The shoreline and topographic details ^{on the boat sheet} were transferred from Chart 352 and 278. The final shoreline for the smooth sheet will be taken from the map manuscript compiled from photographs of the area.

There were no important changes in shoreline or topographic features determined during this survey with the exception of several locations as listed under item U-Y Miscellaneous paragraph No. 3.

Areas not accessible by launch due to foul bottom are outlined and labelled as such. In all other areas the low water line is defined by soundings.

H. SOUNDINGS

Soundings were obtained with 868J type and EDO-255 type graphic recorders with least depth being verified by hand lead and sounding pole in accordance with paragraph 46 of the Hydrographic Manual.

Many strays were picked up with the EDO-255 type fathometer. A large percentage of those that appeared to be connected to the bottom were investigated further in order to verify or disprove the soundings. See fathometer report for project 13870 1956 field season.

I. CONTROL OF HYDROGRAPHY

Hydrography was controlled ~~entirely~~ by three point fixes ^{and estimated distances from shore} at intervals of from 1 to $1\frac{1}{2}$ minutes there were no unusual jumps noted when changing control stations, with the exception of one signal in the Seekonk River. Signal ICE was circled around the wrong prick point. The signal was used as circled throughout the season; however, the check angles did not check. This error in signal plot will be corrected on the smooth plot. *see Review 4 A*

J. ADEQUACY OF SURVEY

This survey is considered adequate to supersede prior surveys for charting. Junctions with prior and contemporary surveys mentioned in item B. Survey Limits and Dates, were satisfactory and depth curves can be adequately drawn at the junctions. *See Review 4*

K. CROSSLINES

Crosslines were run to the extent of 8 to 10% of the regular system of sounding lines excluding development and agreement was satisfactory.

L. COMPARISON WITH PRIOR SURVEYS

Comparison with large scale Chart 352 was made. see M below.
A comparison with prior surveys and the Chart 278 reveal some discrepancies. The comparison with prior surveys together with the preliminary review of Chart 278 is listed in the following item M.

M. COMPARISON WITH CHART AND PRIOR SURVEYS

A comparison with Charts 278 and 352 along with the comparison with prior surveys are discussed in this item along with any recommendations as to deletions or information for charting. There are no preliminary review items necessary on this sheet.

<u>ITEM</u>	<u>LAT. & LONG.</u>	<u>CHART 278</u>	<u>REMARKS</u>
1.	41° 51.6 ⁹ 71° 22.75		<i>Awash @ MHW</i> Wreck bares 1.0 ft. at L.W. this should be charted. There are also several obstructions in this same location that should be charted. Vol.1 pg. 62 & 63, pos. 110 to 115.
2.	41° 48.93 71° 23.49		The wreck charted at this location could not be located. Investigation was made at extreme low water and a sounding line was run close to the charted position. It was noted that a large wreck lay on the shore above MHW 25m. inshore from the charted position. It is recommended that this wreck be deleted from the chart. <i>Concur</i> <i>(Not charted on 352)</i>
3.	41° 49.20 71° 24.35		There are 5 concrete bridge abutments under construction. This is to be a fixed bridge. These were located in Vol. 15 pg. 14 pos. 38-41 x day. This bridge will probably be completed within 6 to 8 months and therefore it is recommended that final clearance dimensions be secured from the Rhode Island State Highway Dept. before the printing of a new chart. <i>Entire vicinity revised through Airphotos and Bps 53612-13 which are subsequent to the present survey.</i>
<u>CHART #352</u>			
4.	41° 49.08 71° 24.20		<i>Awash @ MLW</i> <i>in depths less than 6-ft.</i> Submerged wreck lays alongside pier. Axis of wreck is parallel to pier. It is recommended that this wreck be charted as it is a danger to vessels coming alongside the pier in this area. Vol.15 pg. 13 pos. 33x day.

CHART 352

ITEM	LAT. & LONG.	REMARKS
5.	41° 48.83 71° 23.75	The wreck located at this position forms the west corner of the wreck area. This wreck bares 11-ft @ MLW. It is recommended that the symbol shown on Chart 352 be changed accordingly. Vol. 4; pg. 67; pos. 91 f day.
6.	41° 48.30 71° 23.37	Lone, steel pipe bares 3 ft. at MLW. It is recommended that this obstruction be charted. Vol. 8; pg. 20; pos. 9 k day <i>Charted through NIM 46/1957, which is subsequent.</i>
7.	41° 48.27 71° 23.92	Pier in this location should be charted as a pier in ruins. Vol. 9; pg. 44; pos. 164 m day. <i>Chart 278 previously corrected.</i>
8.	41° 48.75 71° 23.70	The small areas shown on chart as bare at low water were not located as such. This area is shoal but nothing is bare at MLW. It is recommended that these be deleted from the chart. <i>A zero sdg is located @ 41° 48' 74" (71° 23' 67")</i>
9.	41° 48.68 71° 23.70	Pier as charted at this location is correct; however, the slip on north side of pier has been dredged to a depth necessary for oil tankers to discharge fuel. See soundings on boat sheet. vol. 14; pg. 34-35; pos. 138 to 140 v day vol. 8; pg. 14; pos. 153 to 155 j day.
10.	41° 47.57 71° 22.67	<i>Charted information on 278 is from CL 841/59 which is subsequent to present survey.</i> Submerged rock with a sounding of 2 ft. at MLW. It is recommended that this be charted as such. Vol. 16; pg. 6; pos. 3 a day. <i>The 2 ft sdg has been previously approved, but the characteristic "RK" should be added.</i>
11.	41° 48.68 71° 22.75	The rock awash as charted was not located. Inspection of the area at extreme low tide and several sounding lines passing over such rock did not show any indication of this rock. It should be noted that in this area and elsewhere on this sheet the water is extremely muddy. In lieu of the discoloration of the water and the fact that it might be an off lying rock of the small islet only 50 m. east it is recommended that the rock be charted as shown on Chart 352. The bottom in this small bay indicates many boulders. See fathogram on n-day; vol. 9; pgs. 52-60; pos. 1 to 35 n day.
12.	41° 47.44 71° 22.55	Lovett Rock was located as charted. This rock was located on sounding line. It is approximately 10 to 15 m. in diameter and has ^{F.U.O.} soundings of 21 ft. on it at MLW. Vol. 11; pgs. 24 & 25 also pg. 28; pos. 77 and 79 also 94 to 95 q-day.

This rock is from H-878 (1865) and has been carried forward to smooth sheet.

CHART 352

<u>ITEM</u>	<u>LAT. & LONG.</u>	<u>REMARKS</u>
13.	41° 47.30 71° 22.49	The 10 and 11 ft. soundings were located as charted. Vol. 11; pg. 27 & 28; pos. 91 to 93 q-day. Vol. 11; pg. 25; pos. 81 to 82 q-day. ✓
14.	41° 47.08 71° 22.38	The platform charted in this position is in ruins - only piling remain which bare 7 ft. at MLW. Vol. 15; pg. 20; pos. 64 x day. (or 2' at MHW) ✓
15.	41° 46.80 71° 22.24	Location of a steel mooring platform used by tankers that lay alongside pier 250 m. north. It is recommended that this platform be charted as such. It bares 15 ft. at MLW. Vol. 9; pg.30; pos. 103 m day. <i>Revise chart to platform.</i>
16.	41° 47.05 71° 22.87	Five rocks and several stakes located. It is recommended that they be charted as shown on boat <i>Smooth Sheet.</i> sheet. Rock - vol. 11; pg.70; pos. 105 r day Rocks - vol. 12; pg. 12; pos. 148,149,150,152 r day Stake - vol. 12; pg.12; pos. 151, 156 r day.
17.	41° 47.14 71° 23.04	Wreck awash at MLW. <i>of which only the Keel remains.</i> It is recommended that this wreck be charted as located. Vol. 12; pg. 13; pos. 154, 155 r day. ✓

It is to be noted that with the many changes in shoreline brought about by dredging channels and building bridges, piers, jetties, bulkheads, dump areas, fill and excavations the present survey does not agree too closely with the prior survey soundings.

In the undisturbed areas there is close agreement. This survey will entirely supersede the prior surveys for charting.

N. DANGERS AND SHOALS

All charted dangers, shoals, and bare rocks were found as charted except for those listed in item M - Comparison with Chart. In addition to those dangers presently charted the following numbered dangers included under item M-Comparison with Chart are recommended to be charted: 1,3,4,5,6,10, 15,16, and 17.

O. COAST PILOT INFORMATION

All information pertaining to the Coast Pilot for the entire area included on Sheets H-8316 and H-8314 are included in a special Coast Pilot Report a copy of which is appended to this report as Appendix E.

P. AIDS TO NAVIGATION

The positions of all floating aids to navigation are as follows:

<u>NUMBER</u>	<u>LAT.&LONG.</u>	<u>*DEPTH</u>	<u>VOL. NO.</u>	<u>POSITION NO.</u>	<u>DATE OF LOCATION</u>
Providence R.	41° 46.83	11	122 q	10/4/56	
Channel Buoy 19	71° 22.44				

* Depths are subject to
correction due to revision of Tidal reducers.

P. AIDS TO NAVIGATION (continued)

NUMBER	LAT. & LONG.	*DEPTH	VOL. NO.	POSITION NO.	DATE OF LOCATION
<i>see previous page</i>					
Channel Bouy 21	41-47.27 71-22.77	31'	11	61 r	10/5/56
22	41-47.42 71-22.55	11'	11	78 q	10/4/56
24	41-48.38 71-23.47	14'	8	128 j	9/25/56
Field Point					
Channel Bouy 6	41-46.45 71-22.97	18'	11	44 r	10/ 5/56
7	41-46.78 71-23.16	22'	11	52 r	10/5/56
8	41-46.96 71-22.95	14'	10	163 p	10/3/56
9	41-46.87 71-23.34	14'	10	174 n	10/2/56
Seekonk River					
Channel Bouy 1	41-49.27 71-23.27	7'	5	94 g	9/19/56
2	41-49.32 71-23.21	16'	5	102 g	9/19/56
3	41-49.79 71-22.70	18'	3	2 d	9/11/56
4	41-49.53 71-22.68	17'	3	1 d	9/11/56
4A	41-49.99 71-22.64	15'	3	14 d	9/11/56
5	41-50.23 71-22.57	16'	2	232 c	9/10/56
6	41-50.08 71-22.61	9'	3	15 d	9/11/56
7	41-50.34 71-22.48	16'	2	230 c	9/10/56
8	41-50.26 71-22.51	16'	2	231-c	9/10/56
9	41-50.44 71-22.43	16'	2	229 c	9/10/56
10	41- 51.02 71-22.46	17'	2	225 c	9/10/56
11	41-50.63 71-22.35	16'	2	43 c	9/10/56
12	41-51.47 71-22.60	7'	1	66 a	9/6/56
13	41-50.71 71-22.38	17'	2	227 c	9/10/56
15	41-50.93 71-22.45	18'	2	226 c	9/10/56
17	41-51.17 71-22.53	17'	2	224 c	9/10/56
19	41-51.44 71-22.63	18'	1	65 a	9/6/56
21	41-51.61 71-22.70	18'	1	116 b	9/7/56
23	41-51.81 71-22.76	18'	1	81 b	9/7/56
25	41-51.93 71-22.80	18'	1	98 b	9/7/56

Q. LANDMARKS FOR CHARTS

There are no new landmarks for charts to report.
Landmarks - L183/57 (L1288/59 is subsequent.)

R. GEOGRAPHIC NAMES

There are no new geographic names to report.

Items S and T not used

U-Y Miscellaneous

1. Non standard abbreviations used in sounding volumes.

There are several non standard abbreviations used throughout the sounding records. These are listed as follows: ✓

1. I.S. - increased speed.
2. O.T. - odd time
3. R.S. - reduced speed
4. S.B. - see boat sheet
5. S.B.S. - see boat sheet
6. S.L. - shoreline

2. CONSTRUCTION AND FILL AREAS

As noted on the boat sheet, there are several areas subject to fill and dump areas as well as one area in which a highway bridge is under construction. These areas are listed as follows:

<u>LAT. & LONG.</u>	<u>DESCRIPTION</u>
A. 41° 47.30 71° 22.85	As noted on boat sheet area as outlined is subject to fill. <i>charted through air photo revisions</i> ✓
b. 41° 49.25 71° 24.30	As noted on boat sheet area on both sides of river are subject to and being filled at the time of this survey. <i>Chart revised thru Bp 53612-13</i> ✓
c. 41° 50.90 71° 22.15	As noted on boat sheet area is used as dump and shoreline is subject to change. ✓
d. 41° 49.20 71° 24.35	As shown on boat sheet highway bridge was under construction at time of survey. This will be fixed bridge. Abutments are located in Vol. 15; pg.14; pos. 38 - 41 x day. ✓

Abutments shown on Smooth Sheet Originate with the photogrammetric surveys.

3. HURRICANE DAMAGE PREVENTION - SURVEY AND PLANS

It is to be noted that extensive plans for Narragansett Bay have been discussed by the Army Engineers and various city and state officials concerned with hurricane damage in Narragansett Bay. Plans have been set forth for a tide barrier across the entrance to the bay near Newport, Rhode Island and other damage barriers inside the bay, including one such barrier near Fox Point near lat. 41° 48.85 long. 71° 24.00. There has been no construction started on these barriers and they still are in the preliminary planning stage.


Z. TABULATION OF APPLICABLE DATA

1. As noted in item H - Soundings, the bar check tabulations and velocity correction curves for sheets H-8314 and H-8316 on project 13870 will be transmitted as a separate report.

2. Also as noted in item D - Tides and Currents all smooth tide curves and tabulations will be submitted as a separate report.

3. All cartwheel developments of stray soundings and shoals will be transmitted with the boat sheet.

Respectfully submitted,


Clifford W. Tupper
LTJG., C&GS

Attachments:

- Appendix
- A - List of Control Stations
 - B - Abstract of Velocity Corrections
 - C - Statistics
 - D - Tidal Note
 - E - Coast Pilot Report
 - F - Approval Sheet

APPENDIX A

See Norfolk Processing Office List

List of Control Stations on Sheet H-8316

NAME USED IN HYDROGRAPHIC SURVEY	ORIGIN	NAME USED IN HYDROGRAPHIC SURVEY	ORIGIN
ACE	6163-B ^{PH-B-54}	* KEN	PH-1-56-A
ADA	Ph-156-A	IAD	6163-B
AIM	6163-B	LEG	6163-B
AXE	PH-1-56-A	LIP	6163-B
BAD	PH-1-56-A	LOG	PH-1-56-A
BAG	6163-B	LUB	6163-B
BAT	PH-1-56-A	MAN	PH-1-56-A
BED	6163-B	MAX	PH-1-56-A
BOB	6163-B	MUG	6163-B
BON	6163-B	MUM	6163-B
CAB	6163-B	NAT	PH-1-56-A
CAT	6163-B	NED	6163-B
COD	6163-B	NIG	6163-B
COM(HYDRO)	Vol. <u>2</u> ¹⁰	NIP	6163-B
CUT	PH-1-56-A	NUT	PH-1-56-A
DAY	PH-1-56-A	ODD	6163-B
DIC(HYDRO)	VOL. <u>2</u> ¹⁰	OWL	6163-B
DIM	6163-B	PAD	6163-B
DIP	6163-B	PET	6163-B
DOG	6163-B	PCM	6163-B
DUS	6163-B	PRO	6163-B
EAR	PH-1-56-A	PUP	6163-B
EGG	PH-1-56-A	RAG	6163-B
ERG	6163-B	RIP	6163-B
FAD	PH-1-56-A	ROP	PH-1-56-A
FAT	PH-1-56-A	RUM	6163-B
FIG	6163-B	SAD	6163-B
FIN	6163-B	SAG	PH-1-56-A
FOX	PH-1-56-A	SAM	6163-B
FUL	6163-B	SKY	6163-B
FUT	PH-1-56-A	SOX	6163-B
GAG	6163-B	TAM	PH-1-56-A
GAM	6163-B	TAP	6163-B
GAS	PH-1-56-A	TIB	PH-1-56-A
GIZ	PH-1-56-A	TOB(HYDRO)	Vol. <u>2</u> ¹⁰
GOB	6163-B	TUB	6163-B
HAT	6163-B	USE	PH-1-56-A
HEX	PH-1-56-A	VAL	PH-1-56-A
HOD	PH-1-56-A	VET	6163-B
HOE	6163-B	VID	6163-B
HUG	6163-B	WAD	PH-1-56-A
ICE	PH-1-56-A	WAG	6163-B
IDE	6163-B	WAK	PH-1-56-A
IRK	PH-1-56-A	WIT	6163-B
IVY	6163-B	YAK	6163-B
JAP	PH-1-56-A	YES	6163-B
JAW	6163-B	ZAG	6163-B
JOG	PH-1-56-A	ZIP	PH-1-56-A
JUG	6163-B	ZIG	6163-B (10472)
		*KET	6163-B
		*KEY	PH-1-56-A

NORFOLK PROCESSING OFFICE
LIST OF SIGNALS
H-8316

TRIANGULATION STATIONS

BON ✓x E. PROVIDENCE, SEEKONK RIVER, S. TRANSMISSION TOWER, 1956 *Scaled*
 COD ✓x E. PROVIDENCE, SEEKONK RIVER, N. TRANSMISSION TOWER, 1956 *Scaled*
 DAY ✓x PROVIDENCE RADIO STATION WRIB, TOWER, 1956 *Scaled*
 DUS ✓ PROVIDENCE, INDUSTRIAL TRUST BL'DG. TOWER, 1932-37- *Scaled*
 EVA ✓x PROVIDENCE, RIVER LIGHT 17A, 1956 *Scaled*
 FIN ✓x PROVIDENCE RIVER, E. TRANSMISSION TOWER, 1956 *Scaled*
 FUL ✓x FULLER ROCKS LIGHT, 1956 *Scaled*
 HAT ✓x E. PROVIDENCE, STANDPIPE, 1956 *Scaled*
 HOE ✓x PROVIDENCE RIVER, W. TRANSMISSION TOWER, 1956 *Scaled*
 IDE ✓x PROVIDENCE GAS CO., STACK, 1956 *Scaled*
 KET ✓ KETTLE POINT, 1863-1935 *Scaled 1956*
 LEG ✓x E. PROVIDENCE, SQUANTUM CLUB, STACK, 1956 *Scaled*
 LUB ✓ POMHAM CLUBHOUSE, 1912-35 *Scaled*
 MUG ✓x E. PROVIDENCE, BOLD POINT RADIO TOWER, 1956 *Scaled*
 POM ✓ POMHAM ROCKS LIGHTHOUSE, 1879-1913 *1956 Scaled*
 PRO ✓ PROVIDENCE BAPTIST CHURCH, 1843-1935 *Scaled*
 VID ✓ PROVIDENCE UNITARIAN CHURCH, 1863-1935 *Scaled*
 YAK ✓x PROVIDENCE SEWAGE DISPOSAL PLANT, STACK, 1956 *Scaled*
 ZAG ✓x PROVIDENCE, NARRAGANSETT ELECTRIC CO., BLACK STACK, 1956 *Scaled*
 ZIG ✓x PROVIDENCE, NARRAGANSETT ELECTRIC CO., ~~GREY~~ *NORTH* STACK, 1956 *Scaled*

TOPOGRAPHIC STATIONS

SOURCE PH-1-B-56

Ace	Aim *	Bag	Bed	Bob	Bob	Cab	Cat	Dip
Gob	Hug	Ivy	Jaw	Ken	Lad	Lip	Mum	Ned
Nip	Owl	Pad	Pet	Pup	Rag	Rip	Sad	Sam
Sox	Tap	Tub	Vet					

SOURCE T-10472

Axe	Bad	Bat	Cut	Dim	Dog	Ear	Egg	Erg
Fad	Fat	Fox	Gaf	Gag	Gas	Giz	Hex	Hod
Ice	Irk	Jap	Jog	Jug	Key	Log	Man	Max
Nat	Nig	Odd	Rop	Sag	Sky	Tib	Val	Zip

SOURCE T-10473

Tan	Use	Wad	Wak
-----	-----	-----	-----

SOURCE T-T-10475

Fig	KKK	MMH	Gam	Rum	Wag	Wit	Yes
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HYDROGRAPHIC STATIONS

Com	Vol. 10, pg. 3
Dic	Vol. 10, pg. 3
Tob	Vol. 10, pg. 3

BOAT SHEET STATIONS

Ada	Nut
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GROUP I

* 8/13 to 8/14; 8/20 to 9/5, 9/27
** 9/6 to 9/11; 9/12 to 9/26; 10/1 to 10/3

GROUP II

NOTE: Initial setting is 1.0 except on sheet H-8316 when it is 0.0. It is to be noted however that on sheet H-8316 the fish was raised 1.0 ft. thus making the velocity corrections remain consistent with those for the other sheets.

GROUP III

11/7/56 Only.

NOTE: Initial setting is 0.0

NOTE: Initial setting is 1.0 foot.

APPENDIX C

Statistics for Hydrographic Survey H-8316 (ECFP-05156)

East Coast Field Party

Project 13870

Launch CS-168

Date	Vol No.	Day Letter	No. of Positions		Stat. Mi.	
			L.L.	Fath.	Sdg.	Line
September 6	1	a	3	108	7.9	
"	7 1	b	43	132 131	5.8	
"	10 2	c	10	232	13.8	
"	11 3	d	22	173	12.0	
"	12 3 & 4	e	19	185	12.0	
"	13 4 & 5	f	10	212	11.7	
"	19 5 & 6	g	30	136 164	5.7	
"	21 6 & 7	h	54	147	5.1	
"	25 6 & 8	j	0	158	11.8	12.0
"	26 8	k	4	148 149	9.9	9.8
"	27 8 & 9	l	11	61	4.4	
October 1	9	m	29	185	13.2	
"	2 9 & 10	n	2	181	13.4	
"	3 10 & 11	p	2	209	15.7	
"	4 11	q	2	171	8.6	
"	5 11 & 12	r	12	156	10.1	
"	8 12	s	1	258	14.4	
"	9 13	t	0	105	4.8	
"	10 13	u	0	178	11.3	
"	11 14	v	0	201	12.1	
"	15 14	w	0	51	3.9	
November 9	15	x	66	—	—	

TOTALS

320

~~3387~~

~~205.6~~

3415

207.7

Launch CS-82

November 7 1

a

0

20

0.9

3435

Grand Total

3755

208.6

APPENDIX D

Tidal Note for Hydrographic Survey H-8316 (ECFP-05156)

Tidal data for reduction of soundings were obtained from portable automatic tide gages maintained at Providence State Pier No. 1, Providence, Rhode Island; Pawtucket State Pier No. 2, Pawtucket, Rhode Island; East Greenwich Bay, Rhode Island; and Town Wharf, Wickford, Rhode Island. Nearly all tidal data were obtained from the first two named gages with additional tides referred to the Providence area from the last two named gages. The gage locations, MLW readings, range of tides, and time differences follow. The area covered by the various gages is shown on the following print of the progress sketch for Project 13870.

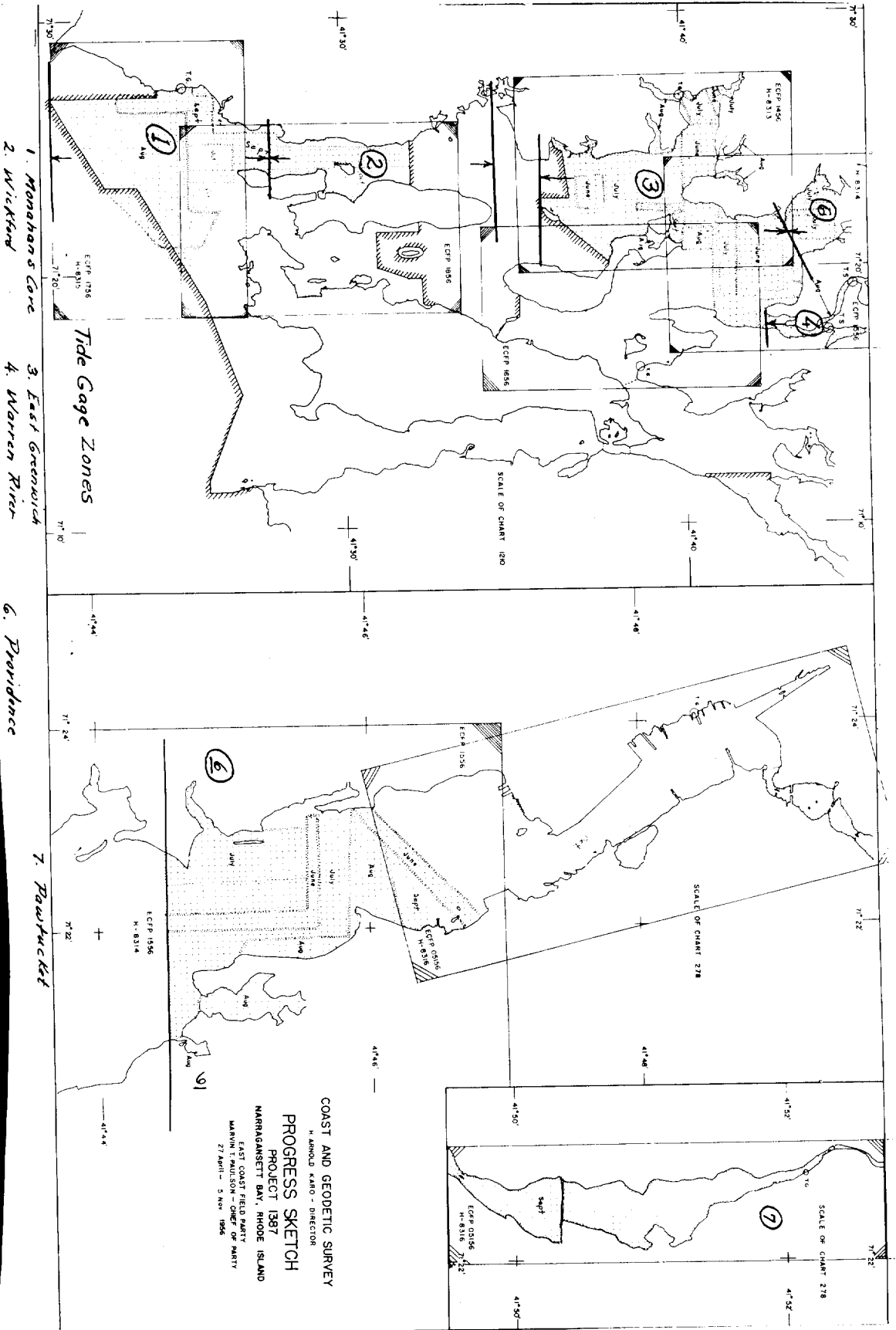
The following data are taken from Directors letters:

36-292-15b, dated 2 July 1956

36-11-15b.2, dated 29 January 1957

ZONE	GAGE	LOCATION	MLW READING ON STAFF	TIME* DIF.	RATIO OF H.W.* HEIGHTS
6	Providence State Pier #1	41° 48.44 71° 24.05	0.0	0.0	1.0
7	Pawtucket State Pier #2	41° 52.04 71° 22.78	-0.2	+10 min.	1.0
3	East Greenwich Bay	41° 39.8 71° 26.7	0.4	0.0	0.8
2	Wickford Town Wharf	41° 34.3 71° 26.7	2.3	-10 min	0.8
<u>TIDE STAFF ONLY</u>					
4	Warren River Barrington R.	41° 44.25 71° 17.28	3.8	+20 min	0.9

*Time and height corrections referred to Providence from all station gages.



APPENDIX E

COAST PILOT REPORT
ATLANTIC COAST

SECTION B - CAPE COD TO SANDY HOOK
Fifth (1950) Edition

- Page 213. - line 9; read:
only by small craft. This cove has a very narrow channel with many submerged moorings and obstructions outside the channel limits.
- Page 213. - line 13; read:
visible 13 miles, is shown from a white stone conical lighthouse, the bottom section is painted red on the west side of the entrance to Providence River.
- Page 213. - line 35; read:
of a stone beacon at the entrance of the channel to the cove, covered at high water, are marked by a buoy.
- Page 213. - line 39; read:
sometimes anchor in depths of 3 to 4 feet 140 yards northeastward of Sunshine Island,
- Page 213. - line 41; read:
the southward is preferred, giving the island a berth of over 100 yards. Approach should be made with caution as there are many dangerous rocks south and southeastward of the island in addition to filling being conducted southward and westward of Field Point.

APPENDIX F

APPROVAL SHEET

BOAT SHEET ECFP 05156 (H-8316)

The hydrographic survey is approved as complete and adequate, The survey was accomplished by a detached unit, but the records were inspected at least weekly by the Chief of Party.

As stated in item "G" of the Descriptive Report, the shoreline was not available at the time of the hydrographic survey. The shoreline, in pencil on the boat sheet, was obtained by enlarging the shoreline of the printed chart; Whereas this was a rough outline, few discrepancies were noted by the hydrographer. The shoreline that has been inked was located by three point fixes, or sketched as indicated by dashed lines.

The hydrographic sheets of the U. S. Engineers, listed under "L", did not materially aid the progress of the survey, as the area covered was small. From latitude 41-47-00 to 41-48-45, only a few lines were run over the surveyd area to have a basis for good comparisons. The coordinate positions of the U.S.Engineer's signals were secured by the Photogrammetry Party and tied into their survey, but was not available to the hydrographic party during the field season, and will have to be obtained from the Baltimore District Officer.

It is probable that some of the area listed as ruins or wreckage on the boat sheet may be cleared by the time the smooth sheet is completed. It is recommended that the Public Works Department of the State of Rhode Island be contacted for the latest improvements at that time. A print of our boat sheet has been furnished the Chief of that department.

Marvin T. Paulson
Marvin T. Paulson
LCdr., C&GS, OinC

- 5d- Fueling platform plots within protractor circle with new positions
of topo signals
- 6d- plotted on rt. & to ck. topo
- 7d- plotted on sum & to ck. topo
- 8d- plotted on rt. & to ck. topo
- 9d- plotted on left & to ck. topo.
- 10d- plotted on rt. & to ck topo
- 11d- plotted on rt & to ck. topo
- 12d " on rt & to ck topo
- 13d " " left & "
- 16d- " " Sum & "
- 17d- " " left & to ck topo
- 18d- " " left & "
- 6e " " rt & "
- 7e plotted per boat sheet & description to ck topo.
- 8e " on left & to ck topo.
- 19e plotted per description to ck topo. -
- 20e " " " " " "
- 21e " " " " " "

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8316 (EGFP-05156)

GENERAL

The smooth plot of this survey presented the usual problems which may be anticipated when the shoreline and much of the control are compiled separately, and are then enlarged from a 1:10,000 to a 1:5,000 scale. This condition caused no perceptible discrepancies as far as the hydrographic lines were concerned. They appear to be normally positioned and soundings checked very well in a generally irregular bottom.

Most of the difficulties were experienced when plotting sextant angles locating piles, piers, shoreline changes, etc., as they were seldom in agreement with manuscript positions. Many of these sextant fixes were left uncharted as it is believed that more accurate positioning may be obtained by direct reference to air-photos of the area. The boat sheet is of little value as the Hydrographer was working without shoreline and the locations of many of the control stations were revised for the smooth plot. Also, see the Hydrographer's note concerning the reliability of sextant angles, page 64, vol. 10.

OVERLAYS

Lat. 41-49.8 Long. 71-22.6 Detached positions 5 thru 13d and 16 thru 18d, vol. 3, locating dolphins and fuel platforms, are being submitted on an overlay. They are not in agreement with manuscript positions. *plotted per data on opposite page.*

Lat. 41-50.5 Long. 71-22.3 Positions 6 thru 8e locating a pier in ruins, and 19 thru 22e locating a breakwater, are being submitted on an overlay. They appear to be displaced with reference to the manuscript shoreline and can probably be more accurately positioned by direct reference to the air-photos.

see opposite page

SOUNDINGS

All soundings were reduced with a template using a 10 second spacing interval. This was done to improve the quality of the scanning and to obtain a closer spacing of soundings in this irregular bottom.

TIDES

In order to eliminate crossing discrepancies, tide reducers were re-entered on t day, 9 Oct. 1956, from hourly heights requested from the Division of Tides. Final soundings for smooth plotting were recorded in the "office column".

In order to eliminate crossing discrepancies created by erroneous tide corrections, tide reducers were re-entered on "t" day 9 Oct 1956, from hourly heights requested from the Division of Tides by the verifier. (approx 600 sdgs. involved)

148g - Plotted with adjusted signals and che topo.
 149g " " " "

149g " " " " " " " + 1° correction on left &.

128h - rejected hydro, would not ck tops.

1294- " " " " " "

44 L plotted nt & Eck & 2 ch tops.

47 l - plotted on cum angle to ck tops.

47c - plotted on left & 1 ch & to ch tops.
48c plotted on left & 1 ch & to ch tops.

49L plotted on sum & to ck top.

60 l-plotted with adjointed signals & chs tops

60 L - plotted with adjusted " " " "

103 m plotted on 1 ck & to ck top.

160m plotted on Lag-Gam-log-obs topo.

161 m plotted on sum & $\frac{1}{2}$ ch & $\frac{1}{2}$ ch top.

162m

163 m " " " " " "

164m plotted on sum & ϕ ch &, chs top

165m plotted, on run & sky - Dog to ck tops.

166m plotted on given ξ 's - reject ck &

167m. not plotted on SS- was not plotted on B.S.

468 m plotted on rt 4 & ch 4 to ch top.

169m plotted on left & \neq ck & to ck top.

170m not plotted

171 m plotted on left & to the top.

172m plotted on left & rock tops.

173 m plotted on description & post start location to ck logs. (rejected 4 -)

174m - plotted on sum & to ch top.

175m plotted on sum & to ck tops.

176 m. plotted on left & back top.

177m - " " " "

178 m - " " "

179m " " " "

181m - " "

182m -

183m- " " " " " "

194m - plotted on sum & to ab tops.

185 m - started on left & to ck top.

48 p - perted with given 4's

49 - " " " " " "
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96 - " " " " " "
97 - " " " " " "
98 - " " " " " "
99 - " " " " " "
100 - " " " " " "

50# - plotted per R.H.C.

CONTROL

Manuscript positions were not furnished for photo-hydro stations Ada and Nut. They were transferred directly from the boat sheet and adjusted proportionately to surrounding stations. No jumps or crossing discrepancies were noted when these stations were used to control hydrographic lines.

FATHOGRAMS

Shoal indications between 152 and 171q have many of the characteristics of true soundings but are believed to have been caused by a mal-function of the fathometer or by floating debris. They were not smooth plotted as soundings. ✓ strays

The shoal indication between 147 and 148n is believed to be a stray - It was not smooth plotted. ^{12' among 16-17'} plotted by verifier may be boulder

DISCREPANCIES

plotted on time & adj. hydro because of shoalest sdg in area, 1'
Positions 32 to 33a were not smooth plotted. The soundings could not be reconciled with surrounding hydrography. ✓

Detached positions 137g, 138g, and ^{NP}143h were not smooth plotted. They are swingers. *plotted on rt & Hep-Day Range ck's*

The following positions locating topographic features, were not smooth plotted as they could not be reconciled with manuscript positions. Several of the fixes, with slight adjustment, will confirm manuscript locations - others may be more accurately positioned by reference to air-photographs of the area.

148 thru 150g ³
128 and 129h ²
44 and 47 thru 49l ⁴
60 and 61l ²

103m, 160 thru 179m, 181 thru 185m ²⁵
28x, 48 thru 50x, 54x and 66x ⁶

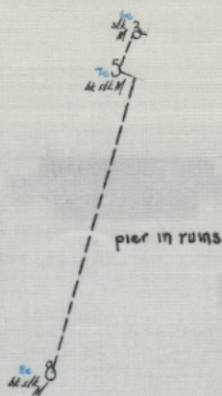
see opposite page.

137g, 138g, 128h, 129h, 167m, 170m were rejected by verifier, the remainder were plotted on the smooth sheet.
Norfolk, Va.
10 Sept. 1959

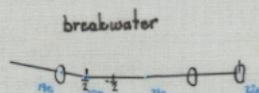
Respectfully submitted,
Hugh L. Proffitt
Hugh L. Proffitt
Cartographer

54x - plotted on sum & to ck tops.
55x plotted & chs tops
56x plotted & chs tops
57x " " "
58x reject - field tops.
59x - plotted on sum & to ck tops
60x " " "
61x " " "
62x " " "
63x plotted & delineated per hydro.
64x plotted with adjusted signals & chs tops.
65x - plotted on sum & to ck tops
66x plotted on rt & to ck tops.

71°22'30"
41°50'30"



71°22'00"
41°50'30"



OVERLAY TO ACCOMPANY
ECFP-05156 H-8316

Detached pos. 6e thru 8e & 19e thru 22e Lch. 168 12 September 1956

41°50'00"
71°22'30"

41°50'00"
71°22'00"

$$\begin{array}{r} 71^{\circ}22'30'' \\ 41^{\circ}50'30'' \\ \hline \end{array}$$

$41^{\circ}50'00''$
 $71^{\circ}23'00''$

$41^{\circ}50'00''$
 $71^{\circ}22'30''$

[illegible]

Detached pos. 5d thru 13d & 16d thru 18d Lch. 168
11 September 1956

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

POST-OFFICE ADDRESS: East Coast Field Party
P. O. Box 515
TELEGRAPH ADDRESS: Jacksonville, Florida
EXPRESS ADDRESS:

16 January 1959

To: District Officer
Norfolk District Office
Coast and Geodetic Survey
102 W Olney Road
Norfolk 17, Virginia

Subject: Graphic Control Surveys, Project 13870, Narragansett Bay

Reference: Director ltr. dated 9 December 1958, 02/MEK FP- East Coast

The above referenced letter was never received by this party. Perhaps it was a casualty of the Christmas mail rush. However, this party does have a number of Graphic Control Survey Sheets of Project 13870, Narragansett Bay. These (8) sheets are being forwarded to your office under separate cover and are listed as follows:

Ph-1-B-56
Ph-1-C-56
Ph-1-E-56
Ph-1-H-56
Ph-1-J-56
Ph-1-I-56
Ph-1-M-56
Ph-1-N-56

We have no further use for these sheets and they need not be returned to this party. Some explanation is needed in relation to the use of these sheets, however, as this party experienced considerable difficulty in using some of these sheets in the transfer of control to smooth plot sheet H-8395. Several discrepancies between the the planetable graphic control sheets and the photogrammetric manuscripts were discovered during the smooth plotting of sheet H-8395. Enclosed you will find a letter from the Washington Office to this party explaining the resolving of these signal discrepancies. Some of the information might be pertinent to your smooth plotting work. Please return the letter to this party, however, as it will be necessary to include this information in the descriptive report for sheet H-8395.

Howard G. Cole, ICPR, OIC
East Coast Field Party

Enclosures: 3

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Proc

7/1

REPORT TO ACCOMPANY CRONAFLEX PRINT FOR
SURVEY T-10476, PROJECT FH-163

The map manuscript was compared with the Geographic Control sheet Ph-1-56 D N/2, scale 1:10,000, projects 13870 and 25120. The following is a list of photo-hydro stations, how far and in what direction the graphic control position falls from the common photogrammetric position on the manuscript. Only those stations that could be seen or identified in the stereoscopic model were pricked on the map manuscript.

<u>Station Name</u>	<u>Difference on Graphic Control Sheet</u>
PAL	0.2 mm WNW
TRY	Held
SAX	0.6 mm NNW
ZOO	0.6 mm NW
USE	1.0 mm NNW
TAP	0.9 mm NNW
LET	0.9 mm N
MAL	0.9 mm E
JAR	Held
NED	0.6 mm N
WAD	0.3 mm W
* Barrington Congregational Church Spire (LDMK)	0.6 mm E

*This station falls on survey No. T-10482.

It is recommended that the positions of the stations plotted on the map manuscript be used in making the smooth sheets.

Respectfully submitted
3 July 1958

Leroy A. Senasack
Carto. Photo. Aid

Approved and forwarded

William F. Deane,
CDR C&GS
Baltimore District Officer

Poor Copy



120 YEARS OF SERVICE
1897 - 1997

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON 25, D. C.

IN REPLY ADDRESS THE DIRECTOR
COAST AND GEODETIC SURVEY
AND NOT THE OFFICE OF THIS LETTER

AND REFER TO NO. 711/1

7 August 1958

To:

LCDR Miller J. Tonkel
East Coast Field Party
P. O. Box 3561
St. Petersburg, Florida

Subject:

Smooth Sheet H-8395, Project CS-13870
(PH-163) Narragansett Bay

References:

LCDR Robert G. Darling's letter of 12
June 1958 and our reply of 20 June 1958
same subject

The signal discrepancies have been resolved as stated in subsequent paragraphs of this letter. The eight planetable graphic control sheets are being forwarded to you. New blue-line tracings at scale 1:10,000 of photogrammetric manuscripts T-10489, T-10490, T-10496, and T-10497 are being prepared and will be forwarded to you shortly.

The following is a resume of the work in this area of the project:

1. Graphic control surveys were made by a field party of the Photogrammetry Division ahead of the photogrammetric mapping to provide immediate control for hydrography.
2. Photogrammetric mapping followed the graphic control surveys to provide shoreline for the hydrographic sheets and may instructions for charting.
3. Some of the graphic control sheet stations were identified on the photographs but many of those stations were not identified and cannot be located by photogrammetric plot.
4. The shoreline pass points shown on the photogrammetric manuscripts are not necessarily identical with graphic control sheet stations and usually are not identical with those stations.
5. LCDR Darling reported in the reference letters discrepancies between the graphic control stations and the photogrammetric manuscripts ranging up to 2 millimeters.

Paar Copy

6. We have checked the manuscript delineation of shoreline details by multiplex and those graphic control stations that were identified by means of a stereoplanigraph bridge. This stereoplanigraph work is well controlled and can, we believe be accepted as somewhat more accurate than either the multiplex or the graphic control surveys.

7. Some of the apparent discrepancies were not identical objects. See item 4 above.

8. In general the multiplex work that is a delineation of shoreline details was accurate. The only notable discrepancy found in the multiplex work at station "NAT". The accepted stereoplanigraph position differs by about ten meters from the graphic control position and about five meters from the multiplex position.

9. We were able to check only those graphic control stations that had been identified on the photographs. This check indicates that the graphic control was generally good but there were some errors that we take to be random errors. Most of these are small and we think that you should use the graphic control positions except as stated under item 10.

10. We have relocated the following graphic control stations and the accepted stereoplanigraph positions are shown on the photogrammetric manuscripts, copies of which are being prepared for you. It is suggested that you use these positions for the smooth sheet rather than the graphic control sheet positions and notes to this effect have been placed on the graphic control sheets: "NAT", "HUT", "BOX", "CUB", and "HEX". The difference in position between the stereoplanigraph and the graphic control sheets amounts to about ten meters at station NAT, and twelve to fifteen meters at station BOX. Otherwise the differences range from five to seven meters.

* Do not fall on surveys to be plotted at NCHC

Pam Capen

You may now resume work on the plotting of smooth sheet H-8393 and I doubt that you will have any further difficulty with signals. However, we have not been able to check all of the graphic control stations in this area since they were not all identified and I should like to hear from you if you do have further trouble. Please insert a copy of this letter in the descriptive report for H-8393 so that the record will be available should any question arise later in this office.

Charles E. Tamm

Assistant Director

cc: Baltimore District Office
Tampa District Office

22

75

Paul C. Ryan

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
WASHINGTON 25, D. C.

IN REPLY ADDRESS THE DIRECTOR
COAST AND GEODETIC SURVEY
AND NOT THE OWNER OF THIS LETTER
AND REFER TO NO. 732/rpj

18 May 1959

To: Norfolk District Office
Coast and Geodetic Survey
102 West Olney Road
Norfolk 10, Virginia

Subject: Smooth Sheet H-8316 - Project PH-163
Narragansett Bay (OS-13870)

This is in reply to your letter of 23 April 1959 concerning the discrepancies you encountered between the location of signals by graphic control and photogrammetric methods.

The positions of all signals located by graphic control methods and identified on field photographs have been checked by multiplex. Where the agreement on common stations was within 0.5 mm, the signals were not shown on the map manuscript.

On graphic control sheet PH-1-B-56, the following graphic control locations are in error by more than 0.5 mm, DIM, SKY, WAO, WIT, GAM, YEB, PEM, PEB.

The photogrammetric locations of all signals delineated on the map manuscripts shall be used. Use the graphic control sheets for transfer of the remaining signals; no proportional shift should be made to the graphic control signals.

Use signals from the photogrammetric manuscripts for the area north of the bridge crossing the Seekonk River. We have no record of the field party making graphic control surveys in this area.

Acting Assistant Director

A revision plot was made in the Washington office by the Div. of Photo. At request of the verifier and 57 signal locations were revised together with a major portion of the shoreline of the Seekonk River.

10/10/62

Paor Copy

Proffitt

NORFOLK DISTRICT OFFICE
102 W. Olney Road
Norfolk 10, Virginia

23 April 1959

To: The Director
Coast and Geodetic Survey
Department of Commerce Bldg.
Washington 25, D. C.

Subject: Discrepancies in Topographic Control Stations on
Survey EGFP-05156 (H-8316)

This office is preparing a smooth sheet for Survey EGFP-05156, Providence Harbor, R.I., and has encountered discrepancies between the locations of the few topographic stations located on air photo manuscripts T-10472, T-10473, T-10475, and T-10476, and those located on graphic control survey PH-1-B-56. Only a few of the stations are located on the manuscripts and their positions generally differ from those on the graphic control sheet by one to two millimeters on a 1:5,000 scale.

It is requested that this office be advised if these air photo locations are to supersede the graphic control locations, and if so, are the remaining graphic control stations to be adjusted proportionately to the air photo positions.

A graphic control survey was not furnished for the area north of the bridge over Seekonk River, and since most of the control stations are shown on the air photo compilations, it is planned to use these for control.

John C. Kilarbe
Comdr., CGS
Norfolk District Officer

HLP:ms

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REPORT TO ACCOMPANY CRONAFLEX PRINT FOR
SURVEY T-10476, PROJECT PH-163

The map manuscript was compared with the Geographic Control sheet Ph-1-56 D N/2, scale 1:10,000, projects 13870 and 25120. The following is a list of photo-hydro stations, how far and in what direction the graphic control position falls from the common photogrammetric position on the manuscript. Only those stations that could be seen or identified in the stereoscopic model were pricked on the map manuscript.

<u>Station Name</u>	<u>Difference on Graphic Control Sheet</u>
PAL	0.2 mm WNW
TRY	Held
SAX	0.6 mm NNW
ZOO	0.6 mm NW
USE	1.0 mm NNW
TAP	0.9 mm NNW
LET	0.9 mm N
MAL	0.9 mm E
JAR	Held
NED	0.6 mm N
WAD	0.3 mm W
* Barrington Congregational Church Spire (LDMK)	0.6 mm E

*This station falls on survey No. T-10482.

It is recommended that the positions of the stations plotted on the map manuscript be used in making the smooth sheets.

*This was not done
by this P.O.*

Respectfully submitted
3 July 1958

*35 Stations corrected after verification
was commenced.*

Leroy A. Senasack
Carto. Photo. Aid

Approved and forwarded

William F. Deane,
CDR C&GS
Baltimore District Officer

Paul Cope

GEOGRAPHIC NAMES
Survey No. H-8316

Survey No. H-8316

GEOGRAPHIC NAMES		Survey No. H-8316											
Name on Survey	<div>On Chart No. 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</div>												
	A	B	C	D	E	F	G	H	K				
<u>Rhode Island</u>			(title)						BGN	1			
<u>Narragansett Bay</u>			"						"	2			
<u>Providence River</u>			"							3			
<u>Corps Cove</u>										4			
<u>Sunshine Island</u>										5			
<u>Field Point</u>										6			
<u>Squantum Point</u>										7			
<u>Lovett Rock</u>										8			
<u>Kettle Point</u>										9			
<u>State Pier</u>			(tide station)							10			
<u>Fox Point</u>										11			
<u>Providence</u>									BGN	12			
<u>Seekonk River</u>									"	13			
<u>India Point</u>										14			
<u>Bucklin Point</u>										15			
<u>Bishop Cove</u>										16			
<u>Stony Point</u>										17			
<u>State Pier</u>			(tide station)							18			
<u>Pawtucket</u>										19			
			Names approved 10-8-59								20		
			L. Heck, L.A.								21		
If additional names are desired, those on 8-26-58 revision of chart 278 are all approved.										22			
										23			
										24			
										25			
										26			
										27			

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8316....

Records accompanying survey:

Boat sheets ...1.; sounding vols. ...16.; wire drag vols.;
bomb vols.; graphic recorder rolls 12 Envelopes
special reports, etc. 1-Smooth sheet, 1-Descriptive report,
2-Overlay tracings, 1-Fathometer report and 1-Graphic control
Sheet. Ph-1-B-56.....

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

Number of positions on sheet

3501
.....

Number of positions checked

*1033 + 5 pos. ckd on
H-8314 Junction
Survey

Number of positions revised

*461
.....

Number of soundings revised
(refers to depth only)

approx *2296 + 92 on H-8314
Junction Survey

Number of soundings erroneously spaced

...38...

Number of signals erroneously plotted
or transferred

...57...

Topographic details

Time 160 hrs

Junctions

Time 40 hrs

Verification of soundings from
graphic record

Time 20 hrs

Verification by F.P. SANBURY.....Total time 892.. Date 10-9-62

Reviewed by Ernest E. Thomas..... Time 182.. Date 11-16-62

* THE MAJORITY OF THESE WERE THE RESULT OF THE CHANGE IN POSITION
OF topo signals.

** APPROX 2225 OF THESE WERE THE RESULT OF TIDE CORRECTIONS

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8316

FIELD NO. ECFP-05156

Rhode Island, Narragansett Bay, Providence and Seekonk Rivers

SURVEYED: September-November 1956

SCALE: 1:5,000

PROJECT NO. 13870

SOUNDINGS: EDO Depth Recorder
808 Depth Recorder
Hand lead
Sounding Pole

CONTROL: Sextant
angles on shore.
Estimated distances
from shore.

Chief of Party-----M. T. Paulson
Surveyed by-----C. W. Tupper
Protracted by-----A. K. Schugeld
Soundings plotted by *Verified by*-----F. P. Saulsbury
Reviewed by-----E. E. Thomas
Inspected by-----R. H. Carstens

Date: 11/26/62

1. Description of the Area

This survey covers the Providence River from Pawtuxet to Providence and the Seekonk River from Providence to Pawtucket.

Generally, the principal waterways covered by this survey are Federal Channel Projects. These channels are bordered by extensive shallow areas, portions of which, as in the Seekonk River, uncover at MLW. Numerous foul areas and snags exist, particularly in the vicinity of inactive docking facilities which are in ruins.

The bottom is generally soft mud in the dredged areas; however, in some random inshore areas, hard bottom or rock outcrops exist.

2. Shoreline and Signals

The shoreline originates with unreviewed photogrammetric surveys T-10472, T-10473, T-10475, and T-10476 of 1956. Revisions and additions determined by the hydrographer are shown in red.

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

The piling shown on the advance manuscript of T-10476 in lat. $41^{\circ}47.06'$ long. $71^{\circ}21.38'$ is apparently an approximate position and should be disregarded. The same feature is more adequately positioned on the present survey.

3. Hydrography

- a. Depths at crossings are in good agreement.
- b. The usual depth curves are in general adequately delineated.
- c. The development of the bottom configuration and investigation of least depths in the area outside the Federal Channel Project is considered good. The area of widely spaced lines in Providence harbor is well covered by Corps of Engineers' surveys, both contemporary and subsequent to the present information.

4. Condition of Survey

- A. The verifier experienced difficulty in the proper adjustment of hydrographic information from signals whose location accuracy had been previously questioned, but not entirely corrected, in the smooth plot. At the request of the verifier, the Division of Photogrammetry investigated and revised 57 signal locations, some as much as 13mm, and random portions of the shoreline along the lower Seekonk River. Some sounding line position errors are not entirely eliminated; however, the present smooth sheet information is considered adequate for charting because of the relative chart scales and the nature of unimportant navigational areas outside the Federal Project Channels.
- B. It was necessary for the verifier to revise approximately 2200 soundings to eliminate discrepancies of as

much as 2 ft. arising from revisions in tide reducers in the Washington Office.

- C. Revisions were required in the junction with H-8314 (1956) where differences of as much as 1/2 to 2 ft. in shallow areas existed because of incorrect tide reducers. The incorrect numeric entry of dates resulted in improper reducers being entered in the volumes.
- D. Except as noted, the sounding records and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual.

5. Junctions

An adequate junction was effected with H-8314 (1956) on the south and represents the only junctional survey since the present survey develops the navigational waterways to the northern limit of the project. (See item 4 C above)

6. Comparison with Prior Surveys

A. Providence River

H-878 (1865) 1/5,000

H-880 (1865) 1/10,000

These surveys show conditions prior to the dredging of the present Federal Channel Project. A comparison of the present survey with these prior surveys is of little significant value because of extensive alterations and additions to both the depths and alongshore facilities over the entire area of the survey.

B. Seekonk River

H-865 (1865) 1/5,000

H-1326b(1874) 1/2,400

These surveys show conditions prior to the dredging of the present Federal Channel Project. Outside the present channel limits considerable shoaling has occurred. Differences are most pronounced where prior natural channels of 6 to 10-ft depths have filled to present depths of 0 to 4-ft.

The present survey supersedes these prior surveys in the common area.

7. Comparison with charts 352 (latest print date 8/1/60)
chart 278 (latest print date 7/16/62)

A. Hydrography

1. Federal Channel Projects

The hydrography outside the charted tabulated channel limits originates principally with U. S. Corps of Engineers' surveys of 1954-55 (Bp 51800-51803 and 53554-53555) together with hydrographic information retained from prior surveys of the above agency since 1932.

(a) The obstruction reported in lat. $41^{\circ}48.29'$, long. $71^{\circ}23.47'$ through NM 35 of 1956 is subsequent to the present survey.

(b) Supplemental soundings charted in the Providence River and the Seekonk River from Bp 60625-60627 of 1961; from Bp 56636-56639 and 58406 of 1958 are subsequent to the present survey.

Outside the tabulated channel areas hydrographic information on the present survey should be used to supplement the U. S. Corps of Engineers' surveys subsequent to 1954.

2. Fox Pt. to Cold Spring Pt.

The charted hydrography originates with U. S. Corps of Engineers' Surveys of 1932 (Bp 25204-05) and 1942 (Bp 35856) supplemented by soundings from the Coast Pilot Examination of 1949 (CL. 543/49) and the present survey prior to verification and review.

(a) The bottom characteristic of "rky" charted in lat. $41^{\circ}49.09'$ long. $71^{\circ}23.28'$ on chart 278 from Corps of Engineers' survey (Bp 47141 of 1941) should be retained since bottom information of this nature on the present survey is rather sparse.

(b) The obstruction charted in lat. $41^{\circ}49.05'$ long. $71^{\circ}23.65'$ on chart 352 apparently originates

from erroneous interpretation of a docked vessel on 1953 photography. Subsequent photographs record a larger vessel in the vicinity and no vessels anchored at this same location. The present survey indicates 24-ft. depths. The feature should be deleted from the chart.

The portion of the present survey which lies between Fox Point and Cold Spring Point is considered adequate to supersede the charted hydrography within this specific area, except as noted above.

3. General

The charted hydrography for those shallow areas outside the limits of the Federal Project originates principally with partial application of the present survey prior to verification and review, together with random soundings from the previously discussed surveys of the Corps of Engineers, and prior surveys of this Bureau.

- a. The piling charted in lat. $41^{\circ}47.28'$ long. $71^{\circ}22.4'$ from T-5748 (1944) fall in depths of 3 to 6 ft on the present survey and were not specifically investigated. The pilings are carried forward to the smooth sheet of the present survey.
- b. An obstruction ^{*Plots in same location as Pier ruins which bears 6' at MHW*} charted in lat. $41^{\circ}51.49'$, long. $71^{\circ}22.55'$ from Bp 49556 (air photo revisions) was not ^{*be one and same. Ruins*} specifically noted on the present survey and should ^{*Charted*} be retained as charted. *5/27/66*
- c. Depths charted on chart 278 in lat. $41^{\circ}46.88'$, long. $71^{\circ}22.3'$ from chart letter 605 of 1961 are subsequent to the present survey.
- d. The trestle charted in lat. $41^{\circ}49.88'$, long. $71^{\circ}22.6'$ is from chart letter 840 of 1959 which is subsequent to the present survey.
- e. The pile ^{*Charted as a platform from letter 7*} charted on chart 278 in lat. $41^{\circ}46.8'$, long. $71^{\circ}22.24'$ originates with chart letter 692 (1962) and is subsequent to the present survey.

- f. The pile charted in lat. $41^{\circ}47.09'$, long. $71^{\circ}22.4'$ from the unverified smooth sheet is in error and was removed during verification. Only the platform ruins exists in this area. *charted as piling on 35'*
- g. The wreck charted on chart 278 in lat. $41^{\circ}48.93'$, long. $71^{\circ}23.49'$ from T-5848 (1944) was not found though searched for at extreme low tide according to the hydrographic descriptive report, item M-1. The wreck should be removed from chart 278.
- h. The 11-ft and 13-ft soundings charted on 278 in lat. $41^{\circ}46.99'$, long. $71^{\circ}23.22'$ and lat. $41^{\circ}46.92'$, long. $71^{\circ}23.28'$ respectively, are from Bp 39104 of 1944. Apparently dredging has been done in the interim between this survey and the present survey and the 11 and 12-ft soundings should be disregarded.

Except as noted above, the present survey adequately portrays the hydrographic details for this area outside the maintained channels and supersedes the charted hydrography in the common area.

B. Dredged Channels

The charted controlling depths for the marked channels originate with information subsequent to, or contemporary with, the present survey.

C. Aids to Navigation

The charted positions of the aids to navigation adequately mark the features intended.

The radio tower shown on the smooth sheet in lat. $41^{\circ}48.93'$ long. $71^{\circ}23.53'$ as a recommended landmark was subsequently removed from the chart through chart letter 1213 of 1959.

* The STACK, charted as a landmark, in lat. $41^{\circ}48.96'$ long. $71^{\circ}24.29'$, originates with Chart Letter 1288 of 1959 and is subsequent to the present survey.

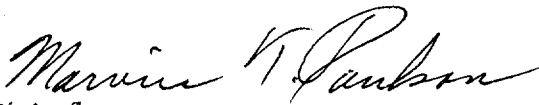
8. Compliance with Instructions

The survey adequately complies with the project instructions.

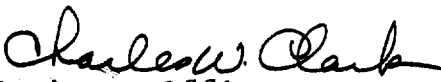
9. Additional Field Work

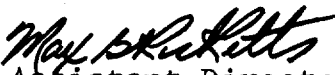
This survey is considered to be an adequate basic survey. Recommendations have been made to the Operations Division covering obstructions and changeable bottom areas reported subsequent to the present survey.

Examined and Approved:


Chief,
Nautical Chart Division


Assistant Director,
Office of Cartography


Projects Officer,
Operations Division


Assistant Director,
Office of Oceanography

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

9 October 1959

Plane of reference approved in
16 volumes of sounding records for

HYDROGRAPHIC SHEET 8316

Locality Narragansett Bay, R.I.

Chief of Party: M. T. Paulson in 1956

Plane of reference is mean low water, reading
3.1 ft. on tide staff at Providence (primary)
11.7 ft. below B.M. 6 (1930)

Pawtucket #2 4.6 + 10.1
East Greenwich 3.7'
BAY
Wickford 3.7 - 10.1
WARREN RIVER 4.1 + 20.1

Height of mean high water above plane of reference is 4.6 feet

Condition of records satisfactory except as noted below:

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

Vol.

11
13
15
16

Positions

45r - 112r ✓ 67
1t - 105t ✓ 104
17x - 66x ✓ 49
1a - 20a ✓ 20
240

William Sheffer

Signature

Chief, Tides Branch

71° 25'

(CONTINUED ON CHART 278)

PROVIDENCE

EAST PROVIDENCE

REL DEPTHS

report of Sept. 16, 1954.

Project Dimensions

Date of survey	Width (feet)	Length (naut miles)	Depth M.L.W (feet)
5-54	600	0.6	35
54-2-55	600	2.2	35
2-55	600	1.0	35
2-55	600	2.1	35
7-57	600	1.0	35
7-57	1000	1.0	35

at Light:
ing about 315 yards north of Sabin
ge of quarter about 390 yards north
hs of 25.6 to 33.1 feet across the
ove which has encroached into the
conditions subsequent to the above.

Section B

Chart 278

Chart 278

Chart 278

Chart 278

Chart 278

Chart 278

Chart 278

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Chart 278

Chart 278

Chart 278

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Chart 278

Chart 278

Chart 278

Chart 278

Chart 278

Chart 278

Chart 278

Chart 278

Chart - 353

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8316

Record of Application to Charts

[illegible]

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.