

# 6859

Diag. Cht. No. 1210-3.

Form 504

U. S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

## DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. None Office No. H-6859

### LOCALITY

State Rhode Island

General locality Narragansett Bay

Locality East Passage

1943

### CHIEF OF PARTY

Benjamin H. Rigg

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DATE August 1943

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DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. ~~76859~~ 76859

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-6859~~ H-6859

Field No. ~~H-6859~~ H-6859

State Rhode Island

General locality Narragansett Bay

Locality East Passage

Scale 1 : 10,000 Date of survey August, 1943

Instructions dated March 15 and March 26, 1943

Vessel Motor Vessel COWIE

Chief of party Benjamin H. Rigg

Surveyed by W. B. Page, Jr. H. & G. Engr.

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

Protracted by Louis Walter

Soundings penciled by Louis Walter

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

REMARKS: This sheet was processed at the Norfolk Processing Office.

XWW 11/1/41

Instructions: This survey was conducted in accordance with instructions of March 15, 1943 and supplemental instructions of March 26, 1943, for Project CS-304.

Methods: The area covered by the survey was in use by the Navy as a torpedo testing range. The ship could only be used for sounding at such times as no firing was in progress. Activity of the launch was curtailed for the same reason, though to lesser degree.

Control was established from previous 2nd and 3rd order triangulation, supplemented by graphical triangulation.

All soundings were obtained with portable depth recorders. Two days of ship sounding were with the 808 Submarine Signal Co. Depth Recorder. The rest of the soundings were by launch using the Bludworth Portable Depth Finder.

Fathometers: The 808 fathometer on the ship was installed with the oscillator and receiver units in bilge tanks. With this type of installation, it is very difficult to obtain Bar Checks. Since most of the depths to be sounded with the ship were shoal (less than 60 Ft.), vertical casts were used in preference to temperature and salinity corrections. These worked very satisfactorily except in the use of the B scale.

The 808 fathometer corrections are the same throughout for the range of the A scale. In switching from scale A to scale B or vice versa there is a noticeable jump. For August 8, "A" day of the ship work, this jump amounts to 2 ft. This jump is added to the A scale correction to obtain the correction for scale B. However for "B" day of the ship work, Aug. 15, the amount of the jump between scale A and scale B was erratic and larger than for "A" day. The amount of the jump varied for each occasion of scale change. The fathogram was examined thoroughly and the amount of the jump determined for each time there was a shift of scale. The amount of the jump was recorded in the sounding record at the point of each change. As on "A" day, Aug. 8, the Barometer correction is obtained by adding the jump to the A scale correction.

The Bludworth fathometer was installed with an outboard fish on a Navy Motor Sailor. Fathometer corrections were obtained with the use of a bar supported under the fish with two leadlines. The leadlines were checked before and at the end of the survey period. A change of length amounting to 0.3 Ft. in 12 Fms. was noted and corrected for. Since the change of scale on the Bludworth fathometer is an electrical function and entails no mechanical shift, there are no corrections necessary for a change of scale. However in the vicinity of depths of 60 Ft., difficulty in reading the soundings is encountered as the initial signal produces a carbon deposit on the printer bar at this point.

The paper feed on the Bludworth fathometer is the friction roller type. Slipping of the paper was noted at times. As a result the speed of the machine cannot be checked by checking the paper speed as on the 808 depth recorder.

A later consultation with service engineers of the Bludworth Co. brought out the fact that 10 inches should be subtracted from the depth of the fish to obtain the setting for the initial signal. This difference occurs because the oscillators and receivers are not at the bottom of the fish. As the initial signal was set at the depth of the fish a constant correction of about 1 foot is found on all bar checks for this depth finder.

27

28

Line adjusted by sd'gs. on crosslines

Discrepancies: The soundings between Pos. 15 B and 16 B, Lat 41-32.3 Long. 71-20.2 appear to be displaced to the Eastward by the amount of one sounding space. It is thought that the decrease in speed occurred a short time before Pos. 16B instead on the position as recorded. If the right angle of Pos. 15B is decreased 1 degree, this position moves Westward approximately 60 meters and the soundings agree better with those of neighboring lines.

Dangers: There were no dangers discovered besides those listed on the review sheet forwarded with the original instructions. The points indicated were investigated as follows.

(1.) The 15 Ft. sounding charted off the North shore of Conanicut Id. in 22 Ft. depths at Lat. 41-34.4, Long. 71-22, was not found. The local area was developed with the launch with 15 meter lines and drifting. No indications of shoal were found. In addition this area has recently been surveyed very thoroughly by the U.S.E.D. in connection with the channel dredged around the North end of Conanicut Id.

(2) The 3 Ft. sounding charted off the South shore of Hope Id. at Lat. 41-35.7 Long. 71-22.3 was found and substantiated. It is a pinnacle rock, the top point of which is about 4 meters in diameter. See Pos. 60p to 80p, Sdg. Vol. 8.

(3) The 18 Ft. soundings charted immediately North of the dredged channel at Lat. 41-34.8 Long. 71-22.1 were not found. The area was developed in checkerboard fashion with no indications of a shoal.

(4) The 28 ft. sounding charted at Lat. 41-34.4 Long. 71-19.4 was checked with fathometer soundings of 29 and 30 feet. This is a pinnacle rock of small area. See Pos. 79j to 80j and Pos. 137m to 138m.

(5) The 18 Ft. sounding charted at Lat. 41-34.1 Long. 71-19.7 appears to be a Northeasterly extension of the 12 Ft. spot known as Fiske Rock. This area was developed with fatometer soundings. See Pos. 16h to 23h. Pos. 43q to 60q. For drift soundings see Pos. 92s to 96s and Pos. 51t for leadline soundings. The sea on this day was so rough that the launch could not be maneuvered to advantage and comparison of leadline and fathometer was not very good.

(6) The 12 Ft. sounding on Fiske Rock at Lat. 41-34.0 Long. 71-19.8 was substantiated with fathometer soundings of 8, 10 and 12 feet. See Pos. 5h-6h, 7h-8h, 22h-23h.

(7) The 31 ft. sounding at Lat 41-33.6 Long. 71-20.0 was substantiated with a boat sheet sounding of 32 ft. See Pos. 16q to 40q, 33q to 34q. For drift sounding see Pos. 41q to 42q. Leadline sounding on 42q. From the fathogram this appears as a pinnacle rock of about 5 meters diameter at the top.

Channels. The dredged channel around the North end of Conanicut Id. has a controlling depth of 35 Ft. with predicted tide reducers. This checks the charted depths.

Comparison with Previous Surveys. Previous surveys of this area consist of Hydrographic survey 787a, (1862) and Wire Drag survey 3801, (1915.) The agreement of the present survey with the previous two is in general good. Due to the greater number of soundings taken in the present survey, a better delineation of depth curves is possible than on the older surveys. Several shoals were found which were not on H-787a. These are discussed under dangers and are all on the charts of this area.

Note. Navigation buoys located by topographic party by graphic triangulation and transferred to boat sheet by tracing paper.

The immediate chart change

83

15' adequately disproved

4' found in present survey

83

21-23' found in present survey

83

25

Junctions;

Sheet 5554; <sup>(1934)</sup> The soundings of sheet H-6359 <sup>(1943)</sup> appear to be 2 to 3 feet shoaler in depths of 30 to 75 feet than those of H-5554. <sup>(1934)</sup> At the Northern end of Gould Id, soundings of H-6359 <sup>(1943)</sup> are deeper <sup>(as much as 20')</sup> than those of H-5554. <sup>(1934)</sup> The torpedo firing pier is located at this point and it is thought that the area immediately around this pier has been deepened by dredging or the scouring action caused by the discharge of torpedos. <sup>(1913)</sup>

Sheet H-3571. <sup>(1913)</sup> A satisfactory junction with sheet H-3571 was obtained. The shoreline of Dyer Id. was resurveyed by planetable.

Sheet H-3572. <sup>(1913)</sup> The soundings and depth curves with sheet 3572 <sup>(1913)</sup> agreed satisfactorily. <sup>(1912)</sup>

Sheet H-3404. <sup>(1912)</sup> A satisfactory junction with sheet H -3404 <sup>(1912)</sup> was obtained at the North end of Conanicut Id. A discrepancy was found at the South end of Hope Id. Lat. 41-35.6, Long. 71-22.7. This area has been used as a dumping ground for dredges and is shown on the chart 353 as an island. Apparently the material of the dumping ground has washed away to some extent as this area is now completely submerged. The depths around the vicinity of the shoal are shoaler on H-6359 <sup>(1943)</sup> than on H-3404. <sup>(1912)</sup> This is caused probably by the <sup>slumping</sup> ~~scouring~~ away of the dumping ground area.

At the midpoint of the shoal , there are five 6"x6" timbers projecting from the bottom. These posts project about 3 feet above the surface at High Water. See Vol.9 Pos. 82r to 83r.

A sunken boiler to the West of the timbers is denoted by a "Rock Awash" symbol on boat sheet H-6359. See Vol.9 Pos. 135r.

STATISTICS

No. of Positions -----	2662
No. of Soundings-----	15092
No. of Sta.Mi. Sdg. Lines.---	487.0
Area in Sq. Sta. .Mi. -----	10.8

Respectfully Submitted.

*William B. Page*  
William B. Page  
Jr. H.&G. Engr.

Approved by

*Benjamin H. Riggs*  
Lt. Comdr. Benjamin H. Riggs  
Chief of Party.

Signals outside High-Water Line

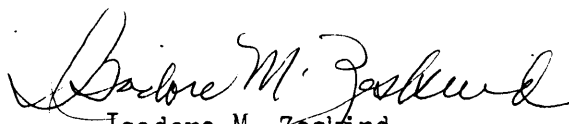
<u>Hydrographic Name</u>	<u>Description</u>
Con -----	Day Beacon - Mast on piling. ✓ ✓
Cor -----	S.W. corner of Dock.
Fit -----	Flagpole of Firing Pier.
New -----	N.W. corner of Dock.
Pip -----	Light pole on dock.
Rig -----	Center of small rocky island. ✓
Rok -----	Top of rock, exposes 3 feet at high tide. ✓
Sam -----	Center of rock ledge, exposed at high water. ✓
Sow -----	S.E. corner of dock.
Tik. -----	Top of rock, exposes 4 feet at high tide. ✓
Tot 000-----	Sign board on face of dock.
Way -----	Halfway Rock Beacon, rock bares at high tide.

ADDENDUM

HYDROGRAPHIC SHEET H-6858


This sheet was processed at the Norfolk Processing Office.

Respectfully submitted,

  
Isadore M. Zeskind  
Assoc. Cartographic Engineer

Norfolk, Va.  
January 1, 1944

Approved and Forwarded

  
Paul C. Whitney  
Supervisor, S.E. District

Remarks

Decisions

1		U.S.G.B
2		415 713 U.S.G.B
3		414 713
4		415 712
5		"
6		415 713 U.S.G.B
7		"
8		"
9		"
10		416 713
11		"
12	Also location of tide staff	"
13		
14		
15		
16		
17		
18		
19		
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21		
22		
23		
24		
25		
26		
27		



GEOGRAPHIC NAMES  
 Survey No. **H6859**

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Rhode Island</u> ✓												1
<u>Narragansett Bay</u> ✓												2
<u>East Passage</u> ✓												3
<u>Aquidneck I.</u> ✓												4
<u>Carr Pt.</u> ✓												5
<u>Dyer I.</u> ✓												6
<u>Halfway Rock</u> ✓												7
<u>Conanicut I.</u> ✓												8
<u>Conanicut Pt.</u> ✓												9
<u>Hope I.</u> ✓												10
<u>Despair I.</u> ✓												11
<u>Prudence I.</u> ✓												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

Names underlined in red approved  
 by L. Heck on 7/13/44

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6859**

Records accompanying survey:

Boat sheets .1..; sounding vols. 11..; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls <sup>21</sup>.....;  
 special reports, etc. ....  
 .....

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

Number of positions on sheet	2662
Number of positions checked	...39
Number of positions revised	...32
Number of soundings recorded	15092
Number of soundings revised (refers to depth only)	...23
Number of soundings erroneously spaced	...129
Number of signals erroneously plotted or transferred	...0
Topographic details	Time ...0
Junctions	Time ..4
Verification of soundings from graphic record	Time .....

Verification by *R.H. Carstens* Total time 151... Date *April 18, 1944*

Review by *R.H. Carstens* Time ...44 Date *June 30, 1944*

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
PHOTOSTAT OF

No. H **H6859**  
No. T

received  
registered  
verified  
reviewed  
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
✓ 25	Pg 2	<i>[Signature]</i>	Capt Senior
✓ 27	Pg 1	<i>[Signature]</i>	Dr. Dorsey
✓ 28	Pg 1	KTA	Capt Adams
30			
40			
62			
63			
82			
✓ 83	<i>[Signature]</i>	<i>[Signature]</i>	
88			
90			

RETURN TO

82	R. W. Knox
----	------------

*[Handwritten signature]*

**GEOGRAPHIC POSITIONS**

Locality Narragansett Bay North American 1927 Datum Third — order Triangulation. State Rhode Island

STATION	LATITUDE AND LONGITUDE	SECONDS IN METERS	AZIMUTH	BACK AZIMUTH	TO STATION	DISTANCE		
						LOGARITHM (METERS)	METERS	FEET
Hope Island, 1843; r. 1912; r. 1932; r. 1943 (d.m.)	41 36 09.754 ✓		137 43 44.3 ✓	317 40 11.9 ✓	Whitman	4.041 201 ✓	10,995.1 ✓	36,073 ✓
	71 21 59.734 ✓		209 43 02.3 ✓	29 43 58.0 ✓	Pine Hill	3.592 595 ✓	3,913.8 ✓	12,841 ✓
			233 00 42.2 ✓	53 05 43.4 ✓	Mt. Hope	4.118 294 ✓	13,130.9 ✓	43,080 ✓
			283 34 16.7 ✓	103 38 43.1 ✓	Quaker	3.980 572 ✓	9,562.5 ✓	31,373 ✓
			6 39 21.6 ✓	186 38 57.4 ✓	Hull	3.864 615 ✓	7,321.8 ✓	24,022 ✓
Quonsett 4, 1912; r. 1934; l. 1935 (d.m.)	41 35 18.128 ✓		226 33 04.9 ✓	46 35 36.1 ✓	Pine Hill	3.860 997 ✓	7,261.0 ✓	23,822 ✓
	71 24 23.657 ✓		244 26 48.5 ✓	64 28 24.0 ✓	Hope Island	3.567 523 ✓	3,694.2 ✓	12,120 ✓
			336 20 46.1 ✓	156 21 57.3 ✓	Hull	3.792 406 ✓	6,200.2 ✓	20,342 ✓
Wickford lighthouse, 1888; r. 1912 (n.d.)	41 34 21.184 ✓		235 38 06.0 ✓	55 39 19.6 ✓	Quonsett 4	3.493 192 ✓	3,113.1 ✓	10,214 ✓
	71 26 14.601 ✓		240 24 24.0 ✓	60 27 13.1 ✓	Hope Island	3.831 706 ✓	6,787.4 ✓	22,268 ✓
			307 46 37.5 ✓	127 49 02.3 ✓	Hull	3.806 247 ✓	6,401.0 ✓	21,001 ✓
Conanicut lighthouse, 1888; r. 1912 (d.)	41 34 24.176 ✓		89 02 55.4 ✓	269 00 19.7 ✓	Wickford lighthouse	3.735 291 ✓	5,436.1 ✓	17,835 ✓
	71 22 19.994 ✓		120 10 09.6 ✓	300 08 47.5 ✓	Quonsett 4	3.520 237 ✓	3,313.1 ✓	10,870 ✓
			188 11 47.5 ✓	8 12 00.9 ✓	Hope Island	3.517 304 ✓	3,290.8 ✓	10,797 ✓
Halfway Rocks beacon, 1912 (d.)	41 33 49.29 ✓		51 14 26 ✓	231 12 41 ✓	Hull	3.671 452 ✓	4,693.0 ✓	15,397 ✓
	71 19 58.48 ✓		147 03 38 ✓	327 02 17 ✓	Hope Island	3.713 000 ✓	5,164.2 ✓	16,943 ✓

No check on this position. Abbreviations used: d. = described; m. = marked; n. = not; r. = recovered; l. = lost; p. = probably. (Example: n. d. = not described; p. l. = probably lost.)

111111

16859

TRIBUTION OF BAR CHECKS

NAVY Motor Sailor No. 5  
Blids worth Fatherder

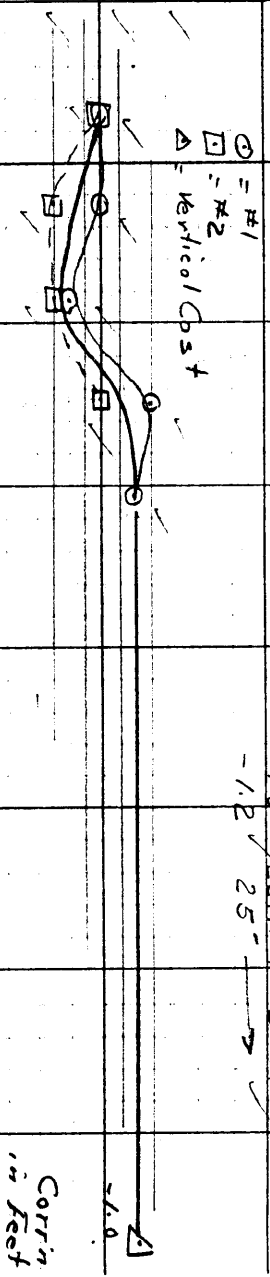
#1 AUG 24 7 day  
P9 63 Vol. 10

near of #1 and #2

7 day  
-1.0 ft. 0 ft. to 10 ft.  
-0.8 ft. 10 ft. to 22 ft.  
-1.0 ft. 22 ft. to 25 ft.  
-1.2 ft. 25 ft. to 25 ft.

M6859

3A



Bar kln	Corrin to Bar	True Bar Depth	Fath Depth	Fath Corrin	Fath M
6	-0.1	5.9	6.8	-0.9	-1.0
12	-0.2	11.8	12.7	-0.9	-1.0
18	-0.2	17.8	18.5	-0.7	-0.8
24	-0.3	23.7	25.0	-1.3	-1.3
30	-0.4	29.6	30.7	-1.1	-1.2
36	-0.5	35.5	36.8	-1.2	-1.2

#2	Vertical	Costs	Vol
6	-0.1	5.9	6.9
12	-0.2	11.8	12.5
18	-0.2	17.8	18.5
24	-0.3	23.7	24.7

VEED

Fath Reading in Feet

Corrin in Feet

TABULATION OF BAR CHECKS

May Motor Sailor No. 5  
B/uds worth Fathometer.

#6859

#1 Aug. 7 1/2 day  
Pg 57 Vol. 5

Bar. LL Feet	Corrin to LL.	True Bar Depth	Fath. Depth	Fath. Corrin Mtr.					
6	-0.1	5.9	6.8	-0.9	1.0				
6	-0.1	11.9	6.9	-1.0	1.0				
12	-0.1	11.9	12.5	-0.6	0.6				
12	-0.1	11.9	12.6	-0.7	0.6				
18	-0.2	17.8	18.8	-1.0	1.0				
18	-0.2	17.8	18.8	-1.0	1.0				
24	-0.2	23.8	24.9	-1.1	1.1				

Used mean of #1 and #2

by day  
-1.0 ft  
-0.8 ft  
-1.0 ft  
-1.0 ft  
15' →

Fath. Reading in Ft.

#2	Pg	Vol.	Fath.	Fath.					
6	14	5.9	7.0	-1.1	1.1				
6	14	5.9	7.0	-1.1	1.1				
12	14	11.9	13.0	-1.1	1.1				
12	14	11.9	12.7	-0.8	0.8				
18	14	17.8	19.0	-1.2	1.1				
18	14	17.8	18.8	-1.0	1.0				
24	14	23.8	24.8	-1.0	1.0				
24	14	23.8	24.8	-1.0	1.0				
30	14	29.7	No Return						

#1 Aug 11 1/2 day  
Pg 18 Vol. 6

Bar. LL Feet	Corrin True Bar Depth	Fath. depth	Fath. Corrin Mtr.						
6	-0.1	5.9	7.0	-1.1	1.1				
6	-0.1	11.9	7.0	-1.1	1.1				
12	-0.1	11.9	12.7	-0.8	0.8				
12	-0.1	11.9	12.7	-0.8	0.8				
18	-0.2	17.8	18.8	-1.0	1.0				
18	-0.2	17.8	18.9	-1.1	1.0				
24	-0.2	23.8	24.9	-1.1	1.1				
24	-0.2	23.8	24.9	-1.1	1.1				
6	-0.1	5.9	7.0	-1.1	1.1				
6	-0.1	5.9	7.0	-1.1	1.1				
12	-0.1	11.9	12.8	-0.9	0.9				
12	-0.1	11.9	12.8	-0.9	0.9				
18	-0.2	17.8	19.0	-1.2	1.1				
18	-0.2	17.8	18.9	-1.1	1.1				

⊙ = #1  
⊠ = #2

Fath. Reading in Ft.

mean of #1 and #2

by day  
-1.0 ft  
-1.2 ft  
-1.4 ft  
28

Corrin in Feet

Aug 16 - m day

Bar. LL	Corrn	True Bar Depth	Fath. Depth	Fath. Corrn	Fath. Mn.
6	-0.1	5.9	6.8	-0.9	-1.0
12	-0.2	11.8	12.7	-0.9	-0.8
18	-0.2	17.8	18.9	-1.1	-0.9
24	-0.3	23.7	24.9	-1.2	-1.2
30	-0.4	29.6	30.8	-1.2	-1.2

m day  
 10 ft ✓  
 10 ft ✓  
 19 ft ✓  
 19 ft ✓  
 23 ft ✓  
 23 ft ✓  
 28

Aug 17 - n day

Bar. LL	Corrn	True Bar Depth	Fath. Depth	Fath. Corrn	Fath. Mn.
6	-0.1	5.9	6.9	-1.0	-1.1
12	-0.2	11.8	12.9	-1.1	-1.0
18	-0.2	17.8	18.7	-0.9	-1.0
24	-0.3	23.7	24.9	-1.2	-1.2
30	-0.4	29.6	30.9	-1.3	-1.3

Fath. Reading in Ft.

n day  
 10 ✓  
 0-22 ft ✓  
 12 ✓  
 22 ✓

Aug 18 - t day

Bar. LL	Corrn	True Bar Depth	Fath. Depth	Fath. Corrn	Fath. Mn.
6	-0.1	5.9	7.0	-1.1	-1.0
12	-0.2	11.8	13.0	-1.2	-1.0
18	-0.2	17.8	18.9	-1.1	-0.9
24	-0.3	23.7	24.9	-1.2	-1.2
30	-0.4	29.6	30.9	-1.3	-1.3

Fath. Reading in Ft.

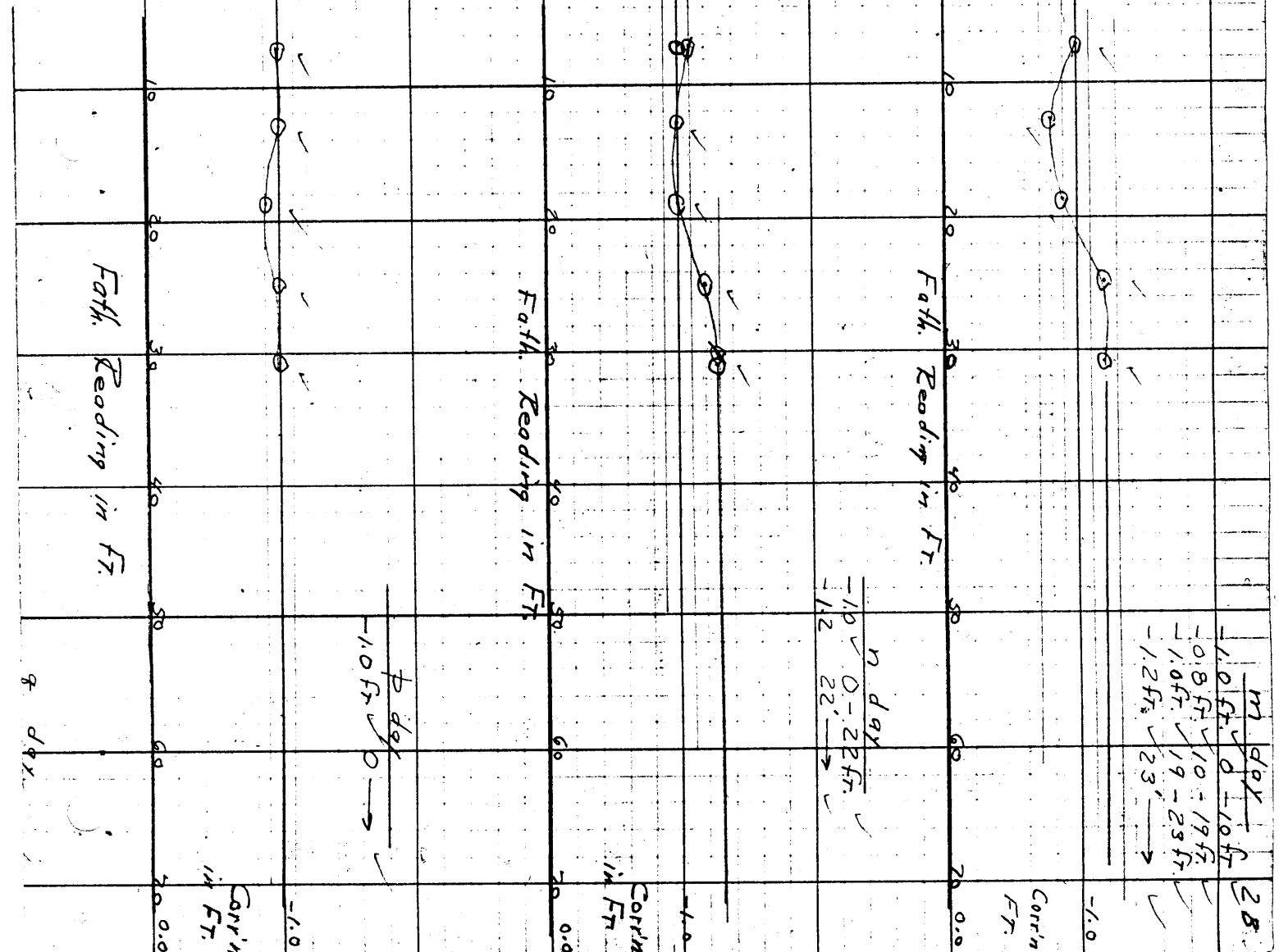
t day  
 10 ft ✓  
 0 ✓

Aug 19 - s day

Bar. LL	Corrn	True Bar Depth	Fath. Depth	Fath. Corrn	Fath. Mn.
6	-0.1	5.9	12.5	-0.7	-1.0
12	-0.2	11.8	18.9	-1.1	-0.9
18	-0.2	17.8	24.9	-1.2	-1.0
24	-0.3	23.7	30.6	-1.0	-1.0
30	-0.4	29.6			

Fath. Reading in Ft.

s day





16859

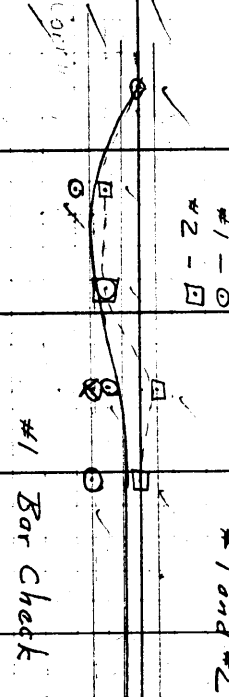
Sheet # 1A

FLUTTERATION OF BAR CHECKS.  
 MOTOR SPILOR No. 5  
 Bludsworth Fathometer.  
 Initial setting = 3.5 feet.

July 26 a day  
 #1. Pg 3. Vol 13

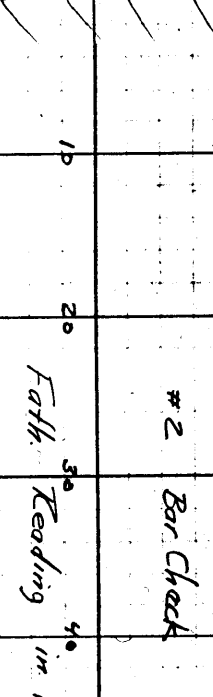
Bar. L. Corin True Fath. Fath.  
 Ft. To Bar Bar Depth Depth Corins. Mh.

6	-0.1	5.9	6.9	-1.0	21.0
12	-0.1	11.9	12.0	-0.7	20.6
12	-0.1	17.9	18.5	-0.9	20.8
18	-0.2	23.8	24.8	-0.6	20.8
24	-0.2	29.8	30.5	-0.7	20.7
30	-0.2	35.7	36.5	-0.7	20.7



#2 Pg 18. Vol 3

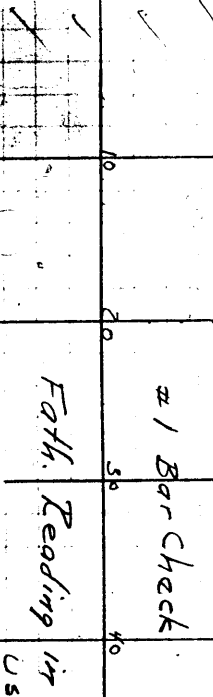
12	-0.10	11.9	12.6	-0.7	20.8
12	-0.10	17.9	18.6	-0.7	20.8
18	-0.20	23.8	25.0	-1.2	21.1
24	-0.20	29.8	30.7	-0.9	21.0
30	-0.30	35.7	36.5	-1.0	21.0



July 27 b day

Bar. L. Corin True Fath. Fath.  
 Ft. To Bar Bar Depth Depth Corins. Mh.

6	-0.1	5.9	6.9	-1.0	21.0
12	-0.1	11.9	12.7	-0.8	20.8
12	-0.1	17.9	18.8	-0.9	20.8
18	-0.1	23.8	24.8	-0.6	20.8
24	-0.2	29.8	30.5	-0.7	20.7
30	-0.2	35.7	36.5	-0.7	20.7



July 26 a day  
 0-8'  
 8-26'  
 26' →

Used Mean of #1 and #2  
 1.0 ft 0 37.0  
 1.2 ft 37.0

Aug 13 d day  
 #1 Pg 17, Vol 4

Bar. LL Ft.	Bar. Corr'n	True Bar Depth	Fath. Depth	Fath. Corr'n	Fath. Mn
6	-0.1	5.9	6.9	-1.0	-1.0
12	-0.1	11.9	12.8	-0.9	-0.9
18	-0.1	17.9	18.8	-0.9	-0.9

#2		Pg. 27		Vol. 4	
6	-0.1	5.9	6.8	-0.9	-1.0
12	-0.1	11.9	12.7	-0.8	-0.8

Aug 4, 2 d day  
 Pg. 31 Vol. 4

Bar. LL Ft.	Bar. Corr'n	True Bar Depth	Fath. Depth	Fath. Corr'n	Fath. Mn
6	-0.1	5.9	6.9	-1.0	-1.0
12	-0.1	11.9	12.3	-0.4	-0.4
18	-0.1	17.9	18.3	-0.4	-0.4
24	-0.2	23.8	24.6	-0.8	-0.8

Aug 5, 5 d day  
 Pg. 57 Vol. 4

Bar. LL Ft.	Bar. Corr'n	True Bar Depth	Fath. Depth	Fath. Corr'n	Fath. Mn
6	-0.1	5.9	6.5	-0.6	-0.6
12	-0.1	11.9	12.0	-0.1	-0.1
18	-0.1	17.9	18.0	-0.1	-0.1
24	-0.2	23.8	24.0	-0.2	-0.2

Used mean of #1 and #2  
 -1.0 ft. 0-10 ft.  
 -0.8 ft. 10-19 ft.  
 -1.0 ft. 19-28 ft.

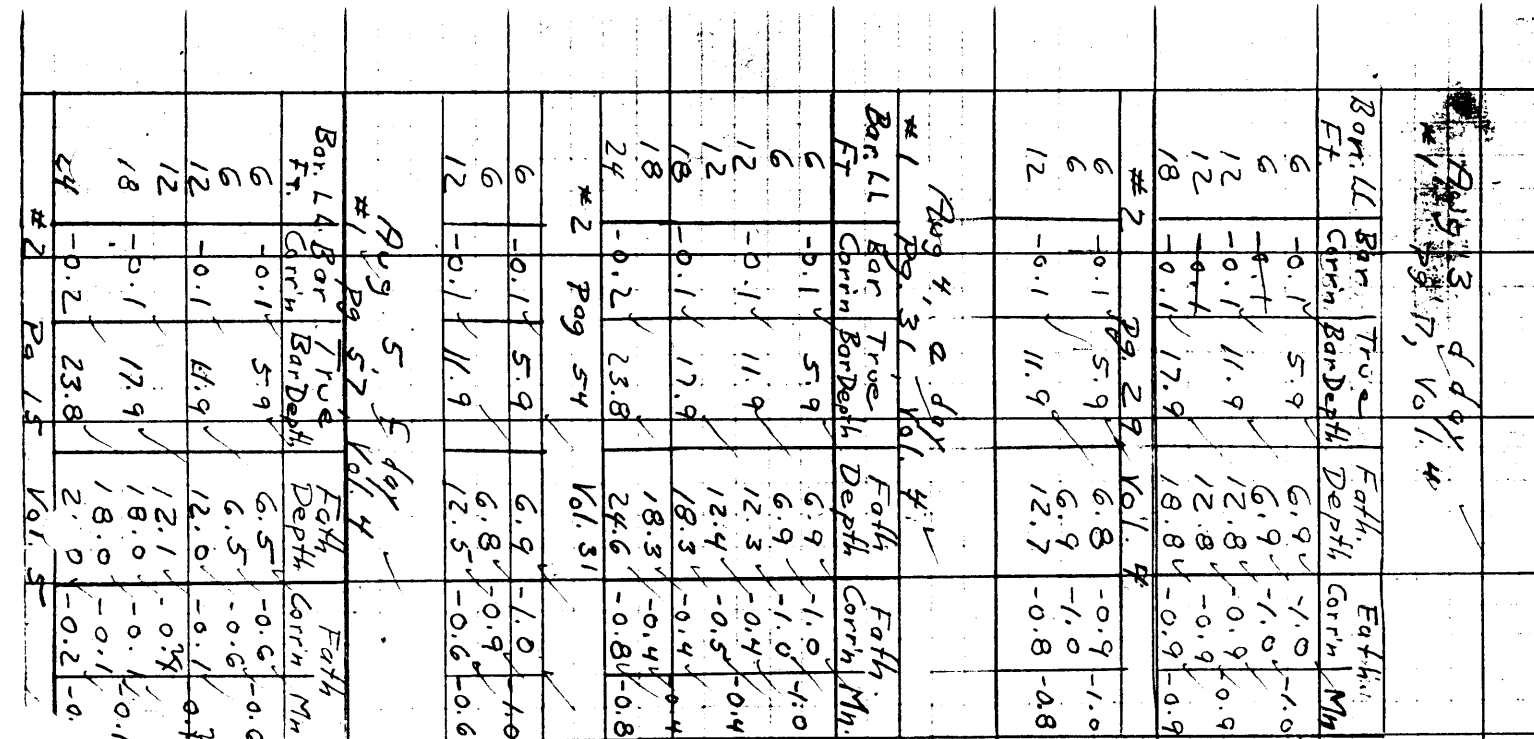
#1 and #2 Bar Check  
 Fath. Reading in FT.  
 Corr'n in FT.

Mean of #1 and #2  
 -1.0 ft. 0-8 ft.  
 -0.8 ft. 8-10 ft.  
 -0.6 ft. 10-14 ft.  
 -0.4 ft. 14-19 ft.

#1 and #2 Bar Check  
 Fath. Reading in FT.  
 Corr'n in FT.

Use #2 Bar Check  
 -0.8 ft. 0-24 ft.  
 -1.0 ft. 24-29 ft.

#1 and #2 Bar Check  
 Fath. Reading in FT.  
 Corr'n in FT.



BIDGE TANK INSTALLATION  
 on Initial Setting - 50 FT.  
 Corrections by Vertical Costs.

A day, Aug 8, 1943

No. L.L. Conn.

A day  
 B Scale  
 -1.8 ft. all depths.

B Scale  
 add jump to Corr'n for P Scale

A Scale  
 Vols. 1  
 Pg. 4

B Scale  
 Pg. 131 Pg. 86 Vol. 1.

The Bottom was too rough to get a good check on B Scale. This comparison was not used.

See fathogram  
 -2.5

Fath. Rg. L.L. Conn. Corr'n  
 54.0 51.5 -2.5  
 54.0 52.0 -2.0  
 54.0 53.0 -1.0  
 3/51.5 -1.8

Fath. Rg. L.L. Conn. Corr'n  
 59 61.5 62.5  
 62 61.0 62.5  
 64.5 62.0 62.5  
 66.5 62.0 62.5  
 3/62.0 62.5 -2.2

A Scale  
 Pg. 47 Vol. 1  
 Pg. 47 Vol. 1

B Scale  
 Pg. 17.2 -5.7

Correction  
 in 1.0

Fath. Rg. L.L. Conn. Corr'n  
 26.5 25.0 -1.5  
 27.0 25.5 -1.5  
 27.5 25.5 -2.0  
 3/25.5 -1.7

Depth Recorder  
 Depth in Feet.

A Scale  
 Pg. 71 Vol. 1  
 Pg. 11 Vol. 1

B Scale  
 Pg. 28 Vol. 1

The created jump from A to B scales makes the vertical costs using B scale as on A day use the P scale correction and add the jump obtain to obtain a B scale Corr'n. Obtain jump value from Sdg Volume or fathogram. of scale shift.

Fath. Rg. L.L. Conn. Corr'n  
 34.0 32.5 -1.5  
 33.5 32.0 -1.5  
 33.5 32.0 -1.5  
 33.5 32.0 -1.5

Fath. Rg. L.L. Conn. Corr'n  
 78.6 72.5 6.1  
 77.8 72.0 5.8  
 76.3 71.0 5.3  
 3/17.2 -5.7

add jump to A Scale Corr'n.

Fath. Rg. L.L. Conn. Corr'n  
 26.5 25.0 -1.5  
 26.5 25.0 -1.5  
 26.5 25.0 -1.5  
 26.5 25.0 -1.5

Fath. Rg. L.L. Conn. Corr'n  
 83.5 77.0 6.5  
 81.0 77.5 3.5  
 82.0 77.5 4.5

B-A jump 4.5  
 4.5  
 6.5  
 6.0

OS on A day use the P scale correction and add the jump obtain to obtain a B scale Corr'n. Obtain jump value from Sdg Volume or fathogram. of scale shift.

Fath. Rg. L.L. Conn. Corr'n  
 39.5 37.5 -2.0  
 39.0 37.0 -2.0  
 39.0 37.0 -2.0

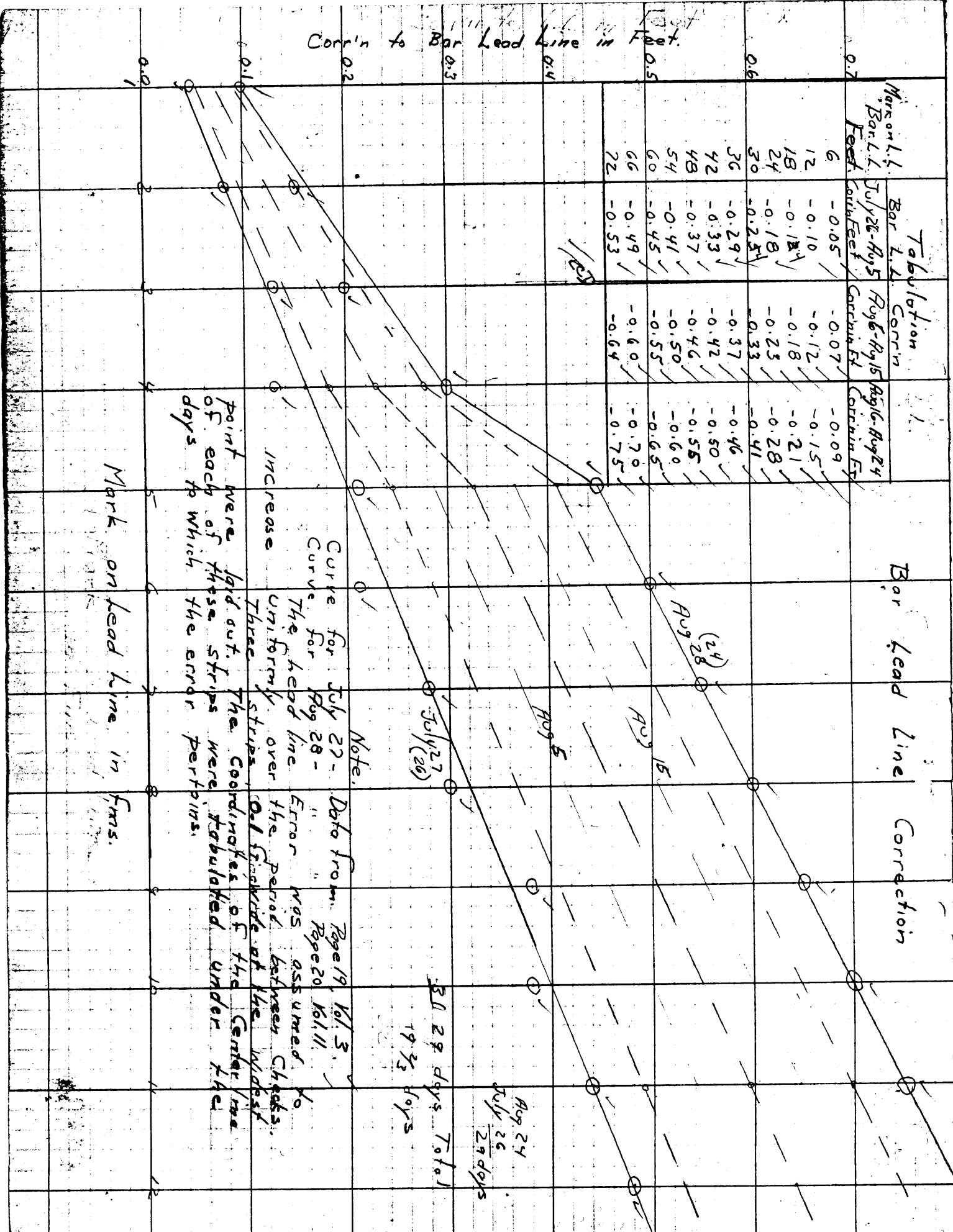
D - a, b, c, d, e, f, g, h, i, j, k, l, m, n, p, q, r, s, t.

B L D S W O R Y

C U R R E C T I O N

F A T H O M E T E R

F A T H O M E T E R



Corrin to Bar Lead Line in Feet.

Maroon L.L. Bar L.L.	Bar L.L. July 28 - Aug 5	Corrin Aug 6 - Aug 15	Tabulation Aug 16 - Aug 24
6	-0.05	-0.07	-0.09
12	-0.10	-0.12	-0.15
18	-0.15	-0.18	-0.21
24	-0.18	-0.25	-0.28
30	-0.25	-0.33	-0.41
36	-0.29	-0.37	-0.46
42	-0.33	-0.42	-0.50
48	-0.37	-0.46	-0.55
54	-0.41	-0.50	-0.60
60	-0.45	-0.55	-0.65
66	-0.49	-0.60	-0.70
72	-0.53	-0.64	-0.75

point were laid out. The coordinates of the center line of each of these strips were tabulated under the days to which the error pertains.

Three strips over the period between Chicks. Error was assumed to be 1/32 inch at the widest.

Curve for July 27 - Aug 28 - The lead line uniformly over the period between Chicks.

Note. Data from Page 19 Vol. 3. Page 20 Vol. 11.

Aug 24  
July 26  
29 days

Aug 29 days Total  
19 2/3 days

Mark on lead line in fms.

Bar Lead Line Correction

Aug 5  
Aug 15  
Aug 24  
Aug 26

July 27  
July 28

30	+0.3	35.7	30.2	-0.9	✓
30			36.9	-1.2	✓
30			36.8	-1.1	✓
42	-0.3	41.7	43.0	-1.3	✓

#2 Page 49 Vol 3

6	-0.1	5.9	7.0	-1.1	✓
6			6.9	-1.0	✓
12	-0.1	11.9	12.9	-1.0	✓

#2 Bar Check  
Corr'n in Ft.

Fath. Reading in Feet

July 28 C day

Bar Lt	Corr'n	True Bar Depth	Fath. Depth	Fath. Corr'n	M
--------	--------	----------------	-------------	--------------	---

6	-0.1	5.9	6.9	-1.0	✓
6			6.9	-1.0	✓
12	-0.1	11.9	12.9	-1.0	✓
12			12.9	-1.0	✓
18	-0.1	17.9	18.9	-1.0	✓
18			18.7	-0.8	✓
24	-0.2	23.8	24.9	-1.1	✓
24			24.8	-1.0	✓
30	-0.2	29.8	30.9	-1.1	✓
30			31.0	-1.2	✓
30			36.9	-1.2	✓
30	-0.3	35.7	36.9	-1.2	✓
36	-0.3	41.7	42.5	-0.8	✓
42	-0.3	47.6	48.5	-0.9	✓

#1 Bar Check

Fath. Reading in Feet

Used mean of #1 and #2

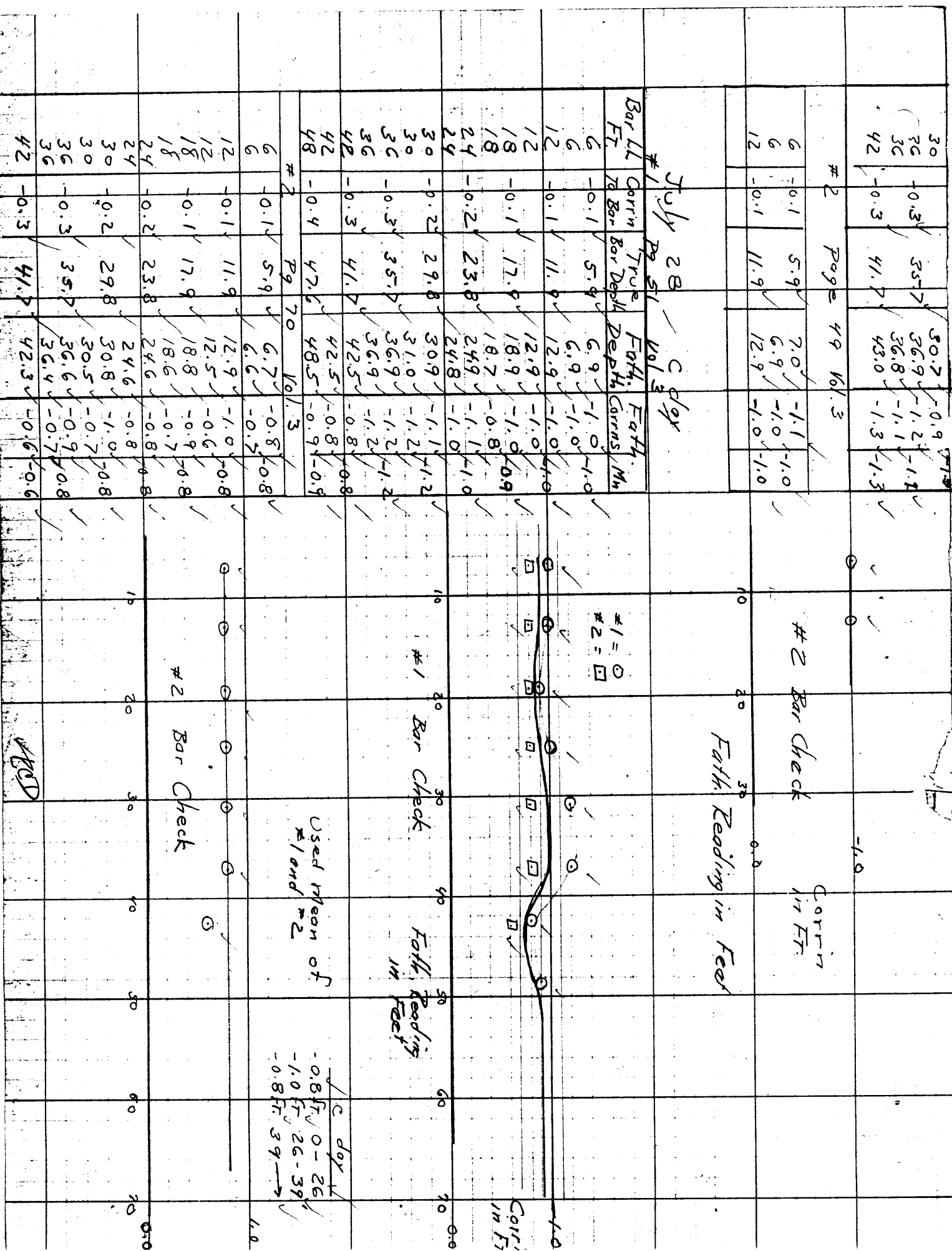
C day  
-0.8 Ft 0-26  
-1.0 Ft 26-39  
-0.8 Ft 39-42

#2 Bar Check

6	-0.1	5.9	6.7	-0.8	✓
6			6.6	-0.7	✓
12	-0.1	11.9	12.9	-1.0	✓
12			12.5	-0.6	✓
18	-0.1	17.9	18.8	-0.9	✓
18			18.6	-0.7	✓
24	-0.2	23.8	24.6	-0.8	✓
24			24.6	-0.8	✓
30	-0.2	29.8	30.8	-1.0	✓
30			30.5	-0.7	✓
30	-0.3	35.7	36.6	-0.9	✓
30			36.4	-0.7	✓
42	-0.3	41.7	42.3	-0.6	✓

#2 Bar Check

Used



6	-0.1	5.9	6.5	-0.6	-0.8					
12	-0.1	-11.9	12.7	-0.8	-0.8					
18	-0.1	17.9	18.7	-0.8	-0.8					
18	-0.2	23.8	18.8	-0.9	-0.8					
24			24.7	-0.9	-1.0					
24			24.9	-1.1	-1.0					
30	-0.2	29.8	31.0	-1.2	-1.2					

Cor'n in Ft. 0.0

#2 Bar Check

Fath. Reading in Ft.

Aug. 6 9 day									
#1 29 32 Vol. 5									
Bar L/Bar	True	Fath	Fath.						
6	-0.1	5.9	6.4	-0.5	-0.4				
6			6.3	-0.4	-0.4				
12	-0.1	11.9	12.3	-0.4	-0.4				
12			12.2	-0.3	-0.4				
18	-0.2	17.8	18.3	-0.5	-0.5				
18			18.5	-0.5	-0.5				
24	-0.2	23.8	24.4	-0.6	-0.6				

Cor'n in Ft. 0.0

Fath. Reading in Ft.

#2 29 35 Vol. 5									
6	-0.1	5.9	7.0	-1.1	-1.1				
6			7.0	-1.1	-1.1				
12	-0.1	11.9	12.9	-1.0	-1.0				
12			12.9	-1.0	-1.0				
18	-0.2	17.8	19.0	-1.2	-1.1				
18			18.8	-1.0	-1.1				
24	-0.2	23.8	25.0	-1.2	-1.2				
24			25.0	-1.2	-1.2				
30	-0.3	29.7	30.9	-1.2	-1.2				
30			31.0	-1.3	-1.2				
36	-0.4	35.6	37.0	-1.4	-1.2				
36			36.7	-1.1	-1.2				
42	-0.4	41.6	43.0	-1.4	-1.3				
42			42.8	-1.2	-1.3				
48	-0.5	47.5	49.0	-1.5	-1.4				
48			48.7	-1.2	-1.4				
54	-0.5	53.5	55.0	-1.5	-1.4				
54			54.7	-1.2	-1.4				
60	-0.6	59.4	60.8	-1.4	-1.4				
60			60.8	-1.4	-1.4				
66	-0.6	65.4	66.7	-1.3	-1.3				

Cor'n in Ft. -1.2

Fath. Reading in Ft.

#1 and #2 Bar Check

Fath. Reading in Ft.

#1 and #2 Bar Check									
6	-0.6	59.4	60.8	-1.4	-1.4				
6			60.8	-1.4	-1.4				
66	-0.6	65.4	66.7	-1.3	-1.3				

Cor'n in Ft. -1.4

Fath. Reading in Ft.

9 day

Use #2

Bar Check

45 - 45.0

45 - 66.0

✓ R.C.P.

24	-0.2	23.8	25.0	-1.2	2	✓
24	-0.3	29.7	25.0	-1.2	2	✓
30	-0.4	35.6	31.0	-1.3	4	✓
36	-0.4	35.6	31.3	-1.6	4	✓
			37.0	-1.4	4	✓

Aug 12 K day

#1 Pg 52 Vol 6

Bar Lk	Cor'n	Truss	Fath. Depth	Fath. Cor'n Mn.		
Feet	78	LL	Bar	Depth		
6	-0.1	5.9	6.9	-1.0	1.0	✓
6	-0.1	5.9	6.9	-1.0	1.0	✓
12	-0.1	11.9	12.7	-0.8	0.8	✓
12	-0.1	11.9	12.7	-0.8	0.8	✓
18	-0.2	17.8	18.7	-0.9	0.9	✓
18	-0.2	17.8	18.7	-0.9	0.9	✓
24	-0.2	23.8	24.8	-1.0	1.0	✓

#2 Pg 16 Vol 7

6	-0.1	5.9	6.9	-1.0	1.0	✓
6	-0.1	5.9	7.0	-1.1	1.0	✓
12	-0.1	11.9	12.9	-1.0	1.0	✓
12	-0.1	11.9	12.8	-0.9	1.0	✓
18	-0.2	17.8	19.0	-1.2	1.2	✓
18	-0.2	17.8	18.9	-1.1	1.2	✓
24	-0.2	23.8	24.9	-1.1	1.1	✓

Aug 13 Pg 36 Vol 7

Bar Lk	Cor'n	Truss	Fath. Depth	Fath. Cor'n Mn.		
Feet	78	LL	Bar	Depth		
6	-0.1	5.9	6.9	-1.0	1.0	✓
6	-0.1	5.9	6.9	-1.0	1.0	✓
12	-0.1	11.9	12.8	-0.9	1.0	✓
12	-0.1	11.9	12.8	-0.9	1.0	✓
18	-0.2	17.8	18.8	-1.0	1.0	✓
18	-0.2	17.8	18.8	-1.0	1.0	✓
24	-0.2	23.8	25.0	-1.2	1.2	✓

Mean of Word #2

K day

-1.0 FT 0 - 10 - ✓

-0.8 FT 10 - 15 - ✓

-1.0 FT 15 - 20 - ✓

Cor'n in Feet

0.0

Fath. Reading in Ft

10 20 30 40 50 60 70

Cor'n in Feet

-1.0

Fath. Reading in Ft

10 20 30 40 50 60 70

Cor'n in Ft

0.0

Fath. Reading in Ft

10 20 30 40 50 60 70

Cor'n in Ft

-1.0

Fath. Reading in Ft

10 20 30 40 50 60 70

Cor'n in Ft

-1.0

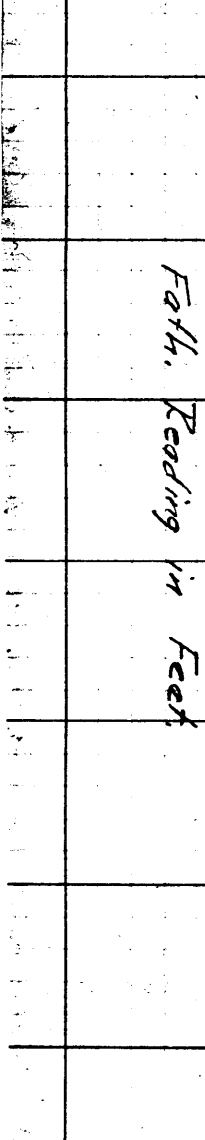
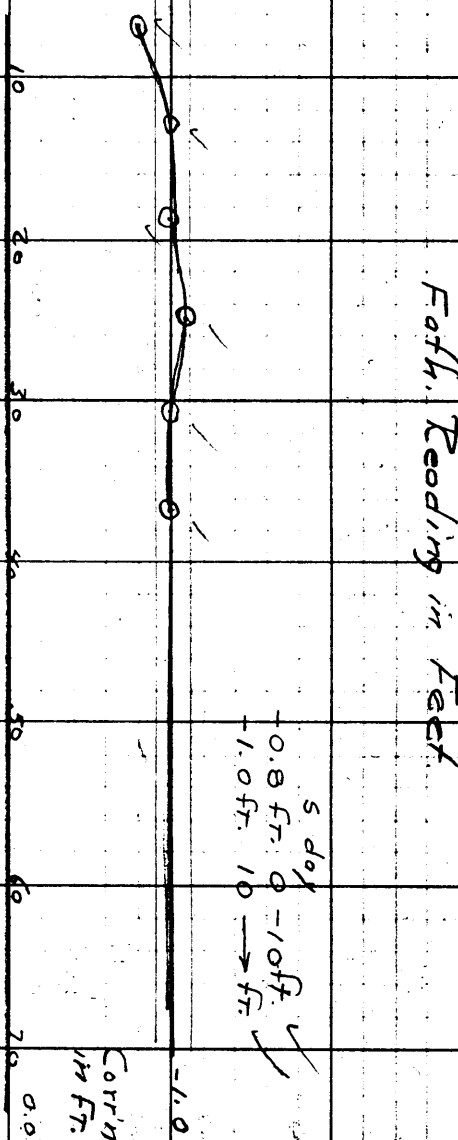
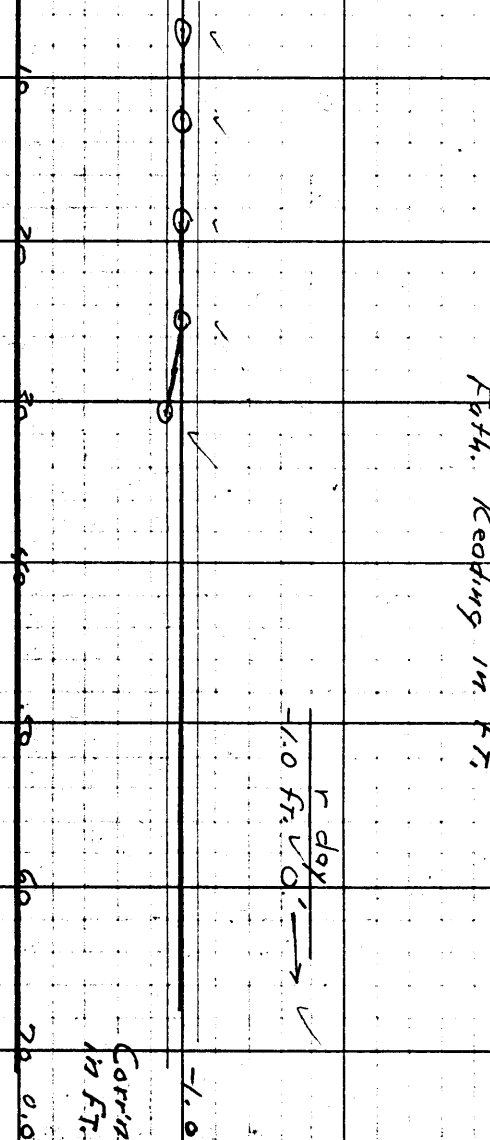
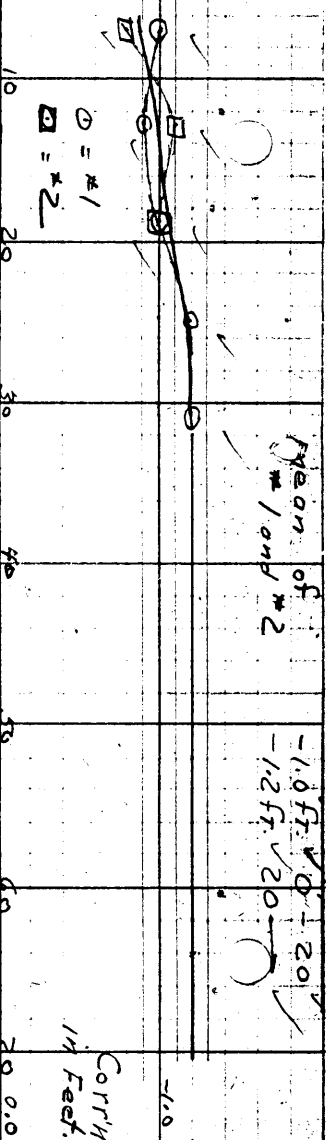
Fath. Reading in Ft

10 20 30 40 50 60 70

Cor'n in Ft

-1.0

FT.	7d LL	Bar	Depth	Corr'n	Mm.
6	-0.1	5.9	19.9	-1.8	2
6	-0.2	11.9	12.8	-0.9	0.9
12	-0.2	17.8	18.8	-1.0	1.0
18	-0.3	23.7	24.9	-1.2	1.2
24	-0.4	29.6	30.8	-1.2	1.2
30	-0.4	35.5	36.5	-1.0	1.0
#2 P9 54 Vd. 9 Aug 20 1 day Bar LL Corr'n True Fath. Depth Corr'n Mm. FT 7d LL Bar Depth Fath. Depth Corr'n Mm. 6 0.1 5.9 6.9 -1.0 1.0 6 0.2 11.8 12.7 -0.9 1.0 12 0.2 17.8 18.8 -1.0 1.0 18 0.2 23.7 24.8 -1.1 1.1 24 0.3 29.6 30.7 -1.0 1.0 30 0.4 35.5 36.5 -1.0 1.0					
#1 P9 54 Vd. 9 Aug 21 5 day Bar LL Corr'n True Fath. Depth Corr'n Mm. FT 7d LL Bar Depth Fath. Depth Corr'n Mm. 6 0.1 5.9 6.5 -0.6 0.8 6 0.2 11.8 12.8 -1.0 1.0 12 0.2 17.8 18.8 -1.0 1.0 18 0.2 23.7 24.8 -1.1 1.1 24 0.3 29.6 30.7 -1.0 1.0 30 0.4 35.5 36.5 -1.0 1.0					





22C  
HRC

## TIDE NOTE FOR HYDROGRAPHIC SHEET

January 11, 1944.

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in  
11 volumes of sounding records for

HYDROGRAPHIC SHEET 6859

Locality Narragansett Bay, East Passage, Rhode Island.

Chief of Party: B. H. Rigg in 1943  
Plane of reference is mean low water reading  
1.7 ft. on tide staff at Prudence Island (Navy Pier)  
10.1 ft. below B. M. 1

Height of mean high water above plane of reference is 3.8 ft.

Condition of records satisfactory except as noted below:

*E. H. Green*

Chief, Division of Tides and Currents.

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6859

Rhode Island, Narragansett Bay, East Passage  
Surveyed in August 1943; Scale 1:10,000  
Instructions dated March 15-26, 1943

Soundings:

808 Fathometer  
Bludsworth Fathometer

Control:

Three-point fix on shore signals

Chief of Party - B. H. Rigg  
Surveyed by - W. B. Page  
Protracted by - L. Walter  
Soundings plotted by - L. Walter  
Verified and inked by - R. H. Carstens  
Reviewed by - R. H. Carstens  
Inspected by - H. R. Edmonston, July 1944

1. Shoreline and Signals

Short sections of shoreline shown on the present survey originate with T-6908 (1943). Prior topographic surveys date back to 1866-70 and therefore were not applied to this sheet. The signals originate with T-6908 (1943), triangulation of 1843-1932, and sextant fixes recorded in the sounding records.

2. Sounding Line Crossings

Satisfactory.

3. Submarine Relief

The usual depth curves were satisfactorily drawn. The 24-ft. and 36-ft. curves have been added for a clearer delineation of the bottom.

Along much of the shoreline, areas are foul with submerged rocks and boulders. To the southwest of Dyer Island shoal soundings indicate submerged rocks rising 2 - 8 feet from the bottom. Pinnacles rising as much as 15 feet from the bottom were found in

Latitude  $41^{\circ}34.38'$ , Long.  $71^{\circ}19.5'$  and other places. Spoil from the channel dredged around the north end of Conanicut Island has been dumped to the southwest of Hope Island.

#### 4. Junctions with Contemporary Surveys

Butt junctions were made with H-3571 (1913) on the northeast and H-3572 (1913) on the north. On the northwest dredging operations have changed the bottom considerably within the area overlapping H-3404 (1912) and no junction is shown with that survey. The 3-ft. sounding (chart 236) from H-3404 in Lat.  $41^{\circ}35.75'$ , Long.  $71^{\circ}22.3'$  is 3.7 feet in the sounding records and is verified by 4 feet on the present survey. The 3-ft. has not been carried forward. On the south in the area overlapping H-5554 (1934) present depths are in places as much as 5 feet shoaler than depths of that survey and in the vicinity of signal FIT present depths are as much as 20 feet deeper. No junction is shown with H-5554.

#### 5. Comparison with Prior Surveys

a.	H-787a (1862)	1:10,000
	H-792a (1861)	1:20,000
	H-939 (1867-68)	1:10,000
	H-2770 (1905)	1:10,000

Agreement with H-939 covering the northwest portion of the present survey is generally within 1 - 3 feet. The 4-ft. sounding in Lat.  $41^{\circ}35.78'$ , Long.  $71^{\circ}22.30'$  and the rock awash in Lat.  $41^{\circ}34.34'$ , Long.  $71^{\circ}21.9'$  from H-939 are not considered disproved by the present survey and have been carried forward. The 6-ft. sounding, chart 236, in Lat.  $41^{\circ}35.9'$ , Long.  $71^{\circ}22.1'$  from H-939 is recorded as 8 feet in the sounding records. The present survey sounding of 9 feet is considered adequate to supersede it.

Sounding lines on H-787 and H-792 are controlled only by a few fixes on each line and as a result numerous soundings are probably out of position. There are differences of as much as 25 feet in certain places as, for example, in Lat.  $41^{\circ}33.8'$ , Long.  $71^{\circ}19.2'$  where a prior depth of 75 feet falls in present depths of about 100 feet. In large areas west of Long.  $71^{\circ}20'$  the bottom has probably washed from 2 - 6 feet deeper as, for example, in the vicinity of Lat.  $41^{\circ}33.0'$ , Long.  $71^{\circ}21.0'$  where prior depths of about 46 feet fall

in present depths of about 51 feet. A sunken rock and a rock awash in Lat.  $41^{\circ}34.6'$ , Long.  $71^{\circ}18.2'$  have been carried forward from H-792. The 15-ft. shoal, chart 236, in Lat.  $41^{\circ}34.5'$ , Long.  $71^{\circ}22.0'$  from H-787 was investigated on the present survey and depths were found to be not less than 22 feet. The sounding should be disregarded.

Except for the soundings and rocks retained from H-939 and H-792, the present survey adequately reveals the bottom configuration and should supersede these prior surveys within the common area.

b. H-3801 (1915) W. D., 1:10,000

The effective depths from this wire drag survey are in harmony with depths of the present survey except for unimportant differences covering small areas. The 28-ft., chart 236, in Lat.  $41^{\circ}33.95'$ , Long.  $71^{\circ}20.05'$  falling in present depths of about 42 feet is a grounding not verified by the hand lead. Its position is probably erroneous and should actually fall on the shoal 80 meters to the east. The sounding was not carried forward.

6. Comparison with Chart 236 (Latest print date 3-24-44)  
Chart 262 (Latest print date 11-16-43)

a. Hydrography

The hydrography charted within the limits of the present survey originates largely with the previously discussed surveys which need no further consideration and with critical soundings of the present survey before verification and review. Two of these soundings on chart 236, the 11-ft. in Lat.  $41^{\circ}34.07'$ , Long.  $71^{\circ}19.8'$  and the 29-ft. in Lat.  $41^{\circ}34.33'$ , Long.  $71^{\circ}19.5'$  were penciled on the smooth sheet in error and should be disregarded. Present survey depths are in good agreement with depths charted from blueprints 35670 (1941), 36618-19 (1942), 36678-79 (1942), and 36578-79 (1942), and are adequate to supersede them within the common area. The 27-ft. sounding, chart 262, in Lat.  $41^{\circ}33.7'$ , Long.  $71^{\circ}20.05'$  originates with chart letter 534 (1915), a preliminary report of shoals on H-3801 (1915) and should be disregarded. The hydrography within this area should be recompiled entirely from the present survey.

## B. Aids to Navigation

The survey positions of aids to navigation falling within the limits of the present survey are in satisfactory agreement with the charted positions and adequately mark the features intended except with respect to the following buoys and beacons:

1. N-2 in Lat.  $41^{\circ}34.2'$ , Long.  $71^{\circ}18.0'$  differs with its charted position by about 110 meters. The survey position more adequately marks the edge of the shoal than does the charted position.
2. N-12 in Lat.  $41^{\circ}34.5'$ , Long.  $71^{\circ}18.4'$  differs with its charted position by about 120 meters. The survey position more adequately marks the edge of the shoal than does the charted position.
3. C-3A in Lat.  $41^{\circ}36.5'$ , Long.  $71^{\circ}21.5'$  differs with its charted position by about 170 meters but it still satisfactorily marks the feature intended.
4. Halfway Rock Beacon in Lat.  $41^{\circ}33.8'$ , Long.  $71^{\circ}20.0'$  differs from its charted position by about 30 meters. Survey positions were not determined for Bell 3A in Lat.  $41^{\circ}34.6'$ , Long.  $71^{\circ}19.1'$ , N-8 in Lat.  $41^{\circ}32.7'$ , Long.  $71^{\circ}18.8'$ , N-6 in Lat.  $41^{\circ}32.4'$ , Long.  $71^{\circ}18.8'$  and the mooring buoy charted in Lat.  $41^{\circ}32.55'$ , Long.  $71^{\circ}19.1'$ . Buoy N-4 charted in Lat.  $31^{\circ}34.7'$ , Long.  $71^{\circ}21.7'$  has been changed to a lighted buoy since the survey was accomplished. The black and red buoy in Lat.  $41^{\circ}34.05'$ , Long.  $71^{\circ}19.85'$  would more adequately mark the shoal if it were moved about 200 meters to the north-east of its present position.

## 7. Condition of Survey

Satisfactory except that numerous soundings were incorrectly spaced particularly on lines containing fractional sounding intervals preceding or following a position.

The numerous notes in the records and on the fathograms were very helpful in the verification of this sheet.

8. Compliance with Instructions for the Project

Satisfactory, except that few bottom characteristics were taken and satisfactory junctions were not effected with H-3404 (1912) on the west and H-5554 (1934) on the south.

9. Additional Field Work Recommended


For cartographic purposes it would be desirable to extend the present survey further to the southward and to the westward in order to secure more satisfactory junctions with H-5554 (1934) and H-3404 (1912). It would also be desirable to verify at low water the positions of the sunken rock and the rock awash in Lat. 41°34.6', Long. 71°18.2'.


Failure of the field party to verify possible strays on the Bludsworth fathograms necessitated the acceptance of a number of questionable soundings on this survey. These soundings are grouped in the vicinity of Lat. 41°34.55', Long. 71°18.25' and appear as shoal strays rising 4 - 8 feet from the general depths. Disproof or verification of these soundings by the use of the handlead would be desirable for a better interpretation of the Bludsworth fathograms.

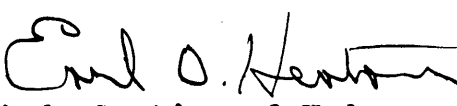
10. Superseded Surveys


H-787a (1862)	in part, except for bottom characteristics
H-792a (1861)	" " " " " "
H-939 (1867-68)	" " " " " "
H-2770 (1905)	in part

Examined and approved:

  
Chief, Surveys Branch

  
Chief, Division of Charts

  
Chief, Section of Hydrography

  
Chief, Division of Coastal Surveys

Partially applied to chart 236

1/28/44

SR

" " " 353

3/28/44

SR

Applied (in full) to chart 262

9/4/44

L.A.M.

" " " " 236

10/23/44

J.T.W.

" " " " 353

Oct. 1944

J.T.W.

" " " " 354

Oct. 1944

J.T.W.

" " " " 1210

Oct. 1944

J.T.W.

Compared with reconstruction 278

July 1945

J.M.A.

~~Re-applied 256~~

~~Nov. 29, 1942~~

~~J.T.W.~~

~~Re-applied 353~~

~~June 18, 1945~~

# 6859

Additional Work

Diag. Cht. No. 1210-3.

<b>Form 504</b> U. S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY	
<b>DESCRIPTIVE REPORT</b>	
Type of Survey <u>Hydrographic</u>	
Field No. <u>S.P. 22-62</u> Office No. <u>H-6859Ad.Wk.</u>	
<b>LOCALITY</b>	
State <u>Rhode Island</u>	
General locality <u>Narragansett Bay</u>	
Locality <u>Prudence I.; Dyer Island,</u>	
<u>Conanicut Pt.</u>	
<u>19 62-63</u>	
<b>CHIEF OF PARTY</b>	
<u>K.A. MacDonald &amp; E.K. Mac<sup>c</sup>Gaffney</u>	
<b>LIBRARY &amp; ARCHIVES</b>	
DATE <u>November 1963</u>	

USCOMM-DC 5087

# 6859

Additional Work



Hub

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-6859

Field No. S.P. 22-62

State Rhode Island

General locality Narragansett Bay

Locality Prudence Island; Dyer Island, Conanicut Point

Scale 1:10,000 Date of survey 9/25/62-6/20/63

Instructions dated \_\_\_\_\_

Vessel WAINWRIGHT & HILGARD

Chief of party K. A. MacDonald and E. K. <sup>Mc</sup>McCaffrey

Surveyed by \_\_\_\_\_

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

Fathograms scaled by \_\_\_\_\_

Fathograms checked by \_\_\_\_\_

Protracted by \_\_\_\_\_

Soundings penciled by \_\_\_\_\_

Soundings in fathoms feet at MLW ~~MLLW~~

REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

KB

UNITED STATES GOVERNMENT

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

# Memorandum

*PEL*

TO : The Director  
Coast & Geodetic Survey

DATE: 30 October 1963

FROM : Commanding Officer  
USC&GS Ships WAINWRIGHT & HILGARD

SUBJECT: SPECIAL REPORT, SPECIAL PROJECT 22-62 (H-6859)

- REFERENCE:
1. Instructions - Special Project 1-63, 2100B-pt, S-2-W&H dated March 19, 1963 (Item No. 25 & 26)
  2. Supplemental Instructions, Special Project 1-63, 2100B-pt S-2-WA&HI dated May 16, 1963 (Item No. 2)

In accordance with referenced instructions, (1) above, wire drag investigations were carried out as noted on the bromide print accompanying the blue line print of survey No. H-6859<sup>(1963)</sup>, vicinity of the reported obstruction at latitude  $41^{\circ} 36' 47'' N$ , longitude  $71^{\circ} 20' 25'' W$ . During the 1962 field season, a double hang occurred near the reported obstruction with an effective drag depth of 17 feet. SCUBA divers obtained positions and depths of 11 and 14 feet respectively on both hangs. Both hangs were reported to be pieces of angle iron protruding from a submerged barge. Subsequently, the hangs were cleared to an effective depth of 8 feet. <sup>and 10 feet</sup> However, in 1963, a drag with an effective depth of 9 feet hung at or near the 11-foot leadline sounding obtained in 1962. This hang was ultimately cleared with an effective drag set at 7 feet.

In accordance with referenced instructions (1) and (2) above, additional hydrographic investigations were carried out as noted on the bromide print H-6859<sup>(1963)</sup>, with results as noted:

HYDRO-SKIFF CS-771 - a day - June 5, 1963

1. Latitude  $41^{\circ} 34.36'$  - Longitude  $71^{\circ} 21.96'$  - position 1a: A pipe structure wreckage, 20 meters in length, was located at this position, bare 1-foot at MLW, at the east end and bare 2 feet at MLW at the west end.
2. Latitude  $41^{\circ} 34.32'$  - Longitude  $71^{\circ} 21.92'$  - position 2a: A rock awash at Mean Low Water was located at this position.

*Chs 236  
353*

*12'0*

LAUNCH CS-181 - a day - June 6, 1963

- 1. Latitude  $41^{\circ} 34.45'$  - Longitude  $71^{\circ} 18.3'$  - position 1a - 122a: ✓  
 Additional hydrography was accomplished southwest of Dyer Island to confirm or disprove the irregular shoal depths extending as far as the 10-foot sounding. Rocks were also located as follows: ↙ considered disproved by this Ad Wk
- (a) Latitude  $41^{\circ} 34.60'N$  - Longitude  $71^{\circ} 18.12'W$ : Rock awash at MLW (position 61a) ✓
- (b) Latitude  $41^{\circ} 34.60'$  - Longitude  $71^{\circ} 18.27'$ : Rock covered 2 feet at MLW (position 72a) ✓
- (c) Latitude  $41^{\circ} 34.68'$  - Longitude  $71^{\circ} 18.25'$ : Rock covered 2 feet at MLW (position 73a) ✓
- (d) Latitude  $41^{\circ} 34.72'$  - Longitude  $71^{\circ} 18.21'$ : Rock awash at MLW (position 74a) ✓

In addition, a sand spit extending southwest from Dyer Island, bare at 3 feet (MLW) was delineated. (position 62a - 71a) Limits of the charted foul area were also outlined. ✓

HYDRO-SKIFF CS-771 - b day - June 20, 1963

- 1. Several detached pole soundings were taken in the charted foul area southwest of Dyer Island (position 1b - 10b) ✓

RECOMMENDATIONS:

The charted wreck symbol and "~~14-ft <sup>top</sup> PA~~" (lat.  $41^{\circ} 36.81'$ , long.  $71^{\circ} 20.47'$ ) should be expunged from C&GS charts 236 & 353 and replaced with <sup>an 8</sup> ~~a 9~~-foot WRECK, and a <sup>14</sup> ~~17~~ foot WRECK respectively. ↙ cleared by ↗ ✓  
See  
Review of  
AD.WK.  
Par. 3

METHODS AND EQUIPMENT:

Accepted hydrographic procedures were followed in carrying out these special investigations. Launch CS-181 was equipped with Raytheon echo sounder type DE-723 number 211, while hydro-skiff CS-771 was equipped with Raytheon number 541. Pole soundings were obtained when necessary and check angles taken on all located features. All control used is existing on the blue line print of survey H-6859 <sup>(1943)</sup> with the following exceptions: ✓

\*Signal WIT - H-8395 (1957)

Signal AMP - H-8313 (1956)

\* Plotted WIT (tank) ⊙ from T-10496 at position Lat.  $41^{\circ} 35' 23.63''$  (729 meters)  
 Long  $71^{\circ} 19' 28.19''$  (653 meters)

ABSTRACT OF CORRECTIONS TO ECHO SOUNDINGS:

1963

SP 22-62, Survey H-6859

LAUNCH CS-181; Fathometer #211

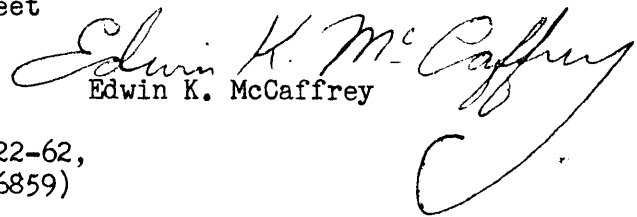
<u>Depth</u>	<u>Correction</u>	<u>Phase Comparison</u>	
		<u>Scale</u>	<u>Correction</u>
0.0			
	0.0'	A	0.0
6.3	+0.2	B	0.0
14.3	+0.4		
20.3	+0.6		
26.1	+0.8		
32.7	+1.0		
40.0	+1.2		
47.1	+1.4		
55.3	+1.6		
65.3	+1.8		
On			

TIDE NOTE:

Newport, Rhode Island standard tide gage was used for tidal data, with hourly heights furnished by the Washington Office. Because of significant range and time differences, the following corrections were taken from C&GS Tide Tables for Prudence Island, Sandy Point and applied to actual heights observed at Newport, R.I.

High Water: +10 minutes and +0.4 feet

Low Water: +9 minutes and +0.0 feet

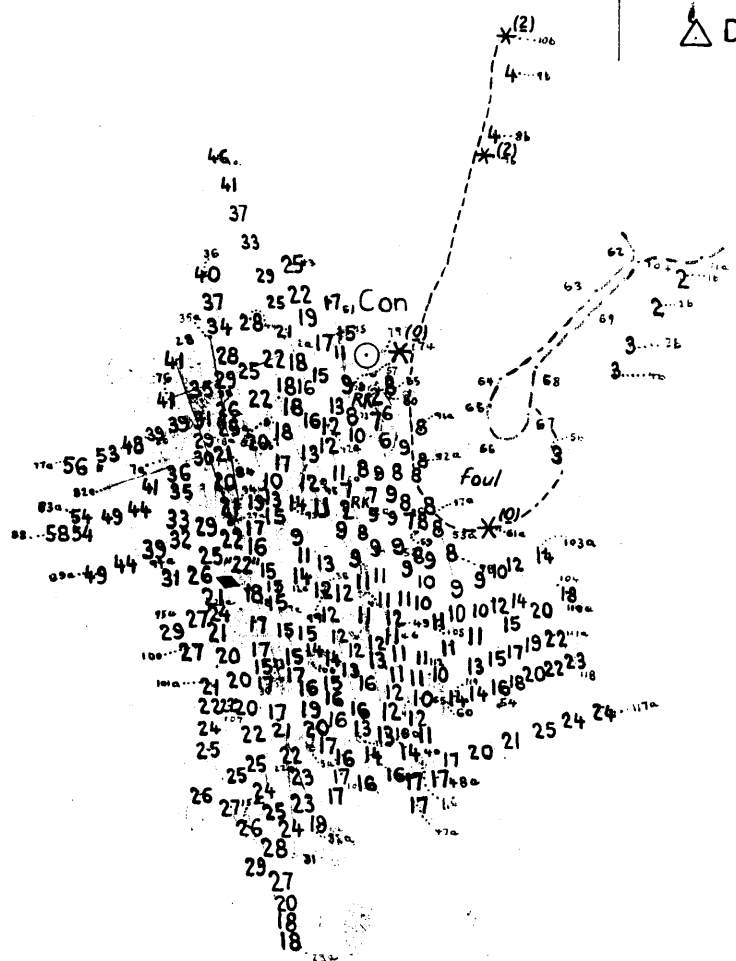
  
Edwin K. McCaffrey

Encl.: Area and Depth overlay, SP 22-62,  
Prudence Island, R. I., (H-6859)

DWC/jrb

△ BAT 1913  
○ Tot

41° 35'  
△ DYER ID. 1843



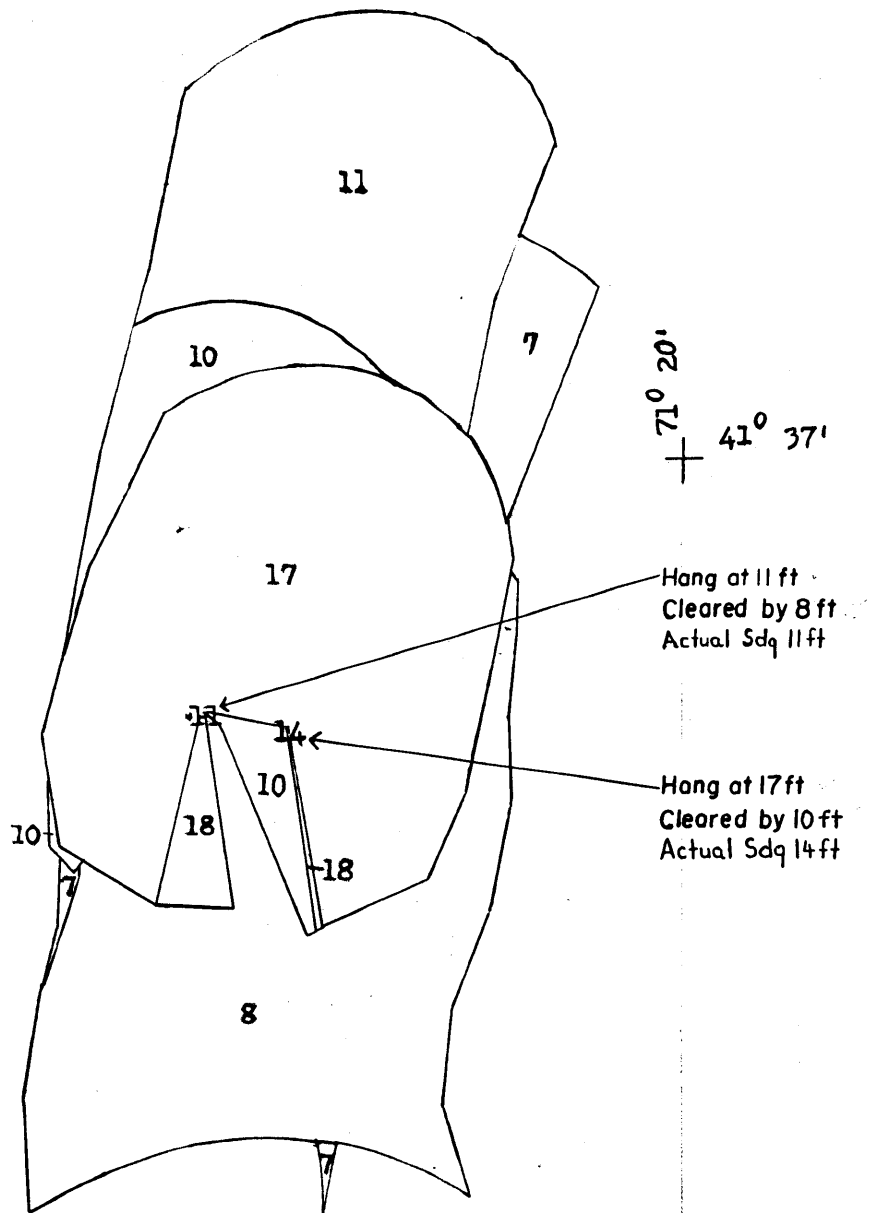
71° 19'

Additional Work  
H-6859(1963)

41° 34'  
71° 18'

○ Tel

Gab  
N.W. qable  
Shed



AREA AND DEPTH DIAGRAM  
SPECIAL PROJECT 22-62  
USC&GSS WAINWRIGHT & HILGARD  
PRUDENCE ISLAND, RHODE ISLAND  
25 SEPTEMBER 1962 - 26 MAY 1963  
H-6859

$71^{\circ} 21'$   
 $41^{\circ} 36'$



RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

February 5, 1964

Nautical Chart Division: R. H. Carstens

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

HYDROGRAPHIC SHEET 6859 Add. Wk.

Locality Narragansett Bay  
Prudence & Dyer Island, Rhode Island.

Chief of Party: K. A. <sup>Mac</sup>~~Donald~~ (1962) and E. K. McCaffrey 1963

Plane of reference is Mean low water

ft. on tide staff at

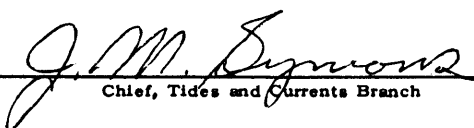
ft. below B. M.

The Height of mean high water above Plane of reference at  
the working Grounds is 4 feet.

Condition of records satisfactory except as noted below:

Tide reducers for the following positions have been revised  
in red and verified.

Wire Drag 11 B - 19 B

  
Chief, Tides and Currents Branch

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 6859 Ad. Wk.

Records accompanying survey: Smooth sheets .....  
 boat sheets .1....; sounding vols. .1....; wire drag vols. ..2..  
 Descriptive Reports .1....; graphic recorder envelopes .1....  
 special reports, etc. ....  
 .....

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

Number of positions on sheet	.....	<u>148</u>
Number of positions checked	.....	
Number of positions revised	.....	
Number of soundings revised (refers to depth only)	.....	
Number of soundings erroneously spaced	.....	
Number of signals erroneously plotted or transferred	.....	
Topographic details	Time	.....
Junctions	Time	.....
Verification of soundings from graphic record	Time	<u>75</u> .....
Special adjustments	Time	.....

Verification by Fannie L. Lewis Total time .89... Date 7-28-70

Reviewed by George A. Kozemczak Time .69... Date 3-15-72

Inspected by: Del E. Nutford 17 hrs 11/8/72



MARINE CHART DIVISION

EVALUATION SECTION - HYDROGRAPHIC SURVEY BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTER NO. 6859 AD. WK.

Rhode Island, Narragansett Bay, vicinity of Prudence and Dyer Islands and Conanicut Point

Special Project - 22-62, dated August 15, 1962

Special Project - 1-63, dated March 19, 1963, and May 16, 1963

Surveyed September 25, 1962; May 26, 1963; June 5-6, 1963; June 20, 1963 Scale: 1:10,000

Soundings:

DE-723 depth recorder

Control:

Sextant fixes on shore signals

Chief of Party.....	K. A. MacDonald and E. K. McCaffrey
Surveyed by.....	J. S. Midgley
Protracted by.....	F. B. Powers
Soundings plotted by.....	F. B. Powers
Verified and inked by.....	F. B. Powers
Reviewed by.....	G. A. Kozemczak
.....	Date: March 15, 1972
Inspected by.....	D. E. Westbrook

1. Purpose of Survey

This additional work was accomplished to verify or disprove the following:

a. A number of questionable soundings in the vicinity of lat.  $41^{\circ}34.55'$ , long.  $71^{\circ}18.25'$  as noted in Par. 9 of the Review of H-6859 (1943) and two rocks in the same area brought forward to that survey from H-792 (1861).

b. A rock awash brought forward to H-6859 (1943) from H-939 (1867-68) in lat.  $41^{\circ}34.34'$ , long.  $71^{\circ}21.95'$ .

c. A 5-pontoon barge reported in Notice to Mariners No. 25 of 1961 as having sunk in 22 ft. of water with 14 ft. of water over it in (approx.) lat.  $41^{\circ}36'47''$ , long.  $71^{\circ}20'25''$ .

## 2. Office Work

The results of the additional work have been plotted as follows:

- a. The investigation of a. above is plotted on an overlay inserted in the Descriptive Report. The significant results of this investigation have been added to H-6859 (1943) in brown ink.
- b. The investigation of b. above is plotted in brown ink directly on H-6859 (1943).
- c. The wire-drag investigation of c. above is plotted on an A&D sheet overlay inserted in the Descriptive Report. Two soundings on wreckage have been added to the present survey in green ink.

## 3. Results of Survey

The results of the investigations are discussed in the following paragraphs:

- a. Several questionable soundings off the south end of Dyer Island are considered discredited by the 1963 additional work, and have been deleted from the survey. The shoal traces on the 1943 Bludsworth fathograms, from which these soundings originate, now appear to be grass or kelp. The following soundings, therefore, should be deleted from Chart 236, 18th Ed., 8/7/71:

<u>Sounding</u>	<u>Lat.</u>	<u>Long.</u>
12-ft. ✓	41°34'31"	71°18'22"
7-ft. ✓	41°34'33"	71°18'19"
4-ft. ✓	41°34'34"	71°18'15"
6-ft. ✓	41°34'31"	71°18'14"
10-ft. ✓	41°34'27"	71°18'19"

These soundings should be replaced by appropriate soundings from the present survey as supplemented by the additional work.

The 18-ft. sounding on the present survey in lat. 41°34.61', long. 71°18.39' was verified by a 20-ft. sounding nearby on the 1963 AD. WK. and was retained.

The 10-ft. sounding on the present survey in lat.  $41^{\circ}34.61'$ , long.  $71^{\circ}18.32'$  was verified by a 10-ft. sounding nearby on the 1963 AD. WK. and was retained. The 9-ft. sounding presently charted in that position on Chart 236, 18th Ed., 8/7/71, is from the boat sheet of the AD. WK. and should be revised to 10-ft. The additional work shows a 9-ft. sounding about 60 meters to the southward of the 10-ft. sounding. This 9-ft. sounding should be considered for charting.

A rock submerged 2-ft. at MLW and a rock awash at MLW were found during the 1963 AD. WK. in the general vicinity of the two rocks previously brought forward to the present survey from H-792 (1861). The two rocks from the prior survey are considered out of position or generalized and have been deleted in favor of the rocks located on the AD. WK. The newly located rocks (lat.  $41^{\circ}34.60'$ , long.  $71^{\circ}18.26'$ , and lat.  $41^{\circ}34.59'$ , long.  $71^{\circ}18.13'$ ) are presently charted from the AD. WK. boat sheet and the chart should be revised to reflect the information now shown on the present survey as supplemented by the additional work.

Three more rocks were found during the additional work. A rock submerged 2-ft. at MLW in lat.  $41^{\circ}34.68'$ , long.  $71^{\circ}18.24'$ , a rock awash at MLW in lat.  $41^{\circ}34.71'$ , long.  $71^{\circ}18.21'$ , and a rock uncovering 2-ft. at MLW in lat.  $41^{\circ}34.86'$ , long.  $71^{\circ}18.12'$ . These rocks should be charted as shown on the present survey.

In addition, the rock in lat.  $41^{\circ}34.94'$ , long.  $71^{\circ}18.11'$  had previously been located in 1943, but the additional work location and elevation was accepted, and the original rock was deleted from the present survey. This rock is adequately charted on Chart 236.

The charted delineation of the rocky spit that extends southwestward from Dyer Island is from 1964 air-photo corrections (Bp-98385) and should be retained as charted.

Buoy "22" located on the 1963 AD. WK. in lat.  $41^{\circ}34.55'$ , long.  $71^{\circ}18.37'$  substantially agrees with its charted position and adequately marks the feature intended.

b. The rock awash previously shown on H-6859 (1943) in lat.  $41^{\circ}34.34'$ , long.  $71^{\circ}21.95'$  which was carried forward from H-939 (1867-68) is considered discredited by the

additional work in 1963 and has been deleted from the survey. However, the field party did locate a rock awash at MLW 35 meters southeast of the above position. Chart 236, 18th Ed., 8/7/71, adequately shows the results of this investigation.

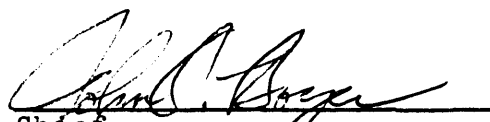
During the above investigation, the field party located the wreckage of a pipe structure which uncovers 2-ft. at MLW in lat.  $41^{\circ}34.36'$ , long.  $71^{\circ}21.95'$ . Chart 236, 18th Ed., 8/7/71, shows a sunken wreck symbol incorrectly symbolized on the boat sheet of this investigation. The chart should be revised to show these pipes as uncovering.

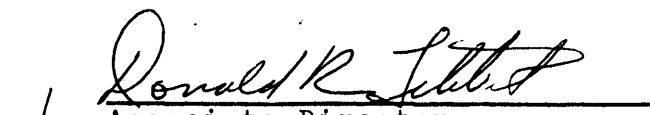
c. The wire-drag investigation in the vicinity of the reported wreck in lat.  $41^{\circ}36'47''$ , long.  $71^{\circ}20'25''$  resulted in hangs on two portions of the barge. The wreck shown on Chart 236, 18th Ed., 8/7/71, as cleared by 8-ft. is adequately charted. The 14-ft. sounding Wk, however, is out of position on the chart and should be recharted in the position shown on the present survey.

#### 4. Additional Field Work

The additional work done in 1962-63 adequately covered the requested items and no additional field work is recommended.

Examined and Approved:

  
 Chief  
 Marine Chart Division

  
 Associate Director  
 Office of Marine Surveys  
 and Maps

RECORD OF APPLICATION TO CHARTS

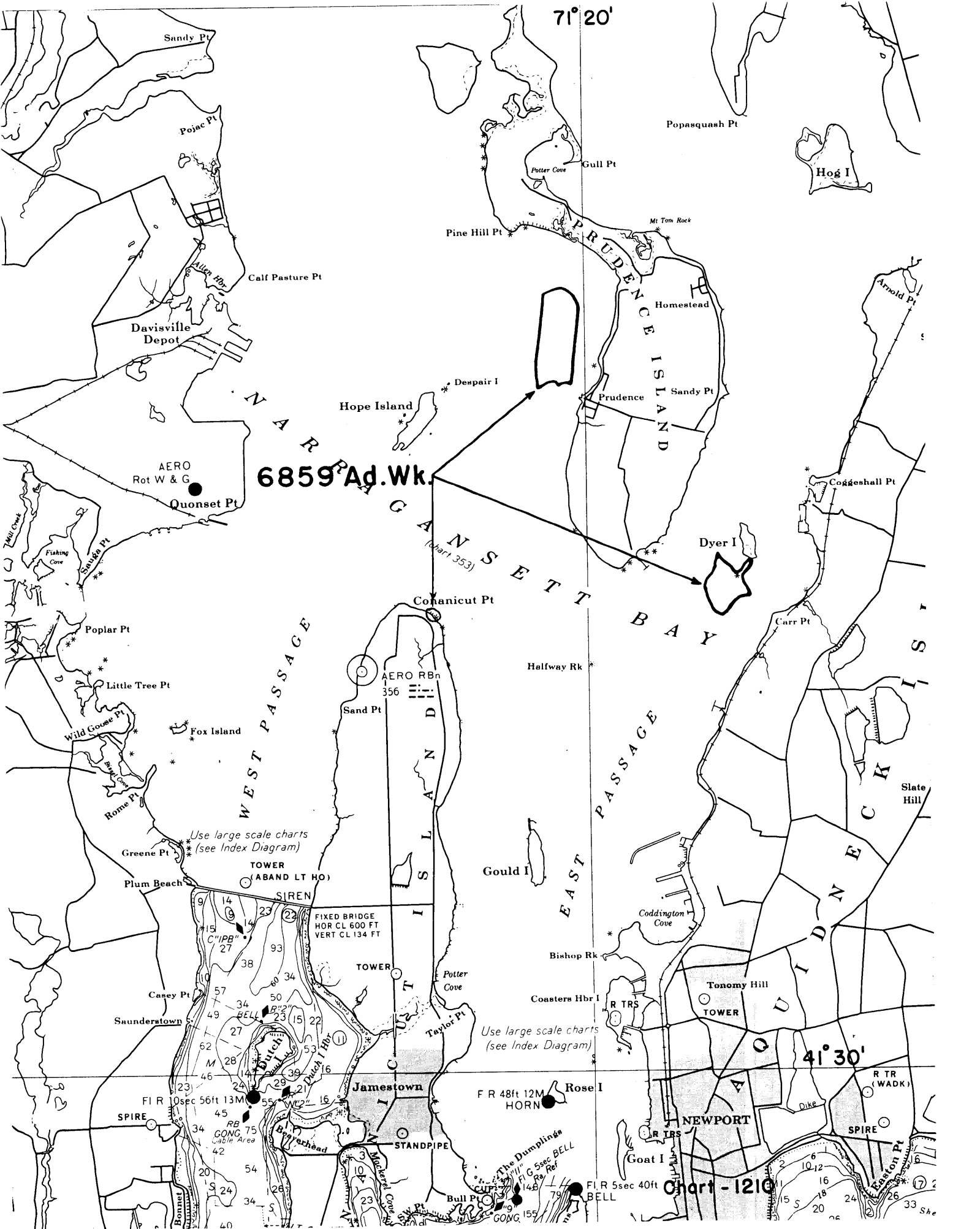
FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-6859 Ad. Wk.

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
236	3-12-64	GEO. R. McCANN	<del>Full</del> Part Before <del>After</del> Verification Review Inspection Signed Via Drawing No. 31
353		" "	
353		" "	<del>Full</del> Part Before <del>After</del> Verification Review Inspection Signed Via Drawing No. 32 <i>listed in history of Draw # 33</i>
236	11-29-72	John Bailey	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. 40 <i>Fully applied</i>
353	6-18-73	William Chandler	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No.
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71° 20'

6859 Ad. Wk.

(Chart 353)

Chart - 1210

41° 30'

