5882

5882

1-3, 6 cm

Form 537
Ed. Dec., 1930

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.

Field No. 2 5882

REGISTER NO.

State Massachusetts

General locality Buzzards Bay

Locality Approaches to New Bedford Harbor

Scale 1:10,000 Date of survey April to August, 1935

Vessel Field Party No. 5.

Chief of Party Lieut. Wm. D. Patterson

Surveyed by W.H. Jennings; G.F. Jordan; D.S. Ling

Protracted by J.C. McIlwaine, Donald Journaey

Soundings penciled by Wm.D. Patterson; C.R. Smith & G.F. Jordan.

Soundings in [redacted] feet

Plane of reference Mean low water.

Subdivision of wire dragged areas by

Inked by Harold W. Murray

Verified by "

Instructions dated July 11 May 14, 1934., 19

Remarks: Suppl. May 9, 1935

KWW 3/12/93

U. S. GOVERNMENT PRINTING OFFICE: 1931

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 2 (Field Number)

APPROACHES TO NEW BEDFORD HARBOR

MASS. 1935.

Project HT-179, Lieut. Wm. D. Patterson, Chief of Party.

****

DATE OF INSTRUCTIONS:

This survey was made in accordance with the Director's Instructions dated July 11, 1934 and Supplemental Instructions dated May 9, 1935.

SURVEY METHODS:

The standard three point sextant fix was used for obtaining positions. Depths were obtained with the standard lead-line, a mahogany wire-center tiller rope, with cupped lead. The line was was marked in fathoms and feet.

In the development of shoals and search for least water, the method of drift sounding generally employed was to mark the location with a small buoy, and drift down on the buoy broadside with two or three leadlines over the side. Numerous overlapping drifts were made so that the location was covered within a 50 meter radius of the charted sounding or least water indication.

LIMIT AND EXTENT:

This survey embraces the approach to New Bedford Harbor from the southwest and southeast. The southern or central approach has been covered by a previous survey using the wire drag method. The southwest limit of this survey is at Mishaum Point and covers the area from shore out to 1 to 1½ miles (to ½ mile east of Dumpling Rocks L.H.) to as far north as latitude 41° 34'. The southeast limit is 1 mile south of West Island and covers the area north th latitude 41° 35', and from this line continues westward with this latitude as a northern limit to longitude 70° 52.3', with the addition of a survey of Negro Ledge.

This survey joins hydrographic Survey No. 5630 (1934 & 35) on the west, sheet No. 3 to the north and sheet No. 5 to the east.

DISCREPANCIES:

1. Latitude 41° 31'plus 730 meters, longitude 70° 56' plus 1060 meters, the sounding at position 69 H (red) is believed in error by one fathom. Reduced sounding of 14 feet would conform to

The surrounding bottom.

(CHUSSEY RK)

2. Latitude 41° 33' plus 574 meters, longitude 70° 55' plus 1170 meters, charted 7 foot rock, least sounding of 8 feet at position 66 X (red). After completion of field work authentic information was received from private persons that this is a large outcropping rock with general depth of 8 feet, but that a small pinnacle exists, on which there is only 4½ feet of water at mean low water. Considering the source of information it is respectfully recommended charting a 4½ foot sounding at this location. In addition, the buoy shown at this location from topographic sheet "C" was removed and a buoy placed 300 meters north of this location which was located at position 70 X (red). This conforms to location of buoys as shown on Chart 252, and it is recommended that the buoy shown 135 meters east of Barekneed Rock Beacon be deleted from this sheet and from topographic sheet "C". (T-6373) *Position of buoy corrected on H-5882 (1935) and note placed on T-6373 (1935)*

For disposition of reported 4½ depth, see par 10 of review and attached chart letter

DANGERS:

In general the entire shoreline embodied in this sheet is very rocky, and numerous off-shore rocks exist. A thorough and detailed inspection has beenmade of all shoal indications either by close sounding lines or drift sounding or by both methods.

Previously charted rocks and shoals have likewise been investigated. In only a few instances have those not found been recommended to be removed from the chart. In such a rocky area as this, it is felt that a shallow sounding can be definitely disproved only after investigation by wire drag. Disbanding of the field party prevented use of the latter method. However, no definite danger remains not investigated in this survey.

All rock and shoal dangers have been clearly shown on the smooth sheet, and attention is called here only to those groups of dangers which combined for hazardous navigation.

The waters south from Salters Point are foul with numerous rocks, and this locality should be especially avoided by visiting craft.

The area between Dumpling Rocks L. H. and Round Hill Point is also foul. Chart 252 shows three submerged rocks in the pass, and although these rocks do not exist, strangers should always use the outside route around the light. Subsequent to disbanding of party three rocks are reported from authentic sources to exist on the east side of the channel in 7 feet of water. There are two rocks with 5 feet of water and one with 4 feet, near the west side of the exposed bedrock, pointed to as outside the 4, 1, 4 soundings shown on the smooth sheet. These should be searched for at the next survey of this area.

Latitude 41° 32.23', longitude 70° 55.32', a 5 foot sounding shown on Chart 252, which was not investigated by this survey. Subsequent to disbanding of the field party information was received from authentic sources that this is a rock with least water of 5 feet at mean low water. Recommend that it be shown as such. This rock is shown by a cross with note on the smooth sheet.

5 foot sounding from H-2229(1895)-carried forward in this position

The area south and southeast from Sconticut Neck is very rocky and should be navigated with extreme care; especially about Little Black Rock. Charted rocks and shoals have been thoroughly investigated, and numerous additional rocks were located. Particular attention is called to rocks that affect 6 foot draft boats in setting their course from Black Rock Beacon to the black can buoy south from West Island, and to the red nun buoy at West Id. Ledge. These rocks are the charted 7 foot rock with sounding of 5½ feet at position 23 R, latitude 41° 34' plus 756 meters, longitude 70° 50' plus 565 meters, and a new rock with sounding of 5½ feet at position 40 S, latitude 41° 34' plus 1000 meters, longitude 70° 51' plus 585 meters.

The pass between Sconticut Neck and ~~Gravelly Id.~~ Angelica Rk is barred by a sand bar 50 feet wide with 1 foot depth of water at mean low water, which begins at position 57 N latitude 41° 34' plus 1786 meters, longitude 70° 51' plus 658 meters and continues three positions to 60 N to Gravelly Id.

Attention is called to a small rocky shoal at latitude 41° 32' plus 1458 meters, longitude 70° 52' plus 341 meters, ~~and~~ with a least water sounding of 19½ feet on a pinnacle rock at position 3 SS.

CHANNELS:

The channel on the west side of Dumpling Rocks L.H. is covered in this report under the heading "Comparison with previous surveys".

ANCHORAGES:

Nothing to report. Waters are sufficiently deep and generally of sticky mud and sand bottom; and harbors are near at hand.

COMPARISON WITH PREVIOUS SURVEYS:

Latitude 41° 32.15' longitude 70° 55.7', a rock awash shown on chart 252. Extensive search was made by topographic and hydrographic parties for this rock, which was not found. Recommend its removal from the chart. *See review, par. 7b (4)*

Latitude 41° 32.27' longitude 70° 55.5', three submerged rocks shown on chart 252. Extensive search made by two hydrographic parties and inquiries made failed to reveal these rocks. Believe rocks shown are result of erroneous fixes and should have plotted 70 meters west of positions shown. Recommend removal from the chart. *See review, par. 7b (3)*

A pass of 7 foot depth is charted ~~on the~~ just west ~~side~~ of Dumpling Rocks L.H. This is erroneous, as the pass is barred by a breakwater awash at low water and several submerged rocks. See note 3rd sounding after position 31 V. Sand has filled in to a mean low water of 2 feet across this pass.

The wharf extending east from Round Hill Pt. L.H. and shown on chart 252 does not exist, and should be removed from the chart. * *See review, par. 8a (3)*

Latitude 41° 31.62' longitude 70° 57.25', a charted wreck is believed to be two large rocks awash which were located by topography. *See review, par. 8a (4)*

* *The area surrounding the previous location of this wharf is very foul, and not navigable, because of numerous scattered boulders. Jordan*

Latitude 41° 33.90' longitude 70° 56.15', two charted 6 foot rocks and submerged rock. Considerable time was spent drift sounding here, resulting in the location of a rock with 5 feet sounding at position 8 HH. No additional rocks were found. After completion of field work, reliable information was received from a private source that other rocks exist here, the eastern 6 foot rock having a least depth of 4½ feet over it. Recommend retaining all soundings and plotting the eastern 6 foot rock as 4½ feet.
See par. 10 of this review and attached copy of chart letter

Latitude 41° 34.74' longitude 70° 51.50', a charted rock south of ~~Gravelly Id.~~ Angelica RK. No rock awash or submerged was found by topographic of hydrographic parties. Recommend removal from the chart.
From H-2129 (1895) See review, par. 7b (12)

Latitude 41° 34.95' longitude 70° 51.52', a charted 1 foot sounding which is part of the 50 foot wide bar reported under dangers in this report.

Latitude 41° 34.89' longitude 70° 51.60', a charted rock awash is not a rock, but the north end of the low water line in the center of the above mentioned bar. *See review, par. 7b(7)*

Latitude 41° 34.85' longitude 70° 50.10' and latitude 41° 34.94' longitude 70° 50.15' are two charted land spots. There is three to five feet of water at these locations, but the area is very foul with rocks. *See review, par. 7b (8)*

The following charted soundings were investigated:

	Latitude	Longitude	Charted depth	Depth ft. found	Pos. No.	Remarks.
1	41° 31.19	70°57.10'	12'	7½'	1 JJ	Rocky shoal.
2	31.15	57.04	13	prevailing	Vl. 7 pg 51	Not found, retain.
3	32.04	56.59	2 rks++	"	" 7 " 51	" " , delete.
4	32.23	56.70	3'	"	" 7 " 51	" " , " .
5	32.27	56.18	11'	10½'	2 JJ	Rocky shoal.
6	32.35	56.40	6'	prevailing	Vl 7 pg 52	Not found, delete.
7	32.16	56.00	15'	"	" 7 " 52	" " , retain.
8	31.07	56.47	22,27,29'	W D Edge	" 7 " 54	Level muddy bottom ~~delete erosion~~
9	31.18	56.10	24'	24'	1 BB	Large rock.
10	31.57	56.35	16'	16'	17 KK	Rock.
11	32.20	55.40	5'	10'	1 LL	Not found-retain-questionable.
12	31.50	55.30	21'	28'	1 MM	" " very rocky-retain.
13	31.95	55.30	20'	23½'	3 MM Zooplankton	" " ~~erosion-delete~~ retain
14	32.40	55.40	17'	23'	4 MM	" " retain.
15	32.90	54.95	16'	30'	1 NN	" " " .
16	31.60	55.65	30'	prevailing		" " two searches-retain.
17	31.90	55.49	19'	erroneous plotting on H-2601 (1903)		" three " delete " .
18	32.15	55.30	8'	"		" two " " .
19	32.22	55.05	22'	39'	6 Z	" " delete-questionable.
20	32.35	55.10	22'	36'	5 Z	" " " " .
21	33.12	55.83	18'	prevailing		" " retain.
22	33.36	55.36	13'	"		" " three search-delete-?
23	33.49	54.40	18'	21'	1 & 2 Z	" " probably pinnacle-retain.
24	32.15	56.70	2 rks++	prevailing		" " 3 searches-delete?
25	31.4	56.1	26,30,30'	"	18 on WD	" " ~~delete-erosion~~.
26	31.60	56.90	2'	" (par. 7 c (1) of review)		" " retain.
27	32.10	55.15	24'	"		" " questionable. delete.
28	32.8	55.7	18,18'	" not covered by 1935 work		" " retain.
29	33.53	54.30	30'	"		" " questionable.
30	33.70	54.75	18'	"		" " retain.

	Latitude	Longitude	Charted depth	Depth ft. found	Pos. No.	Remarks.
31	41 33.95	70 54.90	18,18'	19'		Retain.
32	33.55	51.78	29'	33½'	6 SS	Not found-delete-questionable.
33	33.36	51.40	25'	32½'	1 SS	" " retain.
34	34.80	51.95	12'	15½'	6 NN	" " "
35	34.90	50.00	5'	prevailing		" " questionable
36	34.35	50.05	18'	19'	41,42 R	~~Retain.~~
37	34.55	50.10	11'	prevailing		"

GEOGRAPHIC NAMES:

Retain geographic names for this sheet as found on topographic sheets and chart 252. There are no new place names or changes to report.

REMARKS:

Whereas least water found by drifting does not definitely disprove shoaler depths charted, is is recommended unless otherwise stated in this report, that the lesser depths charted be retained, by reason of the rocky coastline; until they can be investigated by wire-drag method. Several submerged rocks have been found to have small sharp pinnacles which were difficult to find with a lead line.

Also to be noted here is a deepening of the water, removal of rocks on the beach, and a few off-shore rocks on the south shore of Round Hill Pt. Sand was sucked out of this area to fill the marsh land, in the making of an airport on Colonel Green's Estate; and the in-shore waters cleared of rocks.

Authentic information severally mentioned in this report comes from Dr. Henry Prescott of So. Dartmouth, Mass., whose hobby for several years has been the proving of old rocks, and location of new ones; with the addition of photographing ranges for such. He is interested mainly in obstructions with least water of 6 feet or less. His information is considered to be very reliable.

See review, par. 10

LANDMARKS FOR CHARTS:

These will be submitted as a separate report for the entire project.

Respectfully submitted,

George F. Jordan,
Surveyor.

(Jordan discharged before Report was typed)

APPROVED & FORWARDED:

Wm. D. Patterson

Wm. D. Patterson, Lieut.,
Chief of Field Party No. 5.

ADDITIONAL NOTES BY CHIEF OF PARTY

HYDROGRAPHIC SHEET NO. 2

Mass. 1935

Wire drag examination of shoals was prevented by the disbandment of the party due to lack of funds. This work should be done in the future since the leadline cannot be depended upon to give the least depths in this rocky area.

Note the decided change in the topography in the vicinity of Keel Rock, Barekneed Rocks and Dumpling Rocks. The topographer of this year is in error in showing Keel Rock as awash at high water since it is awash on extreme high water and bares 1 foot at ordinary high water. This rock should be shown with a full line. *Height of Keel Rock corrected on T-6373(1935) and H-5882 (1935)*

After inspecting our survey of this year, Dr. Henry Prescott, whose information is considered reliable, called attention to the following descrepancies in addition to those mentioned by Mr. Jordan in his report:-

A rock with 4½ feet over it, lies north of Keel Rock in the position indicated by a cross with note on the smooth sheet. Many small boats have struck this rock prior to the changing of the location of the buoy here.

The charted 4 foot spot, close northeast of Barekneed Rocks is reported to be a ledge with 4 feet over it. South of this ledge is a rock with 4 feet over it in the position indicated by a cross with note on the smooth sheet. This rock is close in, but has been struck several times by small boats.

A rock with 4 feet over it lies 50 yards north of Barekneed Rock Beacon on range with Padanaram Breakwater Light and the Yacht Club flagpole.

See review, par. 10 and attached copy of chart letter

The 5 foot rock, about 130 meters south of Dumpling Rock Light is reported on the range east side of Dumpling Rock and west side of White Rock, as shown by a cross on the smooth sheet.

5 foot sounding carried forward from H-2229 (1895) in this position

Inshore hydrography was done by a large skiff, built by the field party, using an outboard motor. Work could only be done on calm days and even then the shore could not be closely approached due to the many rocks and boulders. Except in very few places, the low water line could not be developed.

Respectfully submitted,

Wm. D. Patterson

Wm. D. Patterson, Lieut.,
Chief of Field Party No. 5.

STATISTICS

for

Sheet No. 2 (Field No.)

DATE	DAY	VOLUME	POSITIONS	SOUNDINGS	MILES(Stat.)
April 29	A	1	37	222	10.0
May 1	B	1	6	27	1.5
2	C	1	119	562	26.0
3	D	1	127	518	26.6
6	E	1	126	480	20.0
8	F	2	161	628	31.7
9	G	2	124	484	14.6
11	H	2	124	452	15.0
13	J	3	121	697	24.4
16	K	3	91	424	17.2
17	L	3	129	770	23.3
20	M	4	89	514	14.6
21	N	4	95	462	10.1
22	P	4	69	421	11.3
24	Q	4 & 5	81	455	12.8
25	R	5	82	349	12.1
27	S	5	57	257	6.1
28	T	5	74	378	8.6
June 3	U	5	54	261	5.6
6	V	6	84	482	11.1
11	W	6	84	402	7.5
12	X	6	72	250	5.0
13	Y	6	33	132	3.2
21	Z	6	7	8	0.0
24	AA	6	45	144	3.6
25	BB	7	9	15	0.0
26	CC	7	43	160	4.6
27	DD	7	16	17	0.0
28	EE	7	59	265	6.4
July 1	FF	7	51	132	4.0
2	GG	7	7	22	0.5
19	HH	7	8	33	0.7
August 1	JJ	7	2	2	0.0
2	KK	7	17	68	1.2
9	LL	7	2	2	0.0
10	MM	7	4	4	0.0
12	NN	7	10	10	0.0
13	PP	7	2	2	0.0
14	QQ	8	7	7	0.0
15	RR	8	23	91	2.0
16	SS	8	10	25	0.3
19	TT	8	22	93	1.8
	Totals		2383	10,727	343.4

Area in Square Statute miles 9.43

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. 5882

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

Number of positions on sheet	2383
Number of positions checked	260 (Mostly detached positions on critical shoals)
Number of positions revised	20
Number of soundings recorded	10,727
Number of soundings revised	321
Number of signals erroneously plotted or transferred	1

Date: Dec. 23, 1935

Verification by Harold W. Murray Time: 62¼ hrs.

Review by R.J. Christman Time: 80 hrs

R L Johnston 38½ hrs.

HYDROGRAPHIC SURVEY NO. 5882

Smooth Sheet Yes

Boat Sheet 1

Sounding Records Yes Vols. 8

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol.1

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service Yes
(Circular Nov. 30,1933)

Remarks

Survey No. 5882

Date. Oct. 31, 1935 GEOGRAPHIC NAMES

Chart No. 1210-3

Diagram No. 1210-3

Approved by the Division of Geographic Names, Department of Interior. ✳

Referred to the Division of Geographic Names, Department of Interior. R

Under investigation. Q

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	Nonquitt	same			
	Barekneed Rocks	" 252			
	Sconticut Neck	same			
	Sconticut Point	"			
	West Island	"			
	Angelica Rock	G.N. Standard			
	Black Rock	249, 252			
	Round Hill Point	same			
	Dumpling Rocks	"			
	Salters Point	249			
	Smiths Neck	same			
	Mishaum Point	"			
	CLARKS PT				

Approved 11/26/35
C.H. Egnew

cont.

(M-136)

	Remarks	Decisions
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		

GEOGRAPHIC NAMES

Survey No. H5882

Name on Survey	A: On Chart No. 252	B: On ~~previous survey~~ Cht. No. 249	C: On U.S. quadrangle Maps	D: From local information	E: On local Maps	F: P.O. Guide or Map	G: Rand McNally Atlas	H: U.S. Light List	K	
Lillie Black Rk.	*	—								1
West I. Ledge	*	—								2
Mosher Ledge	*	—								3
Hursell Rock	*	✓								4
Negro Ledge	*	✓								5
Packet Rock	*	—								6
Henrietta Rock	*	—								7
Bents Ledge	*	—								8
Inez Rock	*	—								9
Lone Rock	*	—								10
Middle Ledge	*	—								11
Hussey Rock	*	—								12
Lazy Rock	*	—								13
Fatal Rock	*	—						++		14
The Sandspit	*	—						—		15
Ragged Rocks	*	—								16
White Rock	*	—								17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27
										M 234

222

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

December 5, 1935.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis

Tide Reducers are approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 5882

Locality Approaches to New Bedford Harbor, Mass.

Chief of Party: Wm. D. Patterson in 1935.
Plane of reference is mean low water reading
1.1 ft. on tide staff at Clarks Point
10.6 ft. below B.M. 1

Height of mean high water above plane of reference is 3.7 feet.

Condition of records satisfactory except as noted below:

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

Verification Report H-5882 (1935)

1. Condition of Records

The records are neat, legible and conform to the requirements of the H. M. except as follows:

a. Triangulation station "Black Rock Beacon" in lat. 41°34.7, long. 70°51.8 was incorrectly plotted approx. 5m. north of its correct position. Altho a careful check was made, no changes in field plotting were required. The station is now correctly shown on the smooth sheet.

b. The abbreviation "Rk" was on initial soundings was indicated on the smooth sheet and accompanied by a long leader in ink. These were removed and re-inked in the usual manner.

2. Shoreline & Legends.

The topography adjacent to the hydrography originals with Plane Table surveys: T-6373 (1935) and T-6357 (1935). The control originals with T-6373 (1935), T-6374 (1935) and T-6357 (1935).

3. Sounding Line Crossings

Sounding line crossings are satisfactory, the usual agreement being within 1 foot or less.

4. Depth Curves.

The usual depth curves may be satisfactorily drawn. Soundings to the nearest half foot were plotted wherever

necessary in smoothing depth curves. ✓

5. Junctions with Contemporary Surveys.

a. The junctions on the south west with H-5630 (1934-35) is satisfactory. Depth curves were ✓ adjusted on both surveys.

b. The junctions on the north and northeast with H-5880(1935) and H-5883(1935) will be considered in the verification of those surveys.

c. No other contemporary surveys adjoin the present survey. ✓

6. Field plotting

Field protracting and plotting were satisfactory except as follows:

a. Approximately 170 soundings were changed due to an office change in the tide reducer.

b. Bottom characteristics were not plotted adjacent to the recorded sounding. Approximately 80% were reported in verification. ✓

7. Remarks for Reviewer.

a. Rocks off West Island (lat. 41°35', long. 70° 49.5') are definitely located on H-5883(1935). In this connection two notes are recorded on lines 18-19P (Vol. 4) and refer to rocks which cannot be disposed of by this survey. It is easily possible that they refer ✓ to rocks on previous surveys since several are shown on the boat sheet in color in this vicinity.

a number of rocks were transferred from the 1895 survey (H-2229). 1935

b. A note "breakers ahead" is recorded at pos. 27c (lat. 41°32.'35, long. 70°55.'5) and is not shown on the boat sheet. This information is too meager for definite office plotting since the area in question is generally foul. Old surveys may offer some solution.

c. The writer has checked off little or no information in the D. R. since practically all paragraphs refer to charted information as well. ✓

d. The breakwater in lat. 41°32.'3, long. 70°55.'35 composed of three rocks awash was plotted from information contained in the Ldg. Bk. An appropriate note has been placed on the sheet. ✓

e.

Verified by Harold W. Murray
Dec. 23, 1935

Attention is also directed to the fact that numerous detached rocks and shoals were searched for and not found on one day's work but were frequently found on the 2nd day's search and in some cases, on the 3rd. It can readily be seen that all shoal spots searched for by ½ to 1½ hours of drifting and not found are not necessarily non-existent. ✓ Wire drag examination recommended by the Chief of Party. Sur. Rep. p. 6.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5882 (1935) FIELD NO. 2

Approaches to New Bedford Harbor, Buzzards Bay, Massachusetts
Surveyed in April to August 1935
Instructions dated July 11, 1934, May 11, 1935 (W. D. Patterson).

Hand Lead Soundings. 3 Point fixes on shore signals.

Chief of Party - W. D. Patterson.
Surveyed by - W. H. Jennings, G. F. Jordan, D. S. Ling.
Protracted by - J. C. McIlwaine, Donald Journacy.
Soundings penciled by - W. D. Patterson, C. R. Smith, G. F. Jordan.
Verified and inked by - Harold W. Murray.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except as follows:

> While searching for and examining a shoal, only one position and sounding were recorded (least depth found). The area covered is not indicated and the extent and area of the search may be inferred only by the time recorded in the "Time Column" (time elapsed between two successive soundings). See "Survey Methods", page, 1, Descriptive Report for method of making drift soundings.

The Descriptive Report is complete and satisfactorily covers items of importance.

2. Compliance with Instructions for the Project.

The plan and character of development are in accordance with the instructions for the project, except that the wire drag examination of the shoal areas was prevented by the disbanding of the party.

The low water line was not defined for reasons stated in the last paragraph on page 6 of the Descriptive Report.

3. Shoreline and Signals.

The shoreline originates with plane table survey T-6357 (1935), T-6373 (1935) and T-6374 (1935). The shoreline was compared with air photo compilation T-5604 (1934). R.J.C. - Nov. 17, 1936.

The topographic signals were transferred from the above plane table surveys.

4. Sounding Line Crossings.

The sounding line crossings are satisfactory, the agreement in depth being generally within 1 foot.

5. Depth Curves.

Within the area covered by the survey the usual depth curves may be satisfactorily drawn including a small part of the low water line.

6. Junction with Contemporary Surveys.

The junctions with H-5630 (1934-5) to the southwest and H-5883 (1935) to the east are satisfactory.

The junction with H-5880 (1935) to the north will be considered in the review of that sheet.

There are no contemporary surveys to the southward or in the area between longitude 70°52', and longitude 70°54.2', however, the present survey is in general agreement on these limits with the last previous survey H-2229 (1895).

7. Comparison with Prior Surveys.

a. H-158 (1844), H-159 (1844-5), H-163 (1845-6).

These surveys are on a scale of 1:20,000. The information on H-158 (1844) is repeated on H-159 (1844-5) with considerable added development. However, the work in general is open and the entire area has been closely developed on a later survey. No part of the information on these sheets is in use on the present chart and they should not be considered in future charting.

b. H-2229 (1895), H-2230 (1895-6).

These surveys, on a scale of 1:10,000, are in good agreement with the present survey although in several instances less water is shown than was found during the 1935 survey. In every case the least depth is carried forward on H-5882 (1935) either by transferring the sounding in color or by a suitable note on that sheet. A few additional shoals were found during the 1935 survey. Features within the area of the present survey, which should be mentioned are the following:

(1) The 6 foot detached shoal (charted) in latitude 41° 32.35', longitude 70°56.40', was not found after a search at low tide. Its disappearance is accounted for by the dredging for material to fill in marsh land for an airport nearby. (See 2nd par. under "Remarks", page 5, Descriptive Report, and page 52 Vol. 7 of sounding record). The 6 foot sounding from H-2229 (1895) should be disregarded in future charting as recommended by the field party.

(2) The detached 12 foot spot (charted) in latitude

41°32.25', longitude 70°55.97', from H-2229 (1895) falls close outside a 12 foot sounding on the present survey. This sounding has not been transferred but the 12 foot curve has been extended to include the area.

(3) The 3 foot sounding (charted) in latitude 41°32.23', longitude 70°56.70', from H-2229 (1895) falls in depths of 10 to 11 feet, close inshore, on the present survey. A search showed only prevailing depths and the field party reports that a sand sucker was used in the area to obtain material for a fill. (See vol. 7, page 51, Sounding Record). The 3 foot sounding should, therefore, be disregarded in future charting as recommended by the field party.

(4) The rock awash (charted) in latitude 41°32.15', longitude 70°55.70', falls in blank area close to a 3-1/2 foot rock located on the present survey. The rock was located from a sounding line (pos. 87z to 88z) on H-2229 (1895), when the tide was 7/10 of a foot below mean low water. The present field party reports "Extensive search was made by topographic and hydrographic parties for this rock which was not found". (See Descriptive Report, page 3). The topographic party searched the area at extreme low water in favorable weather, however, they recommend the retention of the rock as a sunken rock unless disproved by hydrgraphy. (See Descriptive Report of T-6373 (1935) page 2). The rock is considered disproved as a rock awash but since no soundings were taken over its position, it has been carried forward as a sunken rock.

(5) The 4 foot sounding (Hussey Rock) shown on H-2229 (1895) in latitude 41°33.36', longitude 70°55.43', was found to be erroneously protracted about 30 meters northwest of the present location. When correctly plotted this sounding falls within about 10 meters of the present 5 foot sounding. The old 4 foot depth has been retained, however, the position located on the present survey is considered more accurate because of better control used and should be accepted for charting.

(6) The line of soundings with depths of 11 to 14 feet extending eastward from Hussey Rock and terminating with a 13 foot sounding (charted) at latitude 41° 33.36', longitude 70°55.36', fall in depths of 21 to 25 feet on the present survey. An examination of the old records (pos. 57x to 58x red) reveals a note "must be a mistake" applied to the last four soundings and cross lines on H-2229 (1895) indicate that

the depths on this line are incorrect. The present field party made several examinations and took drift soundings without finding any indication of a ridge. The four soundings questioned in the old record are considered erroneous and the charted 13 foot sounding should be removed from the chart.

(7) The rock awash (charted) in latitude 41°34.89', longitude 70°51.60', falls in shoal area close to the low water line on the present survey, which located a rock awash about 80 meters westward as well as a number of other rocks southwestward. The charted rock awash originates with a sounding of minus 1/4 foot, shown on H-2229 (1895). The field party reports that it is not a definite rock but part of the old low water line. (See page 4, Descriptive Report). The present delineation of rocks in this area should be accpeted and the minus 1/4 foot sounding (charted rock awash) disregarded in future charting.

(8) The two sanded low water spots (charted) in latitude 41°34.85', longitude 70°50.10', and latitude 41°34.94' longitude 70°50.15', originate with scattered minus soundings shown on H-2229 (1895). There is 3 to 5 feet of water at these locations on the present survey, however, the locality is foul and several rocks awash were located in these areas. The sanded spots are misleading and they should be replaced on the chart by the recently located rocks awash.

(9) The two 6 foot rocks (charted) in latitude 41°33.90', longitude 70°56.15 were not found by the present survey after an examination by drift soundings, however, a 5 foot rock was located about 100 meters to the northward. The outer 6 foot sounding originates with the 1895 work of H-2230 while the inner 6 foot sounding, 35 meters inshore, was obtained during a special examination in 1896 also shown on H-2230. The outer 6 is located by a weak fix and these two soundings may actually be on the same rock, however, both soundings have been retained because of the recommendation by the field party. (See Descriptive Report, par. 1, page 4).

(10) No authority could be found in the records for the group of sunken rocks (one of which is charted) adjacent to the 6 foot soundings in latitude 41°33.90', longitude 70°56.15'. They probably were not definitely located but simply designate rocky bottom. In view of the statement in the Descriptive Report that more rocks may exist in this area, the word "foul" has been added to the smooth sheet in red, but the sunken rock symbols were not carried forward.

(11) Extensive changes have taken place in the area to the northward of latitude 34°34', and eastward of longitude 70°51.8'. The chart shows a "Dumping Ground" in the eastern part of this area but a comparison of the present survey with the 1895 survey shows good agreement. It is, therefore, presumed that the dumping of dredged material occurred in the area between Black Rock and Little Black Rock where considerable shoaling is shown on the present survey.

(12) The bare rock (charted) in latitude 41°34.74', longitude 70°51.50' originates from an indefinite note in the records, pos. 20b red, of H-2229 (1895) which reads "50 meters from large boulder". The rock is erroneously plotted on H-2229 (1895) and when correctly plotted it falls within 40 meters of a small rocky islet located on the present survey. The present location should be accepted and the above rock should be removed from the chart as recommended by the field party. (See Descriptive Report, par. 2, page 4).

(13) The three submerged rock symbols (charted) in latitude 41°32.27', longitude 70°55.5', fall in depths of 7 to 8 feet on the present survey in a small passage between Round Hill Pt. and Dumpling Rocks Lighthouse. They originate with H-2229 (1895) but no authority for them could be found in the records, however, the sounding line to the eastward could not be identified. If there is any note on this unidentified line locating the rocks it is of an approximate character since this line is about 50 meters distant. Extensive search by two hydrographic parties, as well as inquiries failed to reveal these rocks. (See page 3, Descriptive Report). The present survey shows rocks awash about 50 meters westward and these rocks are believed to belong in this area. In view of their doubtful origin and indefinite location the three submerged rocks should be removed from the chart as recommended by the field party.

(14) The 15 foot sounding (charted) in latitude 41°32.18' longitude 70°56.0' falls in depths of about 21 feet on the present survey. The position which locates this sounding (pos. 18o green) was found to have been erroneously protracted on H-2229 (1895). This threw a line of shoal soundings in deeper water on the present survey. When correctly plotted the soundings on this line are in agreement with the present depths. The 15 foot sounding should, therefore, be disregarded in future charting.

(15) The 18 foot spot (charted) in latitude 41°34.35', longitude 70°50.05' (No. 36 in the list on page 5 of the Descriptive Report) was found to actually be a 19 on

H-2229 (1895). This depth is in agreement with the present survey.

c. H-2601 (1902), H-2601b (1903), H-2601c (1904).

These surveys are special examinations of various small areas on scales of 1:10,000, 1:20,000 and 1:10,000 respectively. A number of the shoal soundings have been carried forward. The parts in conflict with the present survey are as follows:

(1) The 19 (charted) in latitude 41°31.90', longitude 70°55.49' was found to be from an erroneous plotting of pos. 60f (red) on H-2601b (1903). The corrected plotting puts the above 19 in agreement with the present depth and it should be discontinued on the chart.

(2) The 25 foot sounding (charted) in latitude 41°33.36' longitude 70°51.40' (No. 33 in the list of soundings page 5 of the Descriptive Report) comes from H-2601b (1903). The record shows a single shoal sounding on a single line over "stk" bottom. It falls in 32 feet M bottom on the present survey, but apparently rock was encountered during the search and, therefore, the 25 has been carried forward as recommended by the field party.

(3) The 29 foot sounding (charted) in latitude 41°33.55', longitude 70°51.78' (No. 32 in list of soundings, page 5 of Descriptive Report) comes from H-2601b (1903) and falls in depths of 33 feet on the present survey. It was the shoalest sounding on a line of soundings about 2 feet shoaler than the adjacent lines. Two lines of soundings over this area during the following season (H-2601c of 1904) further tend to discredit the above line of soundings. The present survey indicates a general deepening in this area. The 29 has not been retained and the representation on H-5882 (1935) should be followed in future charting, as recommended by the field party.

(4) The 24 foot sounding (charted) in latitude 41°32.10' longitude 70°55.15' (No. 27 in the list of soundings on page 5 of the Descriptive Report) comes from H-2601b (1903). An examination of the record shows that it is not a detached sounding and if strictly spaced by time will plot to the westward of the position now charted. In its revised position it is in fair agreement with the 1935 survey which should be followed in future charting. The above 24 should be removed from the chart as recommended by the field party.

d. H-2968 (1908-9-13-14 WD), H-3556 (1913-14-15 WD).

These wire drag surveys are on a scale 1:20,000. Nearly all the actual soundings falling within the area of the present survey have been transferred to H-5882 (1935) in green. The present depths are consistent with the effective depth of the drag. There is some doubt concerning the following sounding:

(1) The 16 foot sounding, originating with the 1914 wire drag work shown on H-2968 (1908-1914), in latitude 41°32.9', longitude 70°54.97', falls in depths of 30 feet on the present survey. It is a single sounding on the edge of the drag work and was not cleared by the drag. No check angle was obtained on the fix locating it. (Pos. 2E blue). In view of the importance of this sounding and the fact that neither the hydrographic survey of 1895, H-2229, nor the present survey after an hour of drift sounding (pos. INN), show any indication of such a depth, the 16 foot sounding should be investigated in the future.

8. Comparison with Chart 252 (New Print dated May 23, 1935) and Chart 249 (New Print dated Sept. 18, 1934).

a. Hydrography.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and on miscellaneous information as follows:

(1) The breakwater and the two groups of sunken rock symbols charted in approximate latitude 41°32.1', longitude 70° 56.7', come from blue print 15445 (1914). A careful search did not reveal any dangers in the positions of these sunken rock symbols. A 5 foot depth was found in the position of the sunken rock symbol off the southwest end of the breakwater. The sunken rock symbols should be deleted from the chart, as recommended by the field party. (See Nos. 3 and 24, List of soundings, page 4 of the Descriptive Report).

(2) The following soundings are charted on either Chart 249 or Chart 252 from Chart letter No. 11 of 1915, containing advance information of the shoals found by the wire drag in 1914, H-2968 W.D. (1908 - 1914).

22	foot	sounding	in	lat.	41°32.22',	long.	70°55.05'
22	"	"	"	"	32.35',	"	55.10'
21	"	"	"	"	33.66',	"	55.08'
26	"	"	"	"	32.17',	"	55.17'
29	"	"	"	"	33.18',	"	54.72'

When investigated it was found that the positions of some of the shoals found by the drag were erroneously spotted on the section of the chart submitted with

the letter. The shoal soundings were incorrectly shown at the position of the near buoy, which had the same day letter and position number as the tender position, as well as in their correct location at the tender position. This resulted in a duplication of a number of the shoals. The above charted soundings originate from the erroneous positions and should be expunged from the chart.

(3) The wharf charted in latitude 41°32.45', longitude 70° 55.72', is derived from T-4612 (1931). It no longer exists and should be expunged from the chart. (See Descriptive Report, page 3).

(4) The wreck symbol charted in latitude 41°31.61', longitude 70°57.25', originates with 3 sunken rock symbols shown on T-2218 (1895). The present topographic party located two rocks awash ~~in~~ about 50 meters west of this position which should replace the wreck symbol on the chart.

b. Aids to Navigation.

The (F L W) buoy No. 9, in latitude 41°33.3', longitude 70°54.4' was not located on the present survey. The other buoys were located in substantially the same position as charted with the exception of the following buoys, which were located in slightly different positions:

Black buoy	C5	Lat. 41°31.5'	Long. 70°56.27'	charted about	40	meters	E
" "	C7	32.02'	55.22	" "	80	"	N by W
" "	C1	33.35	55.41	" "	60	"	S.E.
Red buoy	N2	34.11	54.85	" "	120	"	S.W.
" "	C1	34.75	52.1	" "	40	"	N.
Hor.stripe buoy	N	34.31	52.25	" "	30	"	SE
Lighted buoy"4"	flR	33.53	51.41	" "	40	"	W.
Hor.stripe buoy	GONG	32.9	51.89	" "	70	"	E.
Black buoy	C3	33.48	55.87	" "	130	"	S.S.E.

(This is the position of this buoy after it was moved. See Descriptive Report, page 2).

All of these buoys in their present locations adequately mark the features intended.

9. Field Plotting.

Protracting and penciling of soundings were satisfactory but bottom characteristics were not plotted adjacent to the soundings for which they were recorded.

In many places the abbreviation "Rk" was inked too far from the feature or sounding to which it was connected by a leader. This was changed in the office by placing the abbreviation close to the feature and erasing the leader.

10. Additional Rocks on Survey.

The information obtained by the field party from private sources regarding the existence of certain rocks not located by the present survey and the existence of shoaler depths on some of the rocks shown on the survey (see Descriptive Report, page 2, par. 1, page 4, par. 1, and page 6, pars. 3, 4, 5 and 6) have not been added to the smooth sheet. While the chief of party's statement regarding the reliability of the source is not questioned, the office practice is to show only such information on the smooth sheet that originates with a survey by this Bureau. However, the information has been incorporated in Chart Letter No. 377, 1936, a copy of which is attached to this review, and will be charted therefrom.

11. Additional Field Work Recommended.

The wire drag examinations, which were contemplated in connection with this survey, were not made due to the disbanding of the field party. Most of the shoals have been examined by drift soundings but in numerous cases the least depths found are a little greater than shown on prior surveys. The leadline can not be depended upon to give the least depths in areas of such irregularity. Because of the irregular character and nature of the bottom with boulder formation, the entire area covered by the present survey should be wire dragged as close inshore as possible. (See recommendation by Chief of Party in Descriptive Report, par. 1, page 6). If such drag survey is not feasible, the following more important shoals and indications should have additional lead line development supplemented by drift soundings, or the short wire drag:

a. The 8 foot rock located on the present survey in latitude 41°33.31', longitude 70°55.84' should be further examined since a depth of 4-1/2 feet has been reported over it. (Seepar. 10 of this review and attached copy of chart letter.)

b. The area described in the Descriptive Report, page 2, par. 6, should be examined.

c. The 16 foot sounding in latitude 41°32.9', longitude 70°54.97' should be verified or disproved either by the wire drag or a drift sounding examination. (See par. 7d (1) of this review).

d. Practically all of the soundings carried forward in color from prior hydrographic surveys should be investigated.

e. The 22 foot sounding shown on the present survey in latitude 41°31.97', longitude 70°55.80' is a single sounding on the regular system of lines in hard bottom between depths of 25 to 29 feet. It should be examined further.

12. Note to Compiler.

The compiler's attention is called to paragraph 10 of this review and to the information incorporated in the attached copy of Chart Letter No. 377 of 1936.

13. Superseding Old Surveys.

Within the area covered the present survey, with indicated additions from previous surveys, supersedes the following surveys for charting purposes:

H-158	(1844)	in	part
H-159	(1844-5)	"	"
H-163	(1845-6)	"	"
H-2229	(1895)	"	"
H-2230	(1895-6)	"	"
H-2601	(1902)	"	"
H-2601b	(1903)	"	"
H-2601c	(1904)	"	"

14. Reviewed by - R. J. Christman, January 16, 1936, and R. L. Johnston.

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green.
C. K. Green,
Chief, Section of Field Records.

L. O. Colbert
Chief, Division of Charts.

Fred. L. Peacock
Chief, Section of Field Work.

Chief, Division of H. & T.

Copy of Chart Letter No. 377 (1936)

C2-LEF

May 11, 1936.

MEMORANDUM to Chart Division:

The soundings noted in red on the attached photostat of H-5882 (1935) in the approaches to New Bedford Harbor, Massachusetts, were obtained by the field party from private sources subsequent to the completion of the field work. The source is considered very reliable by the field party (see Descriptive Report, page 2, par. 1, page 4, par. 1, page 5, par. 3 of Remarks, and page 6, para. 3, 4, 5 and 6), and they recommend their addition to the charts. This recommendation is concurred in. (See also par. 10, Review H-5882).

Following are the geographic positions of the soundings involved:

Depth	Latitude	Longitude
4-1/2 foot rock	41° 33' 574 m.	70° 55' 1170 m.
4-1/2 " "	41° 33' 1580 m.	70° 56' 222 m.
4-1/2 " "	41° 33' 856 m.	70° 55' 1258 m.
4 foot rock	41° 33' 690 m.	70° 56' 100 m.
4 " "	41° 33' 637 m.	70° 55' 1320 m.

A. L. Shalowitz,
Reviewing Section.

25 Jan 15, 1936
ECHO

Applied to drawing of Chart 237 - Dec. 1, 1936 - J.T.W.
Appl'd to 1210 Reconstr. 11/27/61 thru chart 252 - [illegible]