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U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: Rhode Island

Hydrographic } Sheet No. 1 5554

LOCALITY

Narragansett Bay, R. I.
Vicinity of Gould Island

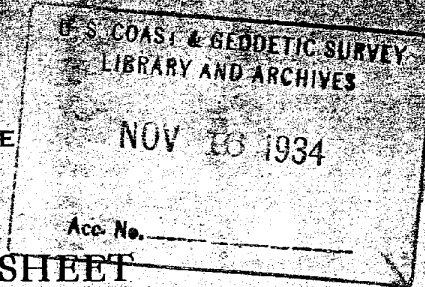
1934

CHIEF OF PARTY

Wm. D. Patterson, Lieut.
U. S. Coast & Geodetic Survey.

5554

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY



REG. NO. 5554

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. 1

REGISTER NO. 5554

State Rhode Island

General locality Narragansett Bay

Locality Vicinity of Gould Island

Scale 1:5,000 Date of survey Aug. 21 - Sept. 28 19 34.

~~Vessel~~ Field Party No. 5

Chief of Party Lieut. Wm. D. Patterson, U.S.C. & G.S.

Surveyed by Lieut. (j.g.) George E. Morris, Jr., U.S.C. & G.S.

Protracted by J. C. McIlwaine

Soundings penciled by C. R. Smith

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by RB Krum

Verified by J W Day and RB Krum

Instructions dated May 14, 1934; and Supplemental Instructions dated July 11 & 31, 19 34.

Remarks:

1

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEET NO. 1 (Field Number)
VICINITY OF GOULD ISLAND, RHODE ISLAND.

DATE OF INSTRUCTIONS

Director's Instructions dated May 14, 1934; Supplemental Instructions dated July 11 & 31, 1934; and Director's Letters, subject "Field Work" dated August 9 & September 20, 1934.

* These letters concern directly to H. 5854 R

SURVEY METHODS

Standard hydrographic methods were followed. Three point sextant fixes for position were taken on shore objects located by triangulation, planetable, or sextant angles. Depths were obtained by use of the phosphor bronze stranded-wire centered mahogany tiller rope leadline, marked in fathoms and feet. Inshore soundings were taken from a skiff with a sounding pole marked in feet.

DISCREPANCIES

the positions 10K to 15K inclusive do not plot in the exact location in which the line was run. It is believed that other poles were confused with the signal Hay because of the sun shining directly behind it so that neither angle nor the sum angle would be correct. For that reason it is recommended that the positions be rejected and that the topographic low water line, which was run at low tide, be used. ✓ ✓

DANGERS

The 25 foot spot charted in Latitude 41° 31'.8, Longitude 71° 19'.3 was searched for but not found. Several closely spaced cross lines were run in addition to an hour spent in drift sounding on two days over the area. The least sounding found was 29½ feet, positions 138D, 123K & 124K. The bottom is sticky mud and it is believed that the shoal has worn away to the present depth. It is recommended that 29½ feet be accepted as the least depth. ✓

Records of W.D. 3801 ^(H15) mention a Boulder. The 25 foot sounding has been retained R.L.G.

Bishop Shoal, Latitude 41° 31'.0, Longitude 71° 20'.1 is charted as 8½ feet. A sounding of 8½ feet, position 14L was found. A small shoal, 100 meters inshore from Bishop Shoal, position 1B, has a least depth of 9 feet. ✓

DANGERS (continued)

The rock awash shown in Latitude $41^{\circ} 32'.2$, Longitude $71^{\circ} 20'.7$ (letter dated Sept. 20, 1934) was found to bare 2 feet at low water, position 95L. It is just outside the low water line.

The 1 foot spot charted 80 meters north of Gould Island could not be found. It was searched for at low tide when the bottom could be seen in two fathoms of water. It is recommended that it be removed from the chart.

The spit north of Gould Island is strewn with rocks. The most northerly ones were located, positions 110L, 111L. A shoal spot of $1\frac{1}{2}$ feet lies just north of 111L, the first sounding before position 7D.

Fowler Rocks, Latitude $41^{\circ} 32'.0$, Longitude $71^{\circ} 21'.8$ were found, positions 27J, 28J & 29J. A wharf is built with its outer end on a large rock, position 91H.

The rock charted as a rock awash in Latitude $41^{\circ} 31'.4$, Longitude $71^{\circ} 21'.7$ is bare at mean high water, position 50J.

The reported shoaling south of Gould Island, H.O. letter July 25, 1934, was investigated. The five fathom curve has built out a short distance to the south of the southeast end of Gould Island but not in a south-southwesterly direction as reported. In addition to the closely spaced cross lines a total of more than three hours on three different days was spent in drift sounding to make sure the reported 27 foot spot was not a detached shoal. It is recommended that the depths be charted as obtained by this survey.

The Sisters ^{KB}

The Sisters Rocks, Latitude $41^{\circ} 31'.3$, Longitude $71^{\circ} 19'.7$ were found, positions 46B, $1\frac{1}{2}$ feet; 47B, 3 feet; 161C, bares 3 feet; and 162C, $2\frac{1}{2}$ feet.

A rock awash, Latitude $41^{\circ} 31'.3$, Longitude $71^{\circ} 19'.7$, position 92K is the end of a rock spit making out from shore. It should be charted as the northwesterly end of the spit bare at low water rather than as a detached rock.

A rock awash, Latitude $41^{\circ} 31'.4$, Longitude $71^{\circ} 19'.5$, position 72K is the northerly end of a rock spit making out from shore. It should be charted as the northerly end of a rock spit bare at low water rather than as a detached rock.

*Ref symbol
extended to conform
with suggestion
G.R./35*

Several rocks were found along the west shore of Rhode Island between Latitude $41^{\circ} 31'.8$, and $41^{\circ} 32'.5$: positions 57K, bares 1 foot; 58K, bares 1 foot; 59K, awash at low water; 60 K, bares $2\frac{1}{2}$ feet; 61K, bares 1 foot; 62K, bares $1\frac{1}{2}$ feet; 63K, bares $\frac{1}{2}$ foot; 64K, awash at low water; 65K, bares $1\frac{1}{2}$ feet; 66K, bares 3 feet; 67K, bares $1\frac{1}{2}$ feet; 68K, bares 1 foot; 69K, bares 1 foot; 70K, bares $1\frac{1}{2}$ feet; 71K, bares $3\frac{1}{2}$ feet. The area between this row of offshore rocks and the high water line is very rocky.

COMPARISON WITH PREVIOUS SURVEYS

A close comparison was made with the published chart as the survey progressed. All charted dangers were investigated, see DANGERS above.

The row of buoys WC 36 to WC 43 inclusive, charted in Longitude $71^{\circ} 21'.5$, between Taylor Point and Fowler Rocks was not in at the time of this survey.

DATUM

The sheet is projected on North American 1927 datum which was obtained by applying a correction of -12.4 meters in latitude and +3.7 meters in longitude to all triangulation stations on the old North American datum. This correction was obtained in this vicinity by the connection of the new triangulation with the old work.

Respectfully Submitted;

George E. Morris Jr.
George E. Morris, Jr.,
Lieutenant (j.g.).

Approved:

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

STATISTICS
HYDROGRAPHIC SHEET NO. 1 (Field Letter)
VICINITY OF GOULD ISLAND, RHODE ISLAND.

DATE 1934	DAY LETTER	VOLUME	POSITIONS	SOUNDINGS	STATUTE MILES
Aug. 21	A	1	130	304	13.3
" 22	B	1	173	434	14.7
" 23	C	1	151	392	13.7
" 23	C	2	15	49	4.7
" 27	D	2	140	507	8.6
" 28	E	2	82	394	8.5
" 29	F	2 & 3	178	717	17.3
" 30	G	3	93	596	8.2
Sept. 6	H	3	133	515	13.4
" 10	J	3 & 4	77	353	5.5
" 11	K	4	145	566	9.1
" 25	L	4	138	502	13.3
" 26	M	5	73	210	5.1
" 27	N	5	9	39	0.7
" 28	P	5	61	310	5.9
TOTALS	14	5	1598	5888	142.0

Area - 4.8 Square Statute Miles.

LAC

December 1, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

E. P. Ellis

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 5554

Locality Vicinity of Gould Island, Newport, Rhode Island

Chief of Party: W. D. Patterson in 1934

Plane of reference is mean low water, reading

1.4 ft. on tide staff at Newport Naval Training Station

35.9 ft. below B.M. 1

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

Condition of records satisfactory except as noted below:

Acting Chief, Division of Tides and Currents.

Verification Report H-5554

Records:

The records are neat and legible. They conform to the requirements of the Hydrographic Manual.

Plotting:

The plotting was well done, except for the location of some of the rocks along the eastern edge of the sheet. Those rocks, whose position was in error, have been corrected.

Drafting:

The field drafting was well done. All of the low water line from T-6116 (1934) was transferred in ink to this sheet. Most of it had to be removed in favor of a yellow curve defined by hydrography.

Crossings:

The crossings in general are in good agreement.

The notable exceptions are

1. a 70 foot sounding in lat $41^{\circ}31.6'$, long $71^{\circ}20.8'$. This is just a hole amidst much shaller depths. ^{is considered insignificant.}
2. a 6 foot sounding in lat $41^{\circ}31.5'$, long $71^{\circ}18.7'$. ^{line incorrectly plotted} was replotted making this 6 ft. sdg. _{not so outstanding.}
3. a 15 foot sounding in lat $41^{\circ}31.2'$, long $71^{\circ}19.9'$. ^{Cannot be discredited. Evidently a shoal spot to be commented on in review.}
4. a 23 foot sounding in lat $41^{\circ}32.3'$, long $71^{\circ}20.7'$. Replaced by shaller sdg. from a replotted line which was incorrectly plotted. R.

These exaptions were carefully investigated and no proof could be found to change their present location

Curves: The usual depth curves could be drawn.

Junctions:

H-5621 (1934) which this sheet joins on the south is not yet verified

Comparison with Other Data:

This sheet checked well with the boat sheet and with Topographic survey 6116 (1934) Besides T-6116 there is no other available ^{nor compilation sheet} contemporary topographic sheet, covering this area, nor will there be any such received from the field this season. Therefore the missing portions of shoreline must be obtained from T-1119 (1869), T-1194 (1870-71), T-1162 (1870) The verifier decided, for the time being, not to take any topography from such old sheets.

Remarks:

The projection was verified by J.W. Day, in this office. The latitude shrinkage was found to be 0.0038, the longitude shrinkage 0.0058. J.W. Day also verified the triangulation, Topographic and Hydrographic stations. There were some positions on A day (red) checked by J.W. Day but the remainder of the verification and all the inking was done by the writer.

Respectfully submitted
G.B. Krum

Feb 7, 1935

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. .5554

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

Number of positions on sheet	.1598
Number of positions checked	...70...
Number of positions revised	...20...
Number of soundings recorded	.5888.
Number of soundings revised	...24...
Number of signals erroneously plotted or transferred	...none.

Date: Feb 7, 1935

Verification by *P.B. Krum* ——— 65 $\frac{3}{4}$ hrs Time:

J. W. Day ——— 11 $\frac{1}{2}$ hrs

Review by *G. Risegari* 11 $\frac{2}{3}$ days Time:

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5554 (1934).

Vicinity of Gould Island, Narragansett Bay, R. I.

Surveyed in 1934

Instructions dated May 14, 1934, (W. D. Patterson)

Supplementary Instructions dated July 11, 1934 and July 31, 1934
(W. D. Patterson, Director's letters, Aug. 9, 1934 and September 20, 1934.

Hand Lead and Pole Soundings - 3-Point Control on Shore Signals.

Chief of Party - W. D. Patterson.
Surveyed by - G. E. Morris, Jr.
Protracted by - J. C. McIlwaine.
Soundings penciled by - C. R. Smith.
Verified by - R. B. Krum, J. W. Day.
Inked by - R. B. K.

1. Condition of Records.

The records conform to the requirements of the Hydrographic Manual, except that evidence that the projection, triangulation stations and transfer of Topo signals were checked in the field was lacking since the initials of the checker were not shown on the sheet. This was done in the office.

2. Compliance with Instructions for the Project.

The survey fulfills the requirements of the instructions for the project.

3. Sounding Line Crossings.

The crosslines where they occur are in good agreement and in other areas the agreement of adjacent lines is satisfactory.

4. Depth Curves.

The usual depth curves can be completely drawn within the limits of the survey.

5. Junctions with Contemporary Surveys.

The junction on the south with H-5621 (1934) will be considered in the review of that sheet.

There is no contemporary work north of the present survey, which is in fair general agreement with H-787a (1862) on its northern limits.

6. Comparison with Prior Surveys.

a. H-787a (1862)

There are no outstanding differences in depths between this survey

and the present survey.

(1) A charted rock awash near shore about 500 meters north of Fowler Rocks (lat. $41^{\circ}32'27$, long. $71^{\circ}21'.9$) was not mentioned by the field party in their descriptive report. It was indefinitely located by distance and direction from a sounding line (pos. 5q to 6q) on H-787a (1862) which shows that the rock bares about 3 feet at mean low water. It falls on the present survey between a 0 and a 4 foot sounding. The rock has been added to the present survey and should be retained on the chart until disproved.

(4) on H-787

(2) Another rock awash (not charted) about 150 meters south of the above mentioned rock falls between a 0 and a 2 foot sounding on the present survey. The old records (pos. 6q) show a sounding which reduces to minus 3 feet at M.L.W. with notation of rock. Although the field party failed to note this rock, it has been added to the present survey and should be charted until disproved.

Not on H-8367

(3) A long string of charted sunken rock symbols, close in-shore, in approximate lat. $41^{\circ}32'.4$, long. $71^{\circ}21'.9$ originate with H-787a (1862). They are not definitely located rocks and the only authority for them is the rocky bottom noted on the line from pos. 5q, to pos. 6q. For this reason they have not been carried forward to the present survey and should be discontinued on the chart.

indivisible located on H-8367

(4) A discrepancy exists in the location of the lower rock awash off the western shore of Coddington Pt., vicinity of The Sisters (lat. $41^{\circ}31'27$ long. $71^{\circ}19'.76$). It falls about forty meters south of the position of a rock on H-5554 (1934). The records of H-787a (1862) describe a rock which bares $2 \frac{3}{4}$ feet at mean low water and as there is no other rock of any such height in this area, it is evidently the same one shown on H-5554 (1934), which bares 3 feet at mean low water. Soundings of 4 and 5 feet were obtained on the present survey over the old position of the rock at a time when there was $1\frac{1}{2}$ feet of tide. The old rock awash should be replaced on the chart by the rock awash located on the present survey.

H-8394 location agrees

(5) A bare rock appearing on Chart No. 236 just south and close to the dock near Fowlers Rocks (lat. $41^{\circ}31'.93$, long. $71^{\circ}21'.76$) originates from H-787a (1862). The records describe this rock as "10 feet out of water" at about high tide. The end of the dock on H-5554 (1934) rests on a rock which dock was built since the old survey was made. It appears self-evident that these rocks are one and the same as the field party of 1934 when developing this area would have noted another rock which in this case would be very outstanding. The bare rock symbol should be discontinued on the chart.

Rock (4) H-8367

b. H-785 (1862-65).

This sheet is practically a duplication of a section of H-787a (1862), the only difference being that the soundings are in fathoms and not in feet. Nothing on the sheet has additional information of value for purposes of comparison.

c. H-3801 (1915) Wire Drag Survey.

A general comparison of the area and depth tracing with H-5554 (1934) shows no discrepancies between the effective depths of the dragged areas and the soundings of the present survey.

(1) A one foot spot charted 80 meters north of Gould Island was searched for by the present field party at low tide. (See D.R. P. 2). It falls among much deeper soundings of the present survey. This shoal spot comes from H-3801(1915) and the sounding is probably erroneously located.

A study of a composite tracing of all soundings from H-787a (1862) and H-5554 (1934) in this area do not bear out the fact that a shoal exists here. The field party's recommendation that the 1 foot sounding be removed from the chart is concurred in.

(2) A rock awash from H-3801 (1915), lat. $41^{\circ}31'.2$, long. $71^{\circ}21'.7$ not shown on Chart No. 236, plots just outside the western limit of H-5554 (1934). This rock appeared on the charts previous to and including the 1928 edition, but on the 1929 edition the rock disappeared. In the investigation for the authority of its removal it appears that the symbol was removed inadvertently. The matter was brought to the attention of the Chief of the Cartographic Section who has taken steps to restore the symbol.

(3) Two rocks awash appear on H-3801 (1915) off the westerly coast of Coddington Pt. in approximate lat. $41^{\circ}31'.3$, long. $71^{\circ}19'.75$. No definite location of these rocks could be found in the records of that sheet.

The upper rock plots sufficiently close to agree with a similar rock on H-5554 (1934). The lower rock however, plots about 55 meters southwest of the position of a rock on the present survey and is evidently out of position.

Both rocks were definitely located on H-5554 (1934). The position of the lower rock on the present survey is further verified by agreement with location on T-869 (1862). These rocks should be charted from H-5554 (1934).

(4) The 25 foot sounding charted in lat. $41^{\circ}31'.8$, long. $71^{\circ}19'.35$ was investigated by field party who reported it could not be found.

This sounding is from the records of H-3801 (1915) where it states at position 3m, that the drag got hooked on boulder at 29 feet and then slipped off. The 25 foot sounding was obtained at this point.

Since the present survey did not drag over the area, there is not sufficient evidence that such depth does not exist, particularly where a boulder was reported. The 25 foot sounding as well as the adjacent soundings of 27, 28, 29, and 30 feet have been added to the present survey and should be retained on the chart.

(5) Four charted bare rocks, near shore in lat. $41^{\circ}32'.1$, long. $71^{\circ}18'.8$ originate from H-3801 (1915) although no actual location of these rocks could be found in the records of that sheet. These rocks when transferred to the present survey fall among minus soundings. It is probable that the present field party would have seen any bare rocks in this area. The rocks on H-3801 (1915) are believed to be a very sketchy location of the two rocks awash which were located on the present survey a little further offshore. They should be replaced on the chart by the rocks shown on H-5554 (1934).

(6) The 25 foot sounding (charted) in lat. $41^{\circ}31'.07$, long. $71^{\circ}20'.0$ has also been added to the present survey.

7. Comparison with Chart No. 236.

a. Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs except that the charted bare rock, lat. $41^{\circ}31'.8$, long. $71^{\circ}21'.8$, just inside the 18 foot curve has its origin in a dirt spot which got on the 1929 edition and was carried forward. The matter was brought to the attention of the Chief of Cartographic Section, who has taken steps for its removal.

b. Aids to Navigation.

The buoys WC 36 to WC 43 inclusive, charted in long. $71^{\circ}21'.5$, between Taylor Pt. and Fowler Rocks were not in at the time of this survey, and therefore could not be located.

Three uncharted nun buoys were located off the northern end of Gould Island.

The buoys marking The Sisters, Bishop Shoal and the mooring buoy in approximate lat. $41^{\circ}32'.55$, long. $71^{\circ}19'.1$, were located in approximately the same positions as charted.

8. Field Plotting.

Protracting of positions and the plotting of soundings in general was satisfactory.

9. Additional Field Work Recommended.

a. For future consideration.

A 15 foot shoal spot between Bishop Rock and The Sisters appears in rocky bottom and it is quite possible that a shoaler depth exists in this area. This shoal should be further developed.

10. Shoreline from Old Surveys.

The shoreline of Conanicut Island and Rhode Island was not entirely surveyed by the topographic party. When the shoreline from the old topographic surveys was transferred to the sheet it was found that it did not join adequately with the new shoreline. There was a discrepancy at the junction in approximate lat. $41^{\circ}31'.3$, long. $71^{\circ}18'.75$. For this reason the shoreline from the old topographic surveys has not been added to H-5554 (1934). It is understood that an aerial photographic survey will be made of this area.

11. Superseding Old Surveys.

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

H-787a (1862) in part.

H-785 (1862-1865) in part.

12. Reviewed by G. Risegari, March 1935.

Inspected by R. L. Johnston.

Examined and approved:

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

J. Borden
Chief, Section of Field Work.

L. O. Pollock
Chief, Div. of Charts.

G. H. Hilde
Chief, Div. of H. & T.

25 Jan 25, 1936

Applied to CIA 236 - Feb '36 - H.J. ^{Ellis} ~~Sawyer~~