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Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Topographic } *Sheet No.* 1
Hydrographic }

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

OCT 9 1941

Acc. No.

State RHODE ISLAND

LOCALITY

BLOCK ISLAND

GRASS SALT POND

1921

CHIEF OF PARTY

H. C. Warwick

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. **H6668**

State RHODE ISLAND

General locality BLOCK ISLAND

Locality GREAT SALT POND

Scale 1:5,000 Date of survey Sept. 5 - 7, 1941

Vessel GILBERT

Chief of Party H. C. Warwick

Surveyed by H. F. Garber

Protracted by H. F. Garber

Soundings penciled by H. F. Garber

Soundings in ~~bottoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by C. E. Dennis 11/10/41

Verified by

Instructions dated August 20 and 29, 1941

Remarks:

H6668

STATISTICS

SHEET No. 1 1941

GREAT SALT POND, BLOCK ISLAND, R. I.

Date	Day Letter	No. Positions	No. Soundings	Statute Miles Sounding lines
Sept. 5, 1941	a	175	257	1.8
Sept. 6, 1941	b	195	480	5.0
Sept. 7, 1941	c	88	108	0.7
	Totals	458	845	7.5

AREA - 0.1 square statute miles.

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET NO. 1

GREAT SALT POND, BLOCK ISLAND R. I.

SCALE 1:5000

SEPTEMBER, 1941

AUTHORITY:

The hydrography executed on this sheet was done in accordance with the Director's Instructions contained in the letters dated August 20, 1941 and August 29, 1941, reference - 22 mjc 1995 GI 4.

CONTROL:

The datum of this survey is the North American. Supplemental triangulation was carried forward from the line SANDY HILL-BLOCK ISLAND NORTH LIGHTHOUSE, using values contained in Special Publication No. 63². Topographic stations were transferred from Field Sheet A, 1941. (F-6834) 1941

SURVEY METHODS:

The general hydrography was accomplished with three-point sextant fixes, and hand lead using a dinghy under oars and propelled by an outboard motor. The sextant observers were close together amidships and the soundings were taken from the bow.

The detail soundings along the wharves were obtained with the hand lead at five meter intervals along all sides of the wharves. Soundings were taken along the position of keel lines of vessels lying alongside of the wharves with a pulling boat at five meter intervals, the distance off and spacing of soundings being controlled from the wharf.

COMPARISON WITH PREVIOUS SURVEYS:

The relative positions of soundings and rocks on sheet H-3562 agree with the present survey very well, but apparently on a slightly different datum. The eleven foot sounding along the east side of steamboat wharf near the end shown on sheet H-3562 was not found on the present survey. Fifteen and one-half feet was the shoalest depth found in the area, except alongside of the dock piling. The twelve foot sounding off the end of the wharf falls among sixteen and one-half foot soundings on the present survey. The Yacht Station Wharf was not built at the time of the survey of H-3562. (1913-1915) Outer end of dock from Chart Letter 155 (1933)

(1913-1915)
Hydrog. 11-
12 ft. depth
H. M. M.

(1912) The small boat channel leading into Trim Pond as shown on sheet 3381 agrees with the present survey.

COMPARISON WITH CHART 276:

As the chart and the present survey are on a different datum and scale an exact comparison was not made. In general the relative positions of the rocks from the high water line agree very well, while the one fathom curve as determined on the present survey is much closer in-shore than shown on the chart. The two and three fathom curves are in fair agreement. The size and shape of the wharves are in fair agreement,

but the soundings along the wharves are considerably deeper on the present survey than those shown on the chart. The piling shown on the chart at Latitude $41^{\circ} 10' 92''$, Longitude $71^{\circ} 34' 45''$ no longer exists and should be deleted from the chart. The position of navigation buoys N-6 and C-5 are in good agreement.

DISCREPANCIES:

Due to the noise of the outboard motor, two soundings were recorded erroneously. Between positions 157a and 158a, an unreduced sounding of one fathom flat is recorded. It is believed that this was confused with one-five. On b day this area was carefully "felt out" with the leadline, drifting over the spot several times. The least depth found was nine and one-half feet, ^{reduced} mid bottom, position 137b and 138b. The sounding is rejected in the record book. The first sounding after position 1b of nine and one-half feet is in error, being about three feet too shoal. In the process of starting the day, either the lead line was read erroneously or the sounding recorded wrong. Later in the day ten minutes was spent in drifting over this area, taking numerous unrecorded soundings. The least depth found was twelve feet reduced, positions 139b and 140b. This sounding was rejected in the record book.

The cross lines are satisfactory, agreeing within one-foot.

CHANNEL:

There is a narrow channel about 10 meters wide with a controlling depth of seven feet at mean low water leading into Trim Pond. This channel is not marked and difficult to follow; used only by small craft with local knowledge.

Respectfully submitted,

Harry F. Garber
Harry F. Garber,
Jr. H. & G. Engineer.

APPROVAL SHEET

SHEET NO. 1 1941

GREAT SALT POND, BLOCK ISLAND, R. I.

The sheets and records covering this survey have been examined
and are approved.

H. C. Warwick
H. C. Warwick,
H. & G. Engineer
Commanding M. V. GILBERT

H6668

TIDAL DATA

The soundings shown on this sheet are referred to mean low water. A tide gage was operated at Champlins' Yacht Wharf. This wharf is in the area sounded. Mean low water on the tide staff was computed by using the data given in Publication No. T-25 for B.M. No. 5 and 10 New Harbor, Great Salt Pond, Block Island, R.I. These two bench marks were the only ones of the old marks recovered in this area.

Elevation B.M.No.5	13.02 (p.20 Publication No.T-25)
Elevation B.M.No.5 above	
0' T.S.	<u>14.660</u>
MLW on Staff	1.640
 Elevation B.M. No. 10	 8.22 (p.20 Publication No. T-25)
Elevation B.M.No. 10	
above 0' TS	<u>9.794</u>
MLW on Staff	1.574

Mean of the difference in elevations between BM No. 5 and BM No. 10 and 0' on the tide staff gives MLW as 1.607 feet on tide staff.

The tide gage was operated for three continuous days in accordance with the Director's letter of August 29, 1941; reference 22,mjc, 1995 GI 4.

TIDE NOTE FOR HYDROGRAPHIC SHEET

October 13, 1941.

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: Mr. H. R. Edmonston

Plane of reference approved in
1 volume of sounding records for

HYDROGRAPHIC SHEET 6668

Locality Great Salt Pond, Block Island

Chief of Party: H. C. Warwick in 1941
Plane of reference is mean low water reading
1.6 ft. on tide staff at Champlin's Yacht Station Dock
13.0 ft. below B. M. 5

Height of mean high water above plane of reference is 2.6 feet.

Condition of records satisfactory except as noted below:

Harn

Acting Chief, Division of Tides and Currents.

Remarks

Decisions

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Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6668**

Records accompanying survey:

Boat sheets ^{one}....; sounding vols. ^{one}....; wire drag vols.;
bomb vols.; graphic recorder rolls;
special reports, etc.
.....

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

Number of positions on sheet	.458.
Number of positions checked	.36.
Number of positions revised	.0.
Number of soundings recorded	.845.
Number of soundings revised (refers to depth only)	.0.
Number of soundings erroneously spaced	.7.
Number of signals erroneously plotted or transferred	.0.
Topographic details	Time .3hr.
Junctions	Time
Verification of soundings from graphic record	Time 5hr.

Verification by *C.E. Dennis*..... Total time .13hr. Date *11/10/41*...

Review by *Harold W. Murray*..... Time *5hrs* Date *12/5/41*...

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT

~~PHOTO STAT COPY~~

No. H **H6668**

~~XXXX~~

received Oct. 10, 1941
registered Oct. 11, 1941
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
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RETURN TO

82	R. W. Knox
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VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H H6668

Verified and Inked by C. E. Dennis

Date 11/10/41

1. The descriptive report was consulted and appropriate action taken. ✓
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude. ✓
3. All references to survey sheets mentioned in the descriptive report include the registry number and year. ✓
4. Geographic names of hydrographic features are in slanting lettering and of topographic features in vertical lettering. ✓
5. All items effecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken. ✓
6. All positions verified instrumentally were check marked in the sounding records. ✓
7. All critical soundings are clear and legible. ✓
8. The metal protractor has been checked within the last three months. ✓
9. The protracting and plotting of all bad crossings were verified. ✓
10. All detached positions locating critical soundings, rocks or buoys were verified. ✓
11. The boat sheet was compared with the smooth sheet. ✓
12. The spacing of soundings as recorded in the records was closely followed. ✓
13. The bottom characteristics were shown on outstanding shoals. ✓
14. The reduction and plotting of doubtful soundings were checked. ✓

15. The transfer of contemporary topographic information was carefully examined. ✓
16. All junctions were transferred. *None — sheets too old*
17. The notation "JOINS H " was added for all contemporary adjoining or overlapping sheets now registered.
18. The depth curves have been drawn to include the significant depths. ✓
19. All triangulation stations and transfer of topographic and hydrographic signals were checked by the field party. ✓
20. Heights of rocks were checked against range of tide. ✓
21. Rocks transferred from topographic survey have a dotted curve where shown thereon. ✓
22. Unnecessary pencil notes have been removed. ✓
23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet. ✓
24. The low water line and delineation of shoal areas have been properly shown (see letter of October 20, 1934). ✓
25. Degree and minutes values and symbols have been checked. ✓
26. Source of shoreline and signals (When not given in report).
T-6834 (1941)
27. Depth curves were satisfactory except as follows: ✓

28. Sounding line crossings were satisfactory except as follows: -
29. Junctions with contemporary surveys were satisfactory except as follows:
30. Condition of sounding records was satisfactory except as follows: ✓
31. The protracting was satisfactory except as follows: ✓
32. The field plotting of soundings was satisfactory except as follows: ✓
33. Notes to reviewer:

*This sheet is on the North American Datum.
Correction added for NA 1127. H.W.M.*

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY NO. 6668 (1941) FIELD NO. 1

Rhode Island, Block Island, Great Salt Pond
Surveyed in September 5-7, 1941, Scale 1:5,000
Instructions dated August 20 and 29, 1941 (GILBERT)

Soundings: Hand lead

Control: Visual fixes

Chief of Party - H. C. Warwick
Surveyed by - H. F. Garber
Protracted by - H. F. Garber
Soundings plotted by - H. F. Garber
Verified and inked by - C. E. Dennis
Reviewed by - Harold W. Murray, December 5, 1941

1. Shoreline and Signals

The shoreline and signals originate with T-6834 (1941).

2. Sounding Line Crossings

Agreement of sounding line crossings is very good. Two rejected soundings discussed in the Descriptive Report require no further comment.

3. Depth Curves

The usual depth curves may be satisfactorily drawn.

4. Junctions with Adjacent Surveys

No contemporary surveys join the present survey. A satisfactory junction for charting purposes is made with the charted hydrography originating with H-3562 (1913-15) and Bp. 34153 (1940).

5. Comparison with Prior Surveys

H-3381 (1912) and H-3562 (1913-15). Scales 1:10,000

These surveys taken together cover the entire area of the present survey. Agreement of depths, wharves and rock detail is only fair. Additional comparative details are noted in the Descriptive Report of the present survey and also T-6834 (1941) under "Comparison with Previous Surveys and with Chart 276". The present survey surveyed on a larger scale is adequate to supersede this survey.

6. Comparison with Chart 276 (New Print dated August 14, 1941)

a. Hydrography

Charted hydrography originates principally with surveys discussed in the preceding paragraph except a few soundings just east of the large wharf on the east which originates with Bp. 29830 of 1936 and Bp. 34153 of 1940. These are in fair agreement with the present survey and may be superseded.

The Descriptive Report, page 2 states that the piles east of Steamboat Wharf are no longer existent. Bp. 34153 of 1940 shows 1 to 2 feet in the vicinity of the small sand shoal here charted from Bp. 29830 of 1936. This information is outside the actual limits of the present survey.

b. Aids to Navigation

Buoys N6 and C5 differ 20 and 65 m. respectively in position but satisfactorily mark the features intended.

7. Compliance with Project Instructions

Satisfactory.

8. Condition of Survey

Satisfactory.

9. Additional Field Work Recommended

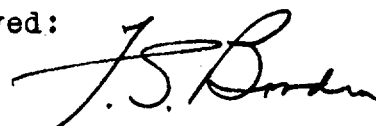
This is an adequate survey and no further work is necessary.


10. Superseded Surveys


H-3381 (1912) In part
H-3562 (1913-15) " "

Examined and Approved:


Chief, Surveys Section


Chief, Division of Charts


Chief, Section of Hydrography


Chief, Division of
Coastal Surveys

Applied to Cht. 276 2-13-42 X.P.