

3562

Diag. Ch. No 1211-2

Form 504
 DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY

State: *Rhode Island*

11-5613

DESCRIPTIVE REPORT.

Hyd. Sheet No. **3562**

LOCALITY:

Block Island

North and West shores

Including Great Salt Pond
and
Block Island Harbor

191.

CHIEF OF PARTY:

3562

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 3562

INSHORE RESURVEY ALONG THE WEST, NORTH AND N.E. SHORES OF BLOCK ISLAND

AND

EXAMINATION IN GREAT SALT POND AND OLD HARBOR

H. 3562.

An excellent piece of hydrography. The sheet, however, is not complete. The shore line being omitted in certain sections.

Sheet examined in Div. of Hyd'y & Top'y.

This work was done in accordance with instructions dated August 2nd 1915, it consists of a resurvey of the inshore hydrography about the northern half of the island, by launch, running 100 meter lines as nearly as possible to conform with the system outlined on chart 356 and extends out to the ten fathom curve. A previous examination of Great Salt Pond was supplemented by additional lines and developments and an examination of the shoal north of the Old Harbor Breakwater was also made. The shoreline about Sandy Point was re-run, and as it was necessary to locate signals for the hydrographic work, the shoreline adjacent to these was also run. Indications of shoals were developed to ascertain the least water and extent.

The 7 and 16-1/2 ft. spots to the N.E. of the entrance to Old Harbor (east side) of island were not found, 12 and 20 ft. being the least water at these points and no indication of a shoal. The Engineers have almost completed the dredging of this harbor to 15 ft. all over. They have no surveys outside of the harbor, with the exception of a survey in the entrance to the new harbor (west side) The Engineer Officer in charge at Newport informed me

that the blueprints of these surveys would be sent to the Office direct. The axis of the shoal extending north of Sandy Point has shifted from 100 to 300 meters to the eastward, Sandy Point has extended northward about 30 meters, otherwise remaining as already charted. The depths obtained on the shoal were greater than shown on chart 356, 9 ft. being the least in the vicinity of the 5-1/2 ft. spot 1/2 mile north of the point, and 14 ft. the least found where 8 ft. is shown 3/4 mile north of the point. 8 ft. was the least found on the ridge 1/4 mile N.E. of Grace Point where 10-1/4 ft. is shown. Sunken rocks extend 250 meters off this point and exposed rocks show inshore of these.

The 33 ft. spot shown 1/4 mile S.E. of Balls Point was found and verified. It is part of a ridge extending out from Balls Point. 46 ft. was found in the vicinity of the two 51 ft. soundings, 5/8 mile east of Balls Point. Inquiry was made of the Life Saving Station, the Lighthouse and local fishermen for other uncharted dangers but, no knowledge of any was obtained. A 13 ft. shoal extends a 1/4 mile out from shore on the west side of Block Island, 1 mile south of Sandy Point. In the vicinity of the 29 and 31 ft. soundings to the east and north of the bell buoy off entrance to the new harbor, a close development was made without finding any less water, and indicating a flat ridge or bank off the entrance with 29--35 ft. upon it, at low water. At low water a search was made along shore on the N.E. side and in Great Salt Pond for sunken rocks. These were located by sextant and marked on the boat sheet.

The channel into the new harbor has a clear width of about 200 ft. and depth of 23 ft. at low water, on either side the banks are steep up to the shoal water which lies between the channel and the jetties. The southern or long

jetty should be favored in entering to keep the middle of the channel, the bank on this side is sand while the northern bank is rocky. Strangers should proceed slowly and avoid passing other steamers in the channel. Vessels usually anchor to the southward from the entrance to the steamboat wharf. A black spar marks the outer end of the extensive flats on the east side of the harbor near the wharf. A sunken rock lies about 120 meters NW X W of the end of the wharf and about 50 meters north of the small point there.

Currents were observed near the North Reef gas buoy on two days, and observations extends over 2 slack waters, the first from flood to ebb and strength of ebb and the second from ebb to flood. The maximum ebb was 2.3 knots and conditions were normal as to wind and weather and range of tide. The observations indicate that the slack waters occur approximately four hours after high and low water. The ebb sets approximately 80° true and the flood 280--310°. The change in both instances occurred through the north that is, with a northerly set. Strong tide rips occur on the north reef and it is dangerous for small open boats to cross the reef except near slack water or with smooth sea. Current observations were made in the entrance to New Harbor on two days and showed a maximum strength of about 1/2 knot. The slack occurring about at high and low waters.

The basin behind Comorant^{Pt.} is blocked by boulders and sunken rocks and should not be used by strangers. The pond behind the steamboat wharf and the old harbor is used by small local fishing boats and both are usually crowded.

Launches and yachts may obtain gasoline and stores there but no coal. During the summer season, June to August a daily schedule is maintained from Newport and New London and two boats each week to New York. In the winter

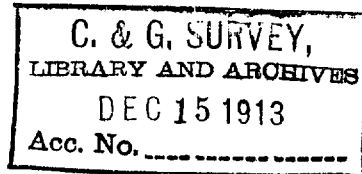
there is but one boat a week to Newport.

Respectfully submitted,

F. Y. Eagle

Assistant, U. S. Coast and Geodetic Survey.

3562



Descriptive Report.

Examination of Great Salt Pond, Old Briton Rock, and reconnaissance of Block Island North Reef.

The chart of Great Salt Pond appearing defective, an examination intended to supplement the chart was made while in the locality on Coast Pilot field work. The projection was not received until after leaving the locality, and the work was protracted after the party returned to the Office. It was then learned that the chart was based on an unreliable sketch, from which nothing can be obtained to supplement this examination. It may therefore be found desirable to run a few additional lines to make this examination a finished survey.

Signals were determined by sextant cuts on natural objects from known points. On account of shrinkage and distortion of the projection, the sextant cuts would not plot exactly. A separate projection was made on which the signals were plotted by numerous intersections, and the positions so obtained were transferred to the sheet. The sextant angles for locating signals are given in the sounding book.

A few reconnaissance lines were run over Block Island North Reef to determine if any extensive changes have occurred. The results indicate that the reef, including Sandy Point, has moved eastward, and the outer 13-foot sounding indicates an extension northeastward of the reef. The party had no means of protracting the positions on the ground on account of the small right angle, hence the irregularity of the lines run. This reconnaissance indicates the need for a survey of Block Island North Reef, including the shore line at Sandy Point, ex-

tended far enough eastward, westward, and southward to merge with the old survey. While on the ground it is advisable to run some additional lines over the broken ground on the northeast side of the island between the reef and Old Briton Rock.

Old Briton Rock and buoy were located, and a few lines run over it to develop its extent.

The tides used in the reduction^{of}/soundings for this work are from readings on a plain staff erected by the U. S. Engineers at the inner end of the entrance of Great Salt Pond, the zero of which was set by them at mean low water.

The following are the natural objects used by the party as signals:

Land- north gable of building on steamboat wharf.

Pier- outer " " " " small landing 630 yds. westward of steamboat wharf.

Gable- gable facing pond of old house, 700 yards ^{southward} ~~westward~~ of Inner light.

Mark- small white shed on beach 425 yards northeastward of the steamboat wharf.

Beat- west gable of shack on east side of Great Salt Pond.

White- small white shed at north end of Great Salt Pond.

Cup- cupola of Hygeia Hotel.

Beac- small house on Beacon Hill.

Lone- chimney of house on Bush Hill.

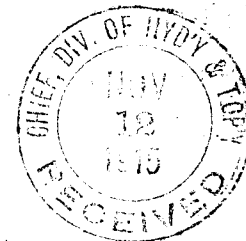
New- hip of hip-roofed house 450 yards eastward of Lone.

Black and Rock.- boulders on beach.

Big- large rock on reef eastward of Grove Point.

Herbert C. Graves.

Department of Commerce and Labor
COAST AND GEODETIC SURVEY
Washington



December 15, 1913.

The Superintendent

Coast and Geodetic Survey.

In 1913 the Coast Pilot Party ran a few reconnaissance lines of soundings over Block Island North Reef to determine if any extension^{ve} changes have occurred. The results indicate that the reef, including Sandy Point, has moved eastward, and there are indications also of an extension northeastward of the reef. This reconnaissance indicates the need for a survey of Block Island, North Reef including the shore line at Sandy Point, extended far enough eastward, westward, and southward to merge with the old survey. While on the ground it is advisable to run some additional lines over the broken ground on the northeast side of Block Island between Block Island North Reef and Old Briton Rock. The keepers of the lighthouse and life saving station may have some knowledge of uncharted rocks on the broken ground in the locality. A three arm protractor reading zero right angle will be needed by the party doing the work, in order to protract the work on the boat sheet.

While the party is in this locality some additional lines can be run to supplement the examination made by the Coast Pilot Party of Great Salt Pond. A list of stations used by the Coast Pilot Party will be found in the descriptive report. *Herbert C. Travis*

Department of Commerce and Labor

COAST AND GEODETIC SURVEY

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COAST AND GEODETIC SURVEY
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Herbert C. Graves

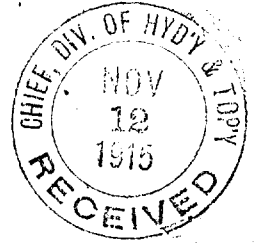
Department of Commerce and Labor
COAST AND GEODETIC SURVEY
Washington

*Return to
Coast Pilot Party*

HYDROGRAPHY ETC. (9)

3562

December 15, 1913.



The Superintendent,
Coast and Geodetic Survey.

FIELD RECORDS (H)
COAST PILOT (H)
ASSISTANT IN CHARGE (H)

I transmit herewith ~~the~~ field records, as follows:

1 projection, scale $\frac{1}{10,000}$, with pretracted positions, of a hydrographic examination of Great Salt Pond, Old Briten Rock, and a reconnaissance of Block Island North Reef. With the projection is a separate projection, which may be destroyed when the draftsmen are through with it; also two tracings showing rough plottings of the soundings.

1 sounding book for this work.

Herbert C. Dames

Enclosures.

S T A T I S T I C S O F H Y D R O G R A P H Y

To accompany Sheet No...3562..

Date	Letter	Vol.	Positions	Soundings	Miles	Boat used.
Aug. 11	a	1	80	281	8.2	Launch No. 51.
" 12,	b		95	431	11.3	"
" 13,	c		120	464	13.2	"
" 16,	d	1	76	282	8.3	"
" 16,	d	2	56	206	5.7	"
" 17,	e		140	702	12.5	"
" 19,	f		152	693	15.4	"
" 21,	g	3	176	707	14.5	"
" 23,	h		79	325	8.4	"
" 24,	j		169	619	19.0	"
" 25,	k	4	200	831	21.5	"
" 26,	l		206	916	20.0	"
" 30,	m	5	54	183	5.0	"
" 31,	n		185	672	12.7	"
Sept. 1,	o		62	317	8.0	"
Totals:-			1850	7629	183.7	

VEC
Feb.13,1914

HYDROGRAPHIC SHEET 3562.

Block Island, Rhode Island, by Herbert C. Graves,
Nautical Expert, in 1913.

TIDES.

	U.S. Army Gauge Great Salt Pond
	ft.
Mean low water, or plane of reference	0.0
Mean range of tide	2.6

VEC
Apr. 15, 1914

HYDROGRAPHIC SHEET 3563.

C. G. Quillian

Pearse Canal, S.E. Alaska, by Assistant C.G. Quillian
in 1913.

TIDES.

	Hidden Inlet Entrance ft.
Mean lower low water, or plane of reference on staff	3.4
Lowest tide observed " "	-1.0
Highest " " " "	22.5
Mean range of tide	13.0

Contracted by Field Party. Plotted and inked by S. L. R.

In verifying the positions, it was assumed that they were correct, except where they appeared doubtful, when they were checked and corrected if found in error.

The work as a whole was good, the area being well covered, the records carefully kept, and the crossings, with a few exceptions, good.

The soundings between positions 73A and 74A were recorded as 11 fathoms, but they should undoubtedly have been 7 fathoms. Positions 9K to 15K, inclusive, were ^{obviously} wrong, as the sounding line between them differed from crossing lines by from 2 to 30 feet, and as efforts to adjust them were unsuccessful, they were rejected. Soundings from positions 134N to 135N, 136N to 137N, and 135E to 137E were also rejected because of poor crossings.

The hydrography north of Sandy Point enclosed by the heavy red line is from the survey of 1913. It is recommended that this work — with the exception of a few deep soundings north of latitude $41^{\circ}15'$ — be rejected because of the great changes in depth which have taken place since then. The work of 1915 covering the same area is developed in a sub-sketch.

The new hydrography in Great Salt Pond was also developed in a sub-sketch and then combined with the work of 1913, the latter being shown in red. This was necessitated by the shifting required to make the two surveys agree.

S. L. Rosenberg

DEPARTMENT OF COMMERCE

= Hyd. Sheet # 3562 =

The work on this sheet was protracted by field party. The protracting was verified and the soundings plotted and inked in the office by S. L. Rosenberg.

The verification of soundings, curves & shoals was made before application of work to published charts. The work is satisfactory and no changes were made with the exception of a few curve changes and additions.

P. B. Castle.

Applied in part to new chart 269 1951 L.A.M.
Applied to reconstruct. of chart 1210 thru chart 269 MR 9/22/61