

4369

Dipg. Cht. No. 1215-2

4369

Form 504 DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY
State: <u>New York</u> <small>11-5613</small>
DESCRIPTIVE REPORT.
Hydrographic Sheet No. <u>4369</u>
LOCALITY: <u>Fire Island Inlet and Vicinity</u>
<u>1924</u>
CHIEF OF PARTY: <u>Geo. L. Bean, H. & G. E.</u>

DESCRIPTIVE REPORT

of

Hydrographic Sheet No.

Fire Island Inlet and Vicinity.

July and August 1924. Scale 1 : 10,000

Geo.L.Bean, Chief of Party.

This survey was made in accordance with the Director's Instructions dated July 8, 1924 and Supplemental Instructions dated July 23, 1924. It was made during July and August 1924, on a 1 : 10,000 scale. The party consisted of Geo.L.Bean in charge, P.R.Hathorne, D.O. left angle and recording and three men. It is entirely handlead work and Launch #65 was used. Headquarters were at Babylon N.Y.

The hydrography on this sheet extends from the vicinity of the Fire Island Coast Guard Station Westward to about 73 20, and extends out to the five fathom curve. It also takes in Fox Creek Channel, Oak Island and Snakehill Channels. Fifty meter lines and under were run in the main channel and one hundred meter lines elsewhere. There was a rather strong tidal current and no good ranges so that the lines could not be equally spaced and are rather crooked. It was impossible to develop the one fathom curve outside the Inlet as there is considerable swell at all times and it was too dangerous to approach to closely to the shore and the edges of the shoals.

Soundings were taken in fathoms and feet and reduced to feet and tenths. A portable automatic tide guage was established on the inside of Democrat Point and the ~~reducing~~ reducers obtained from this. A staff was set up at the Fire Island Naval Radio dock and a comparison between this and Democrat Point gave the following results:

Democrat Point.... range 2.8 feet

Radio Dock.....range 1.0 feet

The mean low water plane was approximately the same and the lag of high and low water at the Radio Dock was about forty-five minutes. It was therefore deemed necessary to adjust the reducers to the difference in range. The tidal curve being comparatively flat the time difference was neglected. The area between the Radio Dock and Democrat Point was therefore divided into five areas and the reducers adjusted accordingly. these various areas are shown on the boat sheet and a table of reducers submitted with the tidal records.

The bottom is generally sandy but at someplaces, mostly inside Democrat Point, ther is a few inches of mud and silt over the sand. In most cases the edges of the shoals are very abrupt. The current is strong, generally speaking, it is three knots on the flood and two knots on the ebb. When affected by winds and storms which tend to change its course,

it cuts its banks very rapidly at some points and builds up shoals at other points. This causes frequent and rapid changes in the location of the channel. Local boatmen state that the changes are so rapid that a single tide may change the channel many yards. This is particularly true in the Snakehill Channel in the vicinity of Whirlpool Point where the water is shoal and the channel narrow.

The middle ground to the West of Democrat Point is very shoal and dries in places on a low Spring tide. It is always well defined on the outside by breakers. Most of the shoals can be seen, especially in bright weather.

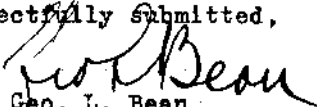
Ice conditions are often bad in the Winter, making it dangerous for small craft to navigate in cold stormy weather. Ice often carries away the bush stakes marking the channels and it is necessary to remove the docks during the Winter to prevent serious ice damage. The bush stakes are put in place each summer, generally by the middle of June. The main channel is buoyed and is kept up by the Lighthouse Dept. Five hundred meters offshore and SSE from Democrat Point is the wreck of a steel ship. The stem and stern posts are visible in fair weather. This wreck is very dangerous as the steel frames are still in place and close to the surface. During heavy weather breakers extend entirely across the entrance bar. The Coast Pilot notes for this sheet are submitted in a separate report. There are numerous fish traps in the vicinity in Two to nine fathoms of water.

The principal traffic is fishing boats and pleasure craft. They are generally less than one hundred feet in length and of shoal draft. Very small boats sometimes pass thru the New Inlet, West of Oak Beach, but the entrance is constantly changing and there are always breakers to pass thru. Snakehill and Oak Island Channels are used extensively by boats up to four feet in draft. Snakehill is a natural channel and Oak Island is a dredged channel. They are marked by bush stakes. Great South Bay is full of grass from June to September and a weedless wheel should be used if it is necessary to enter shoal water. A draft of ten feet may be carried thru the main channel but it is necessary to navigate with caution and not depend entirely upon the buoys.

Statistics:

Area sounded..... 5 sq. miles
Machine 8 lb. handlead.
Boat Launch #65
Remainder of statistics on separate sheet attached.

Respectfully submitted,


Geo. L. Bean
Lieutenant.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Washington, D. C.

September 20, 1924

SUPERINTENDENT, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Geo. L. Bean

Chief of Party.

DESCRIPTION.	POSITION.				Datum.	Method of determination.	Charts affected.
	Latitude.		Longitude.				
	°	D. M. meters.	°	D. P. meters.			
Water tank, Saltaire	40 38	322.0	73 11	730.0	N. A.	Sextant cuts	1214, 1215, 578
High tank on skeleton structure - painted black, Very prominent.							
Cupola -	40 38	741.0	73 18	953.0	" "	Topo.	" " "
Cupola on hotel at west end of Oak Beach.							
Observation tower	40 38	565.0	73 17	1233.0	" "	"	" " "
Observation tower, Coast Guard Station at Oak Beach.							
Flag pole	40 37	1653.0	73 13	565.0	" "	"	" " "
Coast Guard flag pole, Fire Island Station, (Old positions should be removed from the chart).							
Windmill	40 38	518.0	73 19	862.0	" "	"	" " "
Lone windmill west of New Inlet.							

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance. The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaves and like objects are not sufficiently permanent to chart.

Statistics, Fire Island Inlet, New York.

Date, 1924	Letter.	Vol ^u me.	Posi- tions.	Sound- ings.	Miles, statute.	Vessels.
July 28,	a	1	70	561	12.0	Launch # 65
" 29,	b	1	75	534	12.5	" "
" 30,	c	1	96	794	15.1	" "
" 31,	d	2	70	549	13.0	" "
August 1,	e	2	79	757	12.3	" "
" 4,	f	2	98	859	14.5	" "
" 4,	f	3	26	204	3.1	" "
" 5,	g	3	116	965	16.2	" "
" 6,	h	3	45	418	7.0	Hired Launch
" 7,	k	3	39	235	4.0	Launch # 65
Total			714	5876	109.7	

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 4369

Locality: Fire Island Inlet, New York.

Chief of Party: G. L. Bean in 1924.
Plane of reference is mean low water reading
4.5 ft. on tide staff at Democrat Point.
~~at~~ auto gauge

For reduction of soundings, condition of records satisfactory
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks

G. L. Bean
at Chief, Division of Tides and Currents.

Section of Field Records.

Report on Hydro. sheet No. 4369

Surveyed in 1924

Chief of Party - Geo. L. Bean

Protracted by - P. R. Hathorne

Soundings plotted by - Geo. L. Bean.

Verified and inked by - H. E. MacEwen

1. The records conform to the requirements of the General Instructions, except that:
 - (a) the boat's heading by compass was omitted throughout the records, and
 - (b) changes of course were not in every case given in the "remarks" column.
2. The plan and character of the development fulfil the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. With few exceptions the sounding line crossings are good. No system of cross lines was employed. See note (d).
5. The usual depth curves can be completely drawn. See note (e).
6. The field plotting was completed to the extent prescribed in the general instructions.

7. Several changes in the field drafting were made necessary because of doubtful position of fixes, questionable soundings or other evident discrepancies caused by difficulties met in the field work. These discrepancies were however not cleared up by the field party or apparently investigated by the field party thus making it extremely difficult for the office draftsman to arrive at satisfactory solution of points in question.
8. The area is well covered and no further surveying is required to fully develop important areas within the limits of the sheet.
9. Notes:
- (a) The projection shows (10/30/24) a shrinkage of 4.27 meters in 1000 along parallels of Lat. and 3.33 meters in 1000 along meridians of Long.
 - (b) Doubtful crossing at 60 d. and 69 f. - also on section of line 65d to 66d.
 - (c) The field draftsman apparently did not use sufficient care in drawing in the depth curves. There were many instances where changes were necessary and these changes were made with difficulty due to the curves being

9. (cont) -

(c) - originally drawn in ink.

10. Rating of Sewer.

(a) Character and scope of surveying. = Fair

(b) Field Drafting = Good.

Respectfully submitted

H. E. MacEwen

F. R. Sec.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON December 4, 1924.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4369

Fire Island Inlet, New York

Surveyed in 1924

Instructions dated July 8, 1924.

Chief of Party, G. L. Bean.

Surveyed by G. L. Bean and P. R. Hathorne.

Verified and inked by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions except boat's courses were omitted throughout and changes in courses were frequently not noted.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The specific instructions directed that "sounding lines should be spaced similar to those on H. 3707". On H. 3707 all the lines are normal to the axis of the stream, whereas on H. 4369 nearly all the lines are parallel to the stream. The development is very complete throughout.
4. The sounding line crossings are often inadequate. There are numerous instances of unlikely shoal soundings in deeps, and of deep soundings on shoals. Some of these errors may be due to leadline errors, others are undoubtedly caused by erroneous angles throwing the boat's positions out of their proper places. In some cases it has been possible to adjust the erroneous lines to better locations, but a number of them have been retained as plotted. The lack of complete notes regarding directions of boat's courses made the adjustment difficult. It is believed that most of the defects are caused by erroneous left angles due to the difficulty of taking an angle and plotting when surveying in a strong current and shallow water.
5. The development is close enough to draw all the curves.
6. The field plotting was completed to the extent prescribed by the General Instructions and was accurately done. The soundings were plotted in quarter feet instead of whole feet and the curves which were inked had mostly to be erased.

7. The junctions with adjoining sheets are satisfactory.
8. In view of the moderate draft of vessels using this waterway and also because of the constant changes taking place it is not considered necessary to do additional surveying within the area covered by the sheet.
9. The character of the surveying is fair and the field drafting is good.
10. Reviewed by E. P. Ellis, November, 1924.

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. **4369**

State **New York**

General locality **Long Island**

Locality **Fire Island Inlet and Vicinity**

Chief of party **Geo. L. Bean**

Surveyed by **Geo. L. Bean**

Date of survey **July - August, 1924**

Scale **1 : 10,000**

Soundings in **Feet**

Plane of reference **M.L.W. - Democrat Point**

Protracted by **P. R. H.** Soundings in pencil by **G. L. B.**

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, 1 Tide books, 5 Marigrams, 1 Boat sheets,

3 Sounding books, Wire-drag books, Photographs.

Data from other sources affecting sheet

Report Coast Pilot Notes.

Remarks: