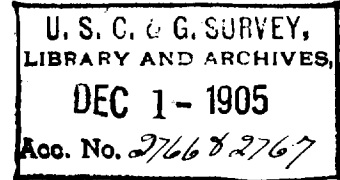


2766

2767



Diag. Cht. No. 283



Department of Commerce and Labor
Coast and Geodetic Survey
O. H. Tittmann, Supt.

Descriptive Report
on

Hydrographic Sheets 9 + 10 (2766 + 2767)
Hudson River, N.Y.

1905

J. B. Mitter, Aid, Chief of Party

2767
2766
2767

Post-Office Address:

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Department of Commerce and Labor

COAST AND GEODETIC SURVEY

Washington

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11-644

NOV. 28, 1905

Mr. O. N. Tittmann,
Superintendent, C. & G. Survey,
Washington, D. C.

Sir:

In reference to hydrographic sheets 9-10 Hudson River, N. Y., I have the honor to report that, under your instructions of July 16, 1905 the work was executed from Sept. 23 to Oct. 18, 1905. It is a hydrographic examination, consisting of a system of five lines following the river, crossed by six other lines in each mile, with closer developments on certain shoal spots. The soundings average 870 to the ^{geographic} square mile: and following the instructions, a complete ^{hydrographic} survey was not attempted.

2. The two sheets extend from Milton Landing to Cooper's Light, a portion of the river extending north and south; and traversed by steamers in two courses, with two changes at Crum Elbow. The mean width is 0.45 mile, the least

(2) width 0.3 mile, at Crum Elbow, and the greatest width 0.7 mile, at Escopus Island.

3. The shores are very abrupt, ^{and thickly wooded;} ~~and~~ rocky, and from 200 to 400 feet high. North of Hyde Park both the New York Central and the West Shore railroads pass inland, leaving both shores in their natural unimproved state, and here they are entirely taken up by great estates owned in New York City. South of that place much clearing and cutting away of rock near the water has been done by the railroads. The bottom is soft blue mud, being a deposit of fine blue clay silt, underlain in most places with hard blue clay upon the rock, which was found by borings being made here for the City of New York, Board of Water Supply, to be 100 feet below the bottom of the river.

4. In general the whole width of the river is safe. The deepest channel, however, follows the western shore from Milton Landing to Poughkeepsie, the eastern shore to Crum Elbow, the western shore to Escopus Island, and the eastern shore to Escopus Light. The greatest depth of this channel is 145 feet, at Crum Elbow, and the least 52 feet at the north end of Escopus Island; the mean depth is 78 feet; and the mean depth of the whole area of the river is 49 feet.

5. There are four dangers to Navigation, of which Blue Point Reef is the first. It is two miles south of Poughkeepsie, and has 18 feet of water in lat. $41^{\circ} 40'$ (1402 meters), long. $73^{\circ} 56'$ (869 m.), which is 6 feet less than previously reported and commonly believed by pilots. There is 50 feet within 25 meters on all sides. It is marked by a prominent rip when the tide is running, and may be passed on either side, being in mid stream. There is no buoy upon it.

6. The Poughkeepsie Railroad Bridge crosses the river east and west in lat. $41^{\circ} 42'$ (1180 meters) and consists of five steel cantilever spans 225 feet above the water, with 4 stone piers in 48 to 60 feet of water, 160 meters apart, marked at night by a red light on each end of each pier, visible 2 miles. The piers are 8 meters wide above water, and 35 meters square below the water, and have caused no shoaling of the bottom which can be measured.

7. Escopus Island is a rock in mid-stream 2 miles north of Hyde Park, 0.4 mile long, and 8 to 10 meters in height, having narrow reefs extending north and south from each end for 0.1 mile. It is public land and used as a pic-nic ground. Off the north end is a red and black spar in $10\frac{1}{2}$ feet of water, and near the south end is a pole upon which two red

(7) lanterns are maintained: visible north, west, and south for two miles but hidden by trees on the east. It is safe to pass on either side of the island, close to the rocks.

8. A shoal 0.6 mile south of Cooper's Light, near the western shore, and parallel to it, has 15 feet of water in lat. $41^{\circ} 51'$ (590 meters), long. $73^{\circ} 56'$ (1150 m.). It extends to mid-stream, is 0.1 mile wide, and has 20 feet of water inside it. It is unmarked, and is much used as an anchorage, being sheltered from the north.

9. At Hyde Park tides were observed sufficiently to reduce the soundings, and the gauge was connected with the precise level line. At Poughkeepsie, 210 tides were registered on Aut. Gauge #79 between Sept. 9 and Nov. 4: which indicated a mean range of 2.94 feet, and a river current $\frac{1}{2}$ that of the tidal current. The latter was measured and found 3 miles (naut.) per hour.

10. Poughkeepsie, 25,000 population, is the only city of more than one thousand in this locality. The Day Line Steamers and the Central Hudson Steamboat Co. ^{Each} land here twice daily, for New York and Albany; and there are two steamers daily for Newburg. A large amount of small freight is shipped to New York thus; but the amount of business at private docks in the city

(10) is very small. A half hourly ferry runs to Highland. The Catskill Line and the Central - Hudson Steamboat Co. Steamers ^{each} land twice daily at Hyde Park; carrying small freight and a great quantity of apples during the season. Small independent steamers land four times daily at Milton Landing, Highland, West Park, Rosemount, and Esopus; and six other private landings. Steamers for Albany and Troy pass twice daily for each point; and many large private yachts, as well as barges and scows, use the river when it is not closed by ice. Poughkeepsie docks have 18 to 30 feet of water, and Hyde Park 20 feet.

11. On occasional years the shad fishing at Hyde Park becomes good, drift nets being used on the river. A small number of sturgeon are caught there at all times, but the industry is scarcely important.

Very respectfully,

Jas. B. Miller,

Aid, C. & G. S., Chief of Party.

Department of Commerce and Labor

Red Sheet No 2766

All soundings were corrected to the plane
of reference furnished by Tidal Div.

The records were kept in a satisfactory
manner

The corrected shore line is shown in red.

H. H. Simons

Jan 29 1906.

Department of Commerce and Labor

Hyd Sheet No 2767

A discrepancy of 3 of a foot in the plane of reference as used by the field party and that furnished by Tidal Div. made it necessary to correct all soundings.

The records were kept in a satisfactory manner.

At some points the beginning and ending of lines indicate that the shoreline is not correct.

H. L. Simons

Jan. 30, 1906.