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FEB 21 1914  
U.S. DEPT. OF COMMERCE

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*O. Pittman*  
Superintendent.

State: *N. J.*

DESCRIPTIVE REPORT.

*Top.* Sheet No. *3431*

LOCALITY:

*Newark Bay,*  
*N. J.*

1913

CHIEF OF PARTY:

*S. Torrey*  
11-4645

3431

DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY  
O H TITTMANN SUPERINTENDENT  
TOPOGRAPHIC RE-SURVEY  
OF  
NEWARK BAY  
AND  
MOUTHS OF THE  
HACKENSACK AND PASSAIC RIVERS  
NEW JERSEY

*Top. 3431*

1913

SCALE 1/10,000

SURVEYED BY THE PARTY OF

*Stehman Honey*

ASSISTANT. C. & G. SURVEY

Note

The heights are expressed in feet,  
and show the elevations above mean  
high water. The contours are given  
for every 20 feet difference of level.  
The full red lines indicate the  
20 feet contours. The broken red lines  
show intermediate ten foot curves.

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

Descriptive Report.

To Accompany.

Topographic Sheet. 3431.

Resurvey of Newark Bay.

New Jersey.

From.

Bergen Point, Bayonne.

To

Plank Road Bridge.

In Newark and Jersey City.

11913

Scale 1/10,000

Surveyed by the Party of

*Hetman, Hoiney,*

Assistant C.&G. Survey

( a ) General Description.

Within the limits of this sheet, the shores on the Eastern side of Newark Bay are low immediately along the water's edge, rising to an elevation of 80 feet above mean high water at the northern end of Bayonne. At the ~~At the~~ mouth of the Hackensack there is a low marshy point extending to the Plank Road bridge and beyond, On the west side of Newark Bay, from the Plank Road Bridge to Elizabethport, <sup>is</sup> there an extensive marsh, across which the Central R.R. of New Jersey runs from Elizabethport to Newark.

Bayonne. A city of 60,000 inhabitants, three fourths of which are foreign birth, extends from Bergen Point along the eastern shore of Newark Bay to the Morris canal, and is noted for its numerous industries and oil refining plants.

The Central Rail Road of New Jersey Bridge Crosses Newark Bay from Bayonne to Elizabethport. Elizabethport is a city of about *forty* thousand inhabitants, three fourths of which are foreign born, this city is noted for its Smelting works and manufacturing plants, The Singer Sewing machine works are located here and employs about four thousand men-women and children. The ~~Lackawanna~~ <sup>Lehigh</sup> and Pennsylvania Rail Road bridge, crosses the bay from the northern end of Bayonne to the Newark ~~Flats~~ <sup>Meadows</sup>, thence to Newark. The new bridge of the Central Rail Road of New Jersey, crosses from Newark to Jersey City at the mouths of the Passaic and Hackensack rivers. The Plank Road bridge, is a wagon trolley road bridge, and crosses the Passaic at the southern end of Newark and across the Hackensack river to Jersey City. The Morris canal, follows the line of this bridge in crossing the Passaic and Hackensack rivers in to Jersey City. There are Trolley roads from Bayonne to Jersey City-Morrisville-Hoboken-Elizabethport and Newark, connecting with the Hudson Tunnels and

ferries at Jersey City and Hoboken New Jersey. There is also a ferry across the Kill Van Kull from Bayonne to Port Richmond on Staten Island, and one across the Arthur Kill from Elizabethport to Staten Island, these ferries connect with the trolley car lines on the Island, Point St, George thence by ferry to the Battery in New York City.

At Bayonne on the north shore of the Kill Van Kull. opposite Port Richmond on Staten Island, is located a fine large hotel, the "Hotel La Tourette, built over one hundred years ago on the Colonial style of architecture". When it was opened as a resort, it was then what Newport is now to the fashionable people of the United States, Its old registers contain the names of distinguished American and foreign statesmen, Clergey men and Soldiers. In the early days there several steamboat lines that made hourly trips to and from New York City .

Shooters Island, Is located at the junction of Arthur Kill and Kill Van Kull at the southern end of Newark Bay about midway between Bayonne and Elizabethport N.J. Located on Shooters Island there is a large dry dock-numerous piers-machine and ship building shops, all of which are closed. The yacht "Metior", constructed for Emperor William of Germany, was built here on this island.

Triangulation stations with the letters U.S.E.D. whenever used, signifies U.S.Engineer's Department, these stations are numbered and were connected by tertiary triangulation with my work in 1913, the data for which was furnished to the U.S.Engineer's office in New York City, by authority of the Superintendent, C.&G.SS subject to correction after final adjustment.

(d) Weather.

The prevailing wind in summer is South Westerly, in the autumn it is North Westerly and South Easterly, in the winter it is North Westerly and North Westerly.

Newark Bay and the Hackensack River is usually frozen during the

months of January and February, The ~~mouth of the~~ Passaic River from the mouth to the northern end of Newark is rarely frozen over, This is owing to the vast amount of grease and acid that is dumped into the river from the numerous factories along the river front of Newark and Harrison, Smoky atmosphere on the bay and rivers is very frequent, owing to the smoke from great numbers of factories in the neighborhood.

The winters are cold, this winter however up to January 24th has been unusually mild, January 12th the mercury dropped to 7 degrees below zero, with this exception the Fahrenheit thermometer has ranged between 38 and 52 degrees since December 1st 1913.

(e) Description of the Shores.

The water in the lower Hackensack and Passaic rivers, Newark Bay - Arthur Kill and Kill Van Kull, is so badly polluted by the grease-acids-petroleum and trash from the mills along the shores of the above streams, that fish and shell fish are almost extinct between Bergen Point and the city of Passaic.

Elizabethport, at the south west end of Newark Bay and along the northern shore of Arthur Kill. Is an extensive manufacturing city of about 40,000 inhabitants, With a good draught of water at its wharves along the Arthur Kill shore

(g) Light Houses-Beacons and Buoys.

There are 2 Light Houses- 1 Beacon- 13 Buoys -3 Rail Road Bridges- 1 Road Bridge and 2 Steamer Ferries, within the limits of this sheet.

(h) Changes in the Shore Line.

The shore line of Newark Bay and its tributaries, have undergone marked changes in the way of improvements along their water fronts, Many new buildings such as factories- wharves and other structures have been built, And many old land marks, such as buildings-wharves- and bridges

have been removed or destroyed.

(i) Survey Methods.

The triangulation was carried up Newark Bay from the line, Bergen Point Light House, Summerville Methodist Church Spire", ( one of the lines in the triangulation of "Greater New York") to the mouths of the Hackensack and Passaic rivers. All of the harbor line triangulation stations and permanent objects established in the triangulation of Newark Bay and its tributaries by the Army Engineers, were connected with my scheme of ~~triangulation and treated~~ as concluded points, as also many church spires - factory chimneys - stacks and all permanent objects visible from the bay and rivers. An entire new scheme of triangulation had to be developed on Newark Bay and its tributaries, none of the original <sup>stations</sup> could be found, many of them were destroyed in the erection of factory buildings, and others were disturbed by the erosion of the shores.

The shore line and interior topography was developed with the Plane Table, using the triangulation points for the determination of positions - heights and contour lines.

In the cities of Bayonne - Greenville - South Bergen and Elizabethport, traverse lines were run parallel to the shore line, and one at right angle to it, to get the contours and part of the street intersections. The streets not obtained by the <sup>transit</sup> ~~transit~~ lines, were transferred from the maps - tracings and blue prints of the different city surveyors to the plane table sheet, by a reduction to scale with the proportional dividers.

The heights are expressed in feet, and show the elevations above mean high water. The contours are given for every 20 feet difference in level. The full red lines indicate the twenty feet contours. The broken red lines show the intermediate ten foot curves.

*Walter H. Horney*  
Chief of Party C & G. Survey

Top 3431<sup>c</sup>

The finished topographic sheet is to be accompanied by the following form, properly filled in, when the sheet is turned in to the office.

U. S. COAST AND GEODETIC SURVEY  
Register No. 3431<sup>c</sup>

STATE-- *New Jersey*  
GENERAL LOCALITY-- *West Shore of Newark Bay*  
LOCALITY-- *Newark Bay*  
Surveyed by-- *Nathaniel P. White (chief of sub-party)*  
Chief of Party *J. H. Hamley ass't*  
Date *December 6<sup>th</sup> 1915*  
Scale  $\frac{1}{10000}$

Inked by Field Party

Lettered by Field Party

~~mean sea level~~  
~~height in feet above high water~~

~~Contour interval~~ feet