

4074

4074

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

State: *New York*

11-5813

DESCRIPTIVE REPORT.

*Hyd.* Sheet No. *4074*

LOCALITY:

*New Deep Lane to  
Midland Beach,  
Statens Island.*

1919

CHIEF OF PARTY:

*Peters, J. H.*

ADDRESS THE SUPERINTENDENT  
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO.

41-~~MMK~~

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
WASHINGTON

LIBRARY

Place with descriptive report  
of hydrographic sheet No. 4074

Drawing Section. 7

April 28, 1919.

Division of Hydrography and Topography: ✓ *Hea*

Division of Charts: ✓

Tidal reductions have been approved in  
1 volume of soundings for

HYDROGRAPHIC SHEET 4074

South Shore, Staten Island, N.Y.  
J. H. Peters in 1919.

Plane of reference is  
Mean low water, reading

2.8 ft. on staff at New Dorp Beach.

*A. Luce*

Chief, Section of Tides  
and Currents.

DESCRIPTIVE REPORT  
to accompany  
SPECIAL SHEET NO. \_\_\_\_\_.

Date of Survey: April 18 to April 24, 1919.

Chief of Party: J.H.Peters, H. and G. Engr.

Locality: New Dorp Lane to Midland Beach, Staten Id., N.Y.

Scale of Sheet: 1:5,000.

Object of Survey: To furnish data for Chief of Construction Division,  
U.S. Army as per letter dated April 8, 1919. Supt.  
instructions dated April 12, 1919. Copy attached.

Triangulation: Stations occupied as follows:

Elm Tree.  
Elm Tree Beacon.  
New Dorp Beacon.

Stations determined by intersections:

CAS Casino cupalo at Midland Beach.  
TANK Water tank on Hoffmann Id, shown on chart 369.  
LIN Lincoln Hotel Cupalo.  
CROSS Cross on church at foot of New Dorp Lane.  
STACK A brick smoke stack in New Dorp Beach. A section  
of the stack is made into checker work by use of  
fancy brick.  
RED A conical shaped red roof on a tower in the field  
back of Midland Beach and south of Lincoln Ave.

As an additional check, a round of sextant angles were  
taken from Lincoln Hotel Cupalo.

Topography: A plane table was not available. To determine the position of  
the high water mark, a traverse was run along the beach,  
from which offsets were measured to the high water mark.  
Other detail was determined by angles and tape measurements  
and plotted direct on the sheet.

Hydrography: The sounding was done with lead and line from launch, posit-  
ions being taken by sextant angles between objects ashore.

A tide staff was established on the pier head at the foot of  
New Dorp Lane. This was connected with precise leveling  
benchmark No. 49 of New York City survey, Board of Estim-  
ate and Apportionment. A comparison was also made by sim-  
ultaneous readings with the staff at Fort Hamilton.

The plane of reference as derived from connecting the tide  
staff with benchmark No. 49, New York City survey is as  
follows:

Elevation of B.M. 49 above MSL	8.943 ft.
B.M. 49 above zero of staff	14.24
Mean sea level on staff	<u>5.30</u>
One half of mean range at Sandy Hook	2.34
Mean low water on staff	<u>2.96</u>

DESCRIPTIVE REPORT  
to accompany  
SPECIAL SHEET NO. \_\_\_\_\_.

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B.M. 49 above zero of staff	14.24
Mean sea level on staff	<u>5.30</u>
One half of mean range at Sandy Hook	<u>2.34</u>
Mean low water on staff	<u>2.96</u>

As it was desired to enter the soundings on the hydrographic sheet prior to the completion of the simultaneous observations at Elm Tree tide station and Fort Hamilton tide station, the plane of reference was taken as corresponding to a reading of the tide staff at Elm Tree tide station of 3.0 feet.

The plane of reference as derived from a comparison by simultaneous observations at Elm Tree tide station and Fort Hamilton tide station was found to be 2.8 feet on the staff at Elm Tree tide station.

#### Changes in the Topography.

There is no definite information in regard to the changes that occur due to the shifting of the beach sands. The best information in this respect can probably be obtained by comparing this sheet with those of previous surveys.

It was noted that the bottom inside the six foot curve was somewhat "ridged up" by the action of the surf. These ridges are one to two feet high and no doubt shift back and forth with the action of the sea at different stages of the tide.

The fact that the beach at the foot of New Dorp Lane is somewhat farther outshore on the north side of the stone pier than on the south side, indicates that there is a decided movement of the beach sands towards the southward alongshore.

As it was desired to enter the soundings on the hydrographic sheet prior to the completion of the simultaneous observations at Elm Tree tide station and Fort Hamilton tide station, the plane of reference was taken as corresponding to a reading of the tide staff at Elm Tree tide station of 2.0 feet.

The plane of reference as derived from a comparison by simultaneous observations at Elm Tree tide station and Fort Hamilton tide station was found to be 2.8 feet on the staff at Elm Tree tide station.

#### Changes in the Topography.

There is no definite information in regard to the changes that occur due to the shifting of the beach sands. The best information in this respect can probably be obtained by comparing this sheet with those of previous surveys.

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The fact that the beach at the foot of New Dorp Lane is somewhat farther outshore on the north side of the stone pier than on the south side, indicates that there is a decided movement of the beach sands towards the southward alongshore.

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
Washington

Apr. 12, 1919.

To: Commanding Officer,  
Steamer RANGER,  
Room 441 Customhouse,  
New York City, N. Y.

From: The Superintendent, Coast and Geodetic Survey.

Subject: INSTRUCTIONS.

I enclose herewith a copy of letter dated April 8, 1919, from the Chief of the Construction Division of the Army, requesting a hydrographic survey on the South Coast of Staten Island. You will please make this survey as soon as practicable and have the data furnished to this office without delay, and not later than April 26, 1919.

2. It is desired that the survey shall be made on a 1:5000 scale and that fifty-meter lines shall be run normal to the shore, crossed by lines one hundred meters apart.

3. The survey should extend from the shore out to the twelve-foot curve, and should extend far enough to either side of the limits indicated by the Chief of the Construction Division of the Army to include any obstructions that might interfere with the work intended.

4. Any triangulation that may be necessary for the location of signals should be in conformity with the general instructions for tertiary triangulation.

5. The records of the automatic gauge at Fort Hamilton will be available to assist in establishing the plane of mean low water, but for the reduction of soundings, you will please establish a tide staff in the immediate vicinity of the work and connect it with the Fort Hamilton gauge by simultaneous observations as called for in the General Instructions for field work. Care should be taken to establish the proper bench marks as provided in Circular 28, a copy of which is enclosed.

6. It is desired that the sheet shall be sent to this office with the soundings in pencil on the sheet. On this sheet you

will please run the present shore line and other topography close to the beach, that may assist the Chief of the Construction Division of the Army for the purpose intended.

7. You will please submit a report giving additional information requested by the Chief of the Construction of the Army.

8. The necessary triangulation data is sent to you in a separate package.

(signed) E. Lester Jones,  
Superintendent.



COPY

April 8, 1919.

CR-E 600.93 (Staten Island, N. Y.)

Chief of the Construction Division,

Supt. of the Coast and Geodetic Survey, Washington, D. C.

Air Coast Defense Station, Staten Island, N. Y.  
Hydrographic Survey.

1. In accordance with the verbal understanding of this date between Captain H. C. Graves of your office and Mr. A. O. Dalmas of this Division, it is requested that a hydrographic survey be made of the portion of the southeast coast of Staten Island from New Dorp Lane, which is situated some 200 feet southwest of Elm Tree Beacon, to a point approximately 1,800 feet northeast, which is the limit of the property known as the Vanderbilt Farm and is marked by a fence. The property beyond is known as Woodland Beach Camping Ground. Survey to extent from the shore to the 6' depth line.

2. Any information or data on storm waves or on the shifting of the coast sands if available, is also requested. This information is required for use in connection with proposed construction work for the Army, and is needed as soon as it can be obtained.

3. All communications upon this subject should be addressed to the Chief of the Construction Division, Engineering Branch, attention Mr. A. O. Dalmas, Telephone, War Department 2686.

R. C. MARSHALL, Jr.  
Brigadier General, U. S. A.,  
Chief of the Construction Division.

By:

H. J. Burt,  
Major, Quartermaster Corps.

HJB-ACD-EAE

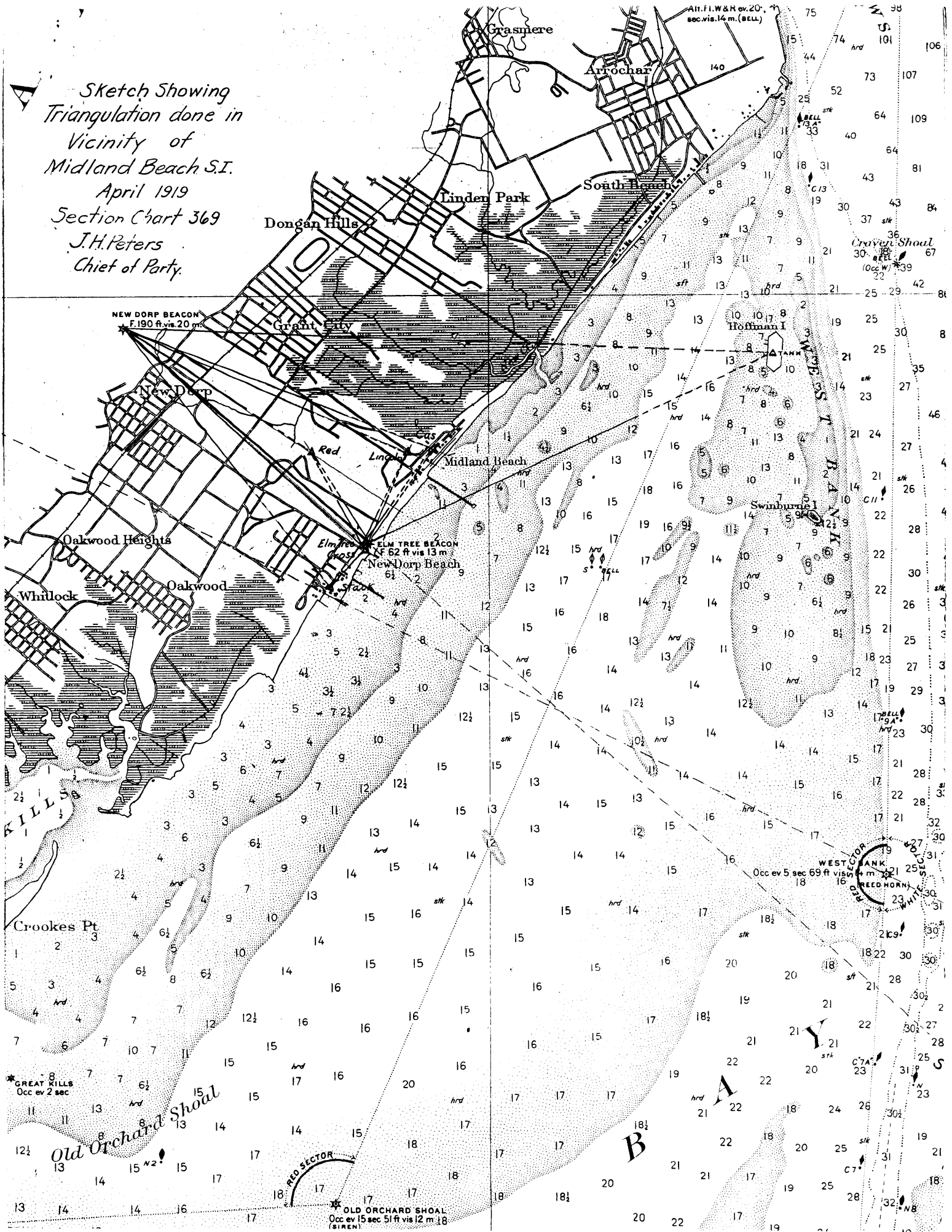
Sketch Showing  
Triangulation done in  
Vicinity of  
Midland Beach S.I.

April 1919

Section Chart 369

J.H. Peters

Chief of Party.



ADDRESS THE SUPERINTENDENT  
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 41-ACC

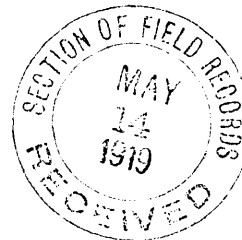
DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON May 14, 1919.

HYDROGRAPHY ETC., (HT)

FIELD RECORDS (C)



Division of Hydrography and Topography: ✓ *mcg*

Division of Charts: ✓

Tidal reductions have been approved in  
1 volume of soundings ( Volume No. 2 ) for

HYDROGRAPHIC SHEET 4074

South Shore, Staten Island, N.Y.  
J.H. Peters in 1919.

Plane of reference is  
Mean low water, reading

2.8 ft. on staff at New Dorp Beach.

*R. P. Rice*  
Chief, Section of Tides  
and Currents.

Hyd. Sheet No 4074

The soundings on this work do not cross well.

It is stated in the descriptive report that the bottom is constantly shifting. As there was an interval of three weeks between "a" day and "b" day, this may explain the failure of the soundings to agree.

No bottom characteristics were noted.

R. L. Johnston

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
WASHINGTON

July 7, 1924.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4074

Staten Island, New York

Surveyed in 1919

Instructions dated April 12, 1919

This survey includes a resurvey of the shoreline.

Chief of Party, J. H. Peters

Surveyed by J. H. Peters

Protracted and soundings plotted by field party.

Verified and inked by R. L. Johnston.

1. The sounding records are defective in that there are practically no bottom characteristics given and the leadline was not tested at the beginning of either day's work.
2. The plan and character of development satisfy the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. The usual field plotting was done by the field party except a portion of b day.
5. The information is sufficient for drawing the usual depth curves.
6. In the outer portion of the work the sounding line crossings are adequate. Inside of 500 meters from the shore there are numerous and excessive differences at the crossings. These differences appear to be properly accounted for in the statement in the descriptive report that there are "ridges one to two feet high which no doubt shift back and forth with the action of the sea at the different stages of the tide".
7. No further surveying is required within the limits of the sheet.
8. The character and scope of the surveying and field drafting are good.
9. Reviewed by E. P. Ellis, June, 1924.