

5283

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: New York

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 5283
Hydrographic } Field No. 2

LOCALITY

Hudson River

Ossining to Grassy Point

1932

CHIEF OF PARTY

C. A. Egner

U. S. COAST & GEODETIC SURVEY
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5283

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5283

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 2

REGISTER NO. **5283**

State New York

General locality Hudson River

Locality Ossining to Grassy Point

Scale 1:10,000 Date of survey Aug-Sept., 19 32

Vessel NATOMA and Launch

Chief of Party C. A. Egner

Surveyed by C. A. Egner and J. T. Jarman

Protracted by L. A. Sinclair

Soundings penciled by A. W. Green

Soundings in ~~fathoms~~ feet

Plane of reference Arbitrary Hudson River data

Subdivision of wire dragged areas by _____

Inked by C. R. Bush Jr.

Verified by C. R. Bush Jr.

Instructions dated Continuation of 1930 work, 19

Remarks: _____

R E P O R T
T O A C C O M P A N Y
H Y D R O G R A P H I C S H E E T
N O. 1 (F I E L D)
H U D S O N R I V E R
1 9 3 2
P R O J E C T H T - 1 0 8

M. V. N A T O M A

C. A. E G N E R, C O M ' D G.

I N S T R U C T I O N S
A N D A U T H O R I T Y:

The work on this sheet was done as a part of the season's work on Combined Operations by the Motor Vessel NATOMA in the Hudson River from June to November 1932. Since it was a continuation of the 1930 work and executed under similar conditions the Instructions for the previous work were considered to apply. Therefore, except in the case of Tidal Observations, the Instructions for which were dated June 18, 1932, no definite Instructions govern the area surveyed this year.

LIMITS:

This sheet No. 2 (Field) joins No. 1 at Rockland Light House and carries north to join Sheet No. 3 at Grassy Point.

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DIVISION OF WORK:

Both ship and launch sounding was done. Since there is quite a little current in the river, channel lines were run with the current by the ship, thereby avoiding any bow in the leadline. Arbitrarily, it was considered that no appreciable error due to bow of leadline would occur in depths of 15 feet or less, so that these ship lines were run only to the east and west sides of the channel far enough to overlap this 15 foot curve. These lines were spaced approximately 50-75 meters apart. Inshore of this, to better control the sounding, the launch completed the area to both beaches by 100 meter lines normal to the shore.

All shoal indications were developed to determine least water.

METHODS:

Since the depth of water throughout this sheet was shoal enough to permit it, all sounding was done with the hand lead in the usual manner.

TIDES:

Portable automatic gages controlling this area were established at Ossining and Haverstraw.

As noted under Sheet No. 1, the plane for the Ossining gage was determined by leveling to First Order leveling Bench Marks along the N.Y. Central Railroad. At Haverstraw there are no such marks. Therefore it was necessary to determine the plane by simultaneous comparison with the Standard Automatic Gage at Peekskill which in turn was tied to First Order Level Bench Marks.

By agreement with the Army Engineers certain arbitrary corrections were applied in final determination of the datum plane, these being covered by the Tidal Instructions for the season's work.

In dividing the area between the Haverstraw and Ossining gages, an arbitrary line was drawn (see boat sheet) from the South end of Croton Point S.W. to the West shore line.

No appreciable error was detected in the transfer across this line.

DANGERS

DISCOVERED:

One very important one was located. A ¹⁸~~27~~ foot pinnacle 1000 meters due West of the south end of Croton Point was the subject of a report, with inclusion in Notice to Mariners and immediate placing on this dangerous spot of a buoy by the Light-house Bureau.

An irregular strip lines the channel at the edge of the shoal area West of Croton Point Park. This, however, is already charted and is well known, so it is not considered a menace to navigation.

Northwest of Ossining the area is regular, and shoal. The Croton river, although by Supreme Court decree a navigable river, is now cut off to all boats by a N.Y. Central Railroad fixed bridge which fact has been the subject of extensive litigation.

HAYERSTRAW:

Dredging off the waterfront at Haverstraw has made much irregularity in this area. This town, formerly a large manufacturer of brick, is now quite decadent and little importance attaches to the waterfront most of the wharves of which are in ruins.

The faces of docks were all sounded, as well as an enclosed rock quarry basin at the South end of town. Likewise, a creek making in behind Grassy Point was sounded to the limit of the launches navigability though this creek no longer has any importance. In fact, a draw bridge across it has not been opened in months.

Haverstraw Bay, across from the town, is shoal and quite regular. This fronts on Croton, a town of little waterfront importance.

As the channel approaches Stony Point northward past Grassy Point, the water deepens greatly, the limit of hand lead sounding being approached at the upper edge of this sheet.

Off Hook Mountain and the range immediately north of it the water deepens abruptly though without irregularity.

CHANGES:

Few natural changes were noted since the previous survey. This area is building up rapidly in population, which carries the usual artificial development of wharves, etc. On the East bank the N.Y. Central Railroad has quadruple-tracked its right-of-way which has made necessary a rock fill which alters the old shore line slightly.

In such rocky, high class, expensive, area, changes are not undertaken lightly, and naturally the river bed itself does not change appreciably from year to year.

CONTROL:

Good control was provided by an abundance of triangulation stations supplemented by many natural objects, located by intersection with the plane-table. Since no traverses were run in doing the topography, all topographic signals are well tied down.

Surveyed:

This area was surveyed between August 30, 1932 and September 28, 1932.

SURVEYED BY:

All surveys by the ship was in charge of C. A. Egner, Commanding Officer.

All launch work was in charge of J. T. Jarman, Aid.

STATISTICS:

Statute miles of soundings	400.9
Number of soundings	12,358
Number of positions	2,336

TIDAL DATA:

Tidal data was forwarded to the Office on Feb. 3-11, 1933.

Respectfully submitted,



C. A. Egner, H. & G. Engr.
Commanding M. V. NATOMA.

HYDROGRAPHIC STATISTICS

HUDSON RIVER, NEW YORK

SHEET NO. 2

DATE 1932	DAY	VOLUME	BOAT	STATUTE MILES SOUNDINGS	NUMBER OF SOUNDINGS	NUMBER OF POSITIONS
8/30	a	1	Launch	19.0	753	149
8/31	b	1	"	4.5	145	43
9/1	c	1	"	22.3	798	177
9/2	d	2	"	7.4	260	71
9/6	e	2	"	21.2	656	133
9/7	f	2	"	22.3	706	149
9/12	g	3	"	4.5	118	26
9/13	h	3	"	18.2	534	122
9/14	j	3	"	21.4	707	149
9/15	k	3	"	11.4	372	66
9/15	k	4	"	15.9	521	91
9/19	l	4	"	20.0	644	133
9/20	m	4	"	21.0	688	141
9/20	m	5	"	4.5	144	27
9/21	n	5	"	29.1	848	201
9/22	p	5	"	19.1	626	143
9/23	q	6	"	20.9	706	179
9/29	r	6	"	15.5	516	143
9/30	t	7	"	9.1	333	79
9/26	A	1	Ship	36.1	865	203
9/27	B	1	"	35.7	848	198
9/28	C	2	"	21.8	570	113
				400.9	12358	2736

August 17, 1933.

Division of Hydrography and Topography:

✓ Division of Charts:

Lide reductions are approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 5283

Locality Ossining to Grassy Point, Hudson River, N.Y.

Chief of Party: C. A. Egner in 1932

Plane of reference is Hudson River Datum (mean low water during lowest river
1.7 ft. on tide staff at Haverstraw (stages) reading

6.7 ft. below B. M. 1

0.2 ft. on tide staff at Ossining

7.6 ft. below B.M. 106

Height of mean high water above plane of reference is 3.0 feet.

Condition of records satisfactory except as noted below:

Reducers entered in the field to the nearest foot and ^{partly} corrected in the office
to the nearest half foot

Hammer
Chief, Division of Tides and Currents

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. H5283.

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	.2736
Number of positions checked	..352.
Number of positions revised	...26.
Number of soundings recorded	.12358.
Number of soundings revised	..163.
Number of signals erroneously plotted or transferred

Date: Oct. 12, 1933

Cartographer: ... C. B. Bush, Jr.

Tide reducers in red

Reduction of 3 and 3 1/2 foot soundings in black

To nearest tenth		Per Manual Par. 135(c)		Egner's work	
0.0		0.0		0.0	
.1		.0		0.0	
.2	2.8, 3.3	.0	3, 3.5	0.0	3, 3.5
.3	2.7, 3.2	.5	2.5, 3.0	1.0	2, 2.5
.4		.5		1.0	
.5		.5		1.0	
.6		.5		1.0	
.7	2.3, 2.8	.5	2.5, 3.0	1.0	2, 2.5
.8	2.2, 2.7	1.0	2.0, 2.5	1.0	2, 2.5
.9	2.1, 2.6	1.0	2.0, 2.5	1.0	2, 2.5
1.0		1.0		1.0	

With the exception of H. 4285 (Field No. 4) all of Egner's Hudson River surveys are reduced for tides as indicated in red in the third column.

When the actual reducer is between .3 and .7 inclusive:
When plotting in whole feet Egner loses 1 foot when plotting soundings recorded 1/2, 1 1/2, 2 1/2 etc.
When plotting in half feet Egner loses 1/2 foot when plotting all soundings.

In all cases where the tide reducer is less than .3 or more than .7 all the systems of reduction give identical plotted soundings.

When plotting in whole feet soundings recorded in whole feet do not change in any case.

The reducers for Hudson River should conform to paragraphs 133, 134 and 135 (c) of the Hydrographic Manual.

Five sheets of Hudson River were surveyed by Egner in 1932. Total number of sounding volumes 24 of which 22 volumes have faulty tide reducers.

SECTION OF FIELD RECORDS

Report on H. 5283.

Chief of Party - C. A. Egner.

Protracted by - L. A. Sinclair, F. A. Nielson.

Verified and inked by - C. R. Bush, Jr.

Surveyed in August-September, 1932.

Surveyed by - C. A. Egner - J. T. Jarmon.

Soundings plotted by - A. W. Green.

Topography inked by - J. T. Jarman.

The records are incomplete in that several topographic signals namely, \odot Mid, \odot ~~Cross~~, \odot Rek, \odot ^{piling}Water, \odot ^{pile}Spit, \odot Set, are not described at all. They are probably piles or dolphins, Page ~~39~~³⁸ vol. 3 notes that launch struck wreck. Hence wreck symbol was put on sheet as \odot wife is evidently on part of wreck.

The depth curves were not drawn to include the depth represented by the curve.

The protracting was fairly accurate - 26 positions being changed and others left unchanged as they did not change any characteristics or depths.

The soundings were plotted according to time intervals but 163 soundings were erroneous, either due to reducer or plainly incorrect. Several cases were noted where the last few soundings were plotted backwards, probably due to plotter trying to remember several at one time. Fractions of a foot was plotted although in most cases they were not necessary.

Day letters and position numbers were clear and legible but several rocks, docks etc. appearing on the topographic sheet did not appear on the smooth sheet. Several positions were plotted up on land, one position being as much as 40 meters inshore.

One buoy, namely N10 was not plotted at all and another buoy, C1 was out of position by 130 meters.

The 17' spot off Croton point mentioned in the descriptive report does not appear, the least depth being 18'.

H. 5283 - 2.

Potato Rock, shown on previous charts as approximately offshore from
△ Park does not appear at all.

It would appear that the sheet was not compared with existing charts
or topographic sheets of this locality.

The attached sheet shows comparison of tidal reducers.

The field drafting is considered fair.

Submitted by - Chas. R. Bush, Jr. Carto. Engr.

SECTION OF FIELD RECORDS
Review of Hydrographic Sheet No. 5283.
Ossining to Grassy Pt., Hudson River, New York.
Surveyed in 1932.
Hand lead soundings.
Instructions dated June 18, 1932. (Natoma)

Chief of Party - C. A. Egner.
Surveyed by - C. A. E., J. T. Jarman.
Protracted by - L. A. Sinclair, F. A. Nielson.
Soundings plotted by - A. W. Green.
Verified and inked by - C. R. Bush, Jr.

1. The records conform to the requirements of the Hydrographic Manual except that no description was furnished of several signals located in water areas well outside the shoreline. In the list of signals filed in the descriptive reports of the topographic sheets these signals were marked N. R. but were not described.

2. The work was continued under the previous season's instructions and no definite instructions govern the actual surveying. The instructions of June 18, 1932, refer only to Tidal Observations.

3. The sounding line crossings are generally satisfactory.

4. The information is sufficient for completely drawing the usual depth curves.

5. The junction on the north with the contemporary sheet, H. 5284, is satisfactory.

The junction on the south with H. 5282 will be reported in the review of that sheet when it is completed.

6. Previous Work.

The old survey of 1854, H. 458 agrees only fairly well with the new work. There are quite a number of shoaler soundings on the old work which is considered unreliable because of the character of the control, the faulty tide reducers and the remoteness of the survey. It is recommended that this sheet be superseded and not used for charting.

The survey of 1901, H. 2549 agrees fairly well but this may also be superseded with the exception of three spots which will be recommended for additional examination in the last paragraph of this review.

The other survey of 1901, H. 2564 and H. 2564a shows excellent agreement but should also be superseded.

The recent work, H. 5283, will now become the basic survey for this area.

7. Within the limits of this sheet the area has been systematically covered and the shoal development is generally sufficient. The descriptive report refers to the 18 ft. sounding, 1000 meters west of Croton Point, (Lat. 41°-

H. 5283 - 2.

10'.13, Long. 73°-54'.7) as a pinnacle. The record shows the bottom as hard in quality but does not give the material. From this it would be presumed that this was not a pinnacle rock, but the point is left in doubt.

Not enough attention was given to the investigation and development of shoal soundings and dangers shown on the existing charts.

8. Additional work and information is required on the following points:

a. A 6 foot spot shown on H. 2549 in L at. 41°-10'.7, Long. 73°-54'.5 should be further developed so that the sounding may be removed from the chart if found non existent. There is a possibility that the original sounding was the result of a recorder's error.

b. Another 6 foot spot shown on H. 2549 in L at. 41°-08'.9, Long. 73°-53' should be closely examined, as there is also a chance this sounding was incorrect. The new work shows 11 feet at this point but no extensive examination was made.

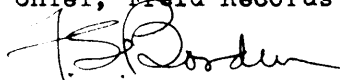
c. Potato Rock, shown on Chart 281 in Lat. 41°11'.15, Long. 73°54'.2, is strongly located by two positions in the records of H. 2549. The least depth over this rock is given as 3 feet and it is dangerous to small boats running close to shore and should be re-examined.

d. Signals Mid, Rek, Set and Wife are located in water areas well outside the shoreline. Information as to what sort of an object these signals were located on is desired.

9. Reviewed by - R. L. Johnston.

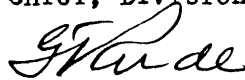
Recommend reference to Chief of Party for additional information.


Chief, Field Records Section.


Chief, Field Work Section.

Examined and approved:


Chief, Division of Charts.


Chief, Division of H. & T.

ADD' WORK
5283

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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

U. S. COAST & GEODETIC SURVEY
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State: NEW YORK

DESCRIPTIVE REPORT

~~Hydrographic~~ } Sheet No. 2 5283
Hydrographic }

LOCALITY

Hudson River

Additional work west of Croton Pt.
and west of Sing Sing Prison.

1933.

CHIEF OF PARTY

C. A. Egner.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 2

REGISTER NO. 5283 (ADDITIONAL-WORK)

State New York

General locality Hudson River

Additional work,

Locality West of Croton Point and west of Sing Sing Prison

Scale 1:10,000 Date of survey Nov. 8, 1933 ~~1923~~

Vessel NATOMA and Launch

Chief of Party C.A. Egnar

Surveyed by C.A. Egnar

Protracted by

Soundings penciled by

Soundings in ~~fathoms~~ feet

Plane of reference Hudson River Datum

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated Paragraph #8 of the review of ~~1923~~
H 5283

Remarks:

REG. NO. 5283 (ADDITIONAL-WORK)

REPORT ON ADDITIONAL FIELD
WORK DONE ON
HYDROGRAPHIC SHEET NO. 5283.

REPORT ON ADDITIONAL FIELD

WORK DONE ON

HYDROGRAPHIC SHEET NO. 5283.

This report covers the additional work done on hydrographic sheet #5283. The work was done to satisfy the additional work and information required under paragraph #8 of the review of the sheet.

The instructions for this work arrived near the close of the 1933 season's work in this vicinity and all the tide gages had been removed from the river. As this additional work consisted largely of proving, or disproving, questionable soundings rather than the further development of these areas, it was not considered necessary to establish tide staffs and connect them to bench marks by levels.

Both Items (a) and (b) of Paragraph #8 of the review of sheet call for investigations of shoal soundings shown on the chart but not verified by this survey. Closely spaced lines were run over both these places and no indication of the shoal spots could be found. It is quite evident that these shoal soundings are the result of an error in recording and should not be shown on the chart.

Item (c) of the review calls for an examination of the locality shown on the chart as the position of Potato Rock. The hydrographic signals used on the previous season's work in this area are whitewashed rocks and all the white-wash has been washed off so that the signals are no longer visible. In lieu of attempting to relocate the old signals the motor sailer party, under Mr. Taylor, ran random lines parallel to the beach in the vicinity of the indicated position, feeling with the leadline for evidence of the rock. It is evident that this rock, if it exists, is a boulder similar to those along the beach with no indications close by to assist in its location, and, that a wire drag would be necessary to find it. The water here is not clear. No proof exists that the rock is not there and, if it were originally well located, it is recommended that it remain on the chart until a wire drag investigation can be made.

The information requested in Item (d) of the review is as follows:

✓ Signal MID is a white-wrapped cluster of fender piling. ✓

✓ Signal REK is on the south end of an old wrecked tub boat. Only about three feet of the length of this boat is visible at H.W. and it extends about one foot above H.W. ✓

✓ Signal SET is signal cloth on one of the four dolphins used in mooring rock barges. ✓

✓ Signal WIFE is on one of the cluster of dolphins. ✓

Respectfully submitted,

JACK C. SAMMONS

Jack C. Sammons, *by G.T.B.*
H. & G. E.,
U.S.C. & G. Survey.

Approved and forwarded:

C. A. Egner
C. A. Egner,
Chief of Party.

SECTION OF FIELD RECORDS

Report on H. 5213 (Additional Work).
Chief of Party - C. A. Egner.
Protracted, inked and verified by Chas. R. Bush, Jr.

Surveyed in November, 1933.
Surveyed by - C. A. Egner.
Soundings plotted by - C. R. Bush, Jr.

The revision work requested according to the review of the above numbered sheet was plotted and inked with green day letters for clarification by the undersigned. As mentioned in the supplementary descriptive report none of the doubtful soundings were found. There were no drift soundings except in the vicinity of Potato Rock and these without an accurate knowledge of position. Hence in the estimation of the undersigned there was not sufficient development to prove or disprove the existence of these shoal spots.

Submitted by - Chas. R. Bush, Jr.

SECTION OF FIELD RECORDS
Review of Hydrographic Sheet No. 5283 (Add. Work).
Ossining to Grassy Pt., Hudson River, N.J.
Surveyed in 1933
Hand lead soundings
No specific instructions except Par. 8, Original Review.

Chief of party - C. A. Egner.
Surveyed by - C. A. Egner.
Protracted, plotted and inked by - C. R. Bush, Jr.

This review deals only with the additional work of 1933 and the item letters correspond to those used in par. 8 of the original review and also to those used in the descriptive report covering the revision work.

Item (a) An investigation was requested of a 6 foot spot shown on Chart 281 in lat. $41^{\circ}-10'.7$, long. $73^{\circ}-54'.5$. The original sounding is recorded in the records of H. 2549, pos. 74d, as 1 fathom 1.5 feet while both the preceding and following soundings are 1 fathom 5 feet making it appear that the suspected sounding should also have been 1 fathom 5 feet.

The field party ran several sounding lines over the spot but obtained no depth less than 10 feet. While they did not take drift soundings or feel around with the lead line, it is believed there is now enough evidence to discredit the 6 ft. sounding and its removal from the chart is recommended.

Item (b) An investigation was requested of another 6 foot spot shown on Chart 281 in Lat. $41^{\circ}-08'.9$, Long. $73^{\circ}-53$. The original sounding is recorded in the records of H. 2549, pos. 30a, as 1 fathom 0.5 feet and was questioned by the verifier at the time that sheet was plotted. It seems probable that the sounding should have been 1 fathom 5 feet.

Here again the field party ran several lines over the spot without finding any indication but did not make a very intensive examination. In spite of this, in view of the fact that the original sounding was very questionable, it is believed there is now enough evidence to disprove it. It is recommended that the 6 foot spot be removed from the chart and be superseded by the present survey, H. 5283.

Item (c) An examination of Potato Rock shown on Chart 281 in Lat. $41^{\circ}-11'.15$, Long. $73^{\circ}-45'.2$ was requested. The field party had no adequate control as the signals were down but they took soundings and felt around the locality with the lead line without finding the rock.

As this rock is strongly located in the records of H. 2549, pos. 31 e and pos. 32e, its existence has not been disproved. The records of H. 2549 further state that this rock is dangerous and has wrecked several boats.


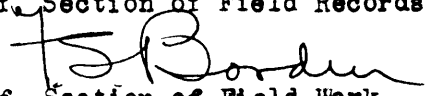
H. 5283 (add. work) - 2.

Potato Rock will be retained on the chart until disproved by the wire drag.



Item (d) Information was requested concerning signals in water areas. This was furnished by the field party. No recommendation needed.

No further additional work is recommended, except as noted below.

Reviewed by - R. L. Johnston.


L. C. Colbert,
Chief, Section of Field Records.

Chief, Section of Field Work.

Examined and approved:


Chief, Division of Charts.

Chief, Division of H. & T.

A 22 foot sounding of the 1932 work, in lat. $41^{\circ}11'.1$, long. $73^{\circ}55'.74$, should be investigated when there is an opportunity to do so. No additional work was requested in the original review. The 22 is about one fathom less than the surrounding depths and appears questionable because it is the first sounding obtained on a line.

LCC

December 20, 1933

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
1 volume/s of sounding records for

HYDROGRAPHIC SHEET 5283 (Additional Work)

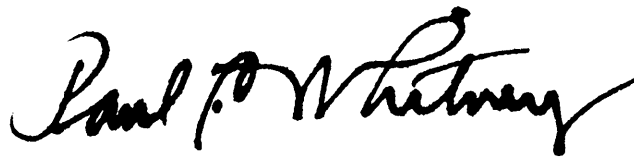
Locality West of Croton Point and West of Sing Sing Prison, Hudson River, N.Y.

Chief of Party: G. A. Egner in 1933

Plane of reference is Hudson River Datum (mean low water during lowest
ft. on tide staff at river stages)
ft. below B. M. (Used Predicted Tides)

Height of mean high water above plane of reference is 3.0 ft.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents

APPLIED TO ALUMINUM-MOUNTED DRAFTING OF THE
RECONSTRUCTION OF CHART No. 282 ^W *within limits of the chart.*

J. M. Albert

Dec. 1934