

6213

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES
AUG 23 1937
Acc. No. _____

Form 504
Rev. Dec. 1903
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 10
Hydrographic }

State New Jersey

LOCALITY

~~Good Bay to Beach, Thorens Cove~~

~~Intracoastal Waterway~~

Brigantine Beach to Absecon Bay

1936

CHIEF OF PARTY

L. D. Graham

621300

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. 10

REGISTER NO. H 6213

State New Jersey (~~Intracoastal Waterway~~)

General locality Vicinity of Atlantic City Intracoastal Waterway

Locality ~~Road Bay to Beach Therefore~~ Brigantine Beach to Absecon Bay

Scale 1:10,000 Date of survey July 14 to Aug. 14, 1936

Vessel U.S.C. & G.S. Launch MIKAWA

Chief of Party L. D. Graham

Surveyed by J. C. Bull

Protracted by J. C. Bull and W. N. Martin

Soundings penciled by E. B. Brown and T. M. Williams

Soundings in ~~fathoms~~ **feet**

Plane of reference Mean Low Water

Subdivision of wire dragged areas by None

Inked by Leonard A. McGarr

Verified by Leonard A. McGarr

Instructions dated May 16, 19 35

Remarks: _____

DESCRIPTIVE REPORT

To Accompany Hydrographic Sheet 10. H-6213

DATE OF INSTRUCTIONS - May 16, 1935 Project HT-205

SURVEY METHODS

The usual hydrographic survey methods were used on this sheet. The soundings were taken, from a 24 foot skiff that was propelled by an out-board motor, with a hand lead line graduated in fathoms and feet. In general the lines were run on ranges. However, in small winding creeks the lines were run by following the general trend of the shore lines. The positions were, in general, taken with sextants on shore signals that had been located on aluminum mounted graphic control sheets. In some small unimportant creeks positions were taken by estimating the position with respect to topographic features that could be identified on the compiled shore line. The shore line and geographic names were obtained from the air planimetric sheets T-5635, T-5636 and T-5637. This shoreline was checked on the graphic control sheets. The shoreline on the south side of the point on Absecon Channel in the vicinity of signal Axe has eroded some since the pictures were taken. This shoreline was rodded in on air planimetric sheet T-5637, which is being forwarded with the smooth sheet. The planetable was set-up at signal Axe and oriented on Brigantine Beach Water Tank, 1932. The shoreline on the west side of the point checked very well. filed in P.R. of T-5637

Beach Thorofare was developed on sheet ^{H-6214} 14 on a scale of 1:5,000. Absecon Inlet was developed by the War Department on a scale of 1 inch = 400 feet; a blue print of which is forwarded with the smooth sheet. The approaches to Absecon Inlet was developed by the War Department on a scale of 1:10,000, a blue print of which is forwarded with the smooth sheet.

DISCREPANCIES

At Lat. $39^{\circ} 23.7'$, Long. $74^{\circ} 23.94'$, between positions 56 and 57 a day, there is a 5 foot sounding that falls in an area that has depths of 10 to 15 feet. It is probable that the 5 foot sounding was recorded 1 fathom too shoal and should be 11 feet. This sounding is not "ok'ed" in the sounding record. *5 and 10 (pos. 100) foot sdgs. fall within 6m. of each other and could easily be interchanged if a slight variation exists in the direction of the boat on line 56-57. 5 plotted in position as recorded, 10 omitted. R.W.M.*

At Lat. $39^{\circ} 24.6'$, Long. $74^{\circ} 28.2'$, between positions 62 and 63 f day, a 2 foot sounding falls inside a line of 4's and near a 7 foot sounding. The 4 ft. and 7 ft. soundings were on lines run in the channel. This 2 ft. sounding was moved northward out of the channel because of the probability that the sounding skiff was dragging slightly while running in the shoal water outside the channel.

At Lat. $39^{\circ} 24.2'$, Long. $74^{\circ} 25.3'$, the first sounding after position 147 k day is recorded $2\frac{1}{2}$ feet. This sounding falls in the middle of a channel that, according to other soundings, has a depth of about 8 feet at this point. It is probable that the sounding was not recorded correctly and should have been 2 fathoms $\frac{1}{2}$ foot, which would reduce to $8\frac{1}{2}$ feet.

Original sdg (1/2 reduced) shown on smooth sheet. Probably a small spoil dump. (Note somewhat similar case in lat. 39° 24.5', long. 74° 25.2')

At Lat. 39° 24.5', Long. 74° 25.1', between positions 70 and 71 p day, there is a sounding of 0 feet that falls inside a small channel. The channel is defined by soundings between positions 21 and 22 l day and 46 to 47 n day. It appears that this 0 sounding (the third after position 70 p) was recorded 1 fathom too shoal and should be 6 feet instead of 0. *Discrepancy probably due to slight variation in course of boat on line 70-71p + 21-22l. S'dy plotted slightly S, zero plotted slightly N.*

At Lat. 39° 23.4', Long. 74° 25.65', position 38 t day falls on shore. It is probable that the right angle was read 1° too large. If the right angle were 78° 57' the position would fall in the water. The shoreline at this point was rodded in on air planimetric sheet T-5637, which is being forwarded with the smooth sheet. The right angle was changed to 78° 57' in the record and plotted accordingly.

CHANNELS

The New Jersey Intracoastal Waterway crosses this sheet, beginning at the southern end of Reed Bay, follows Gull Island Thorofare, then bends southward through Middle Thorofare, then south south eastward following Absecon Channel for a distance of 0.7 mile, then swings westward to Beach Thorofare. The channel is marked with lights, 55 gallon oil drum buoys and stakes. Buoys painted red and stakes which display red crosses are to be left on the starboard side, while buoys painted black and stakes displaying black triangles are to be left on the port side when sailing from Reed Bay to Beach Thorofare. This sheet joins sheet 9 at Reed Bay and sheet 14 at Beach Thorofare. The controlling depth in this channel is 9 feet, which is found at the entrance to Beach Thorofare, positions 59 to 60 c day and 61 to 62 c day.

Depth of 10 to 12' may be had with local knowledge

If going to Atlantic City, instead of swinging westward to Beach Thorofare, swing south eastward to the Brigantine Bridge following Absecon Channel. The controlling depth from Reed Bay to the bridge is 10 feet at Lat. 39° 24.6' and Long. 74° 26.1', between the red oil drum buoy and the black oil drum buoy. It is advisable, however, for craft of draft more than 9 feet to proceed with caution due to a shoal flat that extends to the north westward of the island to the south westward of Little Fish Thorofare at Lat. 39° 24.7', Long. 74° 25.9'. There is also a shoal middle ground with 9 foot controlling depth at Lat. 39° 23.4', Long. 74° 25.8'. *altho deeper depths are available on either side.*

* The channel from the Brigantine bridge to the outside was developed by the War Department on a scale 1 inch = 400 feet. The channel is marked by buoys. The controlling depth on the bar is 15.9 feet between buoys Nos. 3 and 4. It is necessary that craft run close to buoys Nos. 5 and 7 due to a shoal that extends into the channel from the eastward. It is advisable that local information be obtained as to conditions of the entrance channel when entering with craft of draft greater than 5 feet. This is because of the possibility that the channel has shoaled or shifted.

Falls outside limits of present survey

The channel from the intracoastal waterway to Brigantine follows Main Channel to Golden Hammock Thorofare to Bonita Tideway. The controlling depth is 4 feet between positions 112 and 113 c day at Lat. 39° 24.2', Long. 74° 25.5'. *Ab. 4' at Lat. 39° 24.3, Long. 74° 25.1.*

* Note: The War Department has dredged this channel to 20 feet, August 1937.

The channel from the intracoastal waterway to Absecon follows Absecon Channel, then through a dredged channel across Absecon Bay and then up Absecon Creek. The channel across Absecon Bay is marked by three lights. The channel is bounded on the southwest by numerous spoil banks which were located on air planimetric sheet T-5636. The controlling depth is $3\frac{1}{2}$ feet at the northwest end of Absecon Bay between positions 173 and 175 f day and $3\frac{1}{2}$ feet in Absecon Creek (by following the center line) between positions 77 and 78 g day. The mid channel line across Absecon Bay was run between positions 173 and 186 f day. The center line of Absecon Creek was run between positions 29 and 30 g day and 75 to 87 g day.

Lat. $39^{\circ}25.1'$
 Long. $74^{\circ}28.8'$
 Lat. $39^{\circ}25.4'$
 Long. $74^{\circ}29.7'$

Other channels developed on this sheet are of little importance.

AIDS TO NAVIGATION

The beacons, buoys and stakes marking the channels are of a temporary nature and subject to change. During the winter months ice usually destroys all channel marks and they are renewed in the spring by the State Board of Commerce and Navigation. The hurricane of September 18, 1936 destroyed many of the channel markers, most of which will not be renewed until spring. A list of non-floating aids to navigation for this area has previously been submitted. See Chart Letters: #117 (1936) 832 (1936)

COMPARISON WITH CHART 3243, SCALE 1:80,000

The scale of the chart is so small that only a general comparison can be made. In Absecon Channel at the entrance to Beach Thorofare the general depth on the chart is greater than that found by the present survey.

The general depths at the eastern entrance to Mankiller Bay are shallower on the present survey than is indicated on the chart.


On the chart a large thorofare is shown from Lat. $39^{\circ} 24.2'$, Long. $74^{\circ} 26.8'$ to Lat. $39^{\circ} 24.6'$, Long. $74^{\circ} 26.4'$. This thorofare is now filled in in the middle, Lat. $39^{\circ} 24.4'$, Long. $74^{\circ} 26.6'$, so that it is no longer one continuous thorofare.

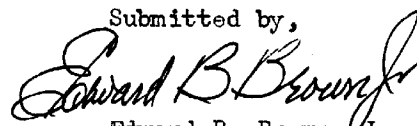
The general depths shown on the chart in Main Channel and Golden Hammock Thorofare are greater than those found by the present survey.

Geographic names shown on this sheet are taken from the air planimetric sheet.

LANDMARKS FOR CHARTS

A list of landmarks for charts was submitted with the graphic control sheets of this area. Chart Letters: #117 (1936) 832 (1936)

Approved and forwarded:

 L. D. Graham
 H. & G. Engineer
 Chief of Party

Submitted by,

 Edward B. Brown, Jr.
 Jr. H. & G. Engineer

4

STATISTICS FOR HYDROGRAPHIC SHEET No. 10 H-6213

Day	Date	Volume	Statute Miles	Soundings	Positions
a	July 14	1	18.7	891	172
b	15	1 & 2	0.8	47	9
c	17	1 & 2	20.0	751	139
d	18	2	11.4	422	93
e	21	2	4.0	146	28
f	22	2 & 3	30.3	1202	203
g	23	3	24.8	1021	201
h	24	4	7.1	333	64
j	27	4	19.4	869	167
k	28	4 & 5	20.9	886	167
l	29	5	12.3	558	112
m	Aug. 1	5 & 6	10.4	452	96
n	3	6	15.7	679	150
p	4	6 & 7	12.2	511	115
q	5	7	16.0	651	154
r	10	7	12.0	341	117
s	11	8	11.9	509	99
t	12	8	4.0	167	38
u	13	8	3.4	158	32
v	14	8	1.3	77	21
			<u>256.6</u>	<u>10671</u>	<u>2177</u>

H-6213
Smooth Sheet No. 10 was plotted under the immediate supervision
of the Chief of Party. The sheet and accompanying records have been
inspected and are approved.



L. D. Graham
H. & G. Engineer
Chief of Party

Field Records Section (Charts).

H6213

HYDROGRAPHIC SHEET NO.

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

Number of positions on sheet ²¹⁷⁷
Number of positions checked ¹⁰⁷
Number of positions revised ⁸
Number of soundings recorded ¹⁰⁶⁷
Number of soundings revised ⁵³⁰
Number of signals erroneously plotted or transferred

Date: *October 26, 1937*

Verification by *Leonard A. McGarrin*

Time: *82½ hours*

Review by *Harold W. Murray*

Time: *21* "

Verifiers Corrections by *"*

3 "

HYDROGRAPHIC SURVEY NO. H-6213

Smooth Sheet Yes

Boat Sheet Yes

Sounding Records 8 Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes (VOL. #1)

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service Yes
(Circular Nov. 30, 1933)

Remarks HYDROGRAPHY

Total Days 20

Last Date Aug. 14, 1936

VERIFIER'S REPORT ON H-6213 (1936).

The records conform to the requirements of the Hydrographic Manual instructions. There is this lack of helpful information in the work, however. Estimated distances to the H. W. Line have not been obtained when lines began or ended within 100 m. of this line. Bearings and estimated distances to lights, buoys, and piers have not been obtained when passing a short distance of these objects. mentioned in Rev.

The control for this survey H-6213 (1936) originates with T-6501 b (1935 - 1936), T-6502 a T-6502 b (1935 - 1936) and T-6503 a (1935 - 1936) The shoreline on H-6213 (1936) originates with T-5635 ⁽¹⁹³⁵⁾ T-5636 ⁽¹⁹³⁵⁾ and T-5637 ⁽¹⁹³⁵⁾.

The following triangulation stations shown on the topographic surveys mentioned above are not shown on H-6213 (1936)

N. J. Geodetic Survey No 1800, 1934.
N. J. " " No. 1801, 1934.
N. J. " " No. 1886, 1934.

The following discrepancies of soundings occur in addition to those listed on pages 1 and 2 of the field party's report:

(1) At lat. $39^{\circ} 24.2'$ long. $74^{\circ} 24.95'$ there is shown an 11-ft. sounding where 17 feet was obtained on line 115 - 116c day (blue). (1) + 17 plotted sharp slope here

(2) At lat. $39^{\circ} 24.3'$ long. $74^{\circ} 22.7'$ there ~~is~~ ^{are} shown a 13 and a 19-ft soundings on a line between which soundings falls a 26 ft. sounding obtained on line 11 - 12c day (blue) running northerly. 26 not plotted - of little value

In lat. $39^{\circ} 24.45'$, long. $74^{\circ} 27.85'$ there is a 3-ft. sounding shown where no conflicting sounding has been obtained. P 3 fudged to N. H.W.M. This sounding seems 1 fathom too shoal in view of the surrounding depths.

^{added. xcom}
Due to lack of soundings the two fathom curve has been omitted in Absecon Creek. The three fathom curve is shown here, nevertheless.

There are two signals bearing the name "AB" on H-6213, one at lat. $39^{\circ} 26.2'$ long. $74^{\circ} 25.0'$ the other at lat. $39^{\circ} 25.05'$ long. $74^{\circ} 21.15'$. Only the latter signal has been used in control on the work of H-6213(1936). causes no confusion.

The hydrographic location of the barge at lat. $39^{\circ} 24.0'$ long. $74^{\circ} 24.8'$ does not exactly agree with the topographic location. (Vol 6, p. 38). The topographic location is shown on H# 6213.

^{two}
The small piers, one at lat. $39^{\circ} 23.4'$ long. $74^{\circ} 24.9'$ the other at lat. $39^{\circ} 23.6'$ long $74^{\circ} 24.45'$ whose ends have been located by sextant cuts have been drawn in normal to the H.W.L. by the noted in Rev.

(2)

verified on the smooth sheet. (Vol. 5, pages 3,4)

The enlarged scales, of the small piers in Bonita Tideway (with soundings) are given in Vol. 5, p. 41, and Vol 7, P 18.

Not plotted nor shown on smooth sheet.

Of the 530 soundings revised during the verification of this survey about 520 were revised as a result of showing zero (0) feet for +1/2 foot, 5 were revised as a result of incorrect reductions, and the remainder for other errors.

Not mentioned in A.S.

Junctions. A satisfactory junction has been made with H-6144 (1936) on the North. Junction with H-6214 (1935 -1936-1937) on the South is also satisfactory. *The latter junction was made for most part by means of proportional dividers. Where possible positions were plotted by means of three arm protractor and soundings filled in directly.* *Sign.*

Leonard A. McGann
Leonard A. McGann
October 27, 1937.

Remarks.

Decisions

	Remarks.	Decisions
1		see T-5636
2		" "
3		" "
4		see T-5635
5		USGB decision
6		see T-5637
7		" "
8		" "
9		" "
10		" "
11		" "
12		" "
13		USGB decision (1938)
14		" "
15		" "
16		" "
17		" "
18		" "
19		" "
20		" "
21		" "
22		" "
23		" "
24		USGB decision
25		see T-5637
26		see T-5636
27		see T-5637
M 234		" "

GEOGRAPHIC NAMES

Survey No. H-6213

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
<u>Absecon Creek</u> ✓	✓ (appd)										1
<u>Cordery Thorofare</u> ✓	GNS (appd)										2
<u>Steelman</u> " ✓	GNS (appd)										3
<u>Grassy Bay</u> ✓	✓ (appd)										4
<u>Absecon Bay</u> ✓	✓ (appd)										5
<u>Wills Thorofare</u> ✓	GNS (appd)										6
<u>Gull Island Thorofare</u> ✓	GNS (appd)										7
<u>Little Fish</u> " ✓	GNS (app'd)										8
<u>Big Fish</u> " ✓	GNS (appd)										9
<u>Stake</u> " ✓	GNS (appd)										10
<u>Wading</u> " ✓	✓ (appd)										11
<u>Eagle Bay</u> ✓	✓ app'd										12
<u>Bein Channel</u> <u>BROAD CR.</u>											13
<u>Low Water Thorofare</u> ✓	✓ (appd)										14
<u>Man-Killer Bay</u> ✓	GNS (appd)										15
<u>Absecon Channel</u> ✓	GNS (appd)										16
<u>Newfound Thorofare</u> ✓	✓ (appd)										17
<u>Duck Thorofare</u> ✓	GNS (appd)										18
<u>Beach Thorofare</u> ✓	✓ (appd)										19
<u>Clam Thorofare</u> ✓	GNS (appd)										20
<u>Penrose Thorofare</u> <u>Canal</u> ✓	GNS (appd)										21
<u>Venice Park Canal</u> ✓	GNS (appd)										22
<u>Atlantic City</u> ✓	✓ (appd)										23
<u>Absecon Inlet</u> ✓	✓ (appd)										24
<u>Brigantine Beach</u> ✓	✓ (appd)										25
<u>Reed Bay</u> ✓	✓ (appd)										26
<u>Golden Hammock Thorofare</u> ✓	GNS (appd)										27
<u>Bonita Tideway</u> ✓	GNS										28

Names underlined in red approved
by JHE on 8/25/37

Remarks

Decisions

1		See T- 5635
2		see T- 5637
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
23*		

GEOGRAPHIC NAMES
 Survey No. H-6213

Name on Survey												
	A	B	C	D	E	F	G	H	K			
<u>Obes Thoro.</u>												1
<u>Gardner Basin</u>	GNS											2
												3
												4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

Name underlined in red approved
 by *GJE* on 10/27/37

CS

Form 719
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

Sept. 10, 1937

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis.

Tide Reducers are approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 6213

Locality Brigantine Beach to Absecon Bay, N. J.

Chief of Party: L. D. Graham in 1936

Plane of reference is mean low water reading

0.8 ft. on tide staff at Main Channel, Main Marsh Thoro.

5.7 ft. below B.M. 1

0.9 ft. on T. S. at Grassy Bay

4.2 ft. below B. M. 1

0.8 ft. on T. S. at Absecon Bay

5.0 ft. below B. M. 1

0.9 ft. on T. S. at Turnpike Bridge

8.7 ft. below B. M. 1

1.2 ft. on T. S. at Gardners Basin

8.5 ft. below B. M. 1

1.2 ft. on T. S. at Brigantine Channel *on H-6144 Chan. not on H-6213 GHE.*

4.7 ft below B. M. 1

~~Condition of records satisfactory except as noted below:~~

Height of mean high water above plane of reference is: 3.4 feet at
Main Channel and Grassy Bay; 3.5 feet at Brigantine Channel; 3.6 feet
at Absecon Bay and Gardners Basin; 3.8 feet at Turnpike Bridge.

Acting Chief, Division of Tides and Currents.

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT } No. H -6213
~~PHOTOSTAT OF~~ } ~~NO. 1~~

{ received August 23, 1937
 { registered August 25, 1937
 { verified
 { reviewed
 { approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
✓ 25			
26			
30			
40			
62			
63			
✓ 82	<i>Jones</i>		<i>See page 6</i>
83			
88			
90			

RETURN TO

82	C. K. Green
----	-------------

✓

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6213 (1936) FIELD NO. 10

Brigantine Beach to Absecon Bay, Intracoastal Waterway, New Jersey
Surveyed in July - August 1936, Scale 1:10,000
Instructions dated May 16, 1935 (E. H. Kirsch)

Hand Lead Soundings.

3 Point fixes on shore signals.

Chief of Party - L. D. Graham,
Surveyed by - J. C. Bull.
Protracted by - J. C. Bull and W. N. Martin.
Soundings plotted by - E. B. Brown and T. M. Williams.
Verified and inked by - L. A. McGann.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except as follows:

- a.- Evidence that the plotting of hydrographic signals had been checked was lacking since the initials of the checker were not shown on the smooth sheet. This was accomplished in the office.
- b. Prominent features such as buoys or piers were not consistently noted in the sounding records when sounding lines passed close by them.

The Descriptive Report is clear and comprehensive and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the Instructions for the Project.

3. Shoreline and Signals.

- a. The shoreline is from planimetric maps T-5635 (1932-35), T-5636 (1932-36) and T-5637 (1932-36).
- b. The signals are from graphic control surveys T-6501b (1935-36), T-6502a and b (1935-36) and T-6503a (1935-36). Several hydrographic signals were also used, the sextant cuts being indexed in the flyleaf of Volume 1.

4. Sounding Line Crossings.

Agreement of such cross lines as were run or result from the work as well as the adjacent lines are satisfactory. Several discrepancies in specific soundings, however, which were listed in

the descriptive report (pages 1-2) were smoothed out in the office.

5. Depth Curves.

Within the limits of the survey, the usual depth curves may be satisfactorily drawn.

6. Junctions with Contemporary Surveys.

- a. The junction on the north with H-6144 (1936) is satisfactory.
- b. The junction on the south in Beach Thorofare with H-6214 (1935-36-37) is satisfactory.
- c. No contemporary surveys to the southeastward of the bridge in Absecon Inlet have been made by this office. This area, however, is surveyed monthly by the U. S. Engineers, the latest survey on file in this office being blueprint 31048 Sept. 1937 (not applied to charts) which is subsequent to the present survey. Agreement of soundings at the junction is good.

7. Comparison with Prior Surveys.

- a. H-1160 (1871-72) and H-1165 (1872).

Portions of these 1:10,000 scale surveys taken together cover the entire area of the present survey. The hydrography on these old surveys is sparse particularly in the channel areas and an adequate comparison with the present survey cannot be made. It is noted, however, that in many areas both hydrography and topography bear little relation to that on the present survey because of artificial changes. New channels have been cut, old ones have been deepened and still others have been deepened solely as a result of dredging for spoil material used in filling in former water areas. The present survey should supersede these surveys in future charting.

- b. H-2694 (1904).

A small portion of this 1:10,000 scale survey covers the present survey in the vicinity of latitude $39^{\circ} 23.5'$, longitude $74^{\circ} 25.0'$. A comparison with the present survey shows general changes in hydrography throughout the entire area, the more outstanding being the shoaling in latitude $39^{\circ} 23.7'$, longitude $74^{\circ} 24.7'$. A channel with depths 7 to 12 feet formerly existed where the present survey now shows an island. Another channel just NE of the island with depths of 19 to 22 feet has shoaled to 8 to 12 feet on the present survey. The present survey should supersede this survey in future charting.

8. Comparison with Chart No. 1217 (New Print dated Aug. 27, 1937) and Chart No. 3243 (New Print dated July 7, 1937).

a. Hydrography.

Hydrography shown on the charts originates with surveys discussed in preceding paragraphs of this review and several Engineers' surveys. The 8 and 15 foot sounding in latitude $39^{\circ} 24.4'$, longitude $74^{\circ} 24.4'$ originate with blueprint 15264 of 1911. The present survey depths here of 8 to 11 feet are slightly shoaler. A number of soundings in the vicinity of latitude $39^{\circ} 23.8'$, longitude $74^{\circ} 26.0'$ originate with blueprint 18813 of 1923. The general features are mainly borne out by the present survey except that in portions of the deeper part of the north to south channel, the present survey depths vary 1 to 20 feet deeper. Blueprint 29340 of Dec. 1935 to January 1936, (scale 1:10,000) covers the vicinity of latitude $39^{\circ} 23.2'$, longitude $74^{\circ} 25.6'$, including Clam Thorofare. The depths are generally in good agreement with the present survey except that in portions of Clam Thorofare the present survey depths vary 1 to 5 feet shoaler. The present survey should supersede these surveys in future charting.

b. Controlling Depths.

- (1) The charted controlling depth of 3 feet as of June 1936 in Absecon Creek and in the channel in Absecon Bay is borne out by the present survey, however, Chart Letter 534 of 1937, which is subsequent to the present survey states that the controlling depth is 3 feet in Absecon Creek and $1\text{-}\frac{3}{4}$ feet in the Absecon Bay Channel as of June 1937.
- (2) The charted controlling depth of 10 feet (see Insert, Chart 1217) in latitude $39^{\circ} 24.6'$, longitude $74^{\circ} 26.1'$ originates with Chart Letter 148 of 1928 and is borne out by the present survey.
- (3) A general note on Chart 3243 states that the controlling depth in the New Jersey Inland Waterway is 4 to 9 feet as of Sept. 1935. The present survey shows a controlling depth of 9 feet in several areas.

c. Aids to Navigation.

The aids to navigation in the New Jersey Inland Waterway are maintained from March to November. (See note on Chart). During the winter months they are usually moved or destroyed by the ice and are renewed in the same or approximately the same locations in the spring. (See page 5, Descriptive Report of T-6399b (1935)). These aids are charted from spotting on a section of the chart submitted annually by the New Jersey Board of Commerce and Navigation. Small differences between

the charted positions and the positions as located on the present survey are, therefore, to be expected. The present locations on the chart are based on information received in 1937 (blueprint 30623, copy of Chart 3243) and are subsequent to the date of the present survey.

The aids located on the present survey are in substantially the same positions as charted, except as follows:

- (1) No floating aids within the limits of the present survey are shown on the chart.
- (2) The light in latitude $39^{\circ} 23.8'$, longitude $74^{\circ} 27.0'$ was located approximately 180 m. N. W. of its charted position. This position originates with the above mentioned blueprint and is the only addition from previously charted information. Although this blueprint is subsequent to the present survey, it is probably a less accurate location of the same aid shown here on the present survey.
- (3) Lights 17 and 18 in the vicinity of latitude $39^{\circ} 25.0'$, longitude $74^{\circ} 25.7'$ fall 220 m. SSW and 480 m S respectively of nearby unnumbered lights on the chart. (The discrepancy in the position of light 18 is also mentioned in the review of H-6144 (1936), par. 8d (2)). The present survey positions were determined in July 1936 (T-6502b and Chart Letter 832). The authority for these positions on the chart cannot be readily ascertained but they are shown on the 1st Aid Proof of Chart 3243, Jan. 1934. Information received from the New Jersey Board of Commerce and Navigation in April 1935 (Chart Letter 339) and June 1936 (Blueprint 30623) show no changes in the lights from the original charted positions. Since this information is respectively prior and subsequent to the present survey, it is reasonably certain that no changes were made in these lights and that the charted positions are inaccurate spottings of the two lights located on the present survey. Because of the large discrepancies in positions of these two lights, the matter has been called to the attention of the New Jersey authorities.
- (4) The present survey shows three ranges with accompanying Front and Rear beacons in the vicinity of latitude $39^{\circ} 24.8'$, longitude $74^{\circ} 25.8'$. These are not shown on the Chart nor are they mentioned in blueprint 30623 of 1937 (referred to above) which is subsequent to the present survey. The ranges as located on the present survey do not give the best water through the channels, a slight shifting in some of the beacons providing a safer clearance for the shoals in this area. This matter has been called to the attention of the New Jersey Board of Commerce and Navigation.

Except as noted above, the aids as located on the present survey satisfactorily mark the features intended.

9. Field Plotting.

Field protracting and plotting were accurate and conform to the requirements of the Hydrographic Manual.

10. Additional Field Work Recommended.

This survey is complete and no additional field work is required.

11. Note to Compiler.

Attention is called to the following:

- a. The piers in latitude $39^{\circ} 23.4'$, longitude $74^{\circ} 24.9'$, and latitude $39^{\circ} 23.6'$, longitude $74^{\circ} 24.5'$, which were located on the present survey and are not shown on T-5637 (1932-36).
- b. Paragraph 8b (1) of this review regarding the latest information on the controlling depth in Absecon Bay Channel.
- c. Paragraph 8c of this review regarding the status of various aids to navigation.
- d. The grass islet in latitude $39^{\circ} 23.3'$, longitude $74^{\circ} 28.1'$ was plotted from information contained in the sounding records and is not shown on T-5637 (1932-36).

12. Superseded Prior Surveys.

Within the area covered, the present survey supersedes the following surveys for charting purposes:

H-1160 (1871-72)	in part	H-2694 (1904)	in part
H-1165 (1872)	" "		

13. Reviewed by - Harold W. Murray, Nov. 16, 1937.'

Inspected by - A. L. Shalowitz.

Examined and approved:

C. K. Green, *C. K. Green*
Chief, Section of Field Records.

Fred. L. Peacock
Chief, Section of Field Work.

R. O. Gilbert
Chief, Division of Charts.

G. H. Hulse
Chief, Division of H. & T.

Applied to drawing of Chart 1217 - Apr. 18, 1937 - J. Walby

Applied to chart 826 April 12, 1939 HML.