

# 8221

Diag. Cht. Nos. 1216-2 & 1217-2.

<p>Form 504</p> <p>U. S. COAST AND GEODETIC SURVEY</p> <p>DEPARTMENT OF COMMERCE</p> <p><b>DESCRIPTIVE REPORT</b></p>	
<p>Type of Survey <u>Hydrographic</u></p>	
<p>Field No. <u>BN-1454</u> Office No. <u>H-8221</u></p>	
<p>LOCALITY</p>	
<p>State <u>New Jersey</u></p>	
<p>General locality .....</p>	
<p>Locality <u>Brigantine Inlet</u></p>	
<p><u>194 54</u></p>	
<p>CHIEF OF PARTY</p>	
<p><u>H. G. Seaborg</u></p>	
<p>LIBRARY &amp; ARCHIVES</p>	
<p>DATE <u>November 21, 1957</u></p>	

B-1870-1 (1)

8221

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.

REGISTER NO. H-8221

Field No. BN - 1454

State New Jersey

General locality ~~South Jersey Coast~~

Locality Brigantine Inlet ~~and Channel~~

Scale 1:10,000 Date of survey 9/13 to 10/25, 1954

Instructions dated 4 May 1954, 8 October 1954

Vessel LAUNCH CS - 175 (SHIP BOWEN)

Chief of party Harold J. Seaborg

Surveyed by J. R. Plaggmier, R. H. Houlder

Soundings taken by fathometer, ~~graphic recorder, hand lead, wire~~ sounding pole

Fathograms scaled by personnel of Ship BOWEN

Fathograms checked by R. H. Houlder

Protracted by A. K. SCHUGELD

Soundings penciled by A. K. SCHUGELD

Soundings in fathoms feet at MLW ~~MLLW~~ AND ARE TRUE DEPTHS.

REMARKS:

DESCRIPTIVE REPORT

to accompany

INSHORE HYDROGRAPHIC SURVEYS

FIELD NOS. BN-1254, 1354, 1454 (H-8221)

U. S. C. & G. S. Ship B O W E N

Harold J. Seaberg, Commanding

Scale 1:10,000

11 August to 28 October, 1954

A. PROJECT:

Project CS-373 was performed under instructions dated 4 May, 1954 and supplemental instructions in the letter dated 8 October 1954.

B. SURVEY LIMITS AND DATES:

A basic hydrographic survey was accomplished in the vicinities of Beach Haven, Little Egg, and Brigantine Inlets, New Jersey.

*H-8219(1954)*  
I: BN-1254: Work commenced on 30 September and ended on 28 October, 1954. Junctions were made with contemporary surveys BN-1354 and BN-2154; and with prior surveys H-6216, 1:10,000, 1935; and H-6225, 1:10,000, 1937. Limits of the survey on this sheet are Latitudes  $39^{\circ}-32'$ ,  $39^{\circ}-34.5'$ , and Longitudes  $74^{\circ}-12'$ ,  $74^{\circ}-20.1'$ .

*H-8220(1954)*  
II: BN-1354: Work commenced on 11 August and ended on 28 October, 1954. Junctions were made with contemporary surveys BN-1254, BN-1454 and BN-2154, and with prior surveys H-5893, 1:10,000, 1935. Limits of the survey on this sheet are Latitudes  $39^{\circ}-28'$ ,  $39^{\circ}-32'$  and Longitudes  $74^{\circ}-23.5'$  and  $74^{\circ}-14.7'$ .

*H-8221(1954)*  
\* III: BN-1454: Work commenced on 9 September and ended on 25 October, 1954. Junctions were made with contemporary surveys BN-1354 and BN-2154, and with prior surveys H-6144, 1:10,000, 1936; and H-6196, 1:10,000, 1936. Limits of the survey on this sheet are Latitudes  $39^{\circ}-24.3'$ ,  $39^{\circ}-28.1'$ , and Longitudes  $74^{\circ}-17'$ ,  $74^{\circ}-21.7'$ .

IV: A graphical presentation of the Sheet Limits is shown on chart section appended to this report entitled "TIDAL AREAS".

C. VESSELS AND EQUIPMENT:

The survey was accomplished using LAUNCH CS-175 and an aluminum skiff. LAUNCH CS-175 is a 31 foot plywood boat drawing one foot, ten inches of water. It has a turning radius of about 10 meters at the sounding speed of 10 knots.

The launch was mostly based at the Little Egg Inlet Coast Guard Lifeboat Station.

All soundings were obtained using 808-J type portable depth recorders and sounding poles. Fathometers 100s and 157spx were used on the three sheets. A sounding pole was used only at the extreme inshore ends of sounding lines and when passing over shoals, to supplement the fathometer.

D. TIDE AND CURRENT STATIONS:

I. Tides: See tide note appended to this report.

II. Currents: No current stations were observed.

Strong currents were found thru the access channel to Brigantine Channel, and thru the deep water areas inside Beach Haven and Little Egg Inlets.

E. BOAT SHEETS:

Boat sheets were prepared and furnished by the Washington Office.

F. CONTROL STATIONS:

A list of control stations is appended to this report. These stations were located by triangulation, topographic, hydrographic, and photogrammetric methods.

G. SHORELINE AND TOPOGRAPHY:

1950 Photogrammetric surveys provided the basic source for shoreline and topographic details. Extensive changes around the entrances to the inlets necessitated partial relocation of the high water line by sextant fixes. The revised shoreline is shown in red on the photogrammetric manuscripts and on the smooth sheet.

H. SOUNDINGS:

All soundings were obtained by using Submarine Signal Company type 808-J portable depth recorders, and sounding poles.

Standard procedure was used in obtaining all the usual corrections applicable. These corrections have all been entered and checked in the sounding volumes and the analysis forwarded to the Norfolk Processing Office.

Leadline soundings and bottom characteristics were obtained in accordance with the Hydrographic Manual.

*No bottom samples were found by the smooth plotter on this survey - by H.S.4. Apparently the officers in charge did not have their records in the record book.*

I. CONTROL OF HYDROGRAPHY:

The survey was controlled by visual fixes except in the upper reaches of creeks, where hydrography was referred to topographic details.

J. ADEQUACY OF SURVEYS:

The survey on Sheet BN-1254 is considered complete and adequate along the outer coast. The inland survey is as complete as time would allow. Additional work would be necessary to make this an adequate basic survey; however the present hydrography clearly indicates the character of the area.

The surveys on Sheets BN-1354 and BN-1454 are considered adequate and complete.

K. CROSS LINES:

Cross lines were run in compliance with Paragraph 357 of the Hydrographic Manual.

*8 Feb 1950*

L. COMPARISON WITH CHART AND PRIOR SURVEYS:

A comparison was made with prior surveys Nos. H-6216, 1:10,000, 1935-6; H-6225, 1:20,000, 1937; H-6195, 1:10,000, 1936; H-5893, 1:10,000, 1935; H-6145, 1:10,000, 1935; H-6196, 1:10,000, 1936; and with charts Nos. 825, 826, 1216, and 1217. A satisfactory junction was made with prior surveys in the Great Bay area; however in the areas near the inlets the bottom has changed extensively.

With reference to that part of the preliminary review dated 18 March 1954, which relates to the three launch sheets, the following conclusions were derived.

Item No. 1.

The areas referred to are undergoing rapid and erratic changes as evidenced by the difference in character of the shore line and the shoals between the photogrammetric survey in 1950 and the present hydrographic survey.

4. Shoalest depth in this area is apparently 8 feet. 6 foot depths were found .3 miles and 2 foot depths found .5 miles northwest of the area.
5. The wreck was located but it has subsequently been removed and should not be shown on the charts.
- 6, 8. The piles referred to were not found after a careful examination of the area.
7. The pile was located as charted (Vol. 1, p. 35, Pos. 1e, skiff)

not applicable  
not applicable

Misc.

a.) A mass of hard material 2 ft. in diameter was located as shown on the preliminary review at Latitude  $39^{\circ}32.34'$ , Longitude  $74^{\circ}16.91'$ , by position 48f, Volume 3, Sheet 1254.

b.) The pile circled on the preliminary review at Latitude  $39^{\circ}30.90'$ , Longitude  $74^{\circ}17.87'$  was not verified. Although there was no extensive investigation of the area, the pile is believed to be extinct.

c.) Piles shown on chart 826 at Latitude  $39^{\circ}25.47'$ , Longitude  $74^{\circ}20.68'$ , and at Latitude  $39^{\circ}25.94'$ , Longitude  $74^{\circ}20.31'$  were not found. Although no extensive investigation was undertaken, the piles are believed to be extinct. The piles further south, however, were verified.

M. DANGERS AND SHOALS:

1.\* A 6" steel pipe, awash at MLW was located at Lat.  $39^{\circ}30.37'$ , Long.  $74^{\circ}17.48'$ , by pos. 106 e, Volume I, Sh. 1354.

2. A sound of rocks, 5 meters in diameter, awash at MLW, was located at Lat.  $39^{\circ}30.53'$ , Long.  $74^{\circ}19.85'$ , by pos. 106 aa, Volume 12, Sh. 1354.

3.\* A 2 foot shoal in fringes on the Intracoastal Waterway channel, near Beach Haven Inlet at Lat.  $39^{\circ}31.75'$ , Long.  $74^{\circ}17.55'$ .

4.\* Shoaling action is rapidly closing Beach Haven Inlet. Presently, breakers close off the channel on all but the calmest days.

5. The north channel at Brigantine Inlet has shifted and closed to a controlling depth of about 2 feet.

The south channel is unmarked, has breakers across it almost continuously and has a controlling depth of about 4 feet. Strong currents are encountered

not applicable  
areas deeper than 10 feet

DANGERS AND SHOALS (continued):

6. There is a suspended ~~shale~~ across a creek at Lat.  $39^{\circ} 27.70'$ ; Long.  $74^{\circ} 19.52'$ . The vertical clearance at MHW is 10 feet.

7. Investigation and development of a shoal sounding at Lat.  $39^{\circ} 25.06'$ ; Long.  $74^{\circ} 19.33'$ , obtained by the Ship BOWEN, failed to substantiate the sounding. *509 from H-8222 considered to be a stray*

\* Note: These three items reported in letter to the Director dated 28 October 1954.

COAST PILOT INFORMATION:

A separate report, copy of which is appended, has been submitted to the Director on Coast Pilot changes.

AIDS TO NAVIGATION AND LANDMARKS FOR CHARTS:

Separate reports of Floating and Non-Floating Aids to Navigation and Landmarks for Charts are appended to this report. The da's and dp's were not entered on form 567 because of excessive distortion of the boat sheet.

MISCELLANEOUS:

The new type sounding volumes were used on sheet No. BN-1454 and proved to be most unsatisfactory. The lack of color contrast and transparency of the pages materially increased the difficulties of recording.

Respectfully submitted,

*Richard H. Houlder*  
Richard H. Houlder,  
Lieutenant, USCGC.

Approved and Forwarded,

*Harold J. Seaberg*  
Harold J. Seaberg,  
Commander, USCGC,  
CHIEF OF PARTY.

APPLIED BAR CHECK CORRECTIONS

PROJECT CS - 373

-4.8221 (954)

I. FATHOMETER 157 SPX (Sheets BN - 1254, 1354, 1454):

Date (1954)		Depth (feet)		Correction (feet)
From	To	From	To	
11 August	1 October (except 18 Sept.)	0.0	50.0	0.0
18 September	18 September	0.0	3.0	- 0.4
		3.2	6.2	- 0.2
		6.4	8.6	0.0
		8.8	11.4	+ 0.2
		11.6	14.8	+ 0.4
		15.0	20.4	+ 0.6
		20.6	28.4	+ 0.8
		28.6	36.2	+ 1.0
		36.4	44.4	- 1.2
		44.6	52.6	- 1.4

II. FATHOMETER 100 S (Sheets BN - 1254, 1354, 1454):

20 September	28 October	0.0	7.6	0.0
		7.7	13.6	- 0.2
		13.7	40.0	+ 0.4
		40.1	55.0	+ 0.6

III. FATHOMETER 160 SPX (Sheet BN - 2154):

12 August	8 October	0.0	20.0	"A" Scale 0.0
		20.1	40.0	+ 0.2
		40.1	60.0	+ 0.4
		35.0	40.0	"B" Scale + 0.4
		40.1	60.0	+ 0.6
		40.1	80.0	+ 0.8

TIDE NOTE

I. SHEET BN 1253:

Tide reducers for the survey of the inland waters were based on recorded tides at the Big Sheepshead Creek portable tide gage station. (Lat. 39°31.4', Long. 74°17.8') (MLW reading on staff 2.2 ft.)

Tide reducers for the survey along the outer coast were based on recorded tides at the Atlantic City Steel Pier standard tide gage station (Lat. 39°21.30', Long. 74°25.10), for which hourly heights were furnished by the Washington Office.

II. SHEET BN-1354:

All outer portions of Beach Haven and Little Egg Inlets are based on the standard tide gage at Steel Pier, Atlantic City, N.J.

The west portion of Great Thoroughfare and that portion of Great Bay west of the line from the Little Egg Coast Guard Station south to the nearest point of land at Little Beach, utilize the tides obtained at the Crab Island portable tide gage station, Lat. 39°31.1', Long. 74°20.2' (MLW reading on staff 2.5 ft.)

All the area east of the line defined for the Crab Island station and west of the junction of the area controlled by the Steel Pier tide gage is controlled by the portable tide gage at Big Sheepshead Creek.

Reference is made to letter from the Assistant Director (36-rjb) dated 15 September 1954, approving the above described zoning.

III. SHEET BN-1454: H-8221.

All outer portions of Brigantine Inlet and along the outer coast are based on tides from Steel Pier, Atlantic City, N. J.

All reducers for sounding from the breaker line inland are based on recorded tides at the Brigantine Channel portable tide gage station. (Lat. 39°26.6', Long. 74°21.0') (MLW reading on staff 0.4 ft.)

IV. SHEET BN-2154:

Tide reducers for this survey were based on recorded tides at the Atlantic City Steel Pier standard tide gage station for which hourly heights were furnished by the Washington Office.

\* NOTE: See appended sheet for graphical presentation.



STATISTICS FOR HYDRO SURVEY H -  
 (FIELD) BN - 1454  
 USC&GS Ship B O W E N  
 CS - 373

<u>LAUNCH CS - 175</u>					
<u>Date</u>	<u>Day</u>	<u>Volume</u>	<u>Number of</u>	<u>Detached</u>	<u>Statute Miles</u>
1954	<u>Letter</u>	<u>Number</u>	<u>Positions</u>	<u>Positions</u>	<u>of Sounding</u>
Sept. 13	a	1	129✓	0	16.1
14	b	1	141✓	0	17.1
28	c	2	120✓	0	13.8
29	d	2	70✓	0	6.4
Oct. 7	e	2 & 3	116✓	0	16.3
8	f	3	209✓	0	35.0
9	g	4	102✓	0	11.1
19	h	4	97✓	0	9.3
25	j	5	32✓	0	3.5
Totals (LAUNCH CS-175) - - - -			<del>1,889</del> 1,016	0	128.6

<u>Aluminum Skiff</u>					
Sept. 9	a	26	141✓	56✓	6.9
Oct. 4	b	26	93✓	4✓	7.2
9	c	27	58✓	0	4.6
12	d	27	9✓	9✓	0.0
13	e	27	89✓	46✓	4.0
Totals (Aluminum Skiff) - - - -			390	115✓	22.7
TOTALS FOR SHEET BN - 1454 -			<del>2,279</del> 1,406✓	115	151.3

TOTAL AREA (Sheets BN - 1254, 1354, 1454) - - 29.4 Square Statute Miles.

NORFOLK PROCESSING OFFICE  
LIST OF SIGNALS

H-8221

TRIANGULATION STATIONS

BRIG BRIGANTINE, ELEV. WATER TANK, 1950  
GANT BRIGANTINE, 1932 ✓  
KIN SIMKIN, 1935 ✓  
HOT HOTEL, 1931-32 ✓

N.J.  
Smooth Sheet - G.P. page 683.  
(Ref. Sta. Lat. 39° 24' 1709.8m.)  
Long 74 21' 522.0m)

MARKED TOPOGRAPHIC STATIONS

\*TINE TINE, 1954 ✓ SOURCE FORM 524  
H-8220

DESCRIBED TOPOGRAPHIC STATIONS SOURCE FORM 524

Fig ✓ Wer ✓

TOPOGRAPHIC STATIONS SOURCE T-9505N

Chi ✓ Cros ✓ Ink ✓ Lip ✓ Man ✓ Nel ✓ Rit ✓ Tal ✓ Tip ✓

SOURCE T-95058

Dim ✓ Dom ✓ Eat ✓ Sep ✓

\* For Triangulation Computation Data - Filed in Library - S. BOWEN { S-3452  
S.H.S.  
8220  
1954

(d) ad.

NORFOLK PROCESSING OFFICE  
ADDENDUM  
To Accompany

HYDROGRAPHIC SURVEY H-8221 (Field No. Bn-1454)

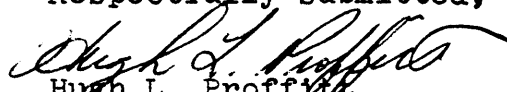
GENERAL

This appears to be an excellent basic survey and no unusual conditions were encountered during the smooth plot. The soundings checked very well at crossings.

SHORELINE

Extensive shoreline changes, shown in red on the smooth sheet, were determined by plotting the sextant fixes recorded in the sounding volumes.

Respectfully submitted,

  
Hugh L. Proffitt  
Cartographer

Norfolk, Va.  
18 November, 1957

GEOGRAPHIC NAMES

Survey No. H-8221

Name on Survey	Source of Name										No.
	A	B	C	D	E	F	G	H	K		
<u>New Jersey</u>				(title)							1
<u>Brigantine</u>											2
<u>Brigantine Inlet</u>				(apply name closer to entrance after inking)							3
<u>Brigantine Channel</u>				(tide station)							4
<u>Weakfish Thorofare</u>											5
<u>Mud Thorofare</u>											6
<u>Little Mud Thorofare</u>											7
<u>Simkins Thorofare</u>											8
<u>Great Thorofare</u>											9
				Names approved 12-9-57							10
See chart 826 for best placement of names										L. N. R. C. K	11
Tide Station off sheet:											12
<u>Steel Pier, Atlantic City</u>											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8221.....

Records accompanying survey:

Boat sheets 1....; sounding vols. 7....; wire drag vols. 0....;  
 bomb vols. 0....; graphic recorder rolls 4-Envelopes  
 special reports, etc. 1-Smooth sheet and 1-Descriptive report.

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

Number of positions on sheet	.....	1406
Number of positions checked	.....	168
Number of positions revised	.....	—
Number of soundings revised (refers to depth only)	.....	.....
Number of soundings erroneously spaced	.....	.....
Number of signals erroneously plotted or transferred	.....	—
Topographic details	Time	4 hrs.
Junctions	Time	8 hrs.
Verification of soundings from graphic record	Time	7 hrs.
Verification by <i>W. E. Reig</i>	Total time	116 hrs. Date Aug 25/58
Reviewed by <i>W. E. Reig</i>	Time	56 Date 10/15/58

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8221

FIELD NO. BN-1454

New Jersey - Brigantine Inlet

Surveyed: September-October 1954

Scale 1:10,000

Project No. CS-373

Soundings:

Control:

808 Depth Recorder  
Sounding Pole

Sextant fixes on shore  
signals

Chief of Party - H. J. Seaborg  
Surveyed by - R. H. Houlder, J. R. Plaggmier  
Protracted by - A. K. Schugeld  
Soundings plotted by - A. K. Schugeld  
Verified and inked by - W. E. Roig  
Reviewed by - L. S. Straw  
Inspected by - R. H. Carstens

Date 16 October 1958

1. Shoreline and Control

The shoreline originates with T-9505 N and S (1950-52) and with subsequent revisions shown in red on the smooth sheet by the hydrographer.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

The depths at sounding line crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves, including the 3-foot curve where appropriate, were adequately delineated. A generally smooth bottom exists along the outside coast from the 6-foot curve seaward; however, at the entrance to Brigantine Inlet the bottom is uneven and shifts constantly because of strong tidal currents augmented occasionally by severe coastal storms; the result is continual change in the configuration of shoals and channel courses.

In Brigantine Channel and other connecting tidewater streams from a mile to a mile and a half inland, the bottom

is changeable. The tidal action produces strong hydraulic currents which scour deep holes in some areas and build shoals or bars in others. Typical examples are: the deep (40 feet) in lat.  $39^{\circ} 26.7'$ , long.  $74^{\circ} 20.25'$ , and the bar (covered by 2 feet of water) in lat.  $39^{\circ} 25.9'$ , long.  $74^{\circ} 19.63'$ . Extensive changes of shoreline also result by virtue of the same forces of nature. (See paragraph 5.)

#### 4. Junctions with Contemporary Surveys

In accordance with the Project Instructions the present survey was extended inland far enough to make a satisfactory butt junction with H-6144 (1936) on the west. The junction with H-8220 (1954) on the north will be considered in the review of that survey. An adequate junction was effected with H-8222 (1954) on the east. There are no contemporary surveys on the south; however, the present survey overlaps prior survey H-6196 (1936) for about a mile. In the common area the present survey is from 1 to 6 feet deeper. Because of these differences in depths with attendant changes in bottom configuration no junction with H-6196 (1936) is shown.

#### 5. Comparison with Prior Surveys

a.	H-109 (1840)	H-1158a (1872)
	H-110 (1840)	H-1158b (1874)
	H-116 (1843)	H-1165 (1872)
	<u>H-670 (1859)</u>	<u>H-2693 (1904)</u>

These prior surveys have been compared with and are superseded by the 1935-36 surveys which are discussed in the succeeding paragraph. Further consideration of the earlier surveys is considered unnecessary in the present review.

#### b. H-6144 (1936), H-6145 (1935-36), H-6196 (1936), and Field Examination No. 3 (1951)

A comparison of the 1935-36 surveys with the present reveals that erratic changes in shoreline and bottom have taken place in this area. The details on these prior surveys show little resemblance to those on the present survey. For example, some of the most spectacular changes are: a 29 to 40 foot deep on the present survey in Brigantine Channel at lat.  $39^{\circ} 26.7'$ , long.  $74^{\circ} 20.25'$ , where there was land above high water in 1935-36; a 4-foot shoal 260 feet wide and 1500 feet long in lat.  $39^{\circ} 27.0'$ , long.  $74^{\circ} 18.28'$  has washed away and depths here on the present survey are 12 to 13 feet; the 4-foot channel leading into Great Thorofare has shoaled to 1 foot in lat.  $39^{\circ} 26.7'$ , long.  $74^{\circ} 19.25'$ . The 11-foot sounding on H-6144 (1936) in lat.  $39^{\circ} 26.21'$ , long.  $74^{\circ} 21.53'$

was never charted, it falls in depths of 20 feet on the present survey and is considered nonexistent. Brigantine Inlet channel which had a depth of 4 feet over the bar has shifted 1300 feet eastward and has deepened to 7 feet over the bar at lat.  $39^{\circ} 25.97'$ , long.  $74^{\circ} 19.23'$ . Within the limits of the present survey there is no indication of the extensive 8 to 12 foot shoal shown on H-6196 (1936) in lat.  $39^{\circ} 24.5'$ , long.  $74^{\circ} 20.4'$  where the depths are 14 to 16 feet. The present closely developed survey is adequate to supersede the prior surveys within the common area.

A single line of soundings on Field Examination No. 3 (1951) crosses a few lines on the present survey at approximately right angles in lat.  $39^{\circ} 27.80'$ , long.  $74^{\circ} 17.23'$ . The depths are 1 to 3 feet shoaler than those on the present survey. A comparison of the depths in this vicinity which was also covered by contemporary survey H-8220 (1954) indicates that considerable change has taken place from 1951 to 1954; therefore the soundings on this single line are superseded by the present work.

6. Comparison with Chart 826 (latest print date 6-16-58)

A. Hydrography

The charted information originates with the present survey applied before verification and review. Only minor differences of 1 foot between the charted depths and the present survey depths are noted.

The Descriptive Report states that the piles in lat.  $39^{\circ} 25.47'$ , long.  $74^{\circ} 20.68'$  and lat.  $39^{\circ} 25.74'$ , long.  $74^{\circ} 20.31'$  do not exist; accordingly they should be expunged from the chart.

As a result of verification and review the 13-foot sounding charted in lat.  $39^{\circ} 25.06'$ , long.  $74^{\circ} 19.33'$  was considered a stray and therefore rejected (paragraph J in Descriptive Report).

B. Aids to Navigation

There are no official aids to navigation within the limits of this survey.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive, except that no bottom characteristics were recorded.
- b. The smooth plotting was accurately done.



8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions except as indicated in item 7a.

9. Additional Field Work

The survey is considered basic and no additional field work is recommended. It is noted, however, that no bottom characteristics were obtained in this changeable area.

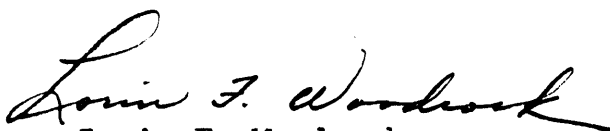
Examined and approved:



Max G. Ricketts  
Chief, Nautical Chart Branch



Ernest B. Lewey  
Chief, Division of Charts



Lorin F. Woodcock  
Chief, Hydrography Branch



Samuel B. Grenell  
Chief, Division of Coastal Surveys

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

23 December 1957 ✓

Plane of reference approved in  
7 volumes of sounding records for

HYDROGRAPHIC SHEET 8221

Locality Brigantine Inlet, N. J.

Chief of Party: H. J. Seaborg in 1954

Plane of reference is mean low water, reading

0.4 ft. on tide staff at Brigantine Channel

4.2 ft. below B.M. 2 (1936)

4.3 ft. on tide staff of 1922 at Atlantic City

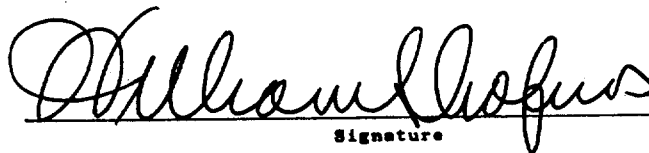
12.1 ft. below B.M. 34 (1922)

Height of mean high water above plane of reference is:

Brigantine Channel...3.5 ft.

Atlantic City.....4.1 ft.

Condition of records satisfactory except as noted below:



Signature

Chief, Tides Branch



