

6224

U. S. COAST & GEODETIC SURVEY  
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6224

Form 504  
Rev. Dec. 1933  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. PATTON, DIRECTOR

**DESCRIPTIVE REPORT**

~~Topographic~~ } Sheet No. 20  
Hydrographic }

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State New Jersey

LOCALITY

Intracoastal Waterway

Grassy Sound to Sewell Point

---

1937

CHIEF OF PARTY

L. D. Graham

CP

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. 20

REGISTER NO H-6224

State New Jersey

General locality Intracoastal Waterway

Locality Grassy Sound to Sewell Point

Scale 1:10,000 Date of survey July - <sup>Sept.</sup> August, 1937

Vessel Launch MIKAWA

Chief of Party L. D. Graham

Surveyed by George E. Varnadoe

Protracted by George W. Lovesee

Soundings penciled by George W. Lovesee

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by L. A. McGann

Verified by L. A. McGann

Instructions dated May 16 19 35

Remarks:

DESCRIPTIVE REPORT

To Accompany Hydrographic Sheet Field No. 20, H-6224

INSTRUCTIONS - May 16, 1935

Project HT-205

SURVEY METHODS

Standard Coast Survey methods were used for this survey. Fixes were taken on the topographic and triangulation signals with sextants. A lead line with bronze wire center, having an 8 pound lead, was used to take all soundings. The leadline had a very small coefficient of expansion and no leadline corrections were necessary for the reduced soundings. A 22 foot flat bottom sounding skiff and outboard motor was used for the inside hydrography. A 35 foot launch with inboard motor was used for the hydrography off Two Mile Beach.

SHORELINE

The shoreline was located by the photo-compilation party of Lieutenant E. H. Kirsch in 1936. Occasional small discrepancies caused by erosion were noticed and in all cases the shoreline changes were rodded with the planetable equipment or corrected by the hydrographic party. The small creek shown on topo sheet ~~at~~ at Lat. 38° 59.68', Long. 74° 49.83' was reported as not existing by the hydrographer. This creek was removed from the smooth sheet, see volume 2 page 29, position 110 ~~day~~.

The following references are all to chart No. 234, new print No. 36-12/29:

The dock <sup>from T-429 (1927)</sup> at Lat. 38° 56.90, Long. 74° 53.41' is gone and should be re-  
moved from the chart, see volume 4 page 10 position 92 1 day.

The old piling <sup>from T-429</sup> at Lat. 38° 56.82', Long. 74° 54.28' can no longer be seen and should be removed from the chart, see volume 4 page 14 position 109\* 1 day.

The small island <sup>from T-429</sup> shown at Lat. 38° 57.13', Long. 74° 53.62' is gone and should be removed from the chart, see volume 4 page 37 position 17 n day.\*

The dock <sup>from T-429</sup> at Lat. 38° 56.77', Long. 74° 52.22' is gone and should be removed from the chart, see volume 4 page 51 position 79 n day.)

The buildings <sup>from T-429</sup> at Lat. 38° 56.76', Long. 74° 52.52' have been moved about 210 meters southsoutheast and should be changed on the chart, see volume 4 page 55 position 7 p day. The lookout tower in this vicinity has also been moved, see Landmarks for Charts for the new location, which is at topo signal OUT. <sup>R-449 (1938)</sup>

Removed on chart 234 (dated Jan 16, 1938).

The two docks at Lat. 38° 56.81', Long. 74° 52.42' have been destroyed and should be shown as old piling, see smooth and boat sheets. There is a new T shaped dock at about the same position, which <sup>is shown on the present survey and</sup> should be on the chart, see volume 4 page 55 position 6 p day.

The grass islet at Lat. 38° 56.94', Long. 74° 52.31' is gone and should be removed from the chart. There are several smaller islets in this vicinity which should be shown, see volume 4 page 62 position 36 to 37 p day. <sup>plotted on smooth sheet.</sup>

\* These items are not shown on T-5648 (1932-36).

### CHANNELS

The main channel on this sheet is the New Jersey Inland Waterway channel, which is well marked with the standard inland waterway symbols. The least depth found in this channel is  $6\frac{1}{2}$  feet near the south end of Richardson Sound. There are several channels leading to docks and boat slips at Wildwood. These side channels are in general deeper than the inland waterway leading to them. At least 23 <sup>with local knowledge</sup> feet can be carried between the jetties at Cape May Inlet, but when making the turn between buoys into the harbor the channel has shoaled to about 13 feet. At the time of the survey we were told that dredging was planned here in the near future. See Rev. par. 92 (c) for later surveys.

### CURRENTS

The only currents found are the tidal currents, which vary in intensity from one to three miles per hour, depending on the height and stage of the tide and the nearness to Cape May Inlet.

### DANGERS

The chief dangers on this sheet are the shoal areas bordering the channels, which are either sand or mud bottom. The five foot shoal shown on chart 234 near the south side of Cape May Harbor is now slightly deeper than shown on the chart, it now has a least depth of  $6\frac{1}{2}$  feet. See comparison with previous surveys for discussion of this shoal.

### ANCHORAGES

Good anchorage can be obtained in Cape May Harbor for ships drawing up to 20 feet, but care must be exercised by them when crossing the shoal area at the east end of the harbor, until this area is dredged. At present ships drawing over 12 feet should enter only on high tide. Good anchorages can be obtained by launches drawing up to 7 or 8 feet at Sunset Lake. The entrance to this lake from Swain Channel is shoal and not marked. The best water is found in the middle channel approaching from the north, where a least depth of  $8\frac{1}{2}$  feet can be found.

### COMPARISON WITH PREVIOUS SURVEYS based on Chart 234 (New Print dated Dec. 29, 1936) (Superseded by later editions)

In general the survey compared well with previous surveys, this survey being in more detail than the old ones. Comparing with harbor chart 234, a great change is found at the entrance to Cape May Harbor. The chart shows 20 feet between red nun buoys 4 & 6. The smooth sheet shows about  $12\frac{1}{2}$  feet here. At the time of the survey we were told by Coast Guard Officials that dredging was planned in the near future to deepen this channel to its former depth.

The depth in the main channel off the Coast Guard Air Base is now much shoaler than shown on chart 234 but dredging was planned here also, so that 20 feet could be carried to the docks at the Naval Reservation just west of the Coast Guard Air Base. The depths in Cape May Harbor compare well with those shown on chart 234.

79

The shoalest sounding obtained on the shoal at buoy number C3 was  $6\frac{1}{2}$  feet. This shoal is shown as 5 feet on chart 234. See volume 5, page 31, position 12 r day and volume 6, page 17, position 6 t day, for the soundings on this shoal. The depth at Cape May Inlet at the breakwater compare well with chart 234

#### GEOGRAPHIC NAMES

Chart 234 shows Mill Creek the same as Upper Thorofare on the map drawing T5648. Mill Creek on map drawing T5648 is called Skunk Sound on chart 234. Chart 3243 shows the names the same as map drawing T5648. It is recommended that chart 234 be changed to conform with chart 3243 and the map drawing. No other geographic names are recommended, this subject having been thoroughly covered by Lieutenant E. H. Kirsch in 1936.

#### NON-FLOATING AIDS TO NAVIGATION

Seven of the nine lights shown on chart 3243 were located by the hydrographic party with sextant fixes and check angles at each fix. Lights 8 and 9, which are the greatest distance from the jetties at Cape May Inlet were inadvertently not located. These are all temporary lights maintained by the New Jersey State Bureau of Commerce and Navigation.  
noted as "in place as charted" in Chart Letter # 49 (1939).

#### DEPTH CURVES

Depth curves inside Cape May Inlet are hard to show because of the uneven bottom. In general the sounds are very shoal with the only deep water being in very narrow channels along the inland waterway. Sunset Lake was probably dredged for filling lots at Wildwood Crest and the bottom changes so rapidly it is hard to show all the depth curves. In general the depths in Cape May Harbor drop very quickly from the one fathom curve to the 4 and 5 fathom curve.

#### REMARKS

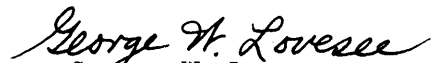
Triangulation symbols on the smooth sheet are shown with black ink instead of the usual red ink. These symbols and the projection and shore line were inked in the Washington Office. All dotted lines representing low water line were transferred from the map drawings in the Washington Office. changed to Red in office.

Submitted by,

Approved and forwarded,



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



George W. Lovesee  
Jr. H. & G. Engineer

LIST OF STATISTICS - SHEET 20, H-6224

Date	Day	Statute Miles	Soundings	Positions
July 16	a	9.7	349	81
19	b	4.7	214	37
21	c	8.0	310	65
22	d	10.3	409	97
23	e	13.8	506	118
29	f	6.5	333	41
30	g	16.3	564	112
Aug. 2	h	12.8	456	95
3	j	1.0	136	26
5	k	14.0	498	100
6	l	7.4	279	60
10	m	8.0	297	56
11	n	8.5	437	84
12	p	14.5	537	109
20	q	8.5	353	79
27	r	21.0	712	162
30	s	9.3	388	114
31	t	1.0	32	12
Sept. 1	u	0.5	7	2
14	v	38.3	812	141
15	w	2.0	66	25
21	x	14.0	429	65
Total		<u>230.1</u>	<u>8124</u>	<u>1681</u>

Area - 7.0 square statute miles

Smooth sheet No. <sup>H-6224</sup> 20 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

VERIFIER'S REPORT ON H-6224(1937)

The records conform to the requirements of the Hydrographic Manual instructions except as noted in the review.

The shoreline on H-6224 (1937) originates with T5647 (1936) T-5648 (1936) ~~T-5649 (1936)~~. The control originates with G. C. S. T-6563a (1937), T-6563b (1937), and T-6564 (1937). See Rev. par. 3 for further details

There is good agreement of soundings at crossings. However at lat.  $39^{\circ} 57.15$  long.  $74^{\circ} 52.5$  there is a discrepancy of sounding where  $11 \frac{1}{2}$  feet was obtained on line 61 - 62 "n" day as compared to 9 feet shown on 82 - 83 "n" day. *OK. sloping bottom. H.W.M.*

The triangulation station symbol has been shown in black ink. changed to red. H.W.M.

The adjoining contemporaneous surveys have not been received in this office at the time of verification of H -6224 (1937)

*There are three bridges shown on H 6224 for which no clearance information has been supplied by the field party.*  
(1) Lat.  $38^{\circ} 59.9'$ , long.  $74^{\circ} 51.15$  (2) <sup>lat</sup>  $38^{\circ} 59.4$ , long.  $74^{\circ} 50.1$   
(3) Lat.  $39^{\circ} 00.45$ , long.  $74^{\circ} 49.8$ . The clearances shown for these bridges has been copied from T-5647 (1936).

*Leonard A. McGann*  
Leonard A. McGann

January 25, 1938.



Field Records Section (Charts)

H6224

HYDROGRAPHIC SHEET NO. ....

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

Number of positions on sheet	.168!
Number of positions checked	...74
Number of positions revised	...1.
Number of soundings recorded	..8124
Number of soundings revised	....9.
Number of signals erroneously plotted or transferred	.....

Date: *January 25, 1938.*

Verification by *H. W. Murray*  
*Leonard A. McGarr*

Time: *21*  
*50 1/2 hours.* } 71 hrs.

Review by *H. W. Murray*

Time: *35* "

HYDROGRAPHIC SURVEY NO. H-6224

Smooth Sheet Yes

Boat Sheet Yes

Sounding Records 7 Vols. \_\_\_\_\_

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol.#1

Landmarks for Charts (Form 567) ~~None~~ Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service None  
(Circular Nov. 30, 1933)

Remarks \_\_\_\_\_

HYDROGRAPHY

Total Days 22 .....

Start Date Sept 21, 1937

## TIDE NOTE FOR HYDROGRAPHIC SHEET

January 12, 1938.

Division of Hydrography and Topography:

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

Plane of reference

~~Tide Reducers~~ are approved in  
7 volumes of sounding records for

HYDROGRAPHIC SHEET 6224

Locality Grassy Sound to Sewell Point, N. J.

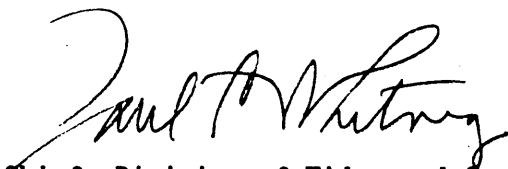
Chief of Party: L. D. Graham in 1937

Plane of reference is mean low water, reading

- 3.0 ft. on tide staff at Grassy Sound P. & R. R.R. Bridge
- 11.2 ft. below B.M. 1
- 2.0 ft. on T. S. at Swain Channel
- 5.1 ft. below B.M. 1
- 2.0 ft. on T. S. at Cape May Harbor
- 9.6 ft. below B.M. 1
- 1.6 ft. on T. S. at Cape May City Pier (Outside)
- 11.7 ft. below B.M. A 5

Height of mean high water above plane of reference is 4.3 feet at  
Grassy Sound; 4.4 feet at Swain Channel; 4.4 feet at Cape May Harbor;  
4.3 feet at Cape May City Pier.

Condition of records satisfactory except as noted below:

  
Chief, Division of Tides and Currents.

Note - Names in Parentheses  
 Need not be inked  
 on hydro sheet.

Remarks

*EFF*

Decisions

1		see T-5647
2		" "
3		" "
4		" "
5		" "
6		" "
7		" "
8		" "
9		
10		" "
11		" "
12		" "
13		" "
14		" "
15		" "
16		" "
17		" "
18		(R) USGB
19		see T-5647
20		" "
21		" "
22		see T-5648
23		" "
24		" "
25		" "
26		" "
27		" "

GEOGRAPHIC NAMES

Survey No. **H6224**

Name on Survey	Source											
	A, On Chart No. 1218, 1219	B, On previous survey No.	C, On U. S. quadrangle Maps	D, From local information	E, On local Maps	F, P. O. Guide or Map	G, Rand McNally Atlas	H, U. S. Light List	K			
✓ <u>Tempe Creek</u>	✓ GNS											1
✓ <u>Old Turtle Thorofare</u>	✓											2
✓ <u>Grassy Sound Channel</u>	✓											3
✓ <u>Richardson Sound</u>	✓											4
✓ <u>Grassy Sound</u>	✓											5
✓ ( <u>Beach Creek</u> )	✓											6
✓ ( <u>West Wildwood</u> )	✓ GNS											7
✓ <u>Wildwood Canal</u>	✓ GNS											8
<del>Hoffman Canal</del>												9
✓ <u>Delavan Creek</u>	✓											10
✓ <u>Taylor Sound</u>	✓											11
✓ <u>Richardson Channel</u>	✓											12
✓ <u>Post Creek</u>	✓											13
✓ <u>Ottens Harbor</u>	✓											14
✓ <u>Wildwood</u>	✓											15
✓ <u>Bennett Creek</u>	✓ GNS											16
✓ <u>Jarvis Sound</u>	✓											17
✓ <u>Swain Channel</u>	✓											18
✓ <u>Ephraim Island</u>	✓ GNS											19
✓ <u>Wildwood Crest</u>	✓											20
✓ <u>Sunset Lake</u>	✓											21
✓ <u>Mill Creek</u>	✓ GNS											22
✓ <u>Upper Thorofare</u>	✓ GNS											23
✓ <u>Cedar Creek</u>	✓ GNS											24
✓ <u>Middle Thorofare</u>	✓											25
✓ <u>Lower Thorofare</u>	✓ GNS											26
✓ <u>Cape Island Creek</u>	✓											27

Remarks

Decisions

1		<i>see T- 5648</i>
2		<i>USGB decision</i>
3		<i>see T-5648</i>
4		
5		<i>see T-5648</i>
6		
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M 234		

GEOGRAPHIC NAMES  
 Survey No. **H6224**

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
<del>Schellinger</del> <u>Schellenger Landing</u>	GNS										1
<u>Cape May Harbor</u>	✓										2
<u>Sewell Point</u>	✓										3
<del>Cape May Inlet</del>											4
<u>Twomile</u> <del>Two Mile Beach</del>	GNS										5
											6
											7
											8
											9
											10
											11
											12
											13
											14
											15
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											24
Names underlined in red approved											25
by <u>GPE</u> on <u>1/11/38</u>											26
											27

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
 DESCRIPTIVE REPORT  
~~PHOTOSTAT OF~~

No. H -6224  
~~No. H~~

{ received Jan 10, 1938  
 registered Jan. 11, 1938  
 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			Page 2 Channels.
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	<del>O. K. Green</del>
----	------------------------

*T.B. Reed*



Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6224 (1937) FIELD NO. 20

Grassy Sound to Sewell Point, Intracoastal Waterway  
Surveyed in July - Sept. 1937, 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 - G. E. Varnadoe.  
Protracted by - G. W. Lovesee.  
Soundings plotted by - G. W. Lovesee.  
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. The name of the leadsman was not consistently entered at the beginning of each day's work.
- b. Several bridge clearances that were not determined by the hydrographic party were obtained from T-5647 (1932-36) and T-5648 (1932-36).

The Descriptive Report is clear 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.

The shoreline originates with topographic maps: T-5647 (1932-36) and T-5648 (1932-36), and graphic control sheets T-6563a and b (1937) and T-6564 (1937).

The signals originate with graphic control sheets: T-6563a and b (1937) and T-6564 (1937).

4. Sounding Line Crossings.

Agreement of such cross lines as were run or result from the work are satisfactory.

5. Depth Curves.

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

6. Junctions with Surveys.

- a. The junctions on the north and northeast with H-6236 (1937) and on the south with H-6232 (1937) will be considered in the reviews of those surveys.
- b. The present survey makes a junction with H-4875 (1928) on the south. Agreement of depths in general is within 1 to 2 feet but there are some exceptions. In latitude  $38^{\circ} 55.9'$ , longitude  $74^{\circ} 50.9'$  for example, several 34 to 35 foot depths on H-4875 (1928) vary 3 to 4 feet shoaler than the present survey. In latitude  $38^{\circ} 55.7'$ , longitude  $74^{\circ} 50.7'$ , a line of 44 to 45 foot depths on the present survey appears to be 4 to 5 feet too deep. The 1928 development in the common area, however, is slightly more detailed and indicates greater irregularity in bottom. The present survey development, therefore, is not sufficiently detailed to show conclusively that changes have occurred. Although no overlapping soundings have been transferred, both surveys should be used to supplement each other in charting this area. An exception, however, is the two lines of soundings run in the inlet which area has been superseded by surveys discussed in par. 8a(2), this review.
- c. The present survey makes a satisfactory junction with H-4870 (1928) on the east, agreement being within 1 or 2 feet at the outer limit of the present survey. In the common area greater differences are noted particularly in the vicinity of the 15 foot shoal on H-4870 (1928) in latitude  $38^{\circ} 57'$ , longitude  $74^{\circ} 50.65'$ , where the present survey shows 22 and 23 feet. Other differences of 3 and 4 feet are noted in the overlapping area. The present survey development is adequate for this area and should replace the charted soundings from H-4870 (1928). Fringe of soundings at junction intentionally omitted. H.W.M.
- d. No junction has been effected on the outside coast between the present survey and H-6236 (1937) to the northeast. This area is covered by H-4859 (1928) and was intended to be used in conjunction with the 1937 surveys. However, a comparison of depths at the junction with the present survey shows a shoaling of as much as 6 feet in the vicinity of latitude  $38^{\circ} 58.4'$ , longitude  $74^{\circ} 49.5'$ . There has also been an accretion in shoreline of 50 to 110 meters. At the junction of H-6236 (1937) (not yet verified), with H-4859 (1928) the comparison shows deepenings of 1 to 8 feet to have taken place. In view of these changes this gap will be resurveyed in 1938. (See par. 10, this review).

7. Comparison with Prior Surveys.

- a. H-116 (1843), H-117 (1841), H-148 (1842-43) and H-1533 (1882), scales 1:40,000 and 1:80,000.

These surveys each cover portions of the offshore area of the

present survey. But a few soundings fall within the limits of the present survey and these have been superseded by later surveys covering this area. The present survey should supersede these surveys in future charting.

b. H-2164 (1891) and H-2166 (1891), Scales 1:10,000.

These sparsely covered surveys taken together cover most of the inland area of the present survey including the inlet. Artificial changes made in the area extending one mile inland from the coast line have been so extensive that little relation exists with the present survey. Several narrow streams with depths of 1 to 12 feet formerly existed in what is now Cape May Harbor. Other streams in the vicinity of Sewell Point and Twomile Beach, including a former inlet to Sunset Lake have been filled in. Portions of Sunset Lake and Post Creek have been widened and considerably deepened. Ottens Harbor and the jetties at the inlet are also subsequent improvements. Further inland an adequate comparison cannot be made due to the sparseness of the 1891 detail. It is noted, however, that the main topographic features have persisted and that the depths in Jarvis and Richardson Sounds are practically unchanged. The present survey should supersede these surveys in future charting.

c. H-4695 (1927), H-4695a (1928) and H-4925 (1929), Scales 1:5,000.

These surveys each cover portions of the general vicinity of Cape May Harbor including the inlet and some of the nearby streams. The topographic features have persisted although differences are noted in some details (see Descriptive Report, page 1, Shoreline). The two single piles (charted) one in latitude  $38^{\circ} 56.8'$ , longitude  $74^{\circ} 53.6'$  and another in latitude  $38^{\circ} 56.8'$ , longitude  $74^{\circ} 53.9'$ , which were used as signals on H-4695 (1927), were not verified. Since the hydrographer of the present survey passed close by these features at a zero tide, it is quite probable that he would have mentioned them if they existed. They are considered to be non-existent and should be disregarded in future charting.

The hydrography is in good agreement in but a few places, the present survey depths varying 1 to 6 feet shoaler in some cases and 1 to 5 feet deeper in others. The shoal area (charted) with least depths of 5 to 10 feet in lat.  $38^{\circ} 56.95'$ , longitude  $74^{\circ} 53.65'$ , originating with the 1927 survey is slightly shoaler than the present survey depths. Since the hydrographer drifted for 45 minutes in this area, he has undoubtedly obtained the prevailing least depth. In this connection the single 8 and 11 foot sounding (not charted but indicated by 12 foot curve on chart 234) shown on the west side of the shoal on the old survey is incorrectly plotted with respect to time interval, the correct position being slightly southeastward

where they agree closely with the present survey delineation.

The present survey although on a smaller scale adequately bears out the essential hydrographic features and should supersede these surveys in future charting.

d. H-4859 (1928) Scale 1:10,000.

A portion of this survey falls within the limits of the present survey in the area just offshore from Twomile Beach and Wildwood Crest. Considerable changes in shoreline and depths are noted. The present survey shoreline is shown 30 to 120 m. further offshore. The hydrography is in agreement in but a few places since changes, mostly deepening, of 1 to 10 feet have taken place. In view of the changes noted, the present survey should supersede this survey in future charting.

8. Comparison with Charts 234 (New Print dated Jan. 18, 1938)

1217 (New Print dated Aug. 27, 1937)

1218 (New Print dated July 26, 1937)

1219 (New Print dated Aug. 17, 1937)

3243 (New Print dated Dec. 10, 1937)

a. Hydrography.

Hydrography shown on the charts originates with surveys discussed in previous paragraphs of this review and the following U. S. Army Engineers' surveys:

- (1) Blueprints 25743 (1931), 27594 (1934) and 30694 (Mar. 1937) cover portions of the vicinity of Cape May Harbor including a small area just eastward of the inlet in latitude  $38^{\circ} 56.4'$ , longitude  $74^{\circ} 51.7'$ . The depths are generally in good agreement with the present survey, except that changes are noted in some areas, the more outstanding being the 1 to 10 foot deepening (25 feet charted from blueprint 30694) shown on the present survey in latitude  $38^{\circ} 57.05'$ , longitude  $74^{\circ} 54.14'$ . The 18 foot sounding in latitude  $38^{\circ} 57.0'$ , longitude  $74^{\circ} 53.6'$  originates with blueprint 30694 of Mar. 1937 (actually 17.9 feet) and falls in depths of 24 to 29 feet and between sounding lines spaced 50 m. apart on the present survey. The 18 falls close to a 21 foot depth on blueprint 31096 of Feb. 1937. Surrounding depths on all three surveys agree within 1 to 2 feet. Because the three surveys are closely related in point of time, and because no special examination was made of the 18 (was not on copy of chart used by field party), it should be retained for the present.
- (2) Blueprint 31211 of Dec. 17 and 31305 of Dec. 30, 1937 on scales of 1:2400 each cover the inlet area between the two jetties and are subsequent to the present survey. The depths are in close agreement in some areas but since changes (generally a deepening of 1 to 5 feet) are noted in others, the Engineers' surveys should supersede the present survey work.

b. Controlling Depths.

Within the area of the present survey, the charted controlling depth in the New Jersey Inland Waterway (Charts 1219 and 3243) between Cape May Harbor and Ottens Harbor is 10 feet as of May 1936 and thence 4 to 9 feet as of Sept. 1935. The present survey shows controlling depths of 8 and 6-1/2 feet respectively.

c. Aids to Navigation.

Buoys are charted on Chart 234 only, lights are charted in part on all of the charts but more completely on Chart 3243. Charts 234 and 3243 also have general descriptive notes relating to the status of various aids.

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

- (1) Buoys N4 and N2 in the vicinity of latitude 38° 57.0', longitude 74° 52.6' were located approximately 70 m. N. W. of their charted positions. The present survey positions are also borne out by blueprint 30694 of 1937. The charted positions originate with Lighthouse Notice to Mariners 21 of 1936, are based on distances and bearings from known objects and are prior to the present survey information. These aids in either position satisfactorily mark the features intended.
- (2) The two charted lights in the vicinity of latitude 38° 59.4', longitude 74° 50.2' were not located on the present survey, however, Chart Letter No. 49 of 1938, received from the Chief of Party, states that these lights are in place as charted. They satisfactorily mark the features shown on the present survey.

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 satisfactory and within its limits no additional work is required. However, in view of the unsatisfactory junctions at the inshore limits between the 1937 work and H-4859 (1928) as noted in paragraphs 6c and d of this review, the following additional work is required:

A complete inshore survey along the Wildwood waterfront from a junction with H-6236 (1937) to a junction with H-6224 (1937) and offshore to a satisfactory junction with H-4821 and H-4870 both of 1928.

Authority for this additional work is included in the instructions to the OCEANOGRAPHER, dated March 4, 1938.

11. Note to Compiler.

The compiler's attention is called to the following:

- a. Par. 6b, c and d, this review relative to the treatment of junctions.
- b. Par. 7c, this review relative to charted piles which should be removed from the chart.
- c. Par. 8a(1), this review relative to a charted 18 foot sounding which should be retained on the chart.
- d. Par. 8a(2), this review relative to the status of certain Engineers' surveys.
- e. Blueprint 31098 of February 1937 (not applied to chart) on a scale of 1:600 covers the general vicinity of Shellinger Landing on the S.W. The present survey development here is sparse but since the main features on both surveys are in good agreement, the blueprint may be used to supplement the present survey wherever necessary for charting purposes.
- f. The piling shown on the smooth sheet in latitude  $38^{\circ} 57.1'$ , longitude  $74^{\circ} 54.1'$ , the dock in latitude  $38^{\circ} 56.8'$ , long.  $74^{\circ} 52.4'$ , an islet in latitude  $38^{\circ} 56.9'$ , long.  $74^{\circ} 52.3'$ , a barge in latitude  $38^{\circ} 58.8'$ , long.  $74^{\circ} 50.25'$ , and another in latitude  $38^{\circ} 59.6'$ , long.  $74^{\circ} 49.6'$ , originate with information contained in the sounding records.
- g. The status of certain charted features listed in the Descriptive Report, page 1, "SHORELINE".

12. Superseded Prior Surveys.

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

H-116	(1843)	In part	H-2166	(1891)	In part
H-117	(1841)	" "	H-4695	(1927)	Entirely
H-148	(1842-43)	" "	H-4695a	(1928)	"
H-1533	(1882)	" "	H-4859	(1928)	In part
H-2164	(1891)	" "	H-4925	(1929)	In part

13. Reviewed by - Harold W. Murray, Feb. 18, 1938.

Inspected by - A. L. Shalowitz.

Examined and approved:

*K. T. Adams*

K. T. Adams,  
Asst. Chief, Division of Charts.

*L. D. Robert*

Chief, Division of Charts.

*G. W. de*

Chief, Division of H. & T.

*Fred. L. Penock*  
Chief, Section of Field Work.

Applied to chart 234, March 25, 1938, R.L.V.  
applied to chart 1219 April 19, 1938, J.G.L.  
" " " 1217 " 28, " J.T.W.

Applied to chart 1218 from 1219. July 22, 1938 J.H.S.  
" " compilation of new chart 827, July, 1939 B.R.  
" " " " " 826-SC 6-3-63 Frazier