

7009

Diag. 77-3

7009

Form 504 U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE DESCRIPTIVE REPORT	
Type of Survey <u>HYDROGRAPHIC</u>	
Field No. <u>F-2013, F-2113</u> Office No. <u>H-7009</u>	
LOCALITY	
State <u>MARYLAND</u>	
General locality <u>CHESAPEAKE BAY</u>	
Locality <u>KENWOOD BEACH TO COVE POINT</u>	
<u>1945</u> CHIEF OF PARTY <u>L. P. Raynor, Commander, USCGS</u>	
LIBRARY & ARCHIVES	
DATE <u>FEB 8 1946</u>	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. H7009

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. 2013 and 2113.

REGISTER NO. H-7009

State Maryland.

General locality Kenwood Beach to Cove Point

Locality Western Shore of Chesapeake Bay.

Scale 1:10,000 Date of survey Dec. 18, 1944 to January 9, 1945.

Vessel Ship LYDONIA - Launches 79 and 100.

Chief of Party L.P. Raynor, Commander, U.S.C. & G. Survey.

Surveyed by Lt. Comd'r. H.J. Healy and Lt. Comd'r. G.W. Lovese.

Protracted by J.D. Curd

Soundings penciled by J.D. Curd

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water.

Subdivision of wire dragged areas by _____

Inked by R.E. Elkins

Verified by R.E. Elkins

Instructions dated April 17, 1940 to Sept. 12, 1944, 19

Remarks: This sheet was processed in the Hydrographic Section of the Southeastern District, Norfolk, Va.

DESCRIPTIVE REPORT TO ACCOMPANY
Hydrographic Sheets H- 7009
Field Sheets No. 2013 & 2113.
Kenwood Beach to Cove Point, Maryland.
L.P. Raynor, Chief of Party,
Commanding Ship LYDONIA.
Surveyed by Lt. Comd'r. H.J. Healy
Lt. Comd'r. G.W. Lovesee

Scale 1:10,000. 1944 & 1945.

A. PROJECT:

The Authority for this survey is contained in the Instructions from the Director for Project No. CS-250, dated April 17, 1940. Additional Instructions dated Sept. 18, 1942. Supplemental Instructions dated Sept. 23, 1943. Supplemental Instructions for the present season are dated Sept. 12, 1944.

B. SURVEY LIMITS AND DATES:

This is a complete new survey of the Western Shore of Chesapeake Bay from Kenwood Beach to Cove Point. The survey extends from the beach to about 1 mile offshore. ~~Field Sheet No. 2013~~ is joined on the north by Sheet H-6955 surveyed by this field party in 1944. A junction is made with Sheet H-6952 to the north and offshore surveyed by the M.V. GILBERT in 1944. The offshore junction for both field sheets No. 2013 & 2113 is made on Sheet H-6953 surveyed by the Ship LYDONIA in the spring of 1944. An inshore junction is made at Cove Point with Sheet H-6683 surveyed in 1941.

Field Work was started on Sheet 2013 by Launch 79 on December 18, 1944. Field work was finished on January 9, 1945. Field work was started on Sheet (field) No. 2113 on Jan. 3, 1945 by Launch 79. Field work was finished on January 9, 1945.

C. VESSELS AND EQUIPMENT:

The surveys of these two sheets were made with Launches No. 79 and 100 which operated from the Ship LYDONIA anchoring in the near vicinity.

Model 808 Fathometers No. 75 and 76 were used. The fathometer used each day is listed in the sounding volumes. Fish No. 809113 was used on Launch 79. Fish No. 809100 was used on Launch 100.

The bottom was hard on the inshore end of the sounding lines and the fathometers worked very well and recorded the depth correctly in all depths over 2 feet. A check was taken with the sounding pole at the inshore end of the lines and as the soundings checked well very few of them were recorded in the sounding volumes.

D. TIDE AND CURRENT STATIONS;

The tide gage at Long Beach was used for both these sheets. This gage is near the center of the surveys and no correction for time is needed. The gage is located on the outer end of the Long Beach Community Pier. This pier is in poor condition but the outer end was substantial and a good record was obtained on the marigram. This gage was not established until the morning of January 3, 1945. A tide observer was left at the staff and readings were taken every half hour while soundings were being taken before January 3, 1945.

Soundings on the boat sheet were reduced from the actual tides at Long Beach and no predicted tides were used.

No current stations were established on this survey.

E. SMOOTH SHEET;

The smooth sheets of this survey will be plotted by the Norfolk Processing Office.

F. CONTROL STATIONS;

COVE PT. LIGHTHOUSE 1848 is the only triangulation station used on these two sheets.

* All topographic signals were located by plane table methods. The plane table traverse was started from the last seasons topo signal KEN at Kenwood Beach. The traverse was then run southeast to the Cove Point Lighthouse. * Some signals from airphoto T-8111(1943)

G. SHORELINE AND TOPOGRAPHY;

The shoreline and topography were surveyed by Lieut. Comd'r. C.R. Reed as described in the paragraph above.

7-6968(1944)

H. SOUNDINGS;

See sub-heading "C" Vessels and equipment.

No unusual or special methods, equipment, or corrections were used.

I. CONTROL OF HYDROGRAPHY;

Positions of soundings are located by three point sextant fixes, taken on shore signals, and plotted with the three arm celluloid protractor. No unusual or sub-standard methods were used for the control of soundings.

J. ADEQUACY OF SURVEY;

This sheet is a complete survey of the area. It should supersede all prior surveys for charting purposes. Junctions with adjoining sheets are satisfactory, no holidays exist, and depth curves can be adequately drawn.

K. **CROSSLINES:**

An adequate number of crosslines were run. Soundings were plotted on the boat sheet to the nearest tenth of a foot. Reducers were taken from the tide gage at Long Pt. Beach at the end of each days work so the soundings could be plotted on the boat sheet the same night by the hydrographer.

Crosslines checked satisfactorily with the main scheme of sounding lines.

See the report on statistics which is attached to this report for the number of miles of hydrography and the percentage of crosslines run.

L. **COMPARISON WITH PRIOR SURVEYS:**

See the comparison with chart below.

M. **COMPARISON WITH CHART:**

Most of the charted soundings shown on Chart No. 1225 checked fairly well with the soundings obtained on this survey. Close inshore in the shoal water the soundings checked very well. Some of the deeper soundings in 15 to 30 feet and from 0.3 to 0.6 mile offshore varied as much as two feet. In most of these cases however the same depth is found in the near vicinity, usually closer inshore. Soundings from the chart which were shoaler were investigated by lines ran back and fourth over the area and the shoalest soundings obtained were checked with the sounding pole or hand lead as shown in the sounding volumes.

The inshore soundings were taken with Launch 100. This launch can sound in $1\frac{1}{2}$ feet of water. Lt. Comd'r. G.W. Lovesee was in charge of this launch. The offshore sounding lines which run parallel to the shoreline were taken with Launch 79 in charge of Lt. Comd'r. H.J. Healy.

The area from Cove Point to the vicinity of Point of Rocks about 3 miles northwest was surveyed by Launch 79 all the way in to the shore. During this period launch 100 was laid up for repairs to the motor. Launch 79 was operated in shifts by the crews of both launches taking turn. This enabled the launch to work longer hours and also gave relief to the personnel as the temperature was at or close to freezing during these two days.

In the area to the north and west of Cove Point for a distance of about 1 mile the bottom is very uneven and varies in depth from 5 to 10 feet. No attempt was made to develop the least depth on each of the shoaler soundings in this area as there were so many of them. There is apparently plenty of water for shallow draft vessels and larger vessels would not navigate this close to shore. These shoals are apparently all firm sand bottom and no rocky bottom was found that would make the area more dangerous to small vessels.

N. DANGERS AND SHOALS:

The inshore area for a mile north and west of Cove Point is dangerous to craft drawing from 3 to 4 feet as they might bump one of the numerous sandy shoals during a period of minus tides. ✓

At Kenwood beach the chart shows the ruins of an old pier which must have extended about 200 yards into the bay. This pier was transferred from the chart to the boat sheet and a sounding line apparently was run directly over the area of the old pier. The fathogram shows a faint trace that may indicate sunken piling of this old pier. At the third sounding after position 25 "a" day, launch 100, Sheet F-2013, these faint traces have been indicated on the fathogram. No sign of old piling could be seen near the surface of the water. The store at Kenwood Beach was closed at the time and the only person that could be contacted was a lady and her daughter at one of the beach cottages. It is recommended that the ruins of this dock remain on the chart because of the possibility of the sunken piling that may not have been removed. *Retain Pier*

There are numerous fish traps all along the coast for a considerable distance off the beach. These traps are made of poles driven in the bottom and are about 2 to 3 inches in diameter. No attempt to locate these fish traps was made as they are moved from time to time as they wear out. The remains of these poles are always carefully removed by the local fishermen who own the traps.

There is a shoal area about $\frac{1}{2}$ mile south of Kenwood Beach which extends for about $\frac{1}{4}$ mile offshore. This area varies in depth from sand bars above low water to soundings of 2 to 3 feet between the sand bars. A depth of nearly 2 feet can be found directly off the beach inside of these sand bars at mean low water. Two sounding lines were run over this shoal at extreme high tide and show character of the depth.

There is a shoal area at Long Beach which extends about 500 meters off shore and varies in depth from 1 to 3 feet at mean low water. Sounding lines were run over this area at high tide. ✓

The inshore area discussed in paragraph 1 above and in comparison with chart on page 3 may have shoals caused by artificial methods. The U.S. Navy uses this area for training of personnel in landing craft and grounding by their craft may have caused some of these shoals. ✓

O. COAST PILOT INFORMATION:

No Coast Pilot information is necessary from the surveys of these two sheets. ✓

Good anchorage can be obtained for small craft of shallow draft in sandy bottom.

P. AIDS TO NAVIGATION:

The only aids to navigation within the limits of ^{this survey} these two sheets is the Lighthouse at Cove Point. ✓

Q. LANDMARKS FOR CHARTS:

This report has been submitted by the field parties ^{T-8111} of the Air Photographic Division. No additional landmarks ^{L-125, 175 (1944)} for charts are recommended.

*L-175 (44) superseded by
L-125 (44)*

R. GEOGRAPHIC NAMES:

This report has been made by the air photographic field parties. No new geographic names are recommended. ^{6/4 ✓}

S. thru Z. Does not apply to this descriptive report.

Respectfully submitted,

Henry T. Healy
Henry T. Healy
Lt. Comd'r., C. & G. Survey.

George W. Lovesee
George W. Lovesee
Lt. Comd'r., C. & G. Survey.

Approved and Forwarded:

L. P. Raynor
L. P. Raynor, Commander, USC&GS
Chief of Party

APPROVAL SHEET

Boat Sheets were inspected daily and sounding records frequently
and both are approved.

L. P. Raynor
L. P. Raynor
Commander, USC&GS
Chief of Party

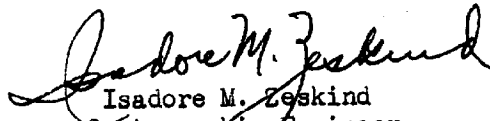
A D D E N D U M

to accompany

HYDROGRAPHIC SURVEY H-7009 (Field Nos. 2013 & 2113)

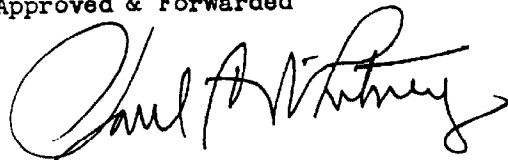
This sheet was processed in the Hydrographic Section of the
Southeastern District, Norfolk, Virginia.

Respectfully submitted,


Isadore M. Zeskind
Cartographic Engineer

Norfolk, Va.
February 6, 1946

Approved & Forwarded



Paul C. Whitney
Supervisor, SE District

H-7009

List of Signals used

Field Sheet 2013

1944-45

<u>T-6968a</u>	<u>T-8111</u>	<u>T-6968a</u>	<u>T-6968b</u>	
EAT	DORM	ABE	LIP	DAY
GAS	FAY	ALL	NED	EVA
JAW	KEN	BAN	NIX	FOG
SOW	LONG	BAR	OPE	HAD
SOX	SEE	BOB	PIL	HOLD
VAL	SHORE	BOW	POL	IVY
		CAT	PUM	JAY
		CRY	QOL	KIT
		DAN	RAN	LIZ
		DOC	RAT	MIN
		DOT	RED	YEL
		EAR	SIM	
		FAT	STO	
		GEO	TRE	
		GIG	TUB	
		HUG	WAX	
		INK	WET	

H-7009

List of Signals used

Field Sheet 2113

1944-45

Triangulation

COVE POINT LIGHTHOUSE 1848

<u>T-6968a</u>	<u>T-6968b</u>	<u>T-8111</u>
ABE	BOB	KIT
BAR	DOTE	LIP
CRY	EVA	LIZ
DAY	EVE	MIN
	FOG	NEL
	HAD	RAT
	HAT	ROY
	HOLD	SIS
	IVY	TED
	JAW	TUB
	JAY	WAX
	JOE	YEL

STATISTICS, SHEETS NOS. F-2013 & F-2113

F-2013:

<u>DATE</u>	<u>DAY LETTER</u>	<u>LAUNCH</u>	<u>VOLUME</u>	<u>NO. SNDGS.</u>	<u>NO. POS.</u>	<u>STAT. MILES SNDG.</u>
12/18/44	a	79	1	1	135	27.7
12/20/44	b	79	1	-	133	26.7
12/20/44	a	100	2	5	130	17.2
12/21/44	b	100	2,4	14	190	28.1
12/21/44	c	79	3	-	110	22.8
1 / 2/45	d	79	3	-	105	18.5
1 / 2/45	c	100	4	16	87	10.5
1 / 8/45	d	100	4	-	84	11.6
1 / 9/45	e	100	4	2	53	6.6

F-2113:

1 / 3/45	a	79	1	-	158	35.8
1 / 4/45	b	79	1,2	-	213	46.3
1 / 9/45	c	79	2	6	30	5.3
1 / 9/45	a	100	3	-	17	2.3

TOTALS, F-2013 + F-2113: 44, 1,445 259.4

AREA OF HYDROGRAPHY, F-2013 + F-2113: 9.4 square statute miles

CROSSLINES, F-2013 + F-2113: 23.8 statute miles, or 9.2% of total

TIDAL NOTE, SHEETS NOS. F-2013 & F-2113

The plane of reference is Mean Low Water.

The tidal record from the portable automatic tide gage or fixed tide staff at Long Beach, Md., governs the reduction of all soundings on these survey sheets.

<u>GAGE</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>MLW ON STAFF</u>	<u>TIME DIFF. FROM BALTIMORE</u>
LONG BEACH	38° 27.91'	76° 28.27'	3.7 feet	- 4h 35m

GEOGRAPHIC NAMES

Survey No. **H7009**

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
<u>Kerwood Beach</u>											1
<u>Core Point</u>											2
<u>Long Beach</u>			(location of one tide staff)								3
<u>Chesapeake Bay</u>										U.S.F.G.	4
											5
											6
											7
											8
											9
											10
											11
											12
<u>Chesapeake Beach</u>			(location of one tide staff)								13
											14
											15
											16
											17
											18
											19
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											21
											22
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											24
											25
											26
											27

APPROVED FOR PUBLICATION
 L. RECK 08/28/46

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ...**H7009**

Records accompanying survey:

Boat sheets ..4...; sounding vols. 7.....; wire drag vols.;
bomb vols.; graphic recorder rolls ...¹²...;
special reports, etc.
.....

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

Number of positions on sheet	.....	1445
Number of positions checked	.....	91
Number of positions revised	.....	25
Number of soundings revised (refers to depth only)	.....	18
Number of soundings erroneously spaced	.....	35
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	8
Junctions	Time	8
Verification of soundings from graphic record	Time	18

Verification by...*Roy E. Elkins*.....Total time ..187... Date 7-26-46

Reviewed by...*J. F. Jordan*..... Time ..15... Date 8-7-46

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 7009

FIELD NOS. 2013 & 2113

Maryland, Chesapeake Bay, Kenwood Beach to Cove Point
Surveyed in December 1944 to January, 1945 Scale 1:10,000
Project No. CS-250

Soundings:

808 Fathometer
Pole

Control:

Three-point fixes on shore
signals

Chief of Party - L. P. Raynor
Surveyed by - H. J. Healy and G. W. Lovesee
Protracted by - J. D. Curd
Soundings plotted by - J. D. Curd
Verified and inked by - R. E. Elkins
Reviewed by - G. F. Jordan, August 7, 1946
Inspected by - R. H. Carstens

1. Shoreline and Control

Shoreline and control are from planetable surveys T-6968a and T-6968b of 1944-45, supplemented by signals and short stretches of shoreline from air-photo survey T-8111 (1943).

Shoreline on the latest survey, T-6968, varies as much as 40 meters with T-8111, with even a greater difference indicated on the point at lat. $38^{\circ} 27'$.

2. Sounding Line Crossings

Satisfactory.

3. Bottom Configuration

The bottom is generally smooth except for areas of sand waves. Although the sand waves are indicated by delineation of portions of the 24-ft. curve, they are more pronounced in shoaler depths. The delineation of sand waves shown by the 12 and 18-ft. curves in the vicinity of lat. $38^{\circ} 28'$ is about the same as shown on H-2931 (1907-08).

The direction of the detached curves in the vicinity of lat. $38^{\circ} 23.6'$, long. $76^{\circ} 23.3'$, were determined by drawing intermediate one-foot contours on a tracing overlay.

4. Adjoining Surveys

Satisfactory junctions are effected on the north and south with H-6955 (1944) and H-6683 (1941), respectively. Additional junctions on the north and east will be considered when H-6952 (1944) and H-6953 (1943-45) are verified.

5. Comparison with Prior Surveys

a. H-199 (1847-48) 1:20,000 scale

Soundings on this prior survey agree very well with present depths except in inshore areas, particularly inside the 6-ft. curve. Differences here arise from shifting of sand waves in shallow water. One noticeable difference in depths occurs off the point in lat. $38^{\circ} 27'$ where the present 2 and 3-ft. depths are 5 to 7-ft. shoaler than prior depths.

b. H-2428 (1899) 1:40,000 scale

Two lines of soundings on this small scale reconnaissance survey fall within the limits of the present survey. The agreement in depths is fair.

c. H-2931 (1907-08) 1:20,000 scale

Soundings on this prior survey show fair agreement with present depths inside the 18-ft. curve. Present depths are about 2-ft. shoaler in depths over 20 feet. Differences in depths also occur where sand waves have shifted in shallow depths. The following two shoal soundings on prior sand waves were investigated by drift sounding on the present survey and are considered non-existent:

- (1) 4 ft. (chart 553) in 7-ft. depths at lat. $38^{\circ} 23.77'$, long. $76^{\circ} 23.28'$.
- (2) 5 ft. (not charted) in 8-ft. depths at lat. $38^{\circ} 24.12'$, long. $76^{\circ} 23.55'$.

These prior surveys are superseded except for bottom characteristics which have been carried forward.

6. Comparison with Chart 553 (Latest print of May 25, 1946)

a. Hydrography

Charted depths originate with the aforementioned prior surveys except for partial application of the present survey before verification.

The ruins of an old pier charted at Kenwood Beach in the vicinity of lat. 38° 30', long. 76° 30' should be retained, as recommended by the hydrographer in his discussion of this feature on page 4 of the descriptive report. As a matter of record, the fathogram traces which he mentions are quite similar to other pencil-line traces on other parts of the fathogram which are considered to be strays.

Ruins transferred to present survey from T-2842 (1907)

b. Aids to Navigation

Cove Point Lighthouse is the only aid to navigation charted within the limits of the present survey.

*Rd. Corstens 4/4/47
1951 Photos show a pier in good condition
S.M.A.*

7. Condition of Survey

- a. The sounding records and descriptive report are complete in all detail.
- b. The smooth plotting was satisfactory but should have included explanatory notes for signals as given in paragraphs 781(c) and (d) of the Hydrographic Manual.
- c. Only six bottom characteristics which resulted from investigation of shoals were obtained.

8. Compliance with Project Instructions

Satisfactory.

9. Additional Field Work

This is an excellent basic survey requiring no additional hydrography. However, conclusive investigation of the ruins of old pier mentioned in the preceding paragraph 6(a) should be made.

Examined and approved:

A. Edmonstone
Chief, Nautical Chart Branch

Casper M. Durgin
Chief, Chart Division

Carl O. Heaton
Chief, Section of Hydrography

C. K. Green
Chief, Division of Coastal Surveys

Ham

TIDE NOTE FOR HYDROGRAPHIC SHEET

February 18, 1946

~~Division of Hydrography and Topography:~~

Division of Charts: H. W. MURRAY

Plane of reference approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 7009

Locality Chesapeake Bay, Maryland.
West Shore - Kenwood Beach to Cove Point.

Chief of Party: L. P. Raynor in 1944 - 1945.
Plane of reference is mean low water, reading
2.3 ft. on tide staff at Chesapeake Beach
8.9 ft. below B. M. 1 (1943)
3.7 ft. on tide staff at Long Beach
6.8 ft. below B. M. 1

Height of mean high water above plane of reference is 1.0 feet.

Condition of records satisfactory except as noted below:

Ham
ag Chief, Division of Tides and Currents.

NAUTICAL CHARTS BRANCH

SURVEY NO. **H7009**

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2-15-46	553	G.C.M. Glasson	Before <i>Partially applied</i> After Verification and Review
4/3/46			
	1224	H.F. Stegman	Before After Verification and Review <i>Inspected for critical edges - no correction made!</i>
5-19-48	3331	M. Andros	Before After Verification and Review <i>Fully applied</i>
9/3/48	551	H. MacEwen	Before After Verification and Review <i>a few soundings near Port Republic to fill in.</i>
10/26/51	653	H.F. Stegman	Before After Verification and Review <i>Fully applied to reconstruction drawing.</i>
2/24/64	77	O. S. Anderson	Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.