

ORIGINAL

6968a-b

Diag. Cht. No. 77-4

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. E & F Office No. T6968a & b

LOCALITY

State Maryland

General locality Chesapeake Bay - Western Shore

Locality Kenwood Beach to Cove Point

194 5

CHIEF OF PARTY

L. P. Raynor, Commander, USC&GS

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DATE MAR 14 1945

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. T6968 aeb

TOPOGRAPHIC TITLE SHEET

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

Field Letter E & F

REGISTER NO. T6968a & b

State MarylandGeneral locality Chesapeake Bay - Western ShoreLocality Cove Pt. to Kenwood Beach
Kenwood Beach to Cove PointScale 1/10,000 Date of survey December 1944 Jan., 1945Vessel Ship LYDONIAChief of Party L. P. RaynorSurveyed by C. R. ReedInked by C. R. ReedHeights in feet above -- to ground to tops of treesContour Approximate contour Form line interval -- feetInstructions dated September 12, 1944

Remarks:

Descriptive Report to Accompany

Graphic Control Topographic Sheets E and F
Registry No. 6968a and b

Project CS-250 Chesapeake Bay, Maryland

U.S.C. & G.S.S. LYDONIA L. P. Raynor, Commanding

INSTRUCTIONS: Original project instructions were dated April 17, 1940. Supplemental instructions for the present season are dated September 12, 1944. *Sept 23, 1943*

AREA: The sheets cover the location of signals and parts of the high water line on the west shore of Chesapeake Bay from Kenwood Beach to Cove Point, Maryland.

GENERAL DESCRIPTION OF COAST: The shore is sandy with bluffs behind except at stream mouths and just north of Cove Point where it is low and sandy with some marsh behind.

CONTROL: The control stations are topographic stations from the 1942 air photographic compilation with the exception of triangulation station Cove Point Light House 1848. Other triangulation stations were too high on bluffs to be available.

TRAVERSES: Traverses were run from DORM to KEN, from DORM to LONG, from POL to LONG, and from CORA to COVE POINT LIGHT HOUSE.

A traverse was run from CORA to COVE POINT LIGHTHOUSE without changing orientation or distance because no stations were intervisible after leaving CORA until reaching ETTA. The traverse was then continued to COVE POINT as the position of station ETTA was in question at that time. An error in orientation at station CORA was discovered to be due to the fact that the wrong point on the ground was marked by the air photographic field party, see attached copies of letters dated December 26, 1944 and January 2, 1945.

At the southern end of Sheet T6968a the position and orientation was transferred to the opposite side of the sheet because of the inaccessibility of triangulation station WILSON 2, 1934. Due to the fact that this break in the sheet occurred between CORA and GO, which was the next control station to the south, it was impossible to adjust this error in orientation without constructing another projection and this was not considered warranted. Thus the traverse south of CORA was adjusted between control points proportionally after first correcting the orientation between each pair of points. The errors of closure given are those of distance only for this reason. The errors were rather large but were consistently over closures except near Cove Point.

Topographic station DOT was lost. The mark was found washed out some distance from its proper place. The traverse was adjusted using the point on the ground which complied with the description of station card for station DOT.

1942 (there are 2 stations KEN)

Position shown is corrected position of CORA

Table of Closing Errors

Station to Station	Statute Miles	Closure
DORM - KEN 1942	0.7	+7 meters
DORM - LONG	2.2	+20 "
POL - LONG	1.2	+12 "
CORA - GO	2.0	+14 "
GO - SEE	0.9	+7 "
SEE - DOT	1.0	+21 "
DOT - ETTA	1.2	-2 "
ETTA - COVE POINT L.H.	1.0	0

Excessive error

CHANGE IN SHORELINE: No comparison was made with previous surveys.
The shoreline was partially located for use in the hydrographic surveys.

MAGNETIC MERIDIANS: The value of the magnetic variation was shown at topographic station CORA (1942) using the declinoire with alidade HL90 on December 20, 1944. The value is approximately $7^{\circ} 05' W.$ (*See note)

STATISTICS: The 2 sheets cover a length of beach of 10.6 statute miles. As stated previously only a part of the high water line was located.

Respectfully submitted:

Clarence R. Reed

Clarence R. Reed
Lieut. Comdr. U.S.C. & G. Survey

Approved and forwarded:

R. R. Moore

R. R. Moore, Lieut. Comdr. U.S.C. & G. Survey
Commanding Ship LYDONIA

* The error in position of station CORA was discovered prior to the determination of the magnetic variation.

C
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P
Y

Ship LYDONIA

December 26, 1944

To: The Director
U. S. Coast and Geodetic Survey
Washington 25, D. C.

From: Commanding Officer
Ship LYDONIA

Subject: Error in Topographic Station CORA

While executing graphic control in the vicinity of Long Beach, Maryland, an error was found in the location of topographic station CORA (Sheet T8111). The description of this station states that the mark is at the base of a 10-foot locust tree. There are two 10-foot locusts and the mark was apparently set at the base of the wrong tree, the eastermost of the two. 826

Since signal "POL" (flagpole) used in 1943 hydrography was located with reference to station CORA, its position is also changed. The correct positions are as follows:

CORA - Lat. $38^{\circ} 27'$ +197 meters
Long. $76^{\circ} 27'$ +591 meters

Positions shown on present survey.

POL - Lat. $38^{\circ} 27'$ +115 meters
Long. $76^{\circ} 27'$ +550 meters.

R. R. Moore
Lieut. Comdr. USC&GS
Commanding Ship LYDONIA

cc: Norfolk

C
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Ship LYDONIA

January 2, 1945

To: The Director
U. S. Coast and Geodetic Survey
Washington, D. C.

From: Commanding Officer
Ship LYDONIA

Subject: Location of Topographic Station CORA

Reference: Letter dated, Dec. 26, 1944 (C.O. LYDONIA)

In regard to the location of Topographic Station CORA it should be further stated that the position furnished in reference letter is the position of the station mark and was obtained by assuming the previous position to be at the base of the western most of the two locust trees. Both trees are dimly visible on the air photographs.

L. P. Raynor
Commander, USC&GS
Commanding Ship LYDONIA

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF TOPOGRAPHIC SURVEY

Register No. T-6968 a and b

Field No. E and F

Maryland, Chesapeake Bay, Cove Point to Kenwood Beach

Surveyed December 1944 - January 1945 Scale 1:10,000

Instructions dated September 23, 1943

Project C. S. 250

Plane Table Survey

Aluminum Mounted

Chief of Party - L. P. Raynor

Surveyed by - C. R. Reed

Inked by - C. R. Reed

Reviewed by - R. H. Carstens, April 2, 1947

Inspected - H. W. Murray

1. Junctions with Contemporary Surveys

Topographic signals and the high-water line between Cove Point and Kenwood Beach were located on the present survey in accordance with the Instructions. The present survey makes an adequate junction with planetable survey T-6956 a (1944) on the northwest and air photographic survey T-8111 (1942) on the southeast.

2. Comparison with Prior Surveys

A. T-256 a (1848)	1:20,000
T-281 (1847)	1:20,000
T-388 (1852)	1:20,000
T-2861 (1907-08)	1:20,000
T-2868 (1908)	1:20,000

The area of the present survey was entirely covered both by the 1847-52 surveys and the 1907-08 surveys.

These prior surveys have been compared with T-8111 (1942) in the review of that survey and are superseded by T-8111. Further comparison with the present survey is unnecessary. Consideration of prior surveys will be limited to T-8111 in the following paragraph.

B. T-8111 (1942) 1:20,000

The entire area of the present survey is covered by this prior survey.

Shoreline on T-8111 is generally in good agreement with the present shoreline. The greatest difference is in lat. $38^{\circ}-27.07'$, long. $76^{\circ}-27.4'$ (T-6968 a) where the present shoreline in the bight is about 80 meters inshore from its prior position.

The present survey is adequate to supersede T-8111 in the common area for the delineation of the high-water line and offlying features.

3. Comparison with Chart 1225 (latest print date November 25, 1946)

A. Topography

The present high-water line has been applied to this chart. No corrections are necessary.

B. Magnetic Variation

The present survey value of the magnetic meridian is in substantial agreement with the charted value. The corrections for the declinoire readings, if any, are not known.

4. Condition of Survey

The Descriptive Report contains all the essential information.

The smooth sheet was neatly inked.

It is noted that the closing traverse errors were generally in excess of the permissible limit of 0.4 mm. per mile at the scale of the survey. A discussion of the various traverses is given in the Descriptive Report.

5. Compliance with the Project Instructions

The present survey adequately complies with the Project Instructions.

6. Additional Field Work Recommended

This is an adequate survey and no additional field work is recommended.

Examined and Approved:



I. E. Rittenburg
Chief, Nautical Chart Branch



C. M. Durgin
Chief, Division of Charts



K. G. Crosby
Chief, Section of Hydrography



C. K. Green
Chief, Division of Coastal Surveys

GEOGRAPHIC NAMES

Survey No.

T6968 a+b

Name on Survey

	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
A	B	C	D	E	F	G	H	K	
<u>Maryland</u>								U.S. B	1
<u>Chesapeake Bay</u>								"	2
<u>Kenwood Beach</u>									3
<u>Rocky Point</u>								"	4
<u>Cove Point</u>									5
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Names underlined in red approved
by L. Heck on 4/7/47

NAUTICAL CHARTS BRANCH

SURVEY NO. T6968a-b

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
7/25/45	1225	JT Walker	^{✓470} Before After Verification and Review Range target positions revised. Before
1/5/46	3331	H MacEwen	Before After Verification and Review (¹⁶⁹⁴⁸⁵ 3 rd sheet only)
4/3/46 5/1	1224	Z. J. Stegman	Before After Verification and Review Sheet b only Added range targets on chrt 1225 Completely applied.
5/2/47	551	E. H. Brown	Before After Verification and Review After Review, Before final inspection. Before After Verification and Review
5/2/53	553	Larrest A Bell	Before After Verification and Review Examined for reconstruction of chrt 553 Before After Verification and Review Before After Verification and Review Before After Verification and Review Before After Verification and Review

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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.