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Form 504	
U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	Hydrographic
Field No. 223	Office No. H-6953
LOCALITY	
State	Maryland
General locality	Chesapeake Bay
Locality	Cove Point to James Island
1945	
CHIEF OF PARTY	
L. P. Raynor	
LIBRARY & ARCHIVES	
DATE	April 7, 1945

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-6953

Field No. 223

State Maryland

General locality Chesapeake Bay ¹⁴

Locality James ~~Point~~ to Cove ~~Point~~ ^{Pt. 13 26}

Scale 1:20,000 Date of survey Dec. 1943 - Jan. 1945

Instructions dated April 17, 1940 and September 23, 1943

Vessel LYDONIA

Chief of party L. P. Raynor

Surveyed by Ship's Officers

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

Protracted by M. T. Miller

Soundings penciled by A. G. Atwill

Soundings in ~~meters~~ feet at MLW ~~MLW~~

REMARKS: This sheet was processed in the Hydrographic Section of the
Southeastern District.

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET NO. H-6953 (Field No. 223)

Project: CS-250, Chesapeake Bay, Md. Ship LYDONIA
L.P. Raynor, Commanding

Instructions: April 17, 1940 and Sept. 23, 1943, and Dec. 8,
1943 - 2ORS 1995 LY 4 (Confidential).

NOTE:

This descriptive report was written from notes furnished by the field party supplemented by information obtained at this office.

SURVEY LIMITS AND DATES:

This is a survey between the 30 foot curves in the Chesapeake Bay from Kenwood Beach to Cove Point, Md. The field work on this sheet was begun in December 1943 and completed in January, 1945.

VESSEL & EQUIPMENT:

The hydrography on this survey was accomplished by the Ship LYDONIA except for January 26 and 27, 1944, when Launch # 79 was used. Dorsey 1 fathometer No. 26 was used to obtain the soundings by the Ship LYDONIA while Launch # 79 used an 808 fathometer.

TIDE STATIONS:

Automatic portable tide gages at Long Beach and North Chesapeake Beach, Md., furnished the information for tide reducers.

SMOOTH SHEET:

The smooth sheet was plotted in the hydrographic section of the Southeastern District at Norfolk, Va.

CONTROL STATIONS:

Previously established triangulation furnished the primary control. The hydrographic signals were obtained by the usual method of sextant cuts and fixes.

The following signals were transferred directly from the boat sheet - GAB, LOPE and TWIN. *originate with T-6855 (1941)*

Topographic signals were obtained from the following surveys, -

T-5718 (1941)	T-6956a (1944)
6968 a & b (1945)	8110 (1943)
8111 (1943)	8116 (1943)
8117 (1943)	

SHORELINE:

The shoreline was obtained from the following topographic *(air photographic)* surveys, -

T - 5718
8710
8711
8716
8717

CONTROL OF HYDROGRAPHY:

All lines were controlled by sextant fixes on signals previously established.

CROSSLINES:

The crossings in general are in good agreement. Except for a few instances, the maximum discrepancies are about 2 feet.

REDUCERS:

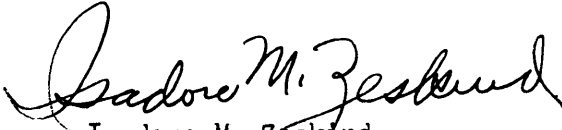
The echo reducers for the ship hydrography were computed from Salinity and Temperature observations, whereas the echo reducers for the 808 fathometer was determined from bar-checks.

IDS (Index, draft squat), - See page 3, Descriptive Report H-6952.

DANGERS & SHOALS:

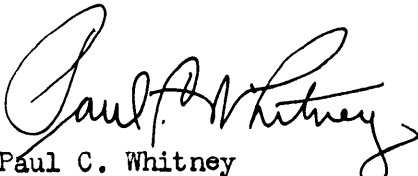
No dangers or shoals appear on this survey.

Respectfully submitted


Isadore M. Zeskind
Cartographic Engineer

Norfolk, Va.
April 5, 1945

Approved & Forwarded:


Paul C. Whitney
Supervisor SE District

STATISTICS SHEET H-6953 (223)

DATE	DAY	SHIP	NO. SOUNDINGS H.L. & POLE	NO. POSITIONS	STATUTE MI. SDG. LINES
1943					
Dec. 18	A	LYDONIA	4	8	0.0
Dec. 19	B	"	25	27	0.0
Dec. 20	C	"	31	62	10.8
Dec. 22	D	"	4	124	40.5
1944					
Jan. 6	E	"	4	201	70.4
Jan. 7	F	"	2	148	47.9
Jan. 12	G	"	1	134	40.6
Jan. 13	H	"	0	100	30.5
Jan. 14	J	"	2	111	30.7
Jan. 19	K	"	3	169	55.0
Jan. 21	L	"	0	9	2.7
Jan. 22	M	"	1	110	36.0
Jan. 26	N	"	7	91	27.0
Jan. 27	P	"	1	70	21.6
Mar. 14	Q	"	0	89	24.0
Jan. 26	a	Launch 79	3	124	25.2
Jan. 27	b	"	1	90	17.1
1945					
Jan. 10 & 11	r	LYDONIA	<u>0</u>	<u>138</u>	<u>34.6</u>
TOTALS			89	1627	514.6

Area in square statute miles 39.0

LIST OF SIGNALS SHEET 223

Triangulation Stations

COVE POINT LIGHTHOUSE, 1848
MILLS 1934

Topographic

Barn T-5718
Blind T-5718
Cedar T-5718
Cedar Tree T-8111
Chim T-5718
Cora T-6968 a & b
Dorm T-8111
Dote T-6968 a & b
Duck T-5718
Fay T-8111
Fred T-8116
Etta T-8111
Gab Trans. from boat sheet T-6855 (1941)
Gable T-5718
Jim T-8110
Jug T-5718
Ken Sheet T-6956a
Lone T-5718
Long T-8111
Lope Trans. from boat sheet T-6855 (1941)
May Sheet A (COWIE 1943) T-6951
Mum T-8110 - house on ozalid
Pine T-5718
Rig T-8116
See T-8111
Shore T-8111
Sow T-6956a
Tar T-8117 (Tar Bay Ent.Lt.)
Tidal 2 T-8111
Twin Trans. from boat sheet T-6855 (1941)
West T-5718
Walt T-8110
Pol T-6968 a & b

Hydrographic

Bea
Haze
Hoe
Old
Pan
Pet
Quo
Vex
Woo

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
 PHOTOSTAT OF

} No. H **H6953**
 } No. T

{ received
 { registered
 { 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			
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26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	
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Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. H-6953. (1943-45)

Records accompanying survey:

Boat sheets .14⁼²; sounding vols. 8...; wire drag vols.;
 bomb vols.; graphic recorder rolls 2...;
 special reports, etc. 1 sheet of Bar Checks.....

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

Number of positions on sheet	..1627
Number of positions checked	..196
Number of positions revised	..0.
Number of soundings recorded
Number of soundings revised (refers to depth only)	..16.
Number of soundings erroneously spaced	..48.
Number of signals erroneously plotted or transferred	..0.
Topographic details	Time ..2.
Junctions	Time ..16.
Verification of soundings from graphic record	Time ..2.

Verification by *B.G. Williams*..... Total time ..126. Date ..8/6/46.

Review by *R.H. Carstens*..... Time ..24.^{hr} Date ..9/13/46.

GEOGRAPHIC NAMES

Survey No. **H6953**

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Maryland</u>										U.S.B	1	
<u>Chesapeake Bay</u>										"	2	
<u>James I.</u>										"	3	
<u>Cove Pt.</u>											4	
<u>Long Beach</u>				(Hide staff location)								5
											6	
											7	
											8	
				Name underlined in red approved by L. Heck on 9/13/46								9
											10	
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											26	
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Lac
MUM

TIDE NOTE FOR HYDROGRAPHIC SHEET

April 12, 1945.

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. W. MURRAY

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 6953

Locality James Point to Cove Point, Chesapeake Bay, Maryland

Chief of Party: L. P. Raynor in 1943-1945
Plane of reference is mean low water reading
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:

Used wrong sign for tide reducer on pages 44-46, Vol. 4.

C. K. Green
Chief, Division of Tides and Currents.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6953

FIELD NO. 223

Maryland, Chesapeake Bay, Cove Pt. to James I.
Surveyed in Dec. 1943 - Jan. 1945 Scale 1:20,000
Project No. CS-250

Soundings:

Control:

Handlead
808 Fathometer
Dorsey Fathometer

Sextant fixes on shore signals

Chief of Party - L. P. Raynor
Surveyed by - Ship's Officers
Protracted by - M. T. Miller
Soundings plotted by - A. G. Atwill
Verified and inked by - B. G. Williams
Reviewed by - R. H. Carstens, September 12, 1946
Inspected by - H. W. Murray

1. Shoreline and Signals

The shoreline originates with air-photographic surveys T-5718 (1941), T-8110, T-8111, T-8116 and T-8117 of 1943. Topographic signals are from the surveys mentioned above and from T-6855 (1941), T-6951 (1943), T-6956 (1944) and T-6968 (1945).

Sextant cuts for supplementary hydrographic signals are recorded in the sounding volumes.

2. Sounding Line Crossings

Depths at crossings are in satisfactory agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were satisfactorily drawn.

The bottom is very smooth.

A natural channel trends southward across the eastern half of the survey. The maximum depth in the channel is about 110 feet.

4. Adjoining Surveys

Satisfactory junctions were effected with H-7009(1945) on the west and H-6683 (1941) on the southwest. The junctions with H-6952 (1944) on the north and H-7065 (1945) and H-6956 (1944) on the east will be considered when those surveys are reviewed. No contemporary surveys on the south are registered at this date.

5. Comparison with Prior Surveys

A.	H-199 (1847-48)	1:20,000
	<u>H-209 (1848)</u>	<u>1:20,000</u>

Depths on these sparsely developed surveys are generally within 3 ft. of present depths. In depths over 90 ft. there are some differences as great as 6-8 ft. Present depths on the charted 59 ft. shoal in lat. 38° 29', long. 76° 23' are 2-3 ft. deeper than prior depths.

Attention is directed to the following soundings:

- (1) The 43-ft. in lat. 38° 25.48', long. 76° 23.30' and the 61 ft. in lat. 38° 26.33', long. 76° 21.20' (both on chart 553) which were inked in error on H-199, have been corrected to 48 ft. and 67 ft. respectively.
- (2) The 51-ft. in lat. 38° 23.30', long. 76° 21.35' (charts 553 and 3331) which was out of position on H-199, has been replotted 100 m. to the west.
- (3) The 21-ft. in lat. 38° 22.92', long. 76° 19.11' (chart 553) from H-209 falls in present depths of about 26 ft. The sounding is probably out of position and should fall on the present 24 ft. shoal 150 m. to the east. Present development of this area is considered adequate and the sounding should be disregarded.

The present survey adequately delineates the bottom and supersedes these prior surveys within the common area.

B.	H-2428 (1899)	1:40,000
	H-2429 (1899)	1:40,000
	<u>H-2931 (1907-08)</u>	<u>1:20,000</u>

The 1899 surveys are reconnaissance lines having a sounding line spacing of about two miles. Agreement with present depths is usually within 1 ft. H-2931 is an inshore sheet overlapping a fringe of the present survey on the west. Prior depths are 2-4 ft. deeper than present depths. The present survey is adequate to supersede these prior surveys within the common area.

6. Comparison with Chart 3331 (Latest print date 2/2/46)
Chart 553 (Latest print date 5/25/46)

A. Hydrography

The hydrography on chart 3331 within the limits of the present survey originates largely with the present survey before verification and review. Existing differences with the smooth sheet are minor.

The hydrography on chart 553 originates principally with the prior surveys discussed previously, and with critical depths from the present survey before verification and review. The completed present survey supersedes the charted information.

The barge charted in lat. $38^{\circ} 26.50'$, long. $76^{\circ} 25.75'$ from H.O. Notice to Mariners 29 (1945) was anchored there subsequent to the time of the present survey. The barge is probably used by the U. S. Navy.

B. Aids to Navigation

The present survey positions of aids to navigation are in satisfactory agreement with the charted positions and satisfactorily mark the features intended.

The lighted buoy charted in lat. $38^{\circ} 25.6'$, long. $76^{\circ} 20.1'$ was established subsequent to the present survey. The present survey beacon in lat. $38^{\circ} 28.45'$, long. $76^{\circ} 21.10'$ is not charted and is probably of a temporary nature.

7. Condition of Survey

The smooth plotting was satisfactorily accomplished.

The Descriptive Report was written by the Processing Office rather than by the hydrographer.

Bar check corrections for "a" day Launch 79 which had been rejected by the field party were accepted in this office as correct and applied to the soundings. The resultant elimination of 1-2 ft. discrepancies with hand lead soundings, Dorsey fathometer soundings and Launch 79 junctional soundings on H-7009, justified this office revision.

8. Compliance with Project Instructions

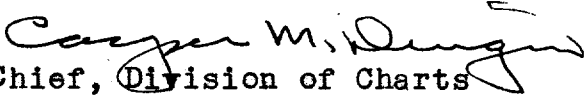
The survey satisfactorily complies with the Instructions except that crosslines run were only 3% of the main system of lines instead of the required 5%.

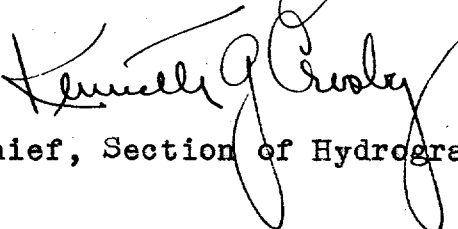
9. Additional Field Work Recommended


This is an excellent basic survey and no additional work is recommended.

Examined and approved:


Chief, Nautical Chart Branch


Chief, Division of Charts


Chief, Section of Hydrography


Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H-6953

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
7-9-45	553	<i>R. H. Andrews</i>	Before After Verification and Review <i>Partially applied</i>
7/20/45	1225	<i>J. T. Walker</i>	Before After Verification and Review <i>Examined - no critical soundings found</i>
12/14/45	3331	<i>H. E. MacEwen</i>	Before After Verification and Review
7-23-46			
7-23-46	539	<i>B. C. McGlasson</i>	Before After Verification and Review <i>Examined</i>
			<i>no critical soundings found</i>
8/31/48	551	<i>H. E. MacEwen</i>	Before After Verification and Review <i>a few sdg. along top limit of sheet</i>
3/29/50	1224	<i>Goodrich</i>	Before <u>After</u> Verification and Review <i>Examined for critical sdg. only.</i>
10/30/51	553	<i>H. F. Stegman</i>	Before After Verification and Review <i>Fully applied to reconstruction drawing.</i>
			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.