8522

Diag. Cht. No. 77-3.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. WA-HT-10-1-60 *Office No.* H-8522

LOCALITY

State Maryland

General locality Chesapeake Bay

Locality West Side of Kent Island

19 60

CHIEF OF PARTY

D. G. Rushford

LIBRARY & ARCHIVES

DATE August 20, 1960

USCOMM-DC 5087

8522

Form 537
(Ed. June 1946)

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-8522

Field No. Wa-Hi-10-1-60

State MARYLAND

General locality CHESAPEAKE BAY

Locality KENT ISLAND, WEST SIDE of

Scale 1:10,000 Date of survey April 1960

Instructions dated 18 Feb. 1960

Vessel WAINWRIGHT & HILGARD

Chief of party DEWEY G. RUSHFORD

Surveyed by D.I. WOLSK, G.N. ORR & J.T. MALDARI

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

Fathograms scaled by SHIP PERSONNEL & NORFOLK DISTRICT OFFICE

Fathograms checked by SHIP PERSONNEL & NORFOLK DISTRICT OFFICE

Protracted by A.K. SCHUGELD

Soundings penciled by A.K. SCHUGELD

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~ and are true depths

REMARKS:

[redacted]

U. S. GOVERNMENT PRINTING OFFICE 16—66520-1

Orig

DESCRIPTIVE REPORT

SPECIAL PROJECT 10,000-816

HYDROGRAPHIC SHEET(NO. ~~1160~~) H-8522

WEST SIDE KENT ISLAND

SCALE: 1:10,000

DEWEY G. RUSHFORD - CHIEF OF PARTY

1960

A. PROJECT

Special Project 10,000-816, Instructions dated 18 February 1960.

B. SURVEY LIMITS AND DATES

Limits are as follows:

SE:	38°53'00" ....Latitude.....NE:		38°58'12"
	76°22'36" ....Longitude.....		76°22'30"
SW:	38°53'00" .....Latitude.....NW:		38°58'12"
	76°24'00".....Longitude.....		76°23'54"

Survey began on 13 April 1960 and was completed on 27 April 1960.

Junctions were made with prior survey H-2402, Scale 1:20,000, dated 1898.

Orig

C. VESSELS AND EQUIPMENT

The Ship HILGARD was used in the area north of 38°56'00" Latitude with the Ship WAINWRIGHT surveying the area south of 38°56'00" N. Latitude.

Fathometer 58-S, type 808 was used by the Ship WAINWRIGHT for "A" through "F" days inclusive.

Fathometer 57-33, type 808J was used by Ship HILGARD for "A" through "E" days inclusive.

D. TIDE AND CURRENTS STATION

Standard tide gage at Annapolis, Maryland served as control station with correction of minus half-hour (thirty minutes); ratio 1.1 on high water heights.

There were no current stations observed within the limits of this sheet.

E. SMOOTH SHEET

Smooth sheet ~~to be~~ was processed by Norfolk District Office.

F. CONTROL STATIONS

All control located by photo-hydro sheets and triangulation data by conventional methods. Signals employed are tabulated in Attachment No. 1.

Geographic Positions for Signals, (Kent Island Speed Trial Ranges) RANGE, NORTH, TRIAL, and SOUTH of 1932 were used. New positions for these signals arrived after the survey was completed. These positions are dated 1960.

G. SHORELINE AND TOPOGRAPHY

Shoreline was transferred to sheets from blue-line manuscripts. Because this was an off-shore survey, only the Mean ~~Low~~ High Water line was inked and no topography was included. (T-11715 and T-11716 of 1960).

Orig

H. SOUNDINGS

All soundings were obtained by conventional methods with 808-J fathometers on "A through D" scales in feet. ✓

I. CONTROL OF SURVEY

Control was visual using the three (3) - point fix with signals on shore. Visibility was good and control adequate. ✓

J. ADEQUACY OF SURVEY

This survey is considered adequate and no additional field work is considered necessary. Spacing of sounding lines employed was 100 meters and no splits were left in the area. ✓

K. CROSSLINES

Crosslines are in good agreement with longitudinal sounding lines. (See PP 7 & of Review.) ✓

L. COMPARISON WITH PRIOR SURVEYS

Previous survey covering this area is Survey H-2402, Scale 1:20,000, dated 1898. and H-167 (1844) | sec TP 5 Review

Discrepancies discovered over a wreck is described as follows: In Descriptive Report for H-8523 WD (1960).

Latitude 38° 55' ~~09"~~ 22.95", Longitude 76° ~~23' 00"~~. ✓

A sounding of twenty-four (24) feet was obtained in charted forty-one (41) feet of water. on H-8523 WD (1960) ✓

M. COMPARISON WITH CHART

In general, good agreement with Chart ~~550~~ 550, print dated 14 July 1958 was noted. The most noticable disagreement was the discovery of a wreck at 38°55'54"N. Latitude, 76°23'00"W Longitude. A sounding of 24 feet was obtained in a charted depth of 45 feet of water. | sec H-8523 WD (1960)

Orig

N. DANGERS AND SHOALS

Only danger noted is described above in sections L and M. ✓

P. AIDS TO NAVIGATION

No fixed aids to navigation were located. ✓

Floating aids to navigation are as follows:

Sheet 1160	Latitude	Longitude	Depth FEET	Pos. No.	Date
Red Nun Buoy 20C: ✓	38°56'~~10~~56.13" N.	76°~~22.54~~22.89' W.	31	WA 2B	14APR60
Red Bell No. 2:	38°57'~~45~~57.62' N.	76°~~23.42~~23.62' W.	50	WA69F	27APR60
RNB, 20B:	38°~~55.18~~55.13' N.	76°~~23.10~~23.03' W.	32	WA141D	20APR60

Q. SILTED AREAS

~~No~~ Some evidence of silted areas was obtained in this survey. ✓

R. LIST OF ATTACHMENTS

1. LIST OF SIGNALS
2. STATISTICS
3. FATHOMETER CORRECTIONS ✓
4. TIDE NOTE
5. APPROVAL SHEET

Submitted:

David I. Wolsk
Ensign, C&GS

Approved and Forwarded

Dewey G. Rushford
LCDR, C&GS
Chief of Party

NORFOLK PROCESSING OFFICE
LIST OF SIGNALS
H-8522

TRIANGULATION STATIONS

TOWER	CHESAPEAKE BAY BRIDGE, EAST TOWER, 1957
SALLY	RED SILO, 1932
FERRY	FERRY BUILDING, SOUTH GABLE, 1932
RANGE	KENT I. SPEED TRIAL, N. FRONT RANGE, 1960
HOUSE	CARVEL HOUSE, N. CHY., 1932-40
LARGE	LARGE WHITE HOUSE, CHIMNEY, 1932-40
SUZIE	C.B.A. EXPERIMENTAL TOWER NO. 4 (KENT I.), 1945
SHOAL	THOMAS POINT SHOAL LIGHTHOUSE, 1905-34
TRIAL	KENT ISLAND SPEED TRIAL, SOUTH FRONT RANGE, 1960
NORTH	KENT ISLAND SPEED TRIAL, NORTH REAR RANGE, 1960
SOUTH	KENT ISLAND SPEED TRIAL, SOUTH REAR RANGE, 1960

PHOTO-HYDRO STATIONS SOURCE T-11716

Joe Jim Ace Tom Top Kim

ATTACHMENT NO. 2

S T A T I S T I C S

HILGARD:

Volume	Day	Date Apr.	Positions Claimed	Nautical Miles	Statute Miles
1	A	13	4	0.0	0.0
1-2	B	14	219	39.0	44.84
2-3	C	15	206	46.4	55.64
3-4	D	20	194	19.8	21.64
4	E	22	18	1.5	1.74
	TOTALS		641	106.7	123.86

WAINWRIGHT:

1	A	13	4	0.0	0.0
1-2	B	14	240	44.1	50.72
2-3	C	15	228	44.7	51.40
3	D	20	143	21.6	24.84
3	E	22	3	0.0	0.0
4	F	27	67	12.4	10.80
	TOTALS		685	122.8	137.86
	CUMULATIVE TOTALS		1326	229.5	261.72

ATTACHMENT No. 3

FATHOMETER CORRECTIONS

Bar checks were taken to a depth of sixty (60) feet and temperature and salinity observations were made to a depth of one hundred fifteen (115) feet. Bar checks were averaged and combined with temperature and salinity observations represented by a smooth curve.

Following corrections were obtained from this curve.

WAINWRIGHT A-F DAYS 10-1-60	
+0.6	0.0 to 4.0
+0.4	4.2 to 9.0
+0.2	9.2 to 14.0
+0.0	14.2 to 19.0
-0.2	19.2 to 24.0
-0.4	24.2 to 28.4
-0.6	28.6 to 33.0
-0.8	33.2 to 37.4
-1.0	37.6 to 41.4
-1.2	41.6 to 45.6
-1.4	45.8 to 49.0
-1.6	49.2 to 53.0
-1.8	53.2 to 56.0
-2.0	56.2 to 59.0
-2.2	59.2 to 61.0
-2.4	61.2 to 67.0
-2.6	67.2 to 73.0
-2.8	73.2 to 79.0
-3.0	79.2 to 84.6
-3.2	84.8 to 90.6
-3.4	90.8 to 97.0
-3.6	97.2 to 103.0
-3.8	103.2 to 109.0
-4.0	109.2 to 115.0
-4.2	115.2 to 121.0
-4.4	121.2 to 125.0
-4.6	125.2 to 131.0
-4.8	131.2 to 135.6
-5.0	135.8 to 143.0
-5.2	143.2 to 148.0
-5.4	148.2 to 152.0

Echo Sounder #58S

HILGARD A-E Days 10-1/60	
-0.0	0.0 to 14.0
-0.2	14.2 to 19.6
-0.4	19.8 to 23.2
-0.6	23.4 to 26.4
-0.8	26.6 to 31.2
-1.0	31.4 to 33.8
-1.2	34.0 to 39.4
-1.4	39.6 to 44.0
-1.6	44.2 to 48.6
-1.8	48.8 to 53.0
-2.0	53.2 to 56.6
-2.2	56.8 to 60.0
-2.4	60.2 to 64.0
-2.6	64.2 to 69.0
-2.8	69.2 to 74.4
-3.0	74.6 to 79.2
-3.2	79.4 to 84.2
-3.4	84.4 to 89.6
-3.6	89.8 to 94.8
-3.8	95.0 to 100.0
-4.0	100.2 to 105.2
-4.2	105.4 to 110.4
-4.4	110.6 to 114.6
-4.6	114.8 to 119.6
-4.8	119.8 to 123.8
-5.0	124.0 to 128.4
-5.2	128.6 to 132.6
-5.4	132.8 to 137.0

Echo Sounder #5733

ABSTRACT OF BAR CHECKS

West Side Kent Island, Chesapeake Bay, Maryland

WAINWRIGHT Echo Sounder #58-S

Date	Ltr. Day	10 A	20 A	30 A	40 A	40 B	50 A	50 B	60 B	70 B
April										
13	A	0.0	-0.5	0.0	-1.6	-2.2	-2.8	-3.0	-4.0	-4.2
		+0.2	-0.6	-1.4	-2.0	-2.6	-2.8	-4.0	-3.8	-4.6
14	B	0.0	-0.1	-0.5	-0.1	-1.0	-1.0	-1.5	-1.0	
		+1.0	0.0	-0.2	-0.5	-0.5	-1.0	-1.0	-1.5	
		+0.2	-0.4	-0.8	-1.0	-1.2	-2.0	-2.0	-3.0	
		+0.2	-0.4	-0.8	-1.0	-1.2	-1.8	-2.6	-3.0	
15	C	+0.2	0.0	-0.2	-0.4	-0.4	-1.0	-1.5	-2.5	
		+0.9	0.0	0.0	-0.8	-1.0	-1.2	-2.0	-2.5	
		0.0	+0.2	0.0	-0.6	-1.0	-1.0	-1.8	-2.0	
		+0.8	+0.2	0.0	-1.0	-0.5	-1.0	-1.2	-2.0	
20	D	+0.5	0.0	-0.5	-1.0	-1.6	-1.5	-1.8	-2.8	
		+0.6	+0.2	-0.4	-1.0	-1.5	-1.0	-1.5	-2.8	
22	E	0.0	-0.8							
		0.0	-0.8							
27	F	+0.4	-1.0							
		-0.2	-1.0							
SUM		+4.8	-5.0	-4.8	-11.0	-14.7	-18.1	-23.9	-30.9	-10.8
No. Observ!ns		16	16	12	12	12	12	12	12	2
MEAN		+0.3	-0.3	-0.4	-0.9	-1.2*	-1.5	-2.0*	-2.2*	-3.2*
PHASE CORR'N (B to A)						+0.8		+0.8	+0.8	+0.8
VEL. CORR'N		+0.3	-0.3	-0.4	-0.9	-0.4	-1.5	-1.2	-1.4	-2.4

PHASE COMPARISON	B to A	C to B	D to C
	+1.6 +1.0	+1.0	+3.0 +1.0
	+2.0 +1.0	+2.0	+3.0 0.0
	+1.0 +0.2	+1.0	+3.0 +3.0
	+0.8 +0.5	+1.0	+2.0 +3.0
	+0.8 +0.8	+2.0	+2.0 ---
	0.0 +0.5	+2.0	
	0.0 +1.2		
	+0.2		
SUM	+11.6	+9.0	+20.0
MEAN	+0.8	+1.5	+2.2
CORRECTION	+0.8	+2.2	+4.4

Values not used - see Norfolk Addend.

SETTLEMENT & SQUAT +0.4

ABSTRACT OF BAR CHECKS

West Side Kent Island, Chesapeake Bay, Md.

Echo Sd'r #5733 HILGARD Sdgs. in Feet

Date	Ltr. Day	10 A	20 A	30 A	40A	40 B	50A	50B	60B
Apr. 13	A	+0.4	0.0	0.0	-0.2	-1.4	-0.5	-2.0	-2.0
		0.0	+0.2	0.0	-0.2	-1.6	-0.0	-1.0	-2.0
		0.0	+0.2	0.0	-0.5	-2.0	-1.0	-2.0	-2.5
		---	+0.5	0.0	0.0	-1.5	-0.5	-2.0	-2.5
14	B	+0.4	+0.2	0.0	0.0	-1.5	-2.0	-1.5	-2.5
		---	+0.2	0.0	-0.1	-1.5	-0.5	---	-2.5
15	C	+0.4	+0.2	-0.5	-0.8	-2.2	-2.0	-3.0	-3.4
		+0.2	-0.4	-0.6	-1.0	-1.6	-1.8	-2.5	-3.2
		+0.2	+0.4	-0.4	-0.6	-1.4	-1.2	-2.0	-2.0
		+0.4	0.0	-0.4	-0.8	-1.0	-1.0	-1.5	-2.0
19	D	-0.6	0.0	-0.4	-1.2	-2.0	-1.4	-2.8	-3.0
		0.0	-0.2	-0.4	-1.0	-2.0	-1.6	-2.6	-3.0
22	E	+0.2	0.0	-0.4	-0.5	-2.0	-0.8	-2.2	-2.6
		+0.4	0.0	0.0	-0.4	-1.0	-0.6	-2.2	-2.2
27	F	-0.2	-0.4	-0.6	-0.6	-0.6	-1.4	-1.2	-1.8
		0.0	+0.4	0.0	-0.6	-0.6	-1.2	-1.2	-1.8
	SUM	+3.0	+1.3	-3.7	-8.5	-23.9	-17.5	-29.7	-39.0
No. of observ'ns		14	16	16	16	16*	16	15*	15*
	MEAN	+0.2	+0.1	-0.2	-0.5	-1.5	-1.1	-2.0	-2.6
Phase comparison		(B to A Scale)				-1.4		-1.4	-1.4
Velocity Corr'n		+0.2	+0.1	-0.2	-0.5	-0.1	-1.1	-0.6	-1.2

Phase Comparison	B To A	C to B	D to C
	-2.0 -1.5	0.0 +0.5	0.0 0.0
	-1.0 -1.0	+0.5 -0.5	+0.5 +0.5
	-1.8 -1.5	0.0 +0.5	+0.5 0.0
	-1.0 -1.5	-0.2 0.0	-1.0 +0.5
	-1.0	0.0 -0.5	+0.5 +0.5
SUM	-11.3	+0.3	+2.0
MEAN	-1.37	+0.03	+0.20
CORRECTION-PHASE	-1.4	-1.3	-1.1
SETTLMENT & SQUAT	+0.4	+0.4	+0.4

SETTLEMENT AND SQUAT

	Full Speed		Stop	
WAINWRIGHT	Tide	Rod	Tide	Rod
	11.0	7.7	11.3	7.1
	10.6	8.4	11.1	7.3
	10.6	8.2	10.6	7.7
	10.5	8.2	10.1	8.0
	10.3	8.0	10.1	8.4
SUM	53.0	40.5	53.2	38.5
MEAN	10.6	8.1	10.6	7.7
		-7.7		
CORRECTOR =		+0.4		
HILGARD	11.4	7.9	11.4	7.3
	11.1	7.9	11.1	7.6
	11.0	8.0	11.0	7.6
	10.9	8.1	10.9	7.7
	10.6	8.1	10.6	7.8
SUM	55.0	40.0	55.0	38.0
MEAN	11.0	8.0	11.0	7.6
		-7.6		
CORRECTOR		+0.4		

ATTACHMENT NO. 4

TIDE NOTE

Standard tide gage, Annapolis, Maryland, Latitude 38° 59'6"; Longitude 76° 29'12", was used for tidal control throughout this survey, with correction of -0.5 hr; 1.1 high water ratio applied.

Time corr. of -½ hr. applied to edgs. by field - this complies with instructions H.L.P.

Hourly heights were furnished from the Washington Office.

NORFOLK PROCESSING OFFICE
FLOATING AIDS TO NAVIGATION
H-8522

BUOY	LATITUDE	LONGITUDE	DEPTH	POSIT.	DATE
Chesapeake Bay Br. Appr. L'td. Bell Buoy 2	38-57.63	76-23.62	49'	69F	4/27/60
Ches. Bay Speed Trial Course Buoy 20B	38-55.14	76-23.05	35'	141D	4/20/60
Ches. Bay Speed Trial Course Buoy 20C	38-56.13	76-22.89	31'	2B	4/14/60

Form 766
DEPARTMENT OF COMMERCE
U. S. Coast and Geodetic Survey
(Ed. 1943)

Copy of this report filed in Washington Office Chart Letter 381-1960 LJW

ADVANCE REPORT OF DANGERS TO BE CHARTED

Survey (Sheet) No. 1160-WD Datum North America Locality West Side Kent Island, State Maryland Date 4/27/60

I recommend that the following dangers to navigation be charted. The positions given have been checked after listing. Checked by John T. Maldari, Ensign, C&GS

Dewey G. Rushford, Lt. Comdr., C&GS
Chief of Party.

TYPE OF DANGER	DEPTH (FEET) *		LATITUDE AND LONGITUDE		FROM CHARTED OBJECT OR NATURAL FEATURE †			CHART USED ‡		DATE OF LOCATION	REMARKS
	FATHOMETER	LEADLINE	° ′	SECONDS (IN METERS)	TRUE BEARING	DISTANCE (METERS)	OBJECT OR FEATURE	No.	PRINT DATE		
Uncharted Wreck	Wire drag cleared at 23.5'	**	38°55.88 76°22.95	1632.0 1388.5	263°	1762.0	North Front Range on Kent Island	556	7/14/58	4/25/60	Hung at 39.8' *Partly cleared at 24.1 Cleared at 23.5'
		** Based on predicted tides									* Temporary hang

* Record least depth over danger reduced to plane of reference of charted soundings, using observed tides, if available.
† Record location both by geographic position and by true bearing with distance from object or natural feature shown on chart.
‡ Use largest-scale chart and note print date given in lower left corner of chart.

NOTE.—This form to be used during the season for prompt reports of uncharted dangers. If reports have been sent by wire, fill out this form and mail with confirmations. Enter dates of wires under "Remarks." Copies of reports on this form should be retained and submitted with the descriptive report.

554171 U. S. GOVERNMENT PRINTING OFFICE

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8522 (WaHi-10-1-60)

GENERAL

With the exception of the discrepancies listed below, soundings are in good agreement on this survey. However, this agreement was accomplished by rather extensive reprocessing in this Office.

A preliminary study of the actual phase differences on the fathograms of Ship Wainwright, showed them to be in disagreement with the results of the phase tests as recorded in the descriptive report. This Office took advantage of the smoothness of the bottom to apply the phase corrections on an individual basis, thus eliminating large errors caused by excessive play in the phasing head.

The application of new phase corrections required a complete reprocessing of Ship Wainwright soundings. In order to facilitate this work the fathograms were rescanned with templates at 15" intervals and the final soundings were recorded in the "office column" Phase corrections, derived from actual comparisons on the fathograms, were applied by template as follows:

A,C,D,E&F days - Ship Wainwright	"B"	scale	-0.6'
	"C"	"	-1.6'
	"D"	"	-2.6'
B day - Ship Wainwright	"B"	scale	-0.6'
	"C"	"	-0.6'
	"D"	"	-0.6'
B day (positions 232 thru 242B only)	"C"	"	-2.6'
	"D"	"	-4.6'

SETTLEMENT & SQUAT

It will be noted that the settlement and squat correction was originally entered in all records with the sign reversed. This resulted in an error of 0.8' on all soundings.

This error was corrected on the Wainwright work by incorperating a ∕0.4' correction in the scanning template.

The error was corrected on the Hilgard work by applying a ∕0.8' correction to all depths. The final sounding are recorded in the "office column".

(continued)

DISCREPANCIES

The sounding lines listed below are being submitted on overlays as they are in disagreement with surrounding hydrography. The discrepancies are believed to be largely due to faulty paper alignment in the fathometer. (Filed with fathograms.)

see #7 of Review

SHIP WAINWRIGHT

Pos. 1 thru 2F
" . 5 thru 69F
" . 18 thru 33D
" . 48 thru 65D

SHIP HILGARD

Pos. 105 thru 109C

Soundings were not plotted on positions 125 thru 126B (Wainwright). It is believed the positions are displaced.

Positions 3 and 4F (Wainwright) were not plotted because of apparent position displacement.

CHART COMPARISONS See #6 of Review.

The following are apparent obstructions which were too deep to be hung by wire drag:

Lat. 38-57.48	Long. 76-22.70	79'	Positions 36 to 37B	Vol. 1
Lat. 38-56.47	Long. 76-23.21	81'	" 171 to 172B	Vol. 1
			" 196 to 197B	Vol. 2
Lat. 38-55.98	Long. 76-23.68	66'	" 174 to 175C	Vol. 3

See the attached section of chart 550 showing comparative smooth sheet depths in red ink.

Norfolk, Va.
18 August 1960

Respectfully submitted,

Hugh L. Proffitt
Cartographer

RH C

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

13 September 1960

~~xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx~~

Division of Charts: R. H. Carstens

Plane of reference approved in
8 volumes of sounding records for

HYDROGRAPHIC SHEET 8522

Locality Kent Island, Maryland

Chief of Party: D. G. Rushford in 1960
Plane of reference is
ft. on tide staff at
ft. below B. M.

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

Condition of records satisfactory except as noted below:

[signature]
X Chief, Tides Branch
~~Chief, Division of Tides and Currents~~

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8522

Name on Survey	A: On Chart No. 550	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	
CHESAPEAKE BAY (FIRE)	✓									1
KENT ISLAND	✓									2
										3
Matapeake										4
										5
										6
										7
										8
				Georgetown Base						9
				Geographic Names						10
				Section						11
					14 Sept 1960					12
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Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8522

Records accompanying survey: Smooth sheets 1;

boat sheets 1 (2 parts); sounding vols. 8; wire drag vols. ;

Descriptive Reports 1; graphic recorder envelopes 6;

special reports, etc. 1 Cahier-Velocity corrections and 2-Boat sheet overlays. 3-Blackline Controls T-11715, T-11716 & T-11717

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

Number of positions on sheet		1326
Number of positions checked		104
Number of positions revised		0
Number of soundings revised (refers to depth only)		0
Number of soundings erroneously spaced		0
Number of signals erroneously plotted or transferred		0
Topographic details	Time	2
Junctions	Time	0
Verification of soundings from graphic record	Time	8
Special adjustments	Time	0

Verification by J. B. Chambers Total time 104 Date 10/12/60

Reviewed by Lee Zeskind Time 34 Date 10/18/60

US COMM C&GS DC

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8522 FIELD NO. WA-HI 10-1-60

Maryland, Chesapeake Bay, West Side of Kent Island

SURVEYED: April 1960 SCALE: 1:10,000

PROJECT NO. 10,000-816

SOUNDINGS: 808 Depth Recorder CONTROL: Sextant fixes on shore signals

Chief of Party ---------- D. G. Rushford
Surveyed by ---------- D. I. Wolsk; G. N. Orr; J. T. Maldari
Protracted by ---------- A. K. Schugeld
Soundings plotted by -------- A. K. Schugeld
Verified and inked by ------- J. C. Chambers
Reviewed by ---------- I. M. Zeskind DATE 10-18-60
Inspected by ---------- R. H. Carstens

1. Shoreline and Control

The shoreline originates with unreviewed air-photographic surveys T-11715 and T-11716 of 1960.

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

2. Sounding Line Crossings

The sounding line crossings are in good agreement except as noted in item 7c.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated.

This survey covers a portion of a natural channel in Chesapeake Bay whose eastern limits lies about $\frac{1}{2}$ to $1\frac{1}{2}$ miles west of Kent Island, and extends about 5 miles north of Lat. 38°53.0'. On the east, the bottom drops sharply from depths as shoal as 8 ft. to the center of the channel where depths of as much as 138 ft. are found. The gradient of the bottom on the west is gentle. Except for the fairly steep gradient on the east and a deep in the vicinity of Lat. 38°55.0', Long. 76°23.3', the bottom is smooth.

4. Junctions with Contemporary Surveys

No contemporary surveys by this Bureau join the present survey. Charted depths at the limits of the present survey are in adequate agreement with the present depths. (See also paragraph 5b)

5. Comparison with Prior Surveys

a. H-167 (1844), 1:20,000
H-2402 (1898), 1:20,000

These surveys together cover the area of the present survey. A comparison between the prior and present survey reveals the bottom has generally shoaled. The greatest difference in depths occurs in the channel area between the 60-ft. depth curves where depth changes of as much as 17 ft. are found, as for example in Lat. 36°55.52', Long. 76°23.47', where a prior depth of 117 ft. falls in present depths of 100 ft. On either side of the channel in depths less than 60 ft. depth changes ranging from 2-4 ft. are noted. The deep which is located in the channel in the vicinity of Lat. 38°55.0', Long. 76°23.3' has shoaled as much as 12 ft. and shortened in length about 1/3 mile.

Several soundings from contemporary survey H-8523 WD (1960) have been carried forward to the present survey. With these additions, the present survey is adequate to supersede the prior surveys within the common area.

b. H-5237 (1932), 1:20,000

Survey H-5237 overlaps the present survey on the east. In the overlapping area only minor differences in depths of 1-2 ft. are noted. Here the present survey is adequate to supersede the prior survey.

6. Comparison with Chart 550 (Latest print date 5-30-60)

A. Hydrography

The charted hydrography originates with surveys H-2402 (1898) and H-5237 (1932) previously discussed which need no further consideration.

1. The wreck in 45 ft. of water charted in Lat. 68°54.82', Long. 76°22.85' from chart letter 36, 1940 was not found during the present survey. The wreck will be considered in the review of H-8523 WD.

2. The cleared depth of 23 ft. charted in Lat. 68°55.90', Long. 76°22.95' originates with advance information of wire drag survey H-8523, 1960 (Chart letter 381, 1960). The grounding value of 24 ft. has been brought forward to the present survey. A revised value of the clearance depth should be charted from H-8523.

The present survey is adequate to supersede the charted hydrography within the common area except as noted above.

B. Aids to Navigation

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

7. Condition of Survey

a. The sounding records and Descriptive Report are complete and comprehensive. During the smooth plotting of the survey errors of 0.8 ft. in all soundings resulting from a reversed sign on settlement and squat corrections were eliminated. In addition phase corrections entered for the ship WAINWRIGHT were not applicable on the sounding lines and were revised. Apparently a loose phasing head caused a change in the phasing values which was not detected by the field party.

b. The smooth-plotting was accurately done.

c. Soundings for all of F-day (red) and portions of D-day (red) Wainwright were not smooth-plotted because of discrepancies of 1-3 ft. between depths on these days and surrounding hydrography. The cause of these discrepancies could not be determined. The F-day soundings by the Wainwright were largely crosslines over the Hilgard lines and differences in the sensitivity of the different fathometers in soft bottom areas may account for some of the discrepancies.

8. Compliance with Project Instructions

The survey adequately complies with the project instructions.

9. Additional Field Work Recommended

The survey is considered basic and no additional field work is recommended.

Examined and Approved:

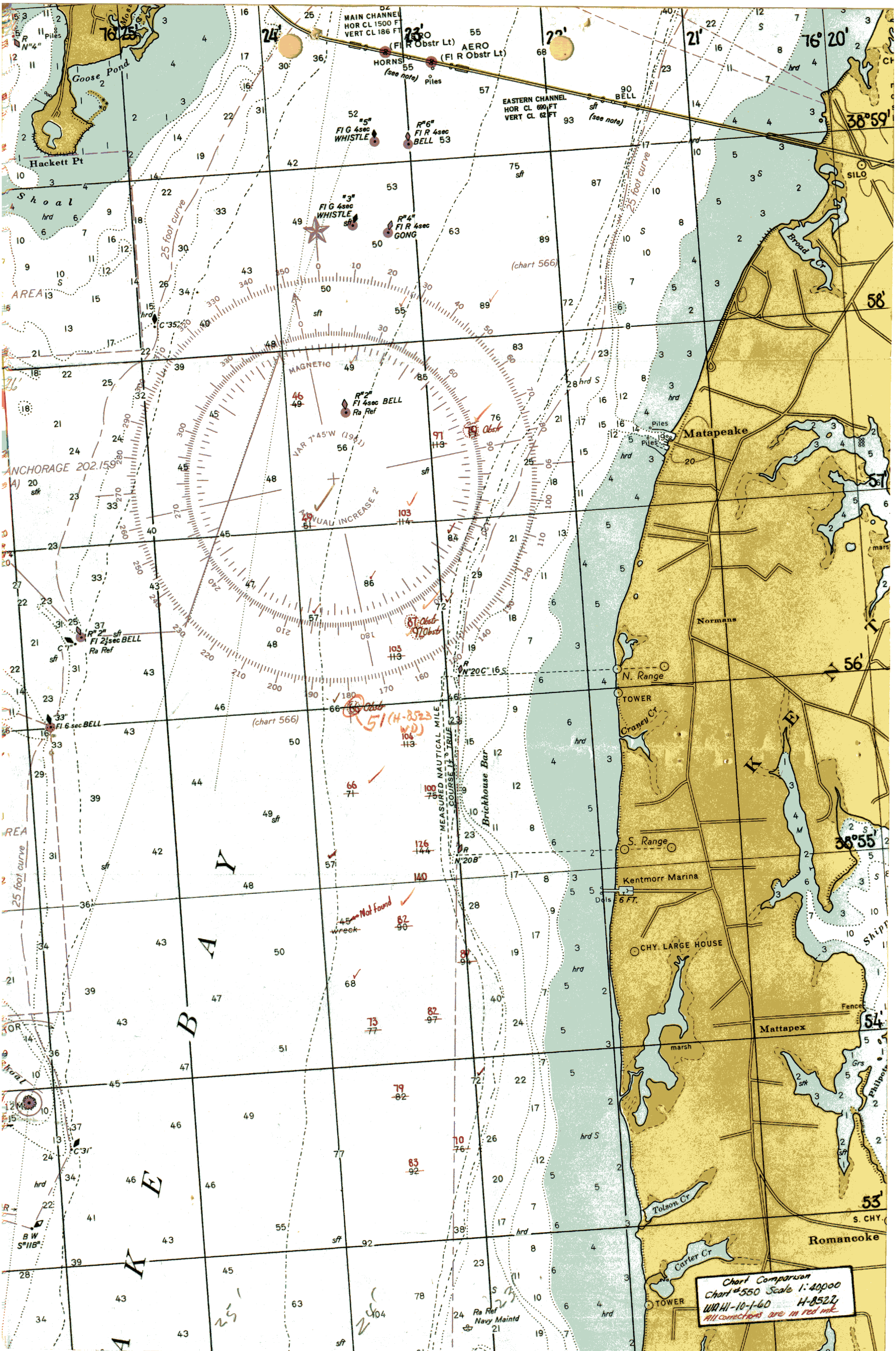
Chief,
Nautical Chart Division

6/15/61

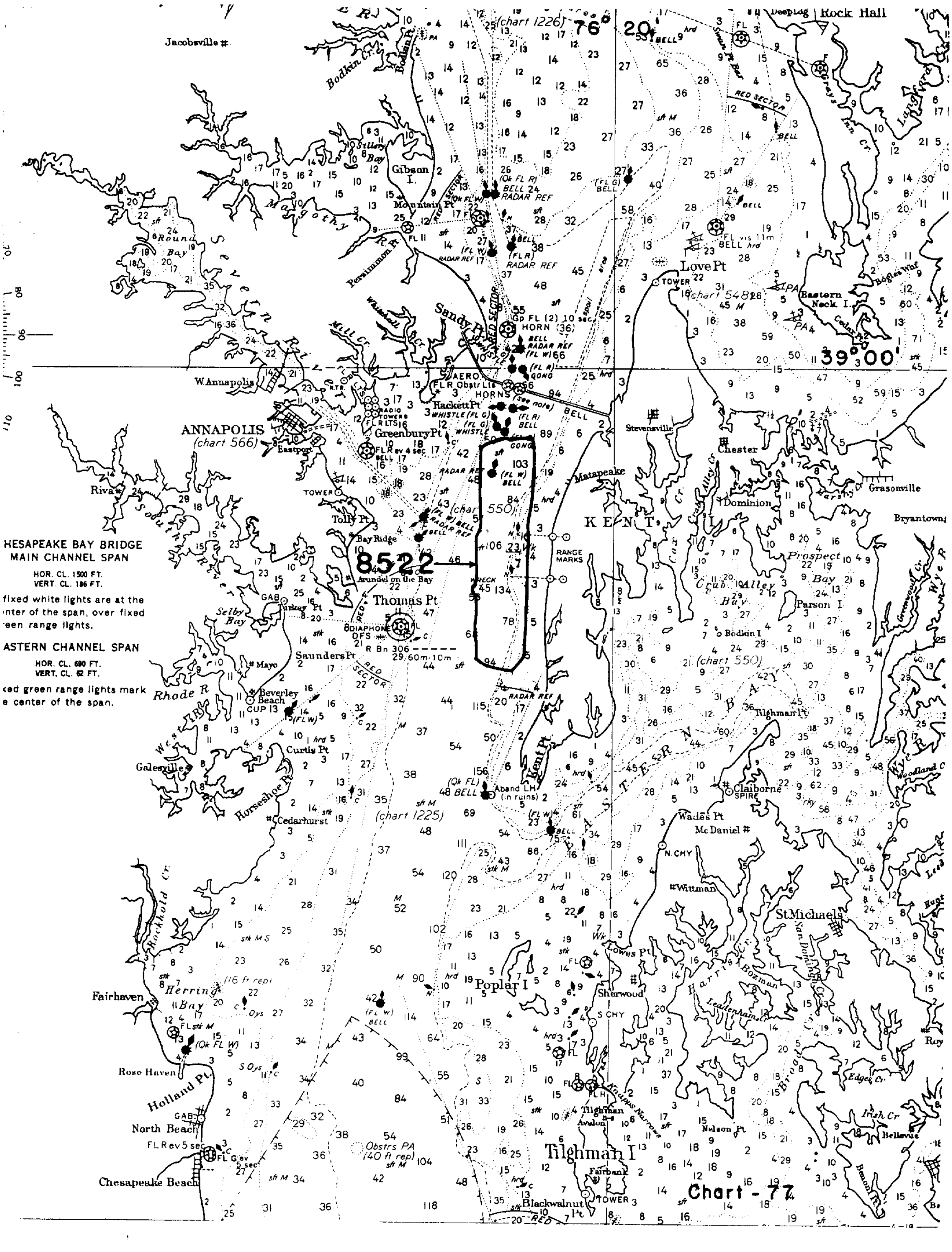
Assistant Director,
Office of Cartography

Projects Officer,
Operations Division

Assistant Director,
Office of Oceanography



76°25'
24'
23'
22'
21'
76°20'
38°59'
58'
57'
56'
38°55'
54'
53'
Goose Pond
Hackett Pt
Shoal
AREA
ANCHORAGE 202.159
MAIN CHANNEL
HOR CL 1500 FT
VERT CL 186 FT
AERO
(Fl R Obstr Lt)
HORNS
(see note)
Piles
EASTERN CHANNEL
HOR CL 690 FT
VERT CL 62 FT
90
BELL
(see note)
"5" Fl G 4sec WHISTLE
R"6" Fl R 4sec BELL
"3" Fl G 4sec WHISTLE
R"4" Fl R 4sec GONG
R"2" Fl 4sec BELL Ra Ref
R"2" Fl 2½sec BELL Ra Ref
"33" Fl 6 sec BELL
C"35"
C"31"
B W S"11B"
25 foot curve
MAGNETIC
VAR 7°45'W (1961)
ANNUAL INCREASE 2'
(chart 566)
SILO
Broad Cr
Matapeake
Normans
N. Range
TOWER
Craney Cr
Brickhouse Bar
MEASURED NAUTICAL MILE
COURSE 12° TRUE
R N"20C"
R N"20B"
S. Range
Kentmorr Marina
CHY. LARGE HOUSE
Mattapex
marsh
Fence
Tolson Cr
Carter Cr
Romancoke
S. CHY
Ra Ref
Navy Maintd
Not found
B A Y
K E
K E N T
Chart Comparison
Chart #550 Scale 1:40,000
WRH 10-1-60 H-8522
All corrections are in red ink


HESAPEAKE BAY BRIDGE
MAIN CHANNEL SPAN
HOR. CL. 1500 FT.
VERT. CL. 186 FT.
fixed white lights are at the
enter of the span, over fixed
een range lights.
ASTERN CHANNEL SPAN
HOR. CL. 690 FT.
VERT. CL. 62 FT.
ed green range lights mark
e center of the span.
8522
Chart - 77
76° 20'
39° 00'
Rock Hall
Jacobsville
Gibson I.
Mountain Pt
Love Pt
Eastern Neck I.
Sandy Pt
Magothy R.
Severn River
Round Bay
W. Annapolis
ANNAPOLIS
(chart 566)
Eastport
Greenbury Pt
Hackett Pt
Stevensville
Chester
Grasonville
Matapeake
KENT I.
Dominion
Riva
South River
Tolly Pt
Bay Ridge
Arundel on the Bay
Thomas Pt
Saunders Pt
Selby Bay
Turkey Pt
Mayo
Rhode R
Beverley Beach
Curtis Pt
Galesville
Horseshoe Pt
Cedarhurst
Kent Pt
Aband LH (in ruins)
Prospect Bay
Crab Alley Bay
Parson I.
Bodkin I
Tilghman Pt
EASTERN BAY
Claiborne
Wades Pt
McDaniel
Wittman
St. Michaels
Lowes Pt
Sherwood
Poplar I
Tilghman I
Fairbank
Blackwalnut Pt
Knapps Narrows
Avalon
Nelson Pt
Harris Cr
Broad Cr
Fairhaven
Herring Bay
Rockhold Cr
Rose Haven
Holland Pt
North Beach
Chesapeake Beach
(chart 1226)
(chart 550)
(chart 548)
(chart 1225)
RANGE MARKS
RED SECTOR

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8522

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
11/21/60	550	J.P. Walker	~~Before~~ After Verification and Review Completely
1-28-61	1225	R.E. Elkins	~~Before~~ After Verification and Review Completely Applied thru chart 550 dtg 25.
12/16/60	566	O. Swendsen	~~Before~~ After Verification and Review Completely applied.
8/2/61	77	J. H. Eaton	~~Before~~ After Verification and Review Thru dtg 25 chart 550
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			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.