8859

Diag. Cht. No. 77-3.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. WH-5-1-65 *Office No.* H-8859

LOCALITY

State Maryland

General locality Severn River

Locality Vicinity of Annapolis

1965

CHIEF OF PARTY

J. P. Randall

LIBRARY & ARCHIVES

DATE 2-13-67

USCOMM-DC 37022-P66

8859

Area 2

12283 - 385
12270 - 550
12282 - 566
12263 - 1225

FORM C&GS-537
(8-15-59)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO.

H-8859

HYDROGRAPHIC TITLE SHEET

INSTRUCTIONS - 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.

WH 5-1-65

State MARYLAND

General locality SEVERN RIVER ~~CHESAPEAKE BAY~~

Locality VICINITY OF ANNAPOLIS ~~SEVERN RIVER~~

Scale 1:5000 Date of survey 18 Sept. - 7 Oct. 1965

Instructions dated 10 August 1965 Project No. SP-7-65

Vessel WHITING (CSS-29)

Chief of party James P. Randall, LCDR, USC&GS

Surveyed by LT(jg) Boon and LT(jg) Petryczanko

Soundings taken by echo sounder, hand lead, pole Echo Sounder

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Protracted by Dorothy C. Calland Automated plot by

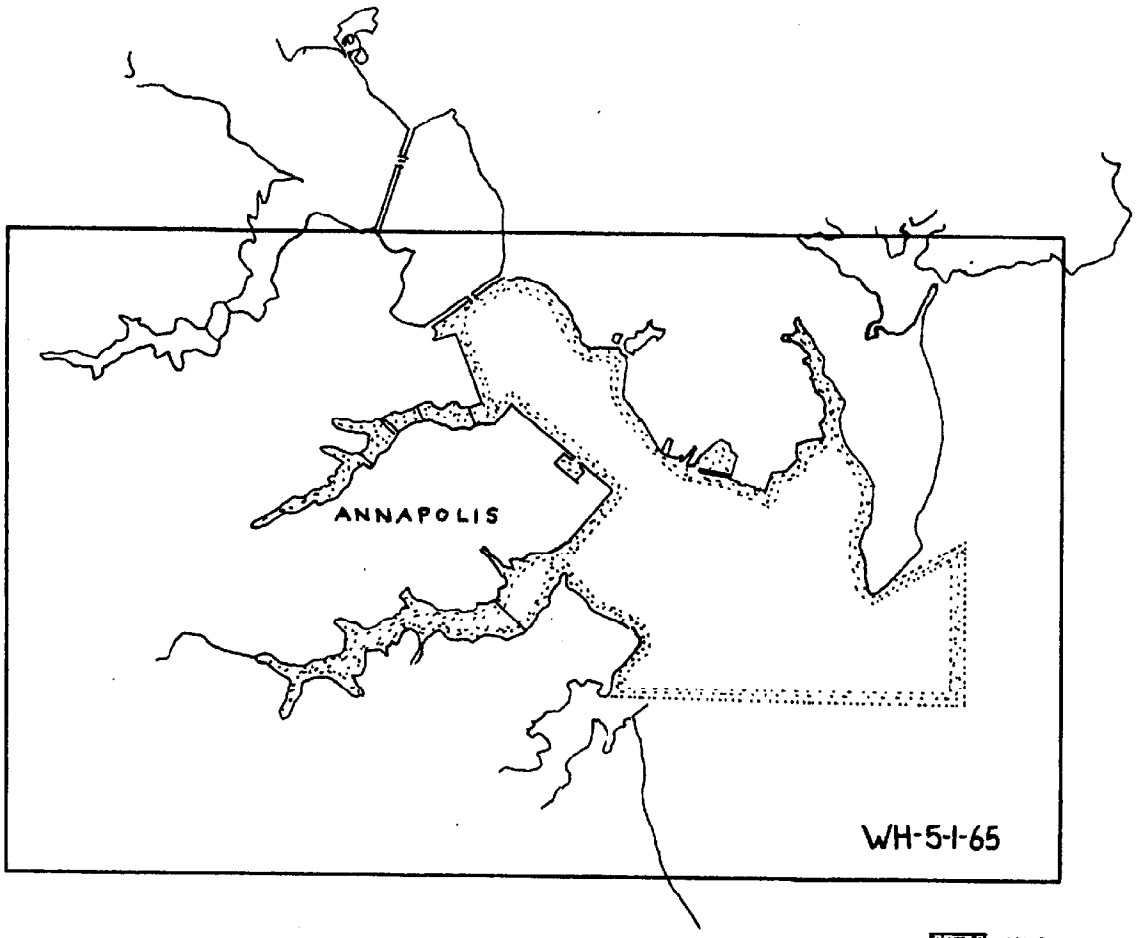
Soundings penciled by Dorothy C. Calland

Soundings in fathoms (feet) at (MLW) MLLW feet at MLW

REMARKS:

USCOMM-DC 19086-P65

SHEET LAYOUT



A. PROJECT:

Authority for this survey was contained in Instructions dated August 10, 1965, entitled SP-7-65, Severn River, Annapolis, Maryland, reference WSC-211 S-2-WH.

B. AREA SURVEYED:

The area covered by the survey is the mouth of the Severn River. The limits of the survey are from ϕ=38° 58.1', λ=76° 28.6'; ϕ=38° 58.1', λ=76° 26.75'; ϕ=38° 58.7', λ=76° 26.75'; ϕ=38° 59.5', λ=76° 29.5', The survey was made from 18 September 1965, to 7 October 1965. It junctions with prior surveys H-8214, 1:5000, 1956; H-5199, 1:5000, 1932; H-5198, 1:10,000, 1932; H-2650, 1:10,000, ~~1903~~ 1902-04; and contemporary surveys WH 10-1-65 and HFP-245 10-1-65, H-8874(1965). H-8860(1965)

C. SOUNDING VESSEL:

Hydrography was performed by Launch WH-2, Skiff-1, and Launch ML-3. Launch WH-2 work is denoted by red color, and skiff-1 work denoted by green color. ML-3 and Skiff-2 were borrowed from Hydrographic Party 245 and were used only for developments. All ML-3 and Skiff-2 work is on overlays and inserted in volumes. Launch ML-3 work is denoted by Violet color and Skiff-2 work denoted by blue color.

D. SOUNDING EQUIPMENT:

Three Raytheon type De-723 fathometers were used on the survey--#262 (WH-2), and #213 (Skiff), and #139 (ML-3). These were used in water ranging from 1-60 feet in depth. A 12 foot sounding pole was used in conjunction with the fathometer in Skiff-1 for approximately 3% of the entire survey.

Velocity corrections for both vessels were determined by means of bar checks, and a squat and settlement test was made using a level and rod. The initial trace was held at 1.0 foot in WH-2 and 0.0 foot in Skiff-1, and a constant secondary trace was held to eliminate a gain correction. Phase comparisons were taken with bar checks.

For more detailed information concerning sounding methods and equipment, refer to Fathometer Report SP-7-65.

E. SMOOTH SHEET:

The smooth sheet will be plotted by the Norfolk Regional Office.

F. CONTROL:

Visual control was used throughout the entire sheet. Photogrammetric and triangulation points were used in conjunction with sextants to determine three-point fixes that were then plotted on the boat sheet by use of a three-arm protractor.

Photogrammetric points were located in 1965 by a photogrammetrist attached to Photo Party 759. The following photogrammetric compilations were used: Incomplete Manuscripts T-12956, T-12957, ~~and~~ T-12958, and T-12661.

For a complete list of signals, see Appendix.

G. SHORELINE:

Shoreline was transferred to the boatsheet from the manuscripts listed in paragraph F. The high-water line was verified by the photogrammetrist, and the low water line by hydrography performed at high tide. There have been no significant changes in shoreline. Shoreline on the smooth sheet is from the reviewed photogrammetric manuscripts T-12956(1965), T-12957(1965) T-12958(1965) and T-12661(1965).

H. CROSSLINES:

The crosslines represent 9% of the total hydrography, exclusive of development, and were in very good agreement.

I. JUNCTIONS:

Junctions with prior surveys agree within ± 2 feet.

Junctions with contemporary survey WH 10-1-65 (H-8860(1965)) agree very well. HFP-245 10-1-65 (H-8874(1965)) was not available for comparison.

J. COMPARISON WITH PRIOR SURVEYS:

The bottom configuration agrees generally well with prior surveys. Specific changes, including presurvey review items, are discussed in detail in paragraph K since Chart 385 is taken from the most recent prior surveys.

K. COMPARISON WITH THE CHART:

The profile of the bottom on this sheet is generally the same as depicted on Chart 385, revised July 20, 1964, except for two major areas. These are two large depressions resulting from extensive scoop dredging, one just north of

Horn Point (ϕ =38° 58.5'; λ =76° 28.5'), and one just east of Horn Point (ϕ =38° 58.2'; λ =76° 28.1'), covering an area of approximately 0.1 sq. mi. each. The northerly of these areas has been deepened to 40-~~50~~ 56 feet and the easterly to 25-40 feet. Both areas have deep but highly irregular bottoms and have isolated peaks of up to ~~12~~ 13 feet in the northerly area, and ~~18~~ 16 feet in the easterly.

The following pre-survey review items fall within the limits of this survey.

1. The pier ruins at ϕ =38° 59.40'; λ =76° 28.72' exist as charted. PSR ITEM NO 1 ORIGIN H 8214 (1956) Concur

2. The shoal containing the 10 foot charted sounding at ϕ =38° 59.08'; λ =76° 28.52' was developed and found ~~to be as charted~~ approx 30 meters north. PSR ITEM NO 2. ORIGIN H-5199 (1932)

3. The channel leading to Anchorage "B" at the Annapolis Yacht Club, south of the Naval Academy, does show depths of 13 feet ~~as charted~~. ~~The southern half of Anchorage "B", however, has shoaled from the charted depth of 12 foot to 10-11 foot~~ (ϕ =38° 58.5'; λ =76° 29.0'). PSR ITEM NO 3. Concur

4. The obstruction charted at ϕ =38° 58.83'; λ = 76° 27.56' was investigated for 30 minutes by visual inspection. Nothing was found. PSR ITEM 4 ORIGIN H-8214 (1956) (bamboo poles) The smooth sheet shows Anchorage "B" least to have a depth of 12'-13'; additional lines would have been desirable. Considered doubtful, delete from chart.

5. The ruins charted at ϕ = 38° 58.62'; λ =76° 27.37' were investigated for 30 minutes by visual inspection. Nothing was found. PSR ITEM NO 5 ORIGIN H-5198 (1932) Considered disproved ~~Not considered disproved, carried forward to present survey~~

6. The sunken wreck charted at ϕ =38° 58.30'; λ =76° 29.15' has been investigated and found to be no longer existing. Two subm logs were found in this vicinity. PSR ITEM NO 6 ORIGIN H-5199 (1932) wk considered disproved

7. The pile charted at ϕ =38° 58.44'; λ =76° 28.49' was investigated for 30 minutes. The pile was not visible above the surface, however, may still exist below the surface. It is recommended that it still be charted. PSR ITEM NO 7 ORIGIN H-5199 (1932) Carried forward as subm pile.

8. The area of the wreck charted at ϕ =38° 58.30'; λ =76° 28.14' has been dredged (mentioned earlier). This wreck was disposed of through scoop dredging. PSR ITEM 8 ORIGIN CL 685/52 Concur

9. The area of the obstruction charted at ϕ =38° 58.26'; λ =76° 27.80' was searched for one hour by standard development methods. Nothing was found. PSR ITEM NO 9 ORIGIN N.M. 12/1965 NOT DISPROVED, RETAIN AS CHARTED.

4

All soundings which were circled were found to agree within 2 feet except for two. At the northern tip of the Naval Academy bulkhead, new dredging has occurred on the northeasterly face and the eastermost of the two charted 11 feet soundings does not exist. The westerly 11 feet depth is part of an existing shoal, however. The area around the 8 foot sounding at ϕ=38° 58.61'; λ=76° 28.51' has been dredged (mentioned earlier).

Other areas where minor changes have been found are as follows:

1. There is still a depression at the mouth of ~~Dorsey's~~ College Creek (ϕ=38° 59.2'; λ=76° 29.2'), but it has filled from its previous depths of ~~30~~ 29-38 feet to ~~25~~ 19-27 28 feet. for review

2. The 18 foot contour at the east point of the Naval Academy bulkhead has been extended slightly towards midriver, ~~with a depth of 17 feet recorded at ϕ=38° 58.9'; λ=76° 28.45'.~~ 16

3. Southeast of the same bulkhead, ~~two~~ a ridges of 10-12 feet ~~have~~ has appeared (ϕ=38° 58.75'; λ=76° 28.55').

4. Deep inside Spa Creek, a shoal of 5 feet extends into midriver (ϕ=38° 58.2'; λ=76° 29.85'). This shoal does not exist on the smooth sheet. Final sounding reductions show the shoalest soundings of 7'.

5. The narrow channel at Carr Creek (ϕ=38 59'; λ=76° 27.5') has shoaled off Carr Point. The 17 foot charted depths are now ~~10-12~~ 8 13-14 feet.

L. ADEQUACY OF SURVEY:

This survey is considered complete and adequate to supersede prior surveys for charting.

M. AIDS TO NAVIGATION:

A comparison of the boatsheet and Chart 385 indicated that all aids to navigation are as charted except buoy "1" was located ~~at Anchorage "B". This buoy is located at ϕ=38° 58' 36.4", λ=76° 28' 50.9", rather than ϕ=38° 58' 36.3", λ=76° 28' 49.8" as charted~~. at ϕ 38°58'36.6", λ 76°28'~~49.6~~ 50.9" and daybeacon "1" charted at ϕ 38°58'21.5", λ 76°29'23.2" was not located.

A comparison of the boatsheet and Light List, Vol. I, Atlantic Coast (1965), indicates that, although all aids to navigation are noted, the depth of water of some of them have changed. They are now as follows:

	listed depth	present depth	smoothsheet
Channel buoy "10"	30	23	25
Channel buoy "11"	18	21	22
Channel buoy "14"	30	23	24
Channel buoy "18"	23	20	22

N. STATISTICS:

	Positions	Naut. Mi.	S'ndng	L'ns	B.S.
WH-2	1239	99.8			18
Skiff-1	450	32.6			0
ML-3	94	4.0			0
Skiff-2	29	1.0			0

Total area of hydrography = 2.2.sq. n. mi.

O. MISCELLANEOUS:

Sounding records on this sheet are characterized by numerous stray traces of varying width, length, darkness, and position on the fathogram. A few appear as part of the bottom profile, making identification as a stray more difficult. In all such cases, however, these readings were investigated very carefully, both by standard development procedures and visual inspection by swimmers.

F. RECOMMENDATIONS:

No part of the survey is considered inadequate for charting purposes.

Q. REFERENCES TO REPORTS:

For more detailed information on sounding methods and equipment, see Corrections to Echo Soundings SP-7-65.

APPROVAL SHEET

The boatsheet and records for the area surveyed are complete and approved. The boatsheet and sounding volumes were examined daily during the survey. The survey is complete and adequate for charting and should supercede all prior surveys.

James P. Randall

James P. Randall
LCDR, USESSA
Commanding Officer

LIST OF STATIONS ON H-8859 (WH 5-1-65)

SIGNAL	ORIGIN
ABE	T-12956 7
ACE	T-12957
ACK	T-12956 7
AIR	T-12958
ANT	T-12958
ARM	ANNAPOLIS ARMORY, S.E.CORNER,1910
BAG	T-12956 7
BAT	T-12957
BLU	T-12957
BOAT	T-12956 7
CAB	T-12956 7
CAT	T-12957 SPIRE 1933
CHAP	CHAPEL ~~DOME~~, NAVAL ACADEMY, ~~1910~~
CLOCK	ANNAPOLIS CLOCK TOWER, 1910
CON	T-12957
CUP	T-12956 7
DAY	T-12957
DIP	T-12957
DOM	T-12957
DUK	T-12958
EAT	T-12957
END	T-12956 7
ESS	T-12957
FAR	T-12956 7
FAT	T-12957
FOX	T-12956
GAB	T-12956 7
GAL	T-12957
GAS	T-12957
GAY	T-12957
GEM	T-12957
GREEN	GREENBURY POINT SHOAL LIGHTHOUSE, 1893, 1932
GUS	T-12956
HAG	T-12958
HAT	T-12957
HOS	ANNAPOLIS NAVAL HOSPITAL CUPOLA
HUB	T-12958
HUT	T-12956
ICE	T-12957
IDA	T-12958
INN	T-12956 7
ION	T-12956

(continued)

SIGNAL	ORIGIN
IRE	ST. MARY'S CATHOLIC CHURCH SPIRE
JAP	T-12957
JAY	T-12958
JOB	T-12956
KID	T-12957
KIM	T-12958
LAD	T-12957
LAX	T-12958
LEG	T-12956
LIT	T-12957
MAG	T-12957
MAN	T-12958
MAST	GREENBURY PT. NAV. RAD. STA. VER. R. MAST, 1957
MID	ANNAPOLIS, MIDSHIPMEN'S QUARTERS SOUTH CUPOLA, 1910
MON	T-12957
NAT	~~T-12957~~ T-12661
NED	T-12958
NUB	T-12956
OAK	T-12957
ODD	T-12958
OFF	T-12956
ORE	T-12957
OUT	T-12957
PAD	T-12957
PED	T-12957
POINT	T-12957
POL	T-12957
POW	ANNAPOLIS POWERHOUSE STACK 1910
QUO	T-12957
RAG	T-12957
RED	T-12957
RIF	T-12958
SAD	T-12957
SAX	T-12956
SIG	T-12957
SPI	T-12957
STATE	ANNAPOLIS STATEHOUSE SPIRE, 1933-4
STAND	ANNAPOLIS STANDPIPE, ~~1923~~ 1932-33
TANK	T-12958
TAP	T-12957
TIN	T-12957
TOW	T-12957
USE	T-12957
VAL	T-12957

(continued)

SIGNAL	ORIGIN
WAD	T-12957
WIT	T-12956
YAK	T-12957
ZAG	T-12957

WH-5-1-65

ML # II

H-8859(1965)

VELOCITY CORRECTIONS - 18 SEPT. - 9 OCT. ~~SEPT.~~ 1965

VOL. PG.	DAY	RATE	DATE	5	10	15	20	25	30	35	40	45(N)	45(S)	50(N)	50(S)	55
I	a	GOOD	9-18	5.2	9.8	14.4	19.4	24.1	—							
				5.0	9.8	14.6	19.3	—								
I	a	GOOD	9-18	5.1	9.9	14.3	19.2	24.2	—							
				5.2	9.6	14.2	19.4	24.1	—							
I	b	GOOD	9-19	5.0	9.5	14.1	19.0	24.0	28.9	33.6	38.5	—				
				5.2	9.9	14.4	19.1	24.0	29.0	33.7	38.5	—				
II	b	GOOD	9-19	5.2	9.5	14.4	19.2	24.1	—							
				5.1	9.4	14.2	19.1	24.0	—							
II	c	GOOD	9-20	5.2	9.4	14.3	19.0	24.0	28.9	33.8	38.6	—				
				5.1	9.5	14.2	19.0	24.0	28.9	33.7	—					
II	d	GOOD	9-21	5.1	9.6	14.4	19.1	24.0	—							
				5.2	9.6	14.4	19.1	24.0	—							
III	d	GOOD	9-21	5.3	9.8	14.4	—									
				5.2	9.9	14.3	—									
III	a	GOOD	9-22	5.2	9.8	14.4	19.2	24.1	29.0	33.9	38.7	—				
				5.8	9.5	14.2	19.0	24.0	28.9	33.9	38.8	—				
III	a	GOOD	9-22	5.2	9.8	14.3	19.1	24.1	29.0	33.9	38.8	—				
				5.5	9.8	14.3	19.2	24.0	29.0	33.9	38.8	—				
IV	g	GOOD	9-23	6.0	9.8	14.4	19.2	24.1	28.8	33.7	38.7	43.6	43.8	48.6	48.8	—
				6.0	9.9	14.5	19.1	24.0	29.0	33.7	38.7	43.5		48.6	48.8	—
IV	g	GOOD	9-23	6.0	9.5	14.4	19.1	24.0	29.2	34.0	39.0	—				
				—	9.7 9.8	14.4	19.2	24.2	29.0	34.2	39.0	—				
IV	f	GOOD	9-24	5.1	9.5	14.1	19.0	23.9	28.6	33.6	38.5	43.4	43.7	—		
				5.1	9.4	14.2	19.0	23.9	28.7	33.7	38.6	43.4	—			
V	f	GOOD	9-24	5.3	9.4	14.2	19.0	—								
				5.2	9.5	14.1	19.0	—								
V	h	GOOD	9-27	5.1	9.7	14.2	19.0	23.9	28.8	33.7	—					
				2	2	2	2	2	1	1	1	2	2	2	2	
		Σ		137.6	270.3	386.3	478.0	528.7	433.7	607.0	503.2	178.9	87.5	97.2	97.6	
		MEAN		5.29	9.66	14.31	19.12	24.03	28.91	33.80	38.71	43.48	43.75	48.60	48.80	
		Σ-R'		119.6	270.3	386.3	478.0	528.7	433.7	507.0	503.2	173.9	87.5	97.2	97.6	
		MEAN		5.20	9.66	14.31	19.12	24.03	28.91	33.80	38.71	43.48	43.75	48.60	48.80	
		CORR'N		-0.20	+0.34	+0.69	+0.88	+0.97	+1.09	+1.20	+1.29	+1.52	+1.25	+1.40	+1.20	

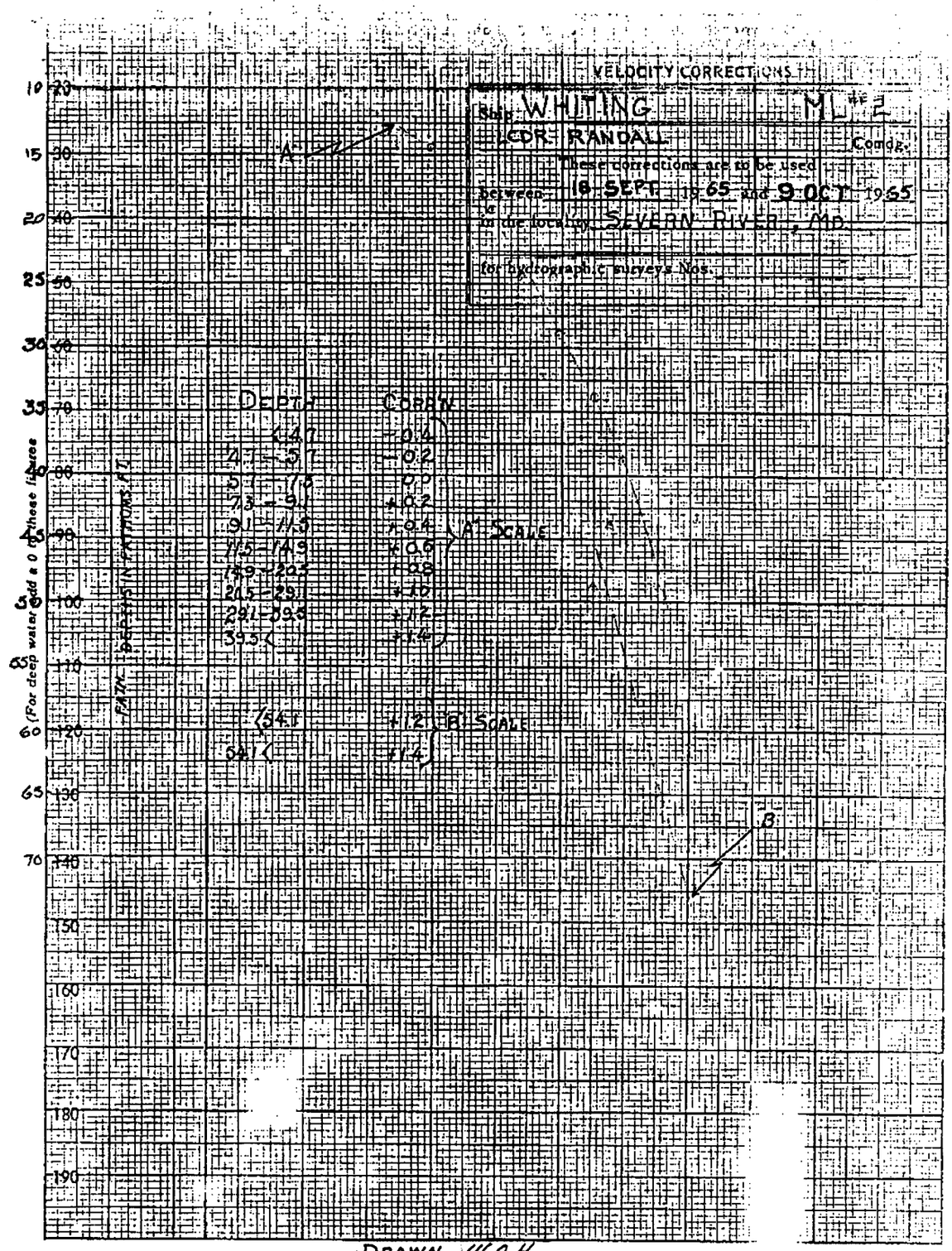
*VALUES VARYING FROM MEAN > ±0.5 FT. REJECTED.

XEROX COPY

XEROX COPY

COMPILED BY: CRO LEM

CHECKED BY: RR CRO


VELOCITY CORRECTIONS
Ship: WHITING
CDR RANDALL
Comdr.
These corrections are to be used
between 18 SEPT. 1965 and 9 OCT 1965
in the locality: SEVERN RIVER, MD.
for hydrographic surveys Nos.
DEPTH
CORRN
A SCALE
B SCALE
DRAWN W.A.H
V
B.M.P.
USCOMM-DC 15439-P62

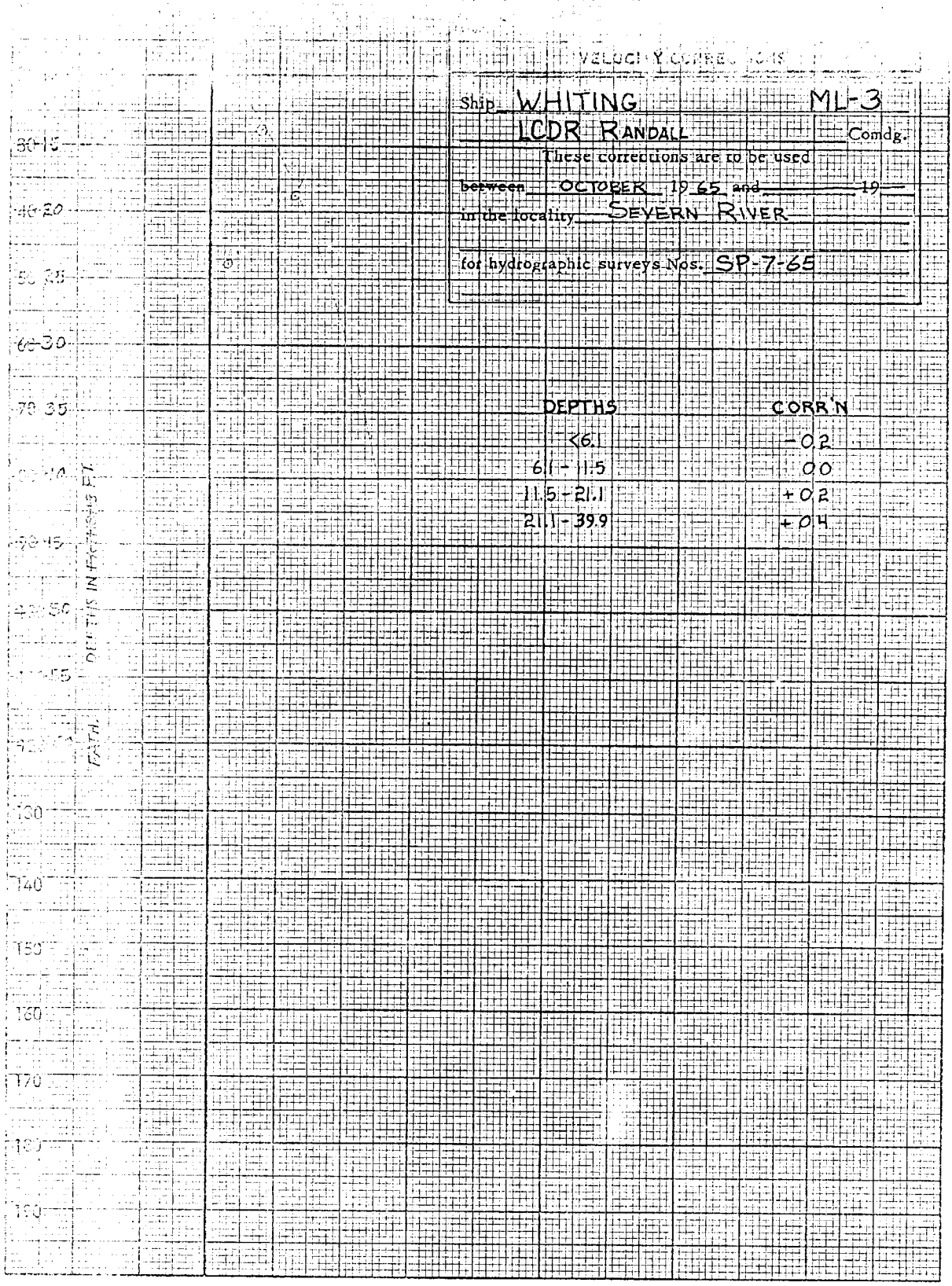
SP-7-65

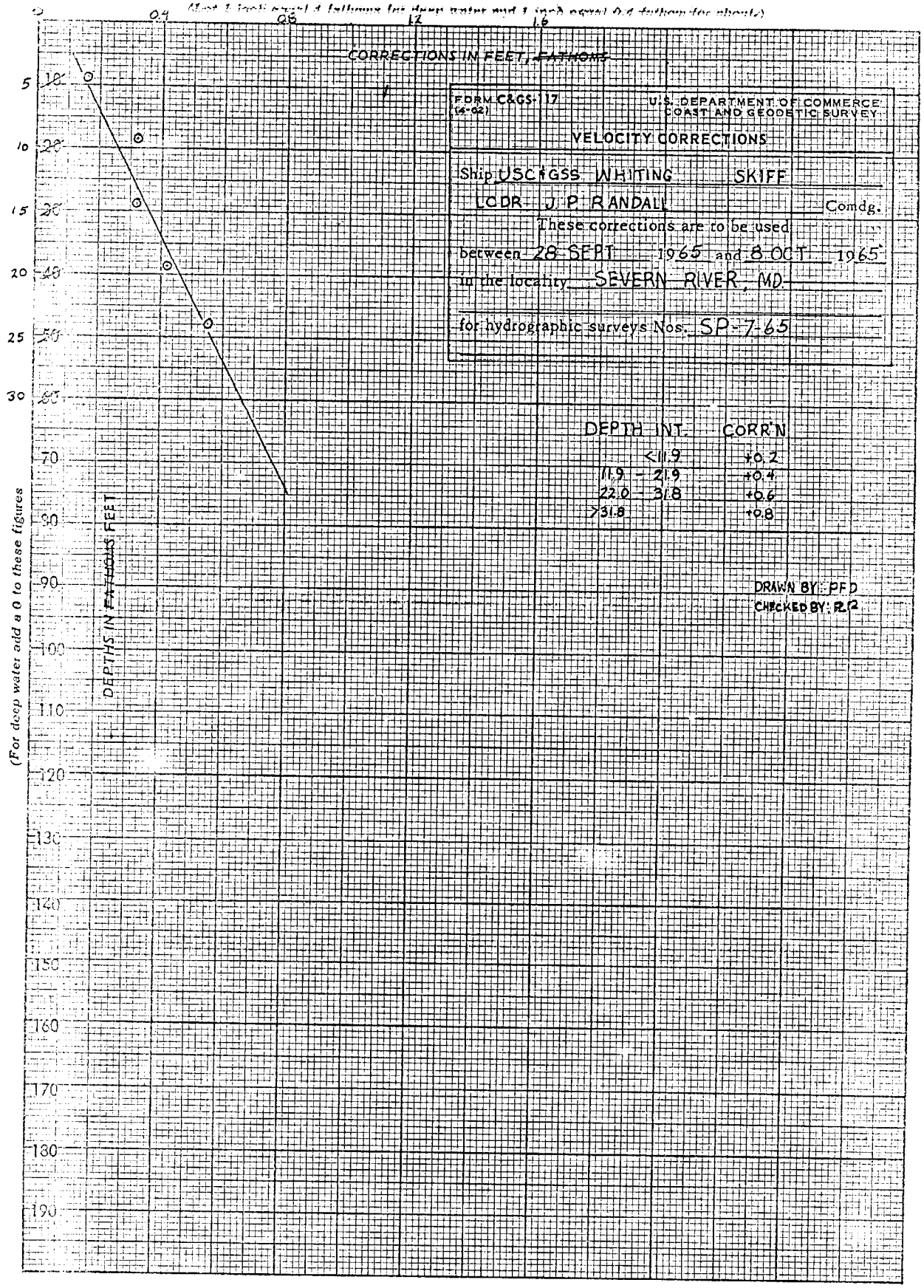
ML 3

VELOCITY CORRECTION

OCTOBER 1965

Vol. - Pg	day - date	4	9	14	19	24
I 3	10-26	4.5 ~~3.9~~ 4.0	~~8.9~~ ~~5.0~~ 8.9	13.9 13.8	18.8 18.7	24.0 23.9
	Σ	8.5	17.8	27.7	37.5	47.9
	M	4.25	8.90	13.85	18.75	23.95
	Corr'n	- 0.25	+ 0.10	+ 0.15	+ 0.25	+ 0.05



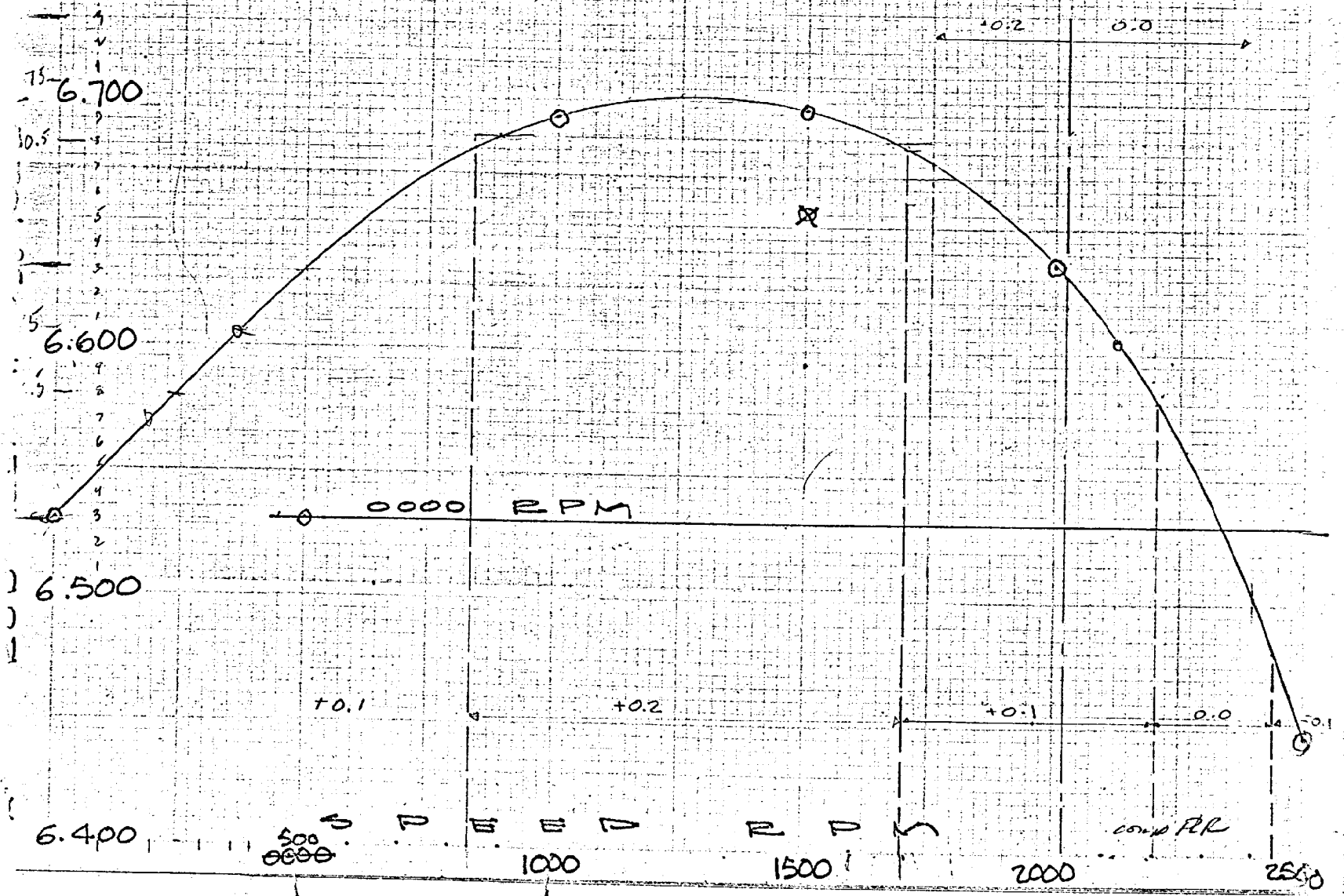


USCOMM-DC 16439-P62

APRIL 30 1965

SQUAT & SETTLEMENT

CORRECTED (FORTIDE) ROD READINGS VS RPM ML #1



4-30-57
COMM-DC 28...

SQUAT & SETTLEMENT

ML # 1 + 2

r.p.m.	Rod	Δ Tide	r.p.m.	Ave. Rod - Ave Tide	Ave. Init.	Corr'n
0000	6.530	0.000	0000	6.531 - 6.531 =		+0.000
1000	6.720	0.027	1000	6.693 - 6.531 =		+0.162
1500	6.500	0.079 ~~0.053~~	1500	6.697 - 6.531 =		+0.166
2000	6.750	0.105 ~~0.079~~	2000	6.645 - 6.531 =		+0.114
2500	6.600	0.132 ~~0.105~~	2500	6.446 - 6.531 =		+0.085
1500	6.850	0.157 ~~0.132~~				
2500	6.640	0.183 ~~0.157~~				
1500	6.910	0.209 ~~0.183~~				
0000	6.830	0.235 ~~0.209~~				
0000	6.860	0.393 ~~0.23~~				
2500	6.830	0.417				

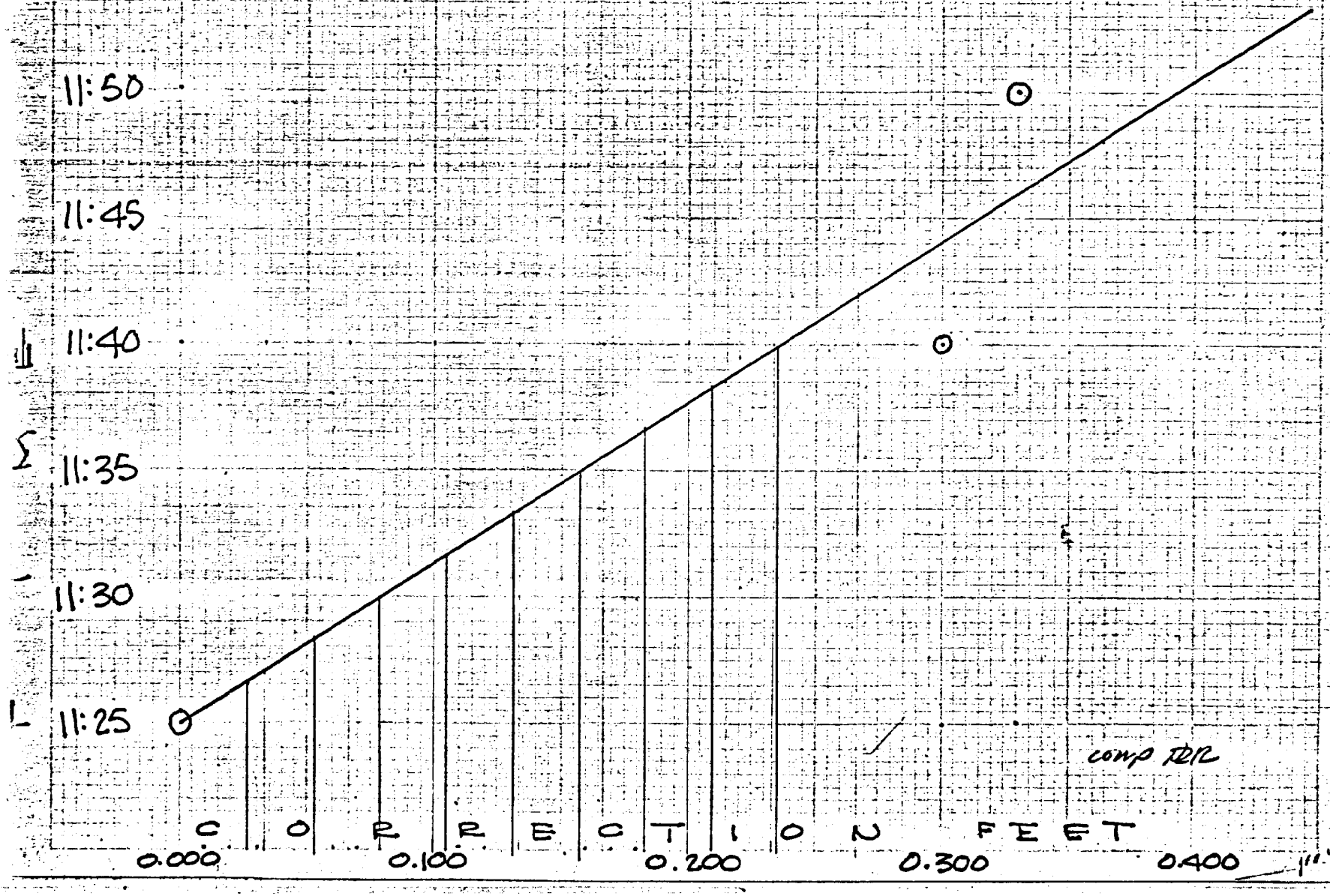
Corrections from Graph

r.p.m.	Corr'n
000 - 500	= 0.0
500 - 2025	= + 0.2
2025 - 2500	= 0.0

APRIL 30 1965

SQUAT & SETTLEMENT

TIME VS 0000 RPM ROD READINGS ML #1



TIDE NOTE

Tidal data was provided by Annapolis Standard Tide Gage, Annapolis, Maryland ($\phi = 38^{\circ}$ 59.1'; $\lambda = 76^{\circ}$ 29.2'). MLW on the staff was 4.4 feet. 60° W time meridian was used.

The ship's Bubbler gage was installed as a back-up to the standard gage, and all curves agreed well. Data used in reductions, however, was all provided by the standard gage.

FORM C&GS-712
(3-9-64)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

November 4, 1966

~~Nautical Chart Division~~: Atlantic Marine Center

Plane of reference approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 8859

Locality: Severn River, Chesapeake Bay, Maryland

Chief of Party: J. P. Randall, 1965

Plane of reference is mean low water

Tide Station Used (Form C&GS-681):

Annapolis

Height of Mean High Water above Plane of Reference is as follows:

0.9 foot

Remarks

J. M. Symons
Chief, Tides and Currents Branch

USCOMM-DC 6680-P64

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8859

Name on Survey	A On Chart No.	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	
Annapolis	✓									1
Back Creek	✓									2
Carr Creek	✓									3
Carr Point	✓									4
Chinks Point	✓									5
~~Dorseys Creek~~			College Creek			GK 1-25-71 a.f. Wright				6
Eastport	✓									7
Ferry Point	✓									8
Greenbury Point	✓									9
Horn Point	✓									10
Spa Creek	✓									11
Severn River	✓	Names approved								12
Sycamore Point		March 22, 1963								13
N. Severn Beach		Frank W. Hackett								14
Biemans Point										15
Brice Point										16
Dungan Basin										17
Market Slip										18
Worthington Basin										19
Bembe Beach										20
Acton Cove										21
Santee Basin										22
Meadows Point	Names approved ~~Nov~~ Feb 2, 1971									23
	Frank W. Hackett									24
										25
										26
										27

NORFOLK HYDROGRAPHIC PROCESSING BRANCH
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8859 (Wh 5-1-65)

GENERAL

Except for the items listed below, this appears to be an excellent basic survey. Soundings are in good agreement at crossings and depth curves follow normal patterns.

DISCREPANCIES

The existence of scattered, charted piles, pipes, etc., was neither confirmed nor disproved.

The field scanning interval was too long for a survey of this scale and it was necessary to scan numerous other soundings to properly delineate depth curves and irregular bottom configurations.

Developement was sparse in most of the smaller tributaries and "no bottom" soundings exist in Carr Creek.

Respectfully submitted,

Hugh L. Proffitt
Carto-Tech

Norfolk, Va.
Oct. 26, 1966

Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8859

Records accompanying survey: Smooth sheets 1;

boat sheets 1; sounding vols. 9; wire drag vols. 0;

Descriptive Reports ....; graphic recorder Cahier 1;

special reports, etc. .....

.....

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

Number of positions on sheet		1812
Number of positions checked		56 58
Number of positions revised		2 0
Number of positions revised (refers to depth only)		
Number of soundings erroneously spaced		
Number of signals erroneously plotted or transferred		
Topographic details	Time	82 hrs
Junctions	Time	4 hrs
Verification of soundings from graphic record	Time	9 hours
Special adjustments	Time	

Verification by Allan L. Schmidt Total time 109 hrs Date 12/7/66

Reviewed by Fannie B. Powers Time 211 Date 1-29-71

Insp by R.W. Derlazaroin 110 hrs 1-27-78

Cartens 47 10/16/78

H-8859

Items for Future Presurvey Reviews

The bottom is considered adequately developed except in the tributaries. Significant changes in the bottom were noted since the prior surveys. The major changes are attributed to dredging.

Position Index		Bottom Change	Use	Resurvey
Lat.	Long.	Index	Index	Cycle
385	0763	4	8	25 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8859 FIELD NO. WH-5-1-65

Maryland - Severn River - Vicinity of Annapolis

SURVEYED: September 18 - October 7, 1965

SCALE: 1:5,000 PROJECT NO.: SP-7-65

SOUNDINGS: Pole - DE-723 Fathometers CONTROL: Visual Fixes on Shore Signals

Chief of Party	J. P. Randall
Surveyed by	J. D. Bonn
	R. Petryczanko
	J. E. Dropp
	P. L. Richardson
Protracted by	D. C. Calland (AMC)
Soundings Plotted by	D. C. Calland
Verified and Inked by	A. K. Schugeld
Reviewed by	F. B. Powers
	Date: January 29, 1971
Inspected by	R. W. DerKazarian

1. Description of the Area

This is an inshore survey of the Severn River in the vicinity of Annapolis. The survey extends to the bridge at Brice Point and includes all creeks between the bridge and the mouth of the river on the south. Extending into the bay it is bounded on the south by latitude 38°58'05" and on the east by longitude 76°26'39".

The bottom is irregular and slopes to form a river channel with several dredged areas throughout the survey. The bottom is mostly silt and sand.

2. Control and Shoreline

The origin of control is adequately covered in part F of the Descriptive Report.

The shoreline originates with Class III reviewed photogrammetric manuscripts T-12956, T-12957, T-12958, and T-12661 of 1965 photography. Field edit has not been accomplished on these manuscripts.

3. Hydrography

a. Depths at crossings are in good agreement.

b. The usual depth curves were adequately delineated except as noted below.

c. The development of the bottom configuration and the investigation of least depths are considered adequate except that it would have been desirable to have greater development in the slips and along piers. In Carr Creek the present survey does not adequately reveal the bottom configuration. The two lines run did not include the deeps in the center of the creek where depths are as great as 13 to 14 feet. These depths were obtained on a 1949 "Special Survey" conducted by this Office. See paragraph 7.a.4.

Development of bottom configuration in portions of Spa and College Creeks was inadequate.

d. Investigation and field disposition were not made of numerous charted piles, pier ruins, and marine railways. Past retention of these on present day charts has increased the congestion in areas where new waterfront development has occurred and makes the earlier charting obsolete.

e. Comments are found in section O of the Descriptive Report regarding strays on the fathograms. The natural appearance of the strays and the blending with the bottom profile make identification difficult and interpretation questionable. Although the report states that in all cases the readings were investigated by standard development procedures and visual inspection by swimmers, recorded development did not actually cross the position of the strays, nor was there recorded information regarding specific investigation of strays or diver activity. However, it is considered unlikely that so many obstructions would exist in the navigable areas and the interpretation by the verifier has in general been accepted. The 7- and 8-foot soundings falling in general depths of 10 to 11 feet in latitude 38°58.38', longitude 76°29.53' have the appearance of grass or debris on the fathogram but because of uncertainity as to their validity they have been accepted as plotted.

4. Condition of Survey

The field plotting, sounding records, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual except that:

a. The sounding volumes did not indicate when a sounding was "not plotted" (N.P.) on the smooth sheet as required by the Hydrographic Manual, section 6-52.

b. Landmarks were not submitted by the field on form 76-40 (formerly form 567). A representative number of landmarks have been added to the smooth sheet from the previously mentioned photogrammetric manuscripts.

c. The sounding volumes were very sparse in notes pertaining to charted features or features in existence which were in need of addressing.

5. Junctions

An adequate junction was effected with H-8860 (1965) on the east and south. The junction with H-8874 (1965) on the northwest will be considered in the review of that survey.

6. Comparison with Prior Surveys

H-5198	(1932)	1:10,000
H-5199	(1932)	1: 5,000
H-8214	(1956)	1: 5,000

These prior surveys taken together cover the area of the present survey. The bottom has remained fairly stable with little or no change for the most part except in areas of man-made changes. South of Greenbury Point present depths of 2 to 4 feet are 1 foot deeper than prior depths. Three isolated areas in approximate latitude 38°58.6', longitude 76°28.6'; latitude 38°58.3', longitude 76°28.2'; and latitude 38°59.2', longitude 76°29.2' have undergone extensive dredging, and depths as much as 58 feet in one area are found where prior depths ranged from 8 to 10 feet. Spoil from these areas has evidently been used for improvements of the bulkhead areas.

Little Carr Creek and a small cove in the vicinity of latitude 38°59.15', longitude 76°27.35' no longer exist. The mean high water line in the vicinity of latitude 38°59.00', longitude 76°27.35' has accreted approximately 125 meters. These changes possibly result from the use of the spoil from dredging as apparent on a survey in 1959 and discussed in paragraph 7.a.4 below.

The small channel leading into Carr Creek in the vicinity of latitude 38°58.9', longitude 76°27.5' with prior depths of 17 feet has silted to present depths of 13 to 14 feet.

Numerous cultural changes have occurred to the high water line with the addition of and changes in piers and bulkheads, etc. Many piling on the 1932 surveys in inshore areas are no longer considered to exist and have not been carried forward.

With the addition of many soundings and several piles retained from the prior surveys, the present survey is adequate to supersede these prior surveys in the common area.

7. Comparison with Chart 385 (latest print date July 14, 1969)
566 (latest print date July 4, 1970)

a. Hydrography

The charted hydrography originates with the previously discussed surveys which require no further consideration, with U.S. Navy survey (Bp-35963), C&GS survey (Bp-58071), U.S. Naval Academy survey (Bp-60369), supplemented with the boat sheet and the partial application of the present survey after verification.

Attention is directed to the following:

(1) Numerous piling and possible remains of marine railways charted from early sources particularly Bp-35963 (1940) and survey H-5198 (1932) are considered no longer valid particularly in areas of waterfront development in Spa Creek and should be disregarded as for examples the two piles near the pier in latitude 38°58.50', longitude 76°28.89' and the marine railways in the vicinity of latitude 38°58.47', longitude 76°28.90'. In 1978, however, there were numerous uncharted mooring piles associated with the finger piers in this area. These possibly should be indicated by a general note on the chart.

(2) Three piles in the vicinity of latitude 38°59'40", longitude 76°28'55" were probably charted from air photographs prior to the date of the present survey, were not verified nor disproved by the present survey, and should be retained on the chart.

(3) The piling in the vicinity of latitude 38°58'35", longitude 76°29.11" (Market Slip) were charted from 1968 air photographs (Bp-98550) subsequent to the date of the present survey and should be retained on the chart.

(4) Present survey depths in Carr Creek do not delineate the entire bottom. It is recommended that soundings from a "Special Survey" of 1959 by this Office be used (Bp-58071, L-449/1959), as it delineates the bottom more completely.

(5) The 7-foot sounding in latitude 38°58.99', longitude 76°28.75' was misidentified from the boat sheet of the present survey and should be deleted.

(6) The 6-foot sounding charted in latitude 38°58.35', longitude 76°29.27' from the unverified smooth sheet of the present survey was interpreted as a spurious return and has been rejected.

With the exception of the above items the present survey is adequate to supersede the charted hydrography within the common area.

b. Topography

The charted topography should be revised to agree with the topography on the present survey except for items listed below.

(1) The following items were charted from 1968 air photographs (Bp-98550) subsequent to the date of the present survey and should be retained on the chart:

(a) Two piers in the vicinity of latitude 38°59'35", longitude 76°28'50".

(b) A pier-in-ruins in latitude 38°59'07", longitude 76°28'26".

(c) Numerous shoreline changes and piers in and at the entrance to Spa Creek and the upper northeast corner of Eastport.

(d) A pier in latitude 38°58'56", longitude 76°28'43".

(2) The following items were charted from 1963 air photographs (Bp-98142) prior to the date of the present survey, were not verified nor disproved by the present survey, and should be retained on the chart:

(a) A pier charted in latitude 38°59'27", longitude 76°27'43" should be revised to ruins.

(b) A pier-in-ruins in latitude 38°59'28", longitude 76°27'40".

(c) The ruins in latitude 38°58'16", longitude 76°28'26".

(3) The following items apparently charted from 1952 air photographs prior to the date of the present survey were not verified nor disproved by the present survey and should be retained on the chart:

(a) A pier-in-ruins in latitude 38°58'41", longitude 76°27'22".

(b) The piers-in-ruins in the vicinity of latitude 38°58'18", longitude 76°29'30".

(c) A pier-in-ruins in latitude 38°58'20", longitude 76°29'25".

(d) A pier-in-ruins in latitude 38°58'17", longitude 76°29'24".

(e) A pier-in-ruins in latitude 38°58'23", longitude 76°28'58".

(f) A marine railway in latitude 38°58.24", longitude 76°28'56".

c. Aids to Navigation

The aids to navigation on the present survey are in substantial agreement with the chart with the following exceptions:

(1) Annapolis Harbor Buoy number 1 located on the present survey in latitude 38°58'36.2", longitude 76°28'49.6" was revised in accordance with Notice to Mariners 16 of 1966 subsequent to the date of the present survey.

(2) Spa Creek Daybeacon number 1 located on the present chart in latitude 38°58'21.5", longitude 76°29'23.2" was established prior to the date of the present survey and was not mentioned by the hydrographer. It should be retained on the chart.

(3) The Annapolis Harbor Buoy number 13 and Harbor Channel Lighted Buoys number 11 and 15 are approximately 25 to 45 meters out of their charted positions and do not mark the channel limits properly.

The remaining charted positions of aids adequately mark the features intended.

8. Compliance with Instructions

The survey adequately complies with the project instructions except as indicated in sections 3 and 4.

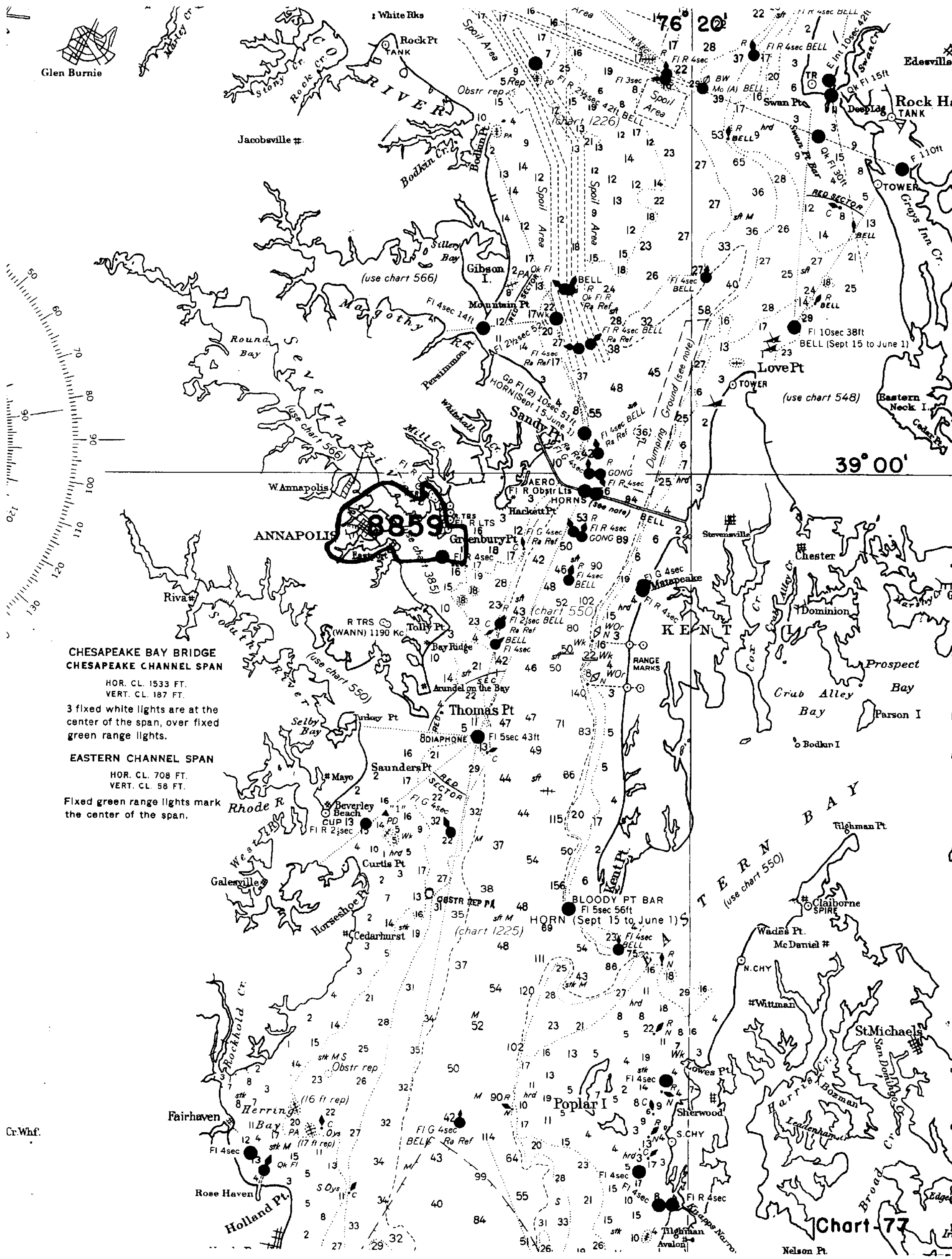
9. Additional Field Work

This survey is considered to be an adequate basic survey and no additional field work is recommended. Continuing waterfront development would indicate the need of updating the shoreline detail.

Examined and Approved:

Chief
Marine Surveys Division

Associate Director
Office of Marine Surveys
and Maps


CHESAPEAKE BAY BRIDGE
CHESAPEAKE CHANNEL SPAN
HOR. CL. 1533 FT.
VERT. CL. 187 FT.
3 fixed white lights are at the center of the span, over fixed green range lights.
EASTERN CHANNEL SPAN
HOR. CL. 708 FT.
VERT. CL. 58 FT.
Fixed green range lights mark the center of the span.
76° 20'
39° 00'
8859
ANNAPOLIS
Glen Burnie
Jacobsville
Rock Pt
Rock Hall
Edesville
Love Pt
Eastern Neck I.
Sandy Pt
Gibson I.
Mountain Pt
Magothy R
Severn R
South River
Rhode R
West R
Riva
W.Annapolis
Hackett Pt
Greenbury Pt
Tolly Pt
Bay Ridge
Arundel on the Bay
Thomas Pt
Saunders Pt
Beverley Beach
Curtis Pt
Galesville
Cedarhurst
Fairhaven
Rose Haven
Holland Pt
Herring Bay
Stevensville
Chester
Matapeake
KENT I.
Kent Pt
Dominion
Prospect Bay
Crab Alley Bay
Parson I
Bodkin I
Tilghman Pt
Claiborne
Wades Pt.
McDaniel
Wittman
St Michaels
Poplar I
Sherwood
Lowes Pt
Tilghman
Avalon
Nelson Pt
BLOODY PT BAR
Fl 5sec 56ft
HORN (Sept 15 to June 1)
Fl 5sec 43ft
DIAPHONE
Fl 10sec 38ft
BELL (Sept 15 to June 1)
(use chart 566)
(use chart 548)
(use chart 550)
(chart 1226)
(chart 1225)
(chart 550)
R TRS
(WANN) 1190 Kc
Cr.Whf.
Chart 77

(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8859

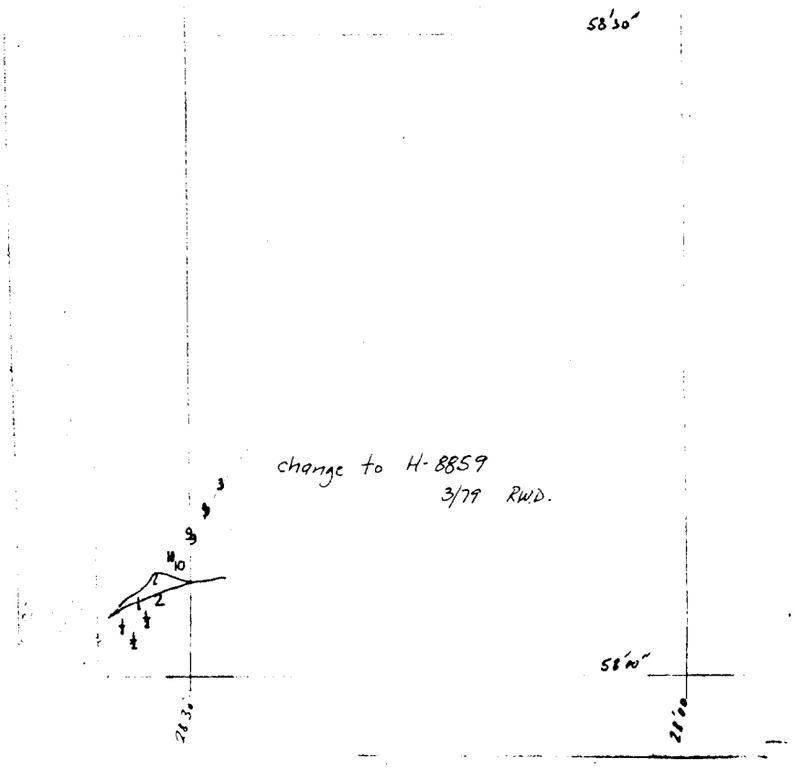
INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review

CHART	DATE	CARTOGRAPHER	REMARKS
566	6/27/67	N H Mall	~~Full~~ Part ~~Before~~ After Verification Review Inspection Signed Via
			Drawing No.
77	8/4/67	O. Svendsen	~~Full~~ Part ~~Before~~ After Verification before Review Inspection Signed Via
			Drawing No: Ch 566 #23
1225	8/17/67	John P. Wein	~~Full~~ Part ~~Before~~ After Verification ~~Review Inspection Signed~~ Via
			Drawing No. Examined thru Ch. 566 dwg #23, no correction
550	8-25-67	Lydia R. Everhart	~~Full~~ Part ~~Before~~ After Verification ~~Review Inspection Signed~~ Via
			Drawing No. 566 " 23
550	10-15-71	H. Kadden	~~Full~~ Part ~~Before~~ After Verification Review before Inspection Signed Via
			Drawing No. Exam. review for critical corr only No corr.
385	10-7-75	W. G. Chandler	~~Full~~ Part ~~Before~~ After Verification Review before Inspection Signed Via
			Drawing No.
566	11/6/75	Richard Hogue	~~Full~~ Part ~~Before~~ After Verification Review before Inspection Signed Via
			Drawing No. Thru 385
1225	1-29-76	Joseph Parsons	~~Full~~ Part ~~Before~~ After Verification Review before Inspection Signed Via
			Drawing No. thr 566
77	4/2/76	J.P. Williams	Full ~~Part~~ ~~Before~~ After Verification ~~Review Inspection Signed~~ Via
			Drawing No. EXAM HYDRO NOT SHOWN IN THIS
550	9/23/76	Joseph Parsons	~~AREA OF CHART 77~~ ~~Partially Applied after~~ ~~Full Part Before After~~ Verification Review ~~Review Inspection Signed~~ Via
			Drawing No. Applied thru ~~385~~ 566
385	12/22/78	Bill Wanless	Fully Applied After Verification, Review and Inspection
			Drawing No. 20
566	1-23-79	M. PANAS	FULLY APPLIED AFTER VERIFICATION, REVIEW & INSPECTION
550	1-26-79	D.C. Harpine	Fully Applied After Verification, Review & Inspection thru Ch 566
1225	2-2-79	[illegible]	FULLY APPLIED AFTER VER., REVIEW & INSPECTION thru 550

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975

USCOMM-DC 8558-P63


58'30"
change to H-8859
3/79 RWD.
58'00"