

8217

Diag. Cht. No. 1222-3.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. BN-1154 Office No. H-3217

LOCALITY

State Virginia

General locality Cape Charles

Locality Fisherman Island

194/54

CHIEF OF PARTY

H. J. Seaborg

LIBRARY & ARCHIVES

DATE July 15, 1957

B-1870-1 (1)

82170

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-8217

Field No. BN - 1154

State Virginia

General locality Cape Charles, Va.

Locality Fisherman's Island, Va.

Scale 1:10,000 Date of survey July 7 - 22, 1954

Instructions dated 25 Feb. 1954, 29 April 1954

Vessel LAUNCH CS - 175

Chief of party H. J. Seaborg

Surveyed by R. H. Houlder

Soundings taken by fathometer, ~~graphic recorder, hand lead, voice~~ sounding pole

Fathograms scaled by Ship's personnel

Fathograms checked by R. H. Houlder & Norfolk District Office

Protracted by W.L. Jonns

Soundings penciled by W.L. Jonns

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

REMARKS: This survey was smooth plotted in the Hydrographic
Section of the Norfolk District Office.

D E S C R I P T I V E R E P O R T

to accompany

INSHORE HYDROGRAPHIC SURVEYS, FISHERMAN'S ISLAND, VA. FIELD NO. BN - 1154
 U. S. C. & G. S. Ship B O W E N HAROLD J. SEABORG, COMMANDING
 Scale 1:10,000 7 - 22 JULY, 1954

A. PROJECT:

A partial hydrographic survey was accomplished in the immediate vicinity of Fisherman's Island, Virginia, under instructions for Project CS-370, dated 25 February 1954 and 29 April 1954. ✓

B. SURVEY LIMITS AND DATES:

Field work commenced on 7 July and terminated on 22 July 1954. The survey limits are Latitudes 37°-03' and 37°-07.5', Longitudes 75°-56' and 75°-58.5'. Junction was made with contemporary survey BN-4154. *(H-8218(1954) on the south and H-7791(1949) on the northwest.* ✓

C. VESSEL AND EQUIPMENT:

This survey was accomplished using LAUNCH CS-175. It has a turning radius of 10 meters at the sounding speed of 10 knots. All soundings were obtained using 808-J type portable depth recorders Nos. 100 S, 157 SPX, 1603 PX, and sounding poles. ✓

D. TIDE AND CURRENT STATIONS:

A portable tide gage was maintained at Smith Island, Va., and furnished tide corrections for the survey. ✓

No current stations were observed. ✓

E. BOAT SHEET:

The Boat Sheet was furnished by the Washington Office. ✓

F. CONTROL STATIONS:

A list of Control Stations, and their origin, follows.

	<u>Source of Control</u>	<u>Date</u>	<u>Signal Name</u>
I.	<u>Triangulation:</u>		
	CAPE CHARLES, NEW LIGHTHOUSE	1932	CAPE ✓
II.	<u>Topo - Photo (Recoverable):</u>		
	Radar Tower T-11247	1954	KIT ✓
	Observation Tower T-11248	1954	SKY ✓
	TOWER T-11248 #9	1953	TOW ✓
	Wise Tower C T-11248 #3	1953	VAT ✓
III.	<u>Photogrammetry:</u>		
	T-11248	1954	BAD ✓
	"	"	BOY ✓
	"	"	CAN ✓
	"	"	DIG ✓
	"	"	ROT ✓
IV.	<u>Hydrographic:</u>		
	Volume 1, Page 72 (T-11248)	1954	SAP ✓

G. SHORELINE AND TOPOGRAPHY:

Shoreline and topography were obtained from photogrammetric sheets Nos. T-11247 and T-11248. ✓

H. SOUNDINGS:

All soundings were obtained using Submarine Signal Company type 808-J ✓ portable depth recorders, and sounding poles.

Standard procedure was used in obtaining all applicable corrections. All corrections have been entered into the sounding volumes and checked. There was no initial correction. In determining the fathometer correction, reference was made to bar checks obtained on Survey BN-4154. A tabulation of these corrections follows. (H-8218)

	From	To	Correction
I. Fathometer 157 SPX	0.0	2.0	- 0.4
	2.1	6.6	- 0.2
	6.7	17.0	0.0
	17.1	40.0	+ 0.2
II. Fathometer 160 SPX	all depths		0.0
III. Fathometer 100 S	1.0	5.0	+ 0.2
	5.1	9.2	+ 0.4
	9.4	20.0	+ 0.6
	20.1	40.0	+ 0.8

I. CONTROL OF HYDROGRAPHY:

Visual three point sextant control was used for the entire survey. ✓

J. ADEQUACY OF SURVEY:

This survey is incomplete. ✓

K. CROSS LINES:

Cross lines are incomplete. ✓

L. COMPARISON WITH CHART AND PRIOR SURVEYS:

Comparison with Chart 1222 and prior surveys showed no unexpected changes in the area surveyed. The wreck noted on the Preliminary Review was not investigated because of curtailment of operations. (See P 5 & 6 of Review)
Transferred to H-8217 from H-7791 (1949).

N. DANGERS AND SHOALS:

No new dangers or shoals were located. ✓

O. COAST PILOT INFORMATION:

No Coast Pilot changes were noted. ✓

P. AIDS TO NAVIGATION AND LANDMARKS FOR CHARTS:

No aids to navigation were located. One landmark for Chart 1222 was located and is noted on the appended Form 567.

Q. MISCELLANEOUS:

This survey is not considered to be adequate to supersede prior surveys but does contain sufficient information in the area surveyed to supplement previous information. ✓

APPROVED AND FORWARDED,

Harold J. Seaborg, Cdr, USC&GS
Chief of Party.

Respectfully submitted,

Richard H. Houlder
Richard H. Houlder, Ensign, USC&GS.

STATISTICS FOR HYDRO SURVEY H -
 (FIELD) BN - 1154
 USC&GS Ship B O W E N
 CS - 370

LAUNCH CS - 175

<u>Date</u>	<u>Day</u> <u>Letter</u>	<u>Volume</u> <u>Number</u>	<u>Number of</u> <u>Positions</u>	<u>Statute Miles</u> <u>of Sounding</u>
1954				
July 7	a	1	140	17.9
13	b	1	63	10.1
14	c	1 & 2	99	15.9
16	d	2	84	10.6
20	e	2	110	18.3
21	f	3	172	21.3
22	g	3	10	1.2
			—	—
		TOTALS - - - - -	678	95.3
			—	—

T I D E N O T E

All tide reducers for soundings were based on recorded tides at ✓
the Smith Island portable tide gage station.

Latitude $37^{\circ}-07.48$

Longitude $75^{\circ}-54.55$

Project CS-370

SH, BN 1154

Launch 66-175

Fath Corr.

Fath.	Date	Day Lett.	5	10	15	20	30	40	50
1575PX	July 7	a	-0.6	0.0		-0.1			
	14	c	0.0	0.0	+0.2	0.0			
		Mean	-0.3	0.0	+0.2	0.0			
1005	July 20	e	+0.1	+0.8	+1.0	+0.7	+0.5		
Corrections									
a, c, d, g Fath 1575PX									
			From	To	Corr.				
			0	2	-0.4				
			2.1	6.6	-0.2				
			6.7	17.0	0.0				
			17.1	40.0	+0.2				
b Fath 1605PX									
			0.0 All day						
e, f Fath 1005									
			From	To	Corr.				
			1	5	+0.2				
			5.1	9.2	+0.4				
			9.4	20	+0.6				
			20.1	40	+0.8				
✓ ✓DER									

✓
✓D6R

CORRECTIONS IN FEET, FATHOMS

VELOCITY CORRECTIONS

U.S. Coast and Geodetic Survey

Ship *Bowditch* Launch *CS-175**Lt. H. T. Seaborn* Comdg.These corrections are to be used
between 19 and 19
in the locality

for hydrographic surveys Nos.

(For deep water add a 0 to these figures)

DEPTHS IN FATHOMS

10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190

0.4 0.2 0 0.2 0.4 0.6 0.8 1.0

1575 f x

1005

v DGR

NORFOLK PROCESSING OFFICE

LIST OF SIGNALS

H-8217

TRIANGULATION STATIONS

CAPE CAPE CHARLES, NEW LIGHTHOUSE, 1887-1932 ✓

TOPOGRAPHIC STATIONS

SOURCE T-11247

Kit ✓

SOURCE T-11248

Bad ✓ Boy ✓ Can ✓ Cap ✓ Dig ✓ Dot ✓ Rot ✓ Sky ✓ Tow ✓ Vat ✓

HYDROGRAPHIC STATIONS

Sap Vol. 1, pg. 72

NORFOLK PROCESSING OFFICE

ADDENDUM

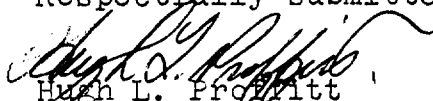
HYDROGRAPHIC SURVEY H-8217 (Field No. Bn-1154)

GENERAL

No unusual conditions were encountered during the smooth plot of this partially completed survey. Soundings on the few crosslines check very well with surrounding hydrography.

The fathograms were check scanned and all fathometer soundings were reduced with velocity templates in the Processing Office.

Respectfully submitted,


Hugh L. Proffitt
Cartographer

Norfolk, Va.
9 July 1957

GEOGRAPHIC NAMES

Survey No. H-8217

Name on Survey	GEOGRAPHIC NAMES									
	Survey No. H-8217									
	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		
Virginia								BGN	1	
Adams Island									2	
Fisherman Island								BGN	3	
Fisherman Inlet								"	4	
Wise Point									5	
Cape Charles									6	
Smith Island Inlet									7	
Smith Island			(tide station)					BGN	8	
									9	
									10	
									11	
									12	
									13	
									14	
									15	
									16	
									17	
									18	
									19	
									20	
									21	
									22	
									23	
									24	
									25	
									26	
									27	

M 234

Names approved 8-9-57

L. Heck

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

9 August 1957

Plane of reference approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 8217

Locality Chesapeake Bay, Va.

Chief of Party: H. J. Seaborg in 1954

Plane of reference is mean low water, reading
1.4 ft. on tide staff at Smith Island
8.9 ft. below B.M. 2 (1940)

Height of mean high water above plane of reference is 3.5 feet.

Condition of records satisfactory except as noted below:


Signature

Acting Chief, Tides Branch

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8217...

Records accompanying survey:

Boat sheets 1...; sounding vols. 3...; wire drag vols. ...;
bomb vols. ...; graphic recorder rolls 3...; Envelopes
special reports, etc. 1-Smooth sheet, 1-Descriptive report,.....
and 2-Blackline impressions T-11247 and T-11248.....

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

Number of positions on sheet	.....	<u>678</u>
Number of positions checked	.....	<u>89</u>
Number of positions revised	.....	<u> </u>
Number of soundings revised (refers to depth only)	.....	<u>169</u>
Number of soundings erroneously spaced	.....	<u>18</u>
Number of signals erroneously plotted or transferred	.....	<u> </u>
Topographic details	Time	<u>48 hrs.</u>
Junctions	Time	<u>4 hrs.</u>
Verification of soundings from graphic record	Time	<u>28 hrs.</u>

Verification by W. E. Roig..... Total time 97 hrs. Date 7/21/58
Reviewed by Am Zerkund..... Time 32 Date 8/26/58

DIVISION OF CHARTS
REVIEW SECTION - NAUTICAL CHART BRANCH
REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8217

FIELD NO. BN-1154

Virginia, Cape Charles, Fisherman Island

Surveyed July, 1954

Scale 1:10,000

Project No. CS-370

Soundings:

808 Depth Recorder
Sounding Pole

Control:

Sextant fixes on
shore signals

Chief of Party - H. J. Seaborg
Surveyed by - R. H. Houlder
Protracted by - W. L. Jonns
Soundings plotted by - W. L. Jonns
Verified and inked by - W. E. Roig
Reviewed by - I. M. Zeskind Date: 8/27/58
Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with unreviewed air-photographic survey T-11247 and T-11248 of 1953-55.

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

2. Sounding Line Crossings

Depths at crossings are in good agreement. However, several additional crosslines in the area south of Fisherman Island would have been desirable had time permitted.

3. Depth Curves and Bottom Configuration

The usual depth curves supplemented by the 3-ft. and 24-ft. curves were adequately delineated.

The bottom north of Fisherman Island consists principally of flats and is fairly smooth. South of Fisherman Island the bottom is

fairly irregular. Here troughs, ridges and shoals contribute to the bottom irregularity.

4. Junctions with Contemporary Surveys

Because of changes in the bottom of as much as 18 ft., junctions on the west between the present survey and surveys H-7791 (1949) and H-7750 (1948-50) were not feasible, except for a small area in the northwest. The junction with H-8218 (1954) on the south will be considered in the review of that survey. No contemporary surveys join the present survey on the east. Charted depths here are in adequate agreement with present depths.

5. Comparison with Prior Surveys

H-345	(1852), 1:20,000	H-3295	(1911), 1:20,000
H-364	(1852), 1:40,000	H-3658	(1914), 1:20,000
H-1013	(1869), 1:20,000	H-4193	(1921), 1:40,000
H-1873	(1888), 1:20,000	H-4926	(1929), 1:20,000
H-1873a	(1911), 1:40,000	H-6438 WD	(1939), 1:40,000
H-1875	(1888), 1:20,000	H-7750	(1948-50), 1:40,000

A comparison between the prior and present surveys reveals considerable changes in shoreline and bottom configuration. Fisherman Island has accreted about 2/3 of a mile in a southeasterly direction. Adams Island has been formed and an island formerly known as Isaacs has disappeared. In general, present depths are 1-2 ft. shoaler north of Fisherman Island and as much as 24 ft. shoaler south of this island. The bottom covered by the present survey in general, is in a state of flux with the greatest changes in depths occurring south of Fisherman Island. The following discrepancies between the prior and present surveys are found:

- (1) The 20-ft. sounding charted in lat. 37°03.6', long. 75°58.3' from H-7750 (1948-50), falls in present depths of 27 ft. The (charted) 20-ft. sounding should be disregarded.
- (2) The 15-ft. sounding charted in lat. 37°03.5', long. 75°58.0' from H-7750 (1948-50), falls in present depths of 23-24 ft. The (charted) 15-ft. sounding should be disregarded.

The present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 1222 (latest print date 3/10/58)

A. Hydrography

The charted hydrography originates principally with the boat sheet of the present survey (Bp. 51690) and a few soundings from the prior surveys previously discussed which need no

further consideration. Only minor differences of 1-2 ft. are noted between the present and charted depths, except as indicated in paragraph 5 above.

B. Aids to Navigation

There are no aids to navigation within the limits of the present survey.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was accurately done.

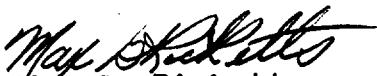
8. Compliance with Project Instructions


This is an incomplete survey which does not completely comply with the Project Instructions.

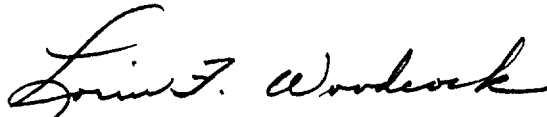
9. Additional Field Work Recommended


As noted in paragraph 8 above, this survey is not complete. However, the bottom of the area covered by the present survey is highly unstable and as a result the bottom configuration is constantly changing. Within the area covered the present survey is considered basic for charting purposes.

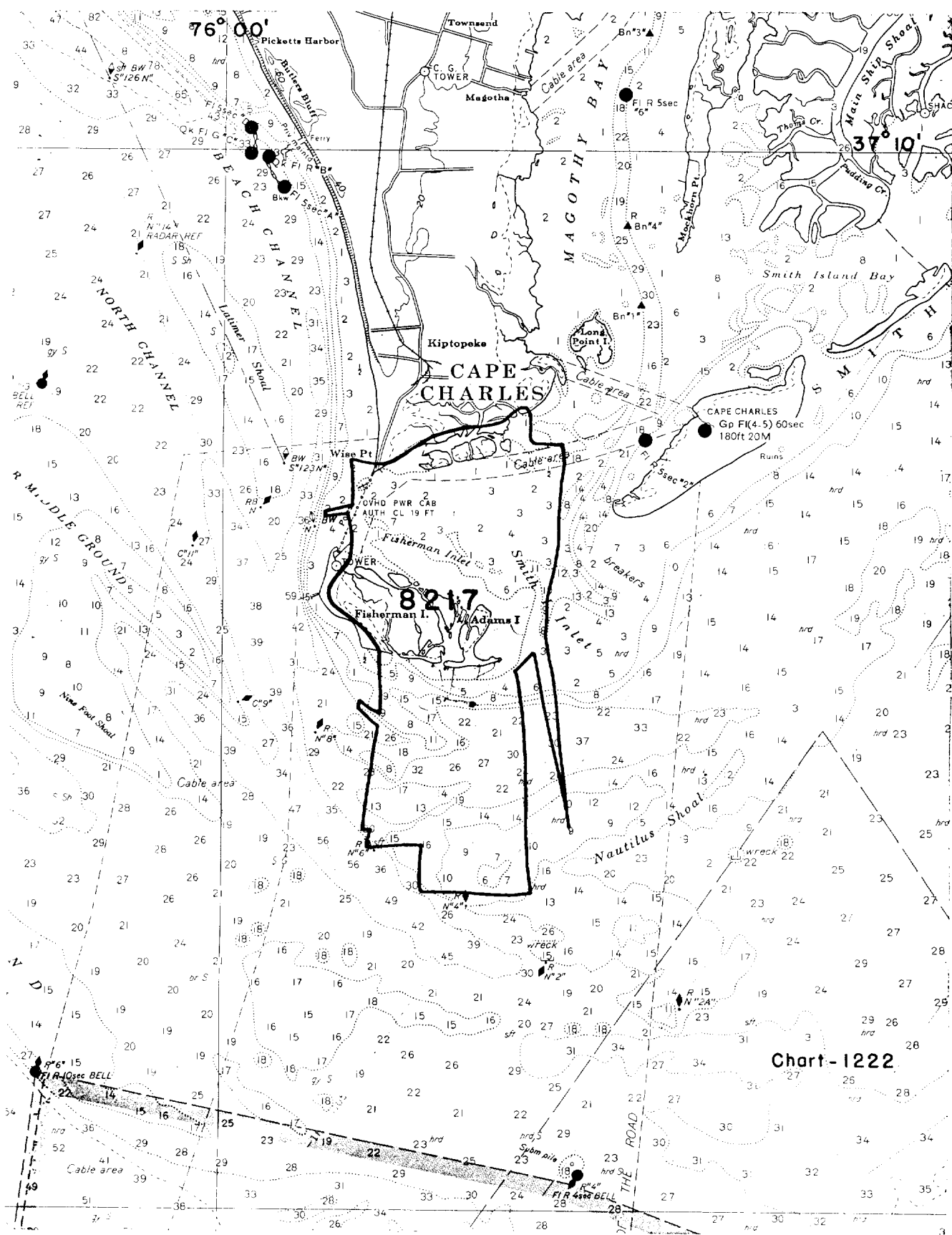
Examined and approved:


Max G. Ricketts
Chief, Nautical Chart Branch


Ernest B. Lewey
Chief, Division of Charts


Lorin F. Woodcock
Chief, Hydrography Branch


Samuel B. Grenell
Chief, Division of Coastal Surveys



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8217

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
11/6/57	78	J. H. Eaton - JSW	Before After Verification and Review Partially Revised one sounding
11-20-57	1222	R. K. de Lander	Part. app'd. Before After Verification and Review.
8-12-59	562	R.E. E	
8-12-59	562 (former layout)	R. E. Elkins	Before After Verification and Review Completely applied
4-3-62	562	R. E. Elkins	Before After Verification and Review Added a few soundings outside of former layout.
4/9/64	563	J. H. Eaton	Fully app'd. Before After Verification and Review
3/4/65	1222	J. H. Eaton	Fully app'd. Before After Verification and Review thru ch't 562
10-2-67	78	M. H. Hall	Fully app'd. Before After Verification and Review thru 1222
	12221	A. Graham	Before After Verification and Review
10-2-85	Prototype		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.