

8280

Diag. Cht. No. 78-3.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. CO-2155 Office No. H-8280

LOCALITY

State Virginia

General locality Chesapeake Bay

Locality West of Tangier Island

1955

CHIEF OF PARTY

D.A.Jones, W.N.Martin & K.S.Ulm.

LIBRARY & ARCHIVES

DATE January 26, 1960

COMM-DC 61300

8280

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-8280

Field No. CO-2155

State Virginia

General locality Chesapeake Bay

Locality West of Tangier Island
~~Great Wicomico River to Smith Point (Offshore area)~~

Scale 1:20,000 Date of survey 15 April - 14 September 1955

Instructions dated 5 February 1953, 25 February 1954, 14 January 1955

Vessel USCGS Ship COWIE

Chief of party Lcdr. D. A. Jones, Cdr. W. N. Martin, Cdr. K. S. Ulm

Surveyed by Officers, Ship COWIE - A.J. Ramey & R.J. Black

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

Fathograms scaled by Personnel, Ship COWIE

Fathograms checked by Personnel, Ship COWIE & 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:

143
1-205

DISCRIPTIVE REPORT
TO ACCOMPANY

HYDROGRAPHIC SURVEY H

FIELD NO. CO-2155

CHESAPEAKE BAY

GREAT WICOMICO RIVER TO
SMITH POINT

USC&GS SHIP COWIE

SCALE 1:20,000

Lcdr. Don A. Jones
Cdr. William N. Martin
Cdr. Kenneth S. Ulm
Commanding

A. Project:

Project CS-1287, Supplemental Instructions dated 5 February 1953, 25 February 1954, and 14 January 1955.

B. Survey Limits and Dates:

This survey is of the offshore area between the Great Wicomico River and Smith Point.

The southern limit is approximately, latitude $37^{\circ} 46' N$, the northern limits latitude $37^{\circ} 52' N$ between longitude $76^{\circ} 02'$ and $76^{\circ} 04'$, and latitude $37^{\circ} 53'$ between longitude $76^{\circ} 04'$ and $76^{\circ} 13'$, the easterly limits longitude $76^{\circ} 02'$ between latitudes $37^{\circ} 46'$ and $37^{\circ} 52'$, and longitude $76^{\circ} 04'$ between latitudes $37^{\circ} 52'$ and $37^{\circ} 53'$, the western limits longitude $76^{\circ} 15'$ between latitudes $37^{\circ} 46'$ and $37^{\circ} 48.5'$, longitude $76^{\circ} 13.3'$ between latitudes $37^{\circ} 48.5'$ and $37^{\circ} 52.8'$. It makes junction with CO-2154 to the south, CO-1654 and CO-2155 to the west, CO-2255 and H-8069 to the north, H-8069 and H-7911 to the east. Sec
R 5
of Review

The survey began on 15 April 1955 and was completed on 14 September 1955.

C. Vessel and Equipment:

The Ship COWIE using an 808 type fathometer was used on this survey. Launch No. 102 using an 808 type fathometer was used only for a couple of days for development on the northwest corner of the sheet. Bottom samples were obtained with the hand lead and the soundings recorded.

D. Tide and Current Stations:

A portable tide gage was installed and maintained throughout the period of the survey at the Great Wicomico River Light House. Tide gage records and soundings are on Eastern Standard Time. A current station was occupied for seventy five hours at latitude $37^{\circ} 52.9' N$, longitude $76^{\circ} 08.6' W$. Current records were kept on Eastern Standard Time.

E. Smooth Sheet:

The smooth sheet ^{WGS} will be constructed and plotted by the Norfolk Processing Office.

F. Control Stations:

Triangulation Stations:

SMITH POINT L.H., 1898-1949

~~Bone 1952~~

Goose 1952

Great Wicomico River Light House 1898

Little Wicomico River Light 1, 1955

Reedville Morris Factory Stack 1938

Reedville Municipal Water Tank, 1955

Sig 1955

Tangler Island Swan Memorial Church Spire 1898

Tangler Sound Light House, 1898

HUGH 3, 1954

Topographic Stations - CO-2155 - Manuscript T-11051

Hydrographic Name

SMITH

Bone

Goose

Wico

Jet

Stak

Aft

Sig

Swan

Tang

HUGH

Bar

Ray

Tub

Topographic Stations - CO-2155 - Manuscript T-11053

Few

Glo

Signals Located by Sextant:

Duck - from Δ BONE-1952 Vol. 1, pg. 14

FORE - from Δ BULLEYE-1949 Vol. 1, pg. 14

G. Shoreline and Topography:

There was no shoreline transferred to the boat sheet. The topographic signals were scaled from the manuscripts and plotted on the boat sheet.

H. Soundings:

Depths were taken with the 808 type fathometer. Bar checks were taken daily, weather permitting. These bar checks provided the basis for the velocity corrections. For a detailed discussion of these corrections see paragraph Z of this report.

I. Control of Hydrography:

Sounding lines were controlled by three point fixes using natural objects or signals ashore. During the survey, jumps of from 50 to 100 meters in the sounding lines were noted, and the Washington Office was consulted. As a result, instructions dated 25 July 1955 were issued to provide additional horizontal control for a replot of the shoreline and signal location. The necessary control was established and at the end of the field season, photographic records and control data was forwarded to the Washington Office for resolution.

Jumps in
sounding lines
eliminated
during plotting
of smooth
sheet.

Due to limited visibility, identification of shore signals was often difficult, and it was not possible in many instances to obtain the strongest fix available on the boat sheet.

The weak fixes used, and distortion of the boat sheet, may account for some of the apparent jumps in the sounding lines. *see addendum notes*

J. Adequacy of Survey:

This survey is considered complete, adequate for charting purposes, and to supersede all prior surveys. Junctions with adjoining surveys are satisfactory, no holidays exist, and depth curves can be adequately drawn at the junctions. The area in the vicinity of Smith Point Light House is more closely covered by CO-1255 *H-8277 (1955)* *see TP6 Review*

K. Crosslines:

In general the crosslines are in good agreement, the percentage is estimated at eight to ten percent. In some instances there are discrepancies of from 1 to 3 feet. It is believed that these discrepancies will be resolved on the smooth sheet. *Revision to initial and for check corrections on some lines improved crossings* *see TP 4 Review*

L-M. Comparison with Prior Surveys and Charts:

A comparison with charts 534 (2/9/53), 568 (8/23/54), 1223 (10/25/54), and 1224 (5/10/54), has been made for the area covered by this survey with special attention being given to the shoal soundings etc., covered by the Preliminary Reviews. These were marked for special attention on the boat sheet, and are listed as follows: *see TP6 Review*

Preliminary Review, Charts 534, 1222, and 1223:

Item 5 - The area about the wreck charted in latitude $37^{\circ} 48.25'N$, longitude $76^{\circ} 13.55'W$, was developed to some extent without finding any indication, 33-34 feet was the least depth found. The development was not sufficiently extensive to prove or disprove its existence in the area. It is recommended that this area be wire dragged. *pos. 64 5-6 mi for 33 ft.* *see TP 7 Review*

Item 6 - The 18 foot sounding charted in latitude $37^{\circ} 49.90'N$, longitude $76^{\circ} 13.12'W$ was not verified. The area was fairly closely developed and the least depth found was 33 feet at MLW. It is recommended that this sounding be deleted from the chart. (This sounding falls within the fish trap area.) *Delete 18 ft. see TP 7 Review*

Item 2 - The area about the wreck reported covered by 47 feet of water, charted in latitude $37^{\circ} 51.70'N$, longitude $76^{\circ} 09.40'W$ was developed to some extent without finding any indication. Nothing less than 98 feet at MLW was found. There are fairly heavy circular currents in this vicinity, and it is quite possible the wreck has broken up or has been washed into the canyon about a quarter of a mile to the westward. It is recommended that this area be wire dragged. *see TP 7 Review Retain WK*

→ See fathogram, 46-470 (Cowie) for fathometer sounding of 62 feet. There were no other indications of the wreck.

Item 3 - The area about the wreck of the Steamer Dorothy, reported covered by 70 feet of water, charted in latitude $37^{\circ} 51.48'N$, longitude $76^{\circ} 09.75'W$, was not developed extensively, and no indications of it were found on the regular system of sounding lines. The charted position falls in a canyon with depths over a hundred feet. There are fairly heavy currents in the vicinity, and it is quite possible that the wreck has been broken up. It is recommended the area be wire dragged. *see TP 7 Review Retain WK*

Item 4 - The area about the remains of the wreck of the Steamer City of Annapolis reported covered by 40 feet of water, charted in latitude $37^{\circ} 51.20'N$, longitude $76^{\circ} 10.05'W$, was developed to some extent, and no indication found. General depths were from 60 to 70 feet in the vicinity. It is possible as there are fairly heavy currents in the area, that the wreckage may have been swept into the canyon about 0.15 nautical mile to the eastward. It is recommended that the area be wire dragged.

See
#7
REVIEW
Retain
V/K.

Item 10 - The charted 40 foot sounding in latitude $37^{\circ} 47.22'N$, longitude $76^{\circ} 10.05'W$, and the charted 48 foot sounding 600 meters to the northwest were fairly closely developed, and no indications were found. It is recommended that these soundings be deleted from the chart.

Least depth of 70' found.
Least depth of 90' found.

The charted 22 foot sounding in latitude $37^{\circ} 51.78'N$, longitude $76^{\circ} 12.70'W$ was not verified although fairly closely developed. As this sounding falls in the fish trap area, it is possible that it is a small obstruction, so it is recommended that the sounding be retained on the chart until disproved by wire drag. General depths in the vicinity are 30 to 32 feet at MLW.

Preliminary Review, Charts 557, 1223, and 1224

Item 2

(a). The charted 28 foot sounding in latitude $37^{\circ} 50.0'N$, longitude $76^{\circ} 06.1'W$ was not verified. The shoalest sounding in the vicinity was 30 feet in general depths of 31 to 35 feet. It is recommended that the sounding be retained on the chart as there is insufficient development to disprove the sounding.

Forward
to H-8280

(b). The charted 28 foot sounding in latitude $37^{\circ} 50.6'N$, longitude $76^{\circ} 05.6'W$ was not verified. General depths of 34 to 36 feet were found in the vicinity. It is recommended that this sounding be deleted from the chart.

delete.
see P6a.2
REVIEW

(c). The charted 28 foot sounding in latitude $37^{\circ} 50.5'N$, longitude $76^{\circ} 06.9'W$ was not verified. General depths of 36 to 39 feet were found in the area. It is recommended that this sounding be deleted from the chart.

delete.
see P6a.1
REVIEW

(d). The charted sounding of 28 feet in latitude $37^{\circ} 51.6'N$, longitude $76^{\circ} 05.6'W$ was not verified. This area was fairly closely developed and several soundings of 29 feet obtained. It is recommended that the 28 foot sounding be retained on the chart.

Forward
to H-8280

(e). The charted sounding of 28 feet in latitude $37^{\circ} 52.9'N$, longitude $76^{\circ} 06.4'W$ was not verified. The shoalest sounding obtained was 32 feet. This area falls on the junction with sheet H-8062 and it was planned to develop this area more closely when making the overlap during the 1956 field season. It is recommended that the 28 foot sounding be retained on the chart until the area is more fully developed.

delete.
see P6b3
Review

sounding specifically investigated
on H-8435

(f). The charted 28 foot sounding in latitude $37^{\circ} 52.9'N$, longitude $76^{\circ} 07.8'W$ was not verified. General depths in the immediate vicinity were from 44 to 56 feet. This area falls on the junction with sheet H-8069, and it was planned to develop the area more closely when making the overlap during the 1956 field season. It is recommended that the 28 foot sounding be retained on the chart until the area is more fully developed.

delete.
see P6b2
Review
H-8435

Area developed on H-8435

In general, a comparison with the charts shows fairly good agreement between the old and new surveys, maximum discrepancies being about 1 to 6 feet. There seems to be a tendency for shoaling of the water on the eastern side of the sheet, and deepening of the water on the westward side of the sheet. It appears from the boat sheet, that there will be minor changes in the depth curves.

See P7
Review

N. Dangers and Shoals:

The principal dangers and shoals in the area are charted. There will be minor changes in the delineation of some of the shoals. There are some fish traps in the area shown on the chart as fish trap areas. No traps were noted outside the fish trap area. There were several camera or observation platforms in the prohibited area around the target wreck.

O. Coast Pilot Information:

This subject will be covered in a separate report submitted to the Washington Office.

P. Aids to Navigation:

See N.P.O. List of Floating Aids ✓

Form 567, Nonfloating Aids to Navigation, is being prepared as a separate report.

Floating Aids to Navigation, within the limits of this survey are as follows:

1. Tangier Island Shoal Southwest Point, Red Nun Buoy No. 12 in latitude 37° 47.10'⁰⁸N, longitude 76° 05.74'W, in 36 feet of water. 137KA ✓
2. Great Wicomico River Entrance lighted Bell Buoy "12TL" in latitude 37° 46.48'³⁰N, longitude 76° 10.10'⁰⁷W in approximately 46 feet of water. pos. 88M ✓
3. Spar Buoy "12BW" in latitude 37° 46.97'N, longitude 76° 12.11'W, in 49 feet of water. pos. 14EA ✓
4. Spar Buoy "12CW" in latitude 37° 48.40'N, longitude 76° 11.99'⁹⁸W, in 49 feet of water. pos. 82DA ✓
5. Spar Buoy "13W" in latitude 37° 50.85'N, longitude 76° 11.08'W, in 48 feet of water. pos. 69a ✓
6. Dameron Marsh Shoal Lighted Bell Buoy "1" in latitude 37° 47.07'⁵N, longitude 76° 14.59'⁸W in 22 feet of water. pos. 1EA ✓

Q. Landmarks for Charts:

The Reedville Municipal Water Tank (Aft), located by triangulation in 1955 is recommended as a landmark. $\phi 37^{\circ} 50.4' \lambda 76^{\circ} 16.65'$ ✓

R. Geographic Names:

Geographic Names as shown on the charts of this area are adequate and no additional names are recommended. *gmb*

U-Y. Miscellaneous:

Fathometer No. 120S was used throughout the survey by the Ship COWIE except for one day when fathometer No. 118S was used. Launch No. 102 worked two days on this survey using fathometer No. 1114S. The velocity corrections for fathometers No. 118S and No. 1114S were obtained from the bar checks taken on the respective days. As fathometer No. 120S was used for a period of five months, fathometer corrections obtained from daily bar checks were plotted on a daily basis and three periods of time was determined where appreciable changes in the velocity corrections occurred. After the periods of time was determined, bar checks were averaged for their respective periods to determine the velocity corrections. ✓

A table of the fathometer corrections will be found in the appendix of this report. ✓

Z. Tabulation of Applicable Data:

A list of signals is attached to the inside cover of Volume 1 of the sounding records. ✓

A tabulation of other data is included in the Appendix as a part of this report. ✓

Respectfully submitted,

Kenneth S. Ulm
Kenneth S. Ulm
Commander, USCGS
Commanding Ship COWIE

Appendix
Tidal Note
Statistics
Fathometer Corrections

TIDAL NOTE

A portable automatic tide gage at Great Wicomico River Light House, latitude $37^{\circ} 48.25'N$, longitude $76^{\circ} 16.08'W$ was used for obtaining tide reducers for the entire survey with the exception of 5 to 8 August, when the gage was inoperative, during this period, tides from the portable automatic tide gage at Sunnybank, Little Wicomico River, latitude $37^{\circ} 53.2'N$, longitude $76^{\circ} 16.1'W$ were reduced to the Great Wicomico River Light House gage. The following reducers from Great Wicomico River Light House gage to Sunnybank, Little Wicomico River gage were supplied by the Division of Tides and Currents as follows:

To Sunnybank, time = +2 hr. 35 min. ratio of range 0.7

No time or height corrections were applied to the observed tides at Great Wicomico River Light House gage. The hourly heights were scaled from the marigrams and the tide curves plotted by personnel of the Ship COWIE.

STATISTICS - SHIP COWIE:

<u>Vol. No.</u>	<u>Date</u>	<u>DAY LETTER</u>	<u>NO. of Pos.</u>	<u>Stat. Miles</u>
I	4/15	A	13	4.7
I	4/20	B	11	4.4
I	4/25	C	31	12.0
I	5/2	D	75	28.8
I	5/3	E	95	34.4
II	5/3	E	44	15.4
II	5/4	F	86	32.3
II	5/5	G	114	41.0
III	5/5	G	87	32.3
III	5/6	H	16	5.0
III	5/9	J	154	43.9
IV	5/10	K	224	65.0
IV	5/11	L	68	20.3
V	5/11	L	121	33.5
V	5/12	M	167	51.5
VI	5/12	M	68	20.2
VI	5/13	N	32	4.4
VI	5/16	P	170	51.3
VII	5/17	Q	8	2.8
VII	5/18	R	201	61.0
VIII	5/19	S	187	55.0
VIII	5/20	T	27	10.2
VIII	5/23	U	49	14.8
IX	5/23	U	77	31.5
IX	5/24	V	195	57.8
X	5/24	V	116	32.5
X	5/26	W	165	45.7
XI	5/26	W	166	48.0
XI	5/27	X	41	10.0
XI	6/1	Y	61	16.1
XII	6/1	Y	275	78.9
XIII	6/2	Z	261	64.1
XIV	6/3	AA	10	2.6
XIV	6/7	BA	134	37.5
XIV	6/13	CA	86	22.8
XV	6/13	CA	7	1.5
XV	6/14	DA	109	25.5
XV	6/15	EA	161	34.6
XVI	6/15	EA	42	11.2
XVI	6/17	FA	9	2.1
XVI	6/20	GA	118	32.5
XVI	6/21	HA	8	1.4
XVI	6/24	JA	28	5.4
XVII	6/29	KA	225	53.2
XVIII	7/1	LA	28	6.1
XVIII	7/5	MA	77	15.8
XVIII	7/8	NA	28	5.7
XVIII	7/11	PA	26	6.1

<u>Vol. No.</u>	<u>Date</u>	<u>DAY LETTER</u>	<u>NO. of POS.</u>	<u>Stat. Miles</u>
XVIII	7/13	QA	18	3.4
XIX	7/25	RA	128	30.1
XIX	8/1	SA	169	46.6
XX	8/2	TA	159	42.9
XX	8/5	UA	30	7.6
XX	8/26	VA	44	10.3
XXI	9/8	WA	62	13.8
XXI	9/9	XA	62	12.6
XXI	9/13	YA	146	29.4
XXII	9/13	YA	42	8.3
XXII	9/14	ZA	98	21.2
Totals			<u>5,459</u>	<u>1,519.0</u>

LAUNCH NO. 102:

XXIII	8/3	a	69	11.7
XXIII	8/4	b	16	3.7
Totals			<u>85</u>	<u>15.4</u>

Ship COWIE			5,459	1,519.0
Launch No. 102			85	15.4
Grand Totals			<u>5,544</u>	<u>1,534.4</u>

Area: 83.62 Square Statute Miles

FATHOMETER CORRECTIONS

SHEET 2155 - FATHOMETER NO. 120S

4 APRIL to 7 JUNE (incl.) Ship COWIE

4 April to 7 June (incl.)

A Scale

0	11	+ 0.6
11.5	17	+ 0.4
17.5	24.5	+ 0.2
25	55	0.0

B Scale

35	67	-1.0
67.5	90	-1.5

C Scale

70	105	-1.5
105.5	113.5	-2.0
114	125	-2.5

D Scale

105	125	-1.0
125.5	145	-2.0
145.5	165	-3.0

Corr. for G day -
5 May 1955

A scale -

0 to 18.0 = 0.0

19.0 to 30.0 = -0.2

31.0 to End = -0.4

B scale

40.0 to 42.0 = -1.4

43.0 to 54.0 = -1.6

55.0 to End = -1.8

C scale

70.0 to 78.0 = -1.8

79.0 to End = -2.0

13 June to 1 July (incl.)

A Scale

0	16	+0.2
16.5	22.5	0.0
23	27.5	-0.2
28	31.5	-0.4
32	35	-0.6
35.5	38.5	-0.8
39	41.5	-1.0
42	45	-1.2
45.5	48.5	-1.4
49	52	-1.6
52.5	55	-1.8

B Scale

35	39.5	0.0
40	45.5	-0.5
46	56	-1.0
56.5	73	-1.5
73.5	79.5	-2.0
80	84	-2.5
84.5	90	-3.0

C Scale

70	76.5	-0.5
77	82.5	-1.0
83	89.5	-1.5
90	104.5	-2.0
105	109.5	-2.5
110	114.5	-3.0

July 5
5 July to 21 Sept. (incl.)

A Scale

0	27.5	+ 0.6
28	55	+ 0.4

B Scale

35	67	0.0
67.5	81	-0.5
81.5	90	0.0

C Scale

70	75	-1.0
75.5	105	-0.5
105.5	115	0.0
115.5	125	+ 0.5

D Scale

105	106.5	-1.0
107	121.5	0.0
122	136.5	+ 1.0
137	151	+ 2.0
151.5	165	+ 3.0

FATHOMETER CORRECTIONS
SHEET 2155 - LAUNCH NO. 102

Fathometer No. 114S 3 August

A Scale

0	23.5	+0.0
24	29.5	+0.2
30	33	+0.4
33.5	35.5	+0.6
36	40	+0.8
40.5	55	+1.0

B Scale

35	50	+2.4
50.5	57.5	+2.2
58	63	+2.0
63.5	68	+1.8
68.5	72.5	+1.6
73	77.5	+1.4
78	81.5	+1.2

Fathometer No. 114S 4 August

A Scale

0	55	0.0
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FATHOMETER CORRECTIONS
SHEET 2155 - SHIP COWIE

Fathometer No. 118S

A Scale

0	17	+1.0
17.5	36.5	+0.8
37	42	+0.6
42.5	47.5	+0.2
53	55	0.0

B Scale

35	38	+0.5
38.5	76	+1.0
76.5	90	+1.5

C Scale

70	77.5	+1.5
78	125	+2.0

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON 25

AND REFER TO NO. 73-mkl

25. April 1956

To: Commanding Officer
C&GS Ship COWIE
and
Norfolk District Officer
Coast and Geodetic Survey
418 Post Office Building
Norfolk 10, Virginia

Subject: Photogrammetric data, west shore, Chesapeake Bay
Project 6101 (1287)

Last season the Commanding Officer of C&GS Ship COWIE reported jumps in sounding lines in the vicinity of Smith Point, south entrance to the Potomac River. The hydrographic party was unable to determine the cause of the jumps but suspected sub-standard photogrammetric work.

The photogrammetric plot was originally laid on a minimum of horizontal control. The hydrographic party established and photo-identified additional horizontal control to test and strengthen the radial plot. The plot was recently relaid using the new control, and the original plot was found to be of standard accuracy. None of the photo-hydro signals could be re-positioned.

Since the hydrographic party experienced difficulty with the areas south of the Potomac River entrance, it was reasoned that the area north of the entrance might also give trouble. That area was the weakest plot of the entire project and consisted of but one single strip of nine lens photographs. The area was re-photographed last fall, field inspected during the winter, and a well controlled radial plot has now been completed. The original plot was found to be completely satisfactory and the shoreline has been revised to the date of the 1955 aerial photographs.

Photogrammetric data previously furnished to both the Norfolk Processing Office and to the hydrographic party were forwarded to Washington for replotting these areas. The question now arises as to whether or not the hydrographic party will require the return of any part of the data for visual fixes this season. New blue line tracings showing the shoreline changes north of the Potomac River entrance are on order for the Norfolk Processing Office. If that activity requires additional photogrammetric data south of the entrance, please inform.

Map indexes are enclosed so that data required may be selected by appropriate shoreline survey numbers.

Acting Director

Poor Copy

NORFOLK PROCESSING OFFICE
FLOATING AIDS TO NAVIGATION
H-8280

<u>BUOY</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
Tangier I. Shoal S.W. Point Buoy 12	37-47.08	76-05.74	36'	7A 137KA	4/23/55 6/29/55 ✓
Dameron Marsh Shoal Lighted Bell Buoy 1	37-47.05	76-14.58	22'	1EA	6/15/55 ✓
Tangier I. Shoal Lump L'td. Bell Buoy 12TL	37-46.4850	76-10.1008	44'	98M	5/12/55 ✓
S 12BW	37-46.97	76-12.11	49'	14EA	6/15/55 ✓
S 12CW	37-48.40	76-11.99	49'	82DA	6/14/55 ✓
S 13W	37-50.83	76-11.10	46'	69A	8/ 3/55 ✓

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8280 (Co-2155)

GENERAL

A considerable amount of difficulty was experienced during the smooth plot of this survey. As indicated in paragraph "I", numerous weak fixes were used near the center of the sheet. This, combined with the distance from control stations and any normal distortion in the smooth sheet, has undoubtedly resulted in some position displacement. *A number of fixes were incorrectly plotted by Processing Office. These fixes were replotted during verification.*

There are numerous crossing discrepancies of from 1 to 2 feet. In addition to position displacement, this disagreement may be attributed to the poor quality of several of the fathograms and the irregular nature of much of the bottom in this area. Much check scanning was required to bring the soundings into better agreement, and in several instances complete days were rescanned. *Incorrectly plotted to fixes and wrong marks were raised.* When this amount of work was needed, the template method was used by verifier. *Final soundings were recorded in the "Office Column". brought crossings into agreement.*

Bar check corrections were recompiled for "G" day by this Office. The new corrections were recorded in the sounding volume and in the descriptive report.

DISCREPANCIES

Soundings on BA day averaged one to two feet deeper than surrounding hydrography. *Fathograms rescanned and Sdgs now in general agreement.*

Soundings between positions 127 and 138P were not penciled on the smooth sheet as they averaged three to five feet deeper than surrounding hydrography. *Cause of discrepancy could not be ascertained by verifier. Sdgs not inked on S/s.*

Positions 104 thru 110EA were not smooth plotted as the positioning appeared doubtful. *Not smooth plotted. Area adequately developed on Y day.*

Soundings between positions 20 and 33N were not penciled. They averaged four to seven feet deeper than surrounding hydrography. ** same*

Positions 49 thru 58TA were not smooth plotted as time and course did not agree with recorded data. *These positions were plotted on overlay by verifier. Sdgs on 49-58TA are in agreement with adjacent hydrography.*
(continued)

DISCREPANCIES (Con't.)

In some instances, sufficient data was lacking to accurately plot and symbolize fish traps.

Four uncharted platforms were located in the restricted area near triangulation station BULLEYE. The platform falling in the vicinity of Lat. 37-47.55 and Long. 76-04.25 was plotted on estimated distances from positions ~~25, 35 and 89K~~. Detached position 73KA, (with no check angle), which is assumed to be locating the same platform, places it about 80 meters S.W. of this position. Position 73KA was not smooth plotted. *Located by pos. 73KA and 89K - Smooth plotted.*

*See 77
item
7 of
review*

Norfolk, Va.
19 Jan. 1960

Respectfully submitted,

Hugh L. Proffitt

Hugh L. Proffitt
Cartographer

GEOGRAPHIC NAMES
Survey No. H-8280

Name on Survey	<div>On Chart No.</div> <div>On previous survey No.</div> <div>On U. S. quadrangle Maps</div> <div>From local information</div> <div>On local Maps</div> <div>P. O. Guide or Map</div> <div>Rand McNally Atlas</div> <div>U. S. Light List</div> <div>BSN</div>									
	A	B	C	D	E	F	G	H	K	
GREAT WICOMICO R (TITLE)									X	1
SMITH POINT (TITLE)										2
										3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
Tangier Island										18
Goose Island										19
Rum Pt										20
Ingram Bay										21
Bull Neck										22
Chesapeake Beach										23
										24
										25
										26
										27

George M. Ball
Geographic Names
2 February 1960

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. .8280...

Records accompanying survey: Smooth sheets ...1...;
 boat sheets ...1...; sounding vols. 23...; wire drag vols.;
 Descriptive Reports ...1...; graphic recorder envelopes .25...;
 special reports, etc.

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

Number of positions on sheet	5544
Number of positions checked	268
Number of positions revised <i>see verifiers notes</i>	39
Number of soundings revised (refers to depth only) <i>see verifiers notes</i>	570
Number of soundings erroneously spaced	✓
Number of signals erroneously plotted or transferred	✓
Topographic details	Time 10
Junctions	Time 120
Verification of soundings from graphic record	Time 50
Special adjustments <i>see verifiers notes</i>	Time 60

Verification by *John T. Callahan* Total time 780 Date *June 15, 61*

Reviewed by *W. Geskind* Time 100 Date *July 8, 1961*

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~XXXXXX Division of Coastal Surveys XXXXXX~~

15 Aug. 1960

Division of Charts: R. H. Carstens

Plane of reference approved in
23 volumes of sounding records for

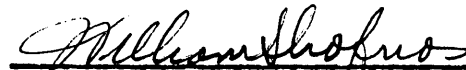
HYDROGRAPHIC SHEET 8280

Locality Chesapeake Bay, Virginia

Chief of Party: D.A. Jones, W.N. Martin & K.S. Ulm in 1955
Plane of reference is mean low water, reading
1.9 ft. on tide staff at Great Wicomico River L.H.
14.2 ft. below B. M. 1 (1898)

Height of mean high water above plane of reference is 1.1 feet.

Condition of records satisfactory except as noted below:



Chief, Tides Branch
~~Chief, Division of Tides and Currents~~

OFFICE OF CARTOGRAPHY
REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8280

FIELD NO. CO. 2155

Virginia, Chesapeake Bay, Vicinity of Great Wicomico River

SURVEYED: April - September 1955

SCALE: 1:20,000

PROJECT NO. CS-1287

SOUNDINGS: Leadline
808 Depth Recorder

CONTROL: Sextant fixes
on shore signals

Chief of Party ----- W. N. Martin; K. S. Ulm; D. A. Jones
Surveyed by ----- A. J. Ramey; R. J. Black
Protracted by ----- W. L. Jonns
Soundings plotted by ----- W. L. Jonns
Verified and inked by ----- J. T. Gallahan
Reviewed by ----- I. M. Zeskind
Inspected by ----- R. H. Carstens

DATE: 7-18-61

1. Description of the Area

This is an offshore survey of that portion of the Chesapeake Bay which lies between Tangier Island and the entrance to Great Wicomico River. In depths less than 36 ft. the bottom is characterized by numerous sand ridges. The main Chesapeake Bay channel crosses the survey. On the east an extensive shoal extends in a southwesterly direction from the south end of Tangier Island. This shoal varies in depth from 10-18 ft. and rises from depths as great as 38 ft.

2. Control and Shoreline

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

The shoreline originates with reviewed photogrammetric surveys T-8162 and T-8164 of 1942, T-11049, T-11051, and T-11053 of 1952-54. Subsequent revisions to the high-water line are shown on the inshore hydrographic surveys.

3. Hydrography

Depths at crossings are in adequate agreement. The usual depth curves were adequately delineated. The 36-ft. curve was drawn to better define the bottom configuration. The least depths and bottom configuration on the shoals were adequately developed.

4. Condition of Survey

a. The sounding records and Descriptive Report are complete and comprehensive, except that the signs of initial corrections were incorrect in the sounding volumes on RA, SA, and TA days. This error necessitated the changing of all penciled soundings on the smooth sheet on these days by the verifier.

b. The smooth plotting was in general, accurately done. In some areas weak fixes necessitated careful checking and some adjustment of positions.

5. Junctions

Adequate junctions were effected with the following surveys:

H-7944 (1951) on the east
H-8069 (1951) on the northeast
H-8435 (1956) on the north
H-8277 (1955) on the northwest
H-8190 (1954-55) on the west
H-8189 (1954) on the southwest
H-8191 (1954-55) on the south
H-8407 (1956-57) on the south

6. Comparison with Prior Surveys

a. H-252 (1849-51), 1:40,000
H-1441a (1879), 1:40,000

These small-scale reconnaissance surveys cover the area of the present survey. A comparison between the prior and present surveys shows the bottom in general to have shoaled 1-6 ft. However, in several areas greater shoaling of the bottom is noted, as for example in lat. $37^{\circ}48.14'$, Long. $76^{\circ}09.15'$, where a prior depth of 40 ft. falls in present depths of 30 ft. The bottom has also deepened in several areas, as for example, in lat. $37^{\circ}46.73'$, long. $76^{\circ}04.81'$, where a prior depth of 17 ft. falls in present depths of 27 ft. These differences in depths are attributed to the depositing of sediment from the adjacent tributaries, the eroding of shoreline, the action of the current on the

bottom, and the different methods of obtaining soundings - leadline on the prior surveys and depth recorder on the present survey. However, many depths on H-252 are in marked disagreement with those on the present survey. These prior depths fall on the present survey in areas which are adequately developed to discredit the existence of the prior depths. The following is a list of such prior soundings which have been charted and should be deleted from the chart:

<u>H-252 (charted)</u> <u>ft.</u>	<u>Location</u>		<u>Depths on</u> <u>pres. survey-ft.</u>
	<u>Latitude</u>	<u>Longitude</u>	
40	37°47.21'	76°10.05'	70-78
48	47.55'	10.18'	86
89	46.70'	10.70'	108-109
68	46.90'	10.52'	100-101
51	47.12'	11.83'	60-63
71	47.52'	11.83'	55-56
78	47.85'	11.10'	94-96
63	47.10'	11.42'	85-89
79	47.88'	10.63'	106-109
69	48.62'	10.90'	90-91
99	48.98'	10.97'	80
35	49.80'	11.92'	45-46
66	49.60'	09.76'	75-79
78	49.08'	10.14'	87-92
39	48.97'	11.92'	48-49
37	51.75'	07.72'	49-50

The above differences in depths between the prior and present surveys are due to the shifting of the bottom and to the less accurate data on the small scale prior survey.

Attention is also directed to the following discrepancies between the prior and present depths:

1. The 28-ft. sounding (charted) in lat. 37°50.57', long. 76°06.95', from H-252 (1849-51) falls in present depths of 37-40 ft. The sounding is believed to be recorded 1 fm. too shoal and should actually fall about 200 meters to the eastward where comparable depths are found on the present survey. The sounding should be deleted from the chart. (see page 4, paragraph L-M, item 2c.)

2. The 28-ft sounding (charted) in lat. $37^{\circ}50.58'$, long. $76^{\circ}05.68'$, from H-252 (1849-51) falls in prior depths of 34 ft. The sounding is believed to be recorded 1 fm. too shoal and should actually be 34 ft. Present depths of 33 to 34 ft. discredit the 28. The sounding should be deleted from the chart. (See page 4, paragraph L-M, item 2b.)

3. The 22-ft. sounding charted in lat. $37^{\circ}51.72'$, long. $76^{\circ}12.58'$, from H-252 (1849-51) is discredited by present depths of 29-31 ft. The sounding is believed to be recorded 1 fm. too shoal and should actually be 28 ft. The charted 22-ft sounding should be deleted from the chart.

Two soundings have been carried forward from H-252 to the present survey. With the addition of these soundings, the present survey is adequate to supersede the prior surveys within the common area.

- b. H-1319a (1860) 1:128,000
H-1319b (1877) 1:80,000

These are early charts of Chesapeake Bay on which the area covered by the present survey falls. These charts show the boundaries between Maryland and Virginia as determined by the charter of Lord Baltimore in 1632, the compact of 1785, and that established by arbitration in 1877.

- c. H-2500 (1900-01) 1:60,000
H-3313 (1911) 1:40,000
H-3361 (1911) 1:40,000
H-4918 (1929) 1:40,000

These surveys together cover the area of the present survey. A comparison between the prior and present surveys reveals only minor differences of 2-4 ft. in depths. The present depths generally are shoaler. These differences in depths may be attributed to causes similar to those given in paragraph "a" above.

A number of bottom characteristics have been carried forward to the present survey from the prior surveys. With the addition of these bottom characteristics, the present survey is adequate to supersede the prior surveys within the common area.

7. Comparison with Chart 534 (Latest print date 8-15-60)
568 (Latest print date 4-17-61)
1223 (Latest print date 3-20-61)

A. Hydrography

The charted hydrography originates principally with the previously discussed prior surveys, supplemented by critical depths from the boat sheet (Bp 53053) of the present survey. Attention is specifically directed to the following discrepancies between the charted data and the present survey:

1. The "wreck PD" charted in lat. $37^{\circ}48.27'$, long $76^{\circ}13.55'$, from HON to M 36 (1949) falls in present depths of 33-34 ft. The area on the present survey is inadequately developed to confirm or disprove the existence of the wreck. The wreck symbol should be retained on the chart until the existence of the wreck is either confirmed or disproved by wire drag. (See page 3, par. L and M, item 5 of the Descriptive Report)
2. The sounding "40 Wreck" charted in lat. $37^{\circ}51.30'$, long. $76^{\circ}10.32'$, from HON to M 43 (1928) was not found during the present survey. The charted 40-ft. sounding falls in an area not closely developed on the present survey in depths of 64-65 ft. The sounding "40-ft. Wreck" should be retained on the chart until its existence can either be confirmed or disproved by wire drag. (See page 3, par. L and M, item 4 of the Descriptive Report.)
3. The "47 Wreck" charted in lat. $37^{\circ}51.70'$, long. $76^{\circ}09.40'$, from HON to M 15 and 23 (1942) was found on the present survey to fall about 100 meters northward of its charted position and a depth of 62 ft. was obtained on the wreck. The area on the present survey is not considered to be adequately developed to show the least depth over the wreck. The "47 Wreck", therefore, should be retained on the chart at the location of the 62-ft. sounding shown on the present survey until the wreck may be searched for by wire drag. (See page 3, par. L and M, item 2 of the Descriptive Report.)

4. The sounding "70 Wreck" charted in lat. $37^{\circ}51.48'$, long. $76^{\circ}09.60'$, from HON to M 43 (1928) was not found during the present survey. The charted 70-ft. sounding falls in an inadequately developed area on the present survey in depths of 87-103 ft. The sounding "70 Wreck" should be retained on the chart until the wreck may be searched for by wire drag. (See page 3, par. L and M, item 3 of the Descriptive Report.)

5. The 18-ft sounding charted in lat. $37^{\circ}49.90'$, long. $76^{\circ}13.12'$, from a source which could not be ascertained, falls in present depths of 32 ft. The charted sounding is discredited by hydrography in this area on the present survey and should be deleted from the chart. (See page 3, par. L and M, item 6 of the Descriptive Report.)

6. The Navy maintained markers and targets charted east of long. $76^{\circ}03.0'$ between lat. $37^{\circ}48.0'$ and lat. $37^{\circ}52.0'$, are not shown on the present survey. These objects originate with HON to M 24 (1958) and were charted subsequent to the present survey.

7. The Platform charted in lat. $37^{\circ}47.55'$, long $76^{\circ}04.25'$, originates with the present survey prior to verification. Its location was revised about 150 meters southwestward during verification and review of the present survey. The charted position of the platform should be revised to agree with its smooth sheet location.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation


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

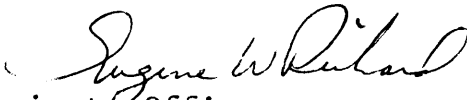
8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.


9. Field Work Recommended

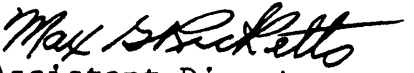
The survey is considered to be a basic survey. However, when wire drag equipment is available in the vicinity of the wrecks mentioned in paragraph 7A above, the status of the wrecks should be determined by wire dragging.


Chief,
Nautical Chart Division


Projects Officer,
Operations Division

Examined and Approved:


Assistant Director,
Office of Cartography


Assistant Director,
Office of Oceanography

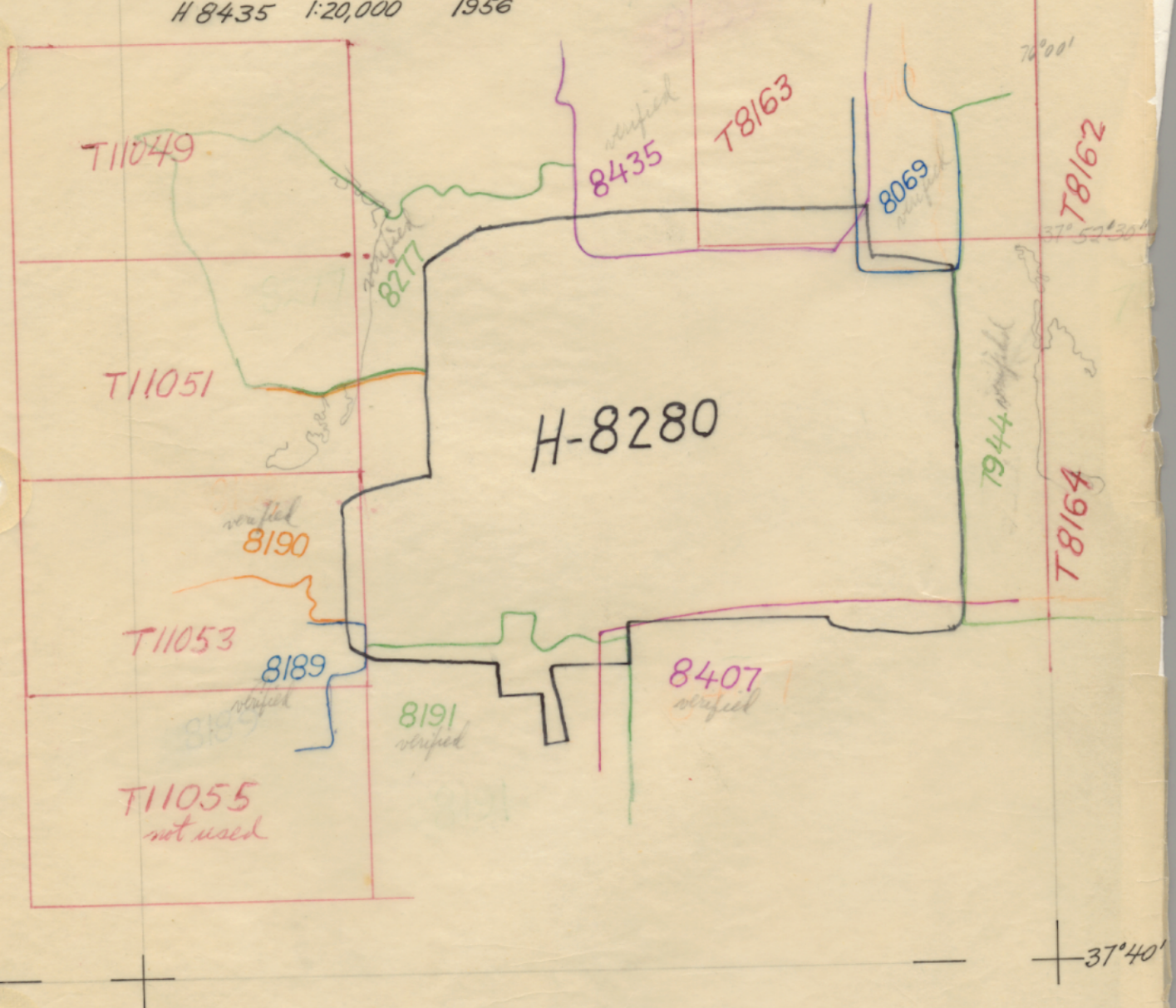
Please note that the
comments by the Processing
office are nullified by the
verifier due to incorrect
plating by the smooth
platter. See Norfolk
Processing office addendum
note.

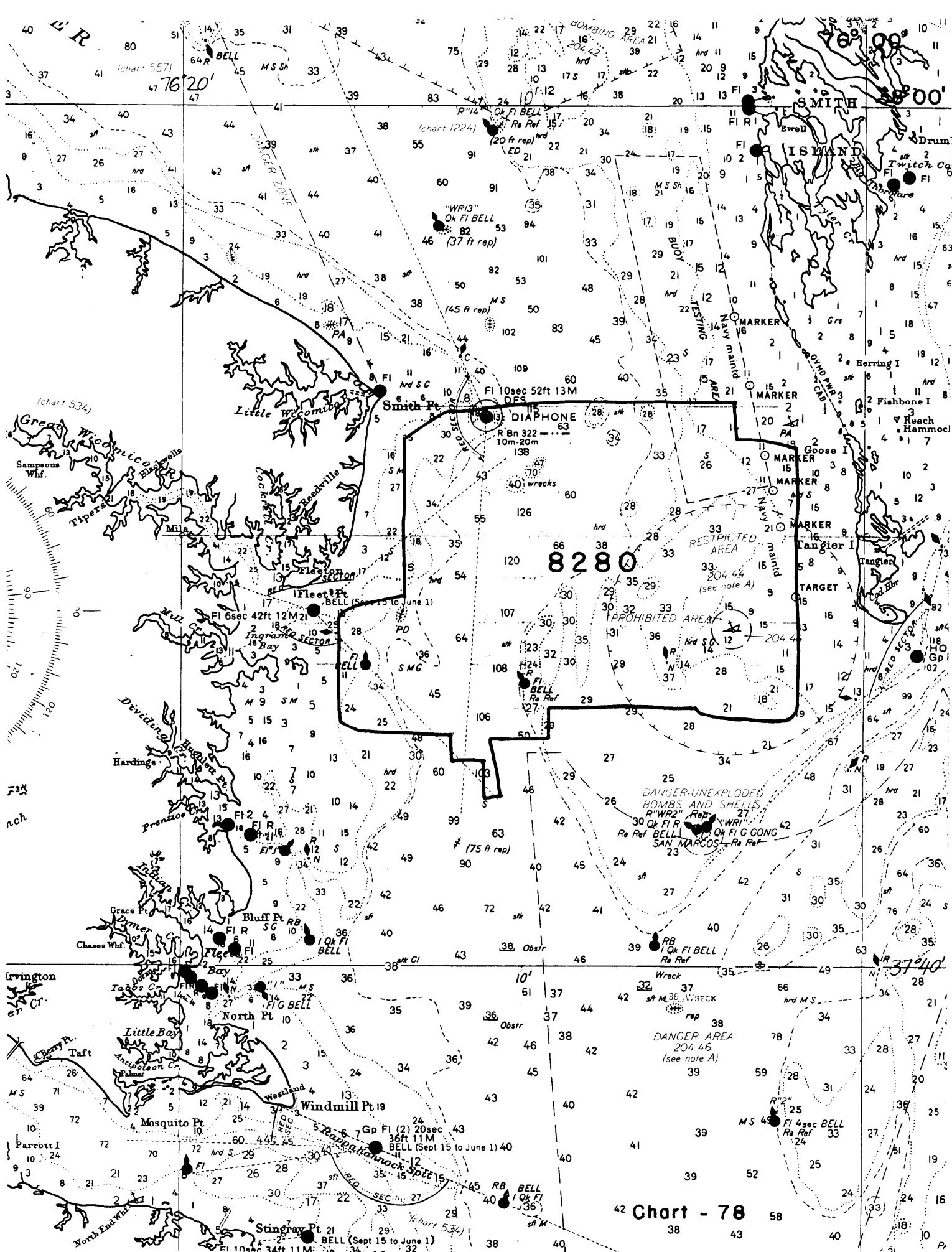
M. Panten

H-7944	1:20,000	1951
H-8069	1:20,000	1951
H-8189	1:10,000	1954
H-8190	1:10,000	1954-55
H-8191	1:20,000	1954-55
H-8277	1:10,000	1955
H-8407	1:20,000	1956-57
H-8435	1:20,000	1956

T 8162	1:20,000	1942
T 8163	"	"
T 8164	"	"
T 11049	1:10,000	1952-54
T 11051	"	"
T 11053	"	"

76°00'
38°00'





NAUTICAL CHARTS BRANCH

SURVEY NO. H-8280

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2-17-60	101-1	A.J. Hoffman	Before After Verification and Review <i>added 2 sdgs.</i>
3/30/60	568	J. Evans	Before After Verification and Review <i>examined for critical info - a few corrections made at this time.</i>
4-12-60	1223	R.K. deLauder	Before After Verification and Review. <i>Area E of 76°08' applied thru chrt 568. Then larger scale chrt 534.</i>
4-20-60	1224	R.K. deLauder	Before After Verification and Review <i>then chrt 1223</i>
5/4/60	534	Helmer	Before After Verification and Review <i>Partial. Critical sdgs. & curves</i>
7-13-60	78	C.R.W.	Before After Verification and Review <i>via 1224</i>
8-28-61	1224	R.E. Elkins	Before After Verification and Review <i>Partly applied Examined Review - no revisions.</i>
8-22-61	1223	J.H. Eaton	Before After Verification and Review <i>before chrt. Partly applied - Revised sdgs & curves in Vic Smith Pt. St.</i>
8-30-61	1224	R.E. Elkins	Before After Verification and Review <i>before chrt. Partly applied, thru chrt 1223. Revised sdgs and curves in vic of Smith Pt. St.</i>
9/14/61	534	J. Eaton	Before After Verification and Review <i>Comp. app'd.</i>
10/11/61	568	J. Eaton	Comp. App'd. after V. & R.
1/13/62	1224	J. Eaton	Comp App'd. after V. & R. <i>Thru dig. chrt 568</i>
3/8/62	1223	J. Eaton	Comp App'd. <i>Thru dig. chts 534 & 568 and sheet.</i>
10/2/67	78	M.H. Hall	Part App'd thru chrt 1223 <i>after V & R</i>
8/24/70	78	J. McMillan	<i>fully thru 1223 #44 & 1224 #48 After Verification & Review</i>

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.