

8168

Diag. Cht. No. 1203-2.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ST-2154 Office No. H-8168

LOCALITY

State Maine

General locality Approaches to Penobscot Bay

Locality Vicinity of Matinicus Island

1954

CHIEF OF PARTY

R. A. Marshall

LIBRARY & ARCHIVES

DATE October 29, 1957

COMM-DC 61300

8168

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-8168

Field No. St-2154

State MAINE

General locality Approaches to ~~LOWER~~ PENOBSCOT BAY

Locality Vicinity of MATINICUS ISLAND

Scale 1:20,000 Date of survey 6/9/54 to 10/14/54

Instructions dated 16 February 1954

Vessel STIRNI

Chief of party ROBERT A. MARSHALL

Surveyed by ROBERT A. MARSHALL

Soundings taken by ~~XXXXXXXX~~ graphic recorder, hand lead, ~~with~~

Fathograms scaled by SHIP PERSONNEL

Fathograms checked by NORFOLK DISTRICT OFFICE

Protracted by A.G. ATWILL

Soundings penciled by A.G. ATWILL

Soundings in ~~XXXXX~~ feet at MLW ~~XXXXX~~ and are true depths

REMARKS:

1548

A. PROJECT:

Project CS-265, Revised Instructions 22/MEK, S-2-ST, S-2-GI dated 16 February 1954 superseded all previous instructions for this project. Letter 22/MEK, S-1-GI, S-1-ST, dated 1 March 1954, letter 21-rcc, S-2-ST dated 16 March 1954 and letter 22/MEK, S-1-ST, dated 25 March 1954 with corrections to original instructions.

B. SURVEY LIMITS AND DATES:

This survey surrounds survey H-8167 in the vicinity of Matinicus Island, Ragged Island and Matinicus Rock in Lower Penobscot Bay, Maine and extends Northward and Westward to the vicinity of Large Green Island. Limits of this survey are: Lat. 43-59.0 N., Long. 68-49.0 W. to Lat. 43-46.2 N., Long. 68-50.0 W. to Lat. 43-46.2 N., Long. 68-56.4 W. to Lat. 43-49.0 N., Long. 68-57.0 W. to Lat. 43-49.0 N., Long. 69-01.0 W. to Lat. 43-53.5 N., Long. 69-03.2 W. to Lat. 43-53.2 N., Long. 68-59.2 W. to Lat. 43-56.3 N., Long. 69-01.2 W. to Lat. 43-59.1 N., Long. 68-58.0 W. to Lat. 43-59.0 N., Long. 68-49.0 W.

Field work began 9 June 1954 and was completed 14 October 1954.

This survey completely surrounds and junctions with H-8167, 1954, scale 1:10,000.

This survey junctions with GI-2254 (H-8177) in the North.

H-6982, 1944, on the West

This survey junctions with the following prior surveys:

H-8176 (1954) 1:20,000 on the Northwest

*not con-
temporary
surveys

* H-7056, 1945, 1:20,000 on the East.

* H-943, 1866-7, 1:20,000 on the North.

* H-7055, 1946, 1:10,000 on the East.

* H-1051, 1866-8, 1:20,000 on same area.

H-7054, 1945, 1:10,000 on the west.

H-7057, 1945, 1:20,000 on the Southwest.

H-8177, 1954 1:20,000 " " North

H-8167 (1954), 1:20,000
vicinity of Matinicus I.

See Review IP 5

C. VESSEL AND EQUIPMENT:

The Coast and Geodetic Survey Ship STIRNI was used exclusively in this survey while basing at Rockland, Maine. The fathometers used over the entire area were 808 Portable Depth Recorders, Numbers 145 and 155. A metal bar check, with accurately calibrated lines was used to obtain bar checks.

Bottom samples were obtained at the prescribed intervals throughout the survey area.

D. TIDE AND CURRENT STATIONS:

No current stations were occupied.

All soundings on the boat sheet were reduced to MLW by adding 0.2 to highs and a time correction of 40 minutes (to correct for DST) to values taken from the tide tables for Portland, Maine. A portable tide gage (Automatic) was in operation at Lat. 43-51.7 N., Long. 68-52.95 W. at Matinicus Harbor throughout the survey. The marigrams from this tide station were used for reducing soundings in the sounding volumes, with no time or range corrections.

E. SMOOTH SHEET:

The smooth sheets ^{WGS} ~~will~~ be plotted by the Norfolk Processing Office. ✓

F. CONTROL STATIONS:

The entire sheet was shoran controlled from the following shoran stations: MATI, MONH, and RAGG. MATI and MONH were on lighthouses and RAGG was on a triangulation station. All had G.P.s available. ✓

→ Marked Topo Sta, 1944 (same as Δ Ragged Island, 1913) H.L.P.
No other control was needed or located.

G. SHORELINE AND TOPOGRAPHY:

The shoreline was located by photogrammetric means and is shown on manuscripts T-11224 (N & S), 1953, scale 1:10,000. Shoreline was not directly involved. This was an offshore sheet and the shoreline was used for orientation only. P 2 of Review

H. SOUNDINGS:

Depths were measured by use of the 808 fathometer. Velocity corrections were determined from a combination of bar checks and serial temperatures. See report "Corrections to Soundings" previously submitted. There were no unusual methods or equipment used. ✓

I. CONTROL OF HYDROGRAPHY:

Shoran was used for control through-out the survey. The three shoran stations were located on previously established triangulation control and no additional control work was necessary. MONH center beyond limit of sheet. ✓

J. ADEQUACY OF SURVEY:

The survey is complete and adequate to supersede prior surveys for charting. The junctions with adjoining surveys are adequate and the depth curves can be adequately drawn at the junctions. sec P 3 & 5 Review

K. CROSSLINES:

Crosslines were run to the extent of 5% of the main scheme of lines. There were no large discrepancies in comparing them to the main scheme of lines. The minor discrepancies will probably iron out when the smooth sheet is plotted. sec P 3 Review

L. COMPARISON WITH PRIOR SURVEYS:

Comparisons made in the field revealed no significant discrepancies between current and prior surveys. see P 6 Review ✓

The agreement in depths at junctions with prior surveys are good and any minor discrepancies should be resolved when the final reduced soundings are smooth plotted. P5
REVIEW

The available prints of the old surveys are not too legible and it is difficult to make accurate comparisons.

M. COMPARISON WITH CHART:

Comparison with charted soundings was good with the following exceptions. It is recommended that these be further investigated by wire-drag.

Charted Depth	Chart No.	Survey Depth	Name	Lat.	Long.*
* 3 feet	322	12.26 feet	Bay Ledge	43-58.05	68-51.7 34 on H-3023WD
** 6 feet	322	14.27 feet	Foster Ledge	43-52.1	68-56.7 6 ft on FE3, 195

[Foster Ledge depth from W.D. H-352B (1913)]

* There is a possibility that this 3 foot sounding on the chart was erroneously interpreted from a three fathom sounding. Retain on chart.

N. DANGERS AND SHOALS:

All charted dangers, shoals, and bare rocks were found as charted, or shoaler depths were found, except for those listed in L, M, and N.
p. 30 "UA" Vol. 26, p. 40 is the rock investigated on H-8167 (1954), p. 5. B "FA"

O. COAST PILOT INFORMATION:

Coast Pilot information in the Matinicus - Ragged Island area is covered in Section O of Descriptive Report for ST-1154, H-8167. (1954)

In the remaining area of the survey the Coast Pilot information is adequate and no corrections to existing material were obtained.

P. AIDS TO NAVIGATION:

The following aids to navigation were located by the hydrographic party:

Floating Aids

Light List Name

Latitude

Longitude

Bantam Ledge Buoy BL

43-49.58.98

68-57.04.11

Foster Ledges Buoy 6

43-52.03

68-56.90

Green Island Seal Ledges

43-53.38

68-58.54

Whistle Buoy

Bay Ledge Whistle Buoy 2

43-57.91

68-51.74

West Penobscot Bay

43-56.64

68-51.95

Approach Lighted Bell

Buoy. S-L Fl. W

The remaining Aids in area are reported in Descriptive Report for ST-1154 (H-8167) (1954) Two Bush Is. Lighted Buoy: H-8177 (1954)

Q. LANDMARKS FOR CHARTS:

See separate report submitted on Form 567. (T-11,224 and 11,225)
For landmarks see inshore H-8167 (1954) also T-11133

R. GEOGRAPHIC NAMES:

An investigation of geographic names was made by the photogrammetric party during the original field inspection. No investigation was made by the hydrographic party.

S. SILTED AREAS:

Not applicable.

T. BY-PRODUCT INFORMATION:

Not applicable.

U. STATISTICS:

Number of positions 4,216, Statue miles soundings 2,082.4, Number H. L. soundings 159, Area 107.7 (Sq. Stat. Miles).

V. TABULATION OF APPLICABLE DATA:

A velocity correction report and a shoran correction report are submitted separately embodying all data pertinent to fathometers and shoran equipment used on this survey. *filed in Library 5-342*

Respectfully submitted,

William R. Kachel

William R. Kachel
Lieut., USC&GS
USC&GS Ship STIRNI

Approved and Forwarded:

Robert A. Marshall
Robert A. Marshall
Commander, USC&GS
Commanding Officer
Ships GILBERT and STIRNI

SHIP STIRNI

STATISTICS
H-8168

<u>DAY LTR.</u>	<u>VOL. NO.</u>	<u>NO. POS.</u>	<u>DATE</u>	<u>H.L. SDGS.</u>	<u>STAT. MI.</u>
A	1	116	6/ 9/ 54	-	55.7
B	1&2	95	6/10/54	-	44.6
C	2&3	195	6/11/54	-	85.3
D	3	20	6/14/54	-	9.0
E	3&4	218	6/15/54	-	103.6
F	4&5	190	6/16/54	-	98.8
G	6&7	155	6/17/54	-	104.6
H	7	84	6/18/54	-	38.2
J	7&8	48	6/24/54	-	24.4
K	8	54	6/28/54	-	32.5
L	8&9	160	6/30/54	-	104.1
M	9&10	79	7/ 1/54	-	32.2
N	10	12	7/ 6/54	-	8.0
P	10	65	7/ 7/54	-	32.5
Q	11	40	7/ 8/54	-	24.5
R	11	144	7/ 9/54	-	51.6
S	12	111	7/12/54	-	28.2
T	12	88	7/14/54	-	46.9
U	13&14	162	7/15/54	-	92.0
V	14	88	7/16/54	-	30.1
W	14&15	149	7/19/54	-	62.8
X	15&16	115	7/22/54	-	52.2
Y	16	56	7/23/54	-	27.0
Z	16&17	94	7/28/54	-	22.1
AA	17	69	7/29/54	-	34.0
BA	17&18	125	7/30/54	-	65.8
CA *	18	5	8/ 3/54	-	-
DA *	18	29	8/ 4/54	-	36.6
EA	18&19	168	8/ 6/54	-	106.5
FA	19	14	8/ 9/54	12	22.6
GA *	19	42	8/11/54	42	38.5
HA	19	12	8/12/54	-	6.8
JA	19	21	8/13/54	-	9.7
KA	20	158	8/17/54	-	85.0
LA	21&22	167	8/18/54	-	90.8
MA	22	123	8/19/54	-	61.3
NA	23	91	8/20/54	-	34.8
PA *	23	27	8/23/54	27	25.3
QA	23&24	159	8/24/54	-	68.5
RA	24&25	204	8/25/54	-	78.4
SA	25&26	201	8/30/54	-	107.0
TA	26	29	9/ 2/54	6	8.2
M					

*
 7athograms
 missing.
 CA- D#
 PA. also
 GA; these
 are all
 bottom
 samples

DINGHY

ua	<u>26</u>	<u>34</u>	10/14/54	<u>39</u>	<u>1.2</u>
TOTALS	26	4216		128	2091.9

NORFOLK PROCESSING OFFICE
FLOATING AIDS TO NAVIGATION

H-8168

<u>BUOY</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
Bantam Ledge Buoy✓ BL	43-49.98✓	68-57.11✓	74'✓	lua✓	10/14/54✓
Foster Ledge Buoy 6	43-52.00	68-56.83	-	99LA (137 "U" July 15, '54)	8/18/54
Green I., Seal Ldge. Whistle Buoy	43-53.36	68-58.52	-	29-30U (Vol. 13 p. 21)	7/15/54
Bay Ledge Whistle✓ Buoy 2✓	43-57.91✓	68-51.74✓	-	24Z✓	7/28/54✓
W. Penobscot Bay✓ Appr. Ltd. Bell Buoy	43-56.65✓	68-51.93✓	-	13D✓	6/14/54✓
Two Bush I. Ltd. Whistle Buoy TB1	43-58.26 See H-8177 (1954)	69-00.18	-	1RA✓	8/25/54
Wooden Ball Island Lighted Bell. Buoy 2WB	43° 50.4'	68° 50.0		7K	6-28-54 S-R.

NORFOLK PROCESSING OFFICE

LIST OF SIGNALS

H-8168

TRIANGULATION STATIONS

JOHN, 1913-34

MATI MATINICUS ROCK L.H., 1859-1944

MONH MONHEGAN LIGHT, 1859-1934 (off sheet limits)

MARKED TOPOGRAPHIC STATIONS

RAGG RAGGED, 1944 (Same position as triangulation RAGGED ID., 1913

TOPOGRAPHIC STATIONS

Net Leg

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8168 (Field No. St-2154)

GENERAL

This appears to be an excellent basic survey in an area of extremely irregular bottom. Soundings agree very well at crossings and no known discrepancies exist.

SOUNDINGS

All fathograms were check scanned and the soundings reduced and converted from fathoms to feet with a template. The field interval of 15" between soundings was increased to 20", and it is believed that adequate representation has been obtained with some saving in processing work.

The sounding reduction and conversion template is being forwarded with the survey for possible use by the verifier.

OVERLAYS

The following positions were plotted on an overlay to accompany the smooth sheet:

79 to 92W, 81 to 82QA, 99 to 100QA and 103 to 104QA

CHART COMPARISONS

As a result of the close fathometer development, numerous differences may be noted between the smooth sheet and the chart. Most of these were not disposed of in the body of the descriptive report and it is assumed that final depths in shoal areas will be resolved by wire drag.

The following comparisons are in addition to those in the body of the report:

<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>CHART 322</u>	<u>SMOOTH SHEET</u>
43-51.38 ✓	69-00.58 ✓	27' ✓	54' TP-7A Review
43-51.54 ✓	69-00.65 ✓	15' ✓	24' TP-7A Review
43-51.88 ✓	69-00.60 ✓	26' ✓	40' 26 on B/S revised to 40' off on S/S
43-52.16 ✓	68-56.58 ✓	13' ✓	22' 13 confirmed by FE3/4J
43-52.68 ✓	69-00.20 ✓	30 (B/S)	58 38 TP 7A Review
43-57.55 ✓	68-50.60 ✓	38' ✓	80'-90' PGB Review

PROCESSING TIME

As a point of interest, Mrs Atwill processed and smooth plotted this survey in an elapsed calendar time of just 2½ months. This includes a complete re-scanning of the fathograms and the simultaneous reduction and conversion of soundings. The plotting of all positions and soundings, the drawing of depth curves and preparation of final notes. A recorder assisted her during the scanning operation.

Norfolk, Va.
22 Oct. 1957

Respectfully submitted,
Hugh L. Proffitt
Hugh L. Proffitt, Cart.

GEOGRAPHIC NAMES

Survey No. H-8168

GEOGRAPHIC NAMES											
Survey No. H-8163											
Name on Survey											

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ...8168...

Records accompanying survey:

Boat sheets 1....; sounding vols. ..26..; wire drag vols.;
bomb vols.; graphic recorder rolls 11-Envelopes
special reports, etc. 1-Smooth sheet, 1-Descriptive report,
8-Overlay tracings, and 1-Cahier containing Shoran corrections,
Sounding corrections, Reduction and Conversion Template,

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

Number of positions on sheet	4216
Number of positions checked	...34
Number of positions revised2
Number of soundings revised (refers to depth only)	About 10 or 12 in order to correct crossings, & to have curves reasonably smooth.
Number of soundings erroneously spaced0
Number of signals erroneously plotted or transferred0
Topographic details	Time0
Junctions	Time 70 hrs. { 8 junctions one of which is entirely within sheet.
Verification of soundings from graphic record	Time 30 hrs. { Too many peaks, deeps and some crossing- discrepancies
Verification by ... Chester Kupiec ...	> 284 hrs.
Verification by ... S. Rose ...	52.5 hrs. Date 1-31-1961
Reviewed by ... S. Rose ...	Time 172 Date 4-28-61
Verification pos. 1 "A" thru pos. 110 "W" by C. Kupiec	} about 31 hrs. per volume
" pos. 111 "W" to end of survey by S. Rose	
Junctions and curves by S. Rose	

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

22 November 1957

Plane of reference approved in
26 volumes of sounding records for

HYDROGRAPHIC SHEET 8168

Locality Penobscot Bay, Maine

Chief of Party: R. A. Marshall in 1954

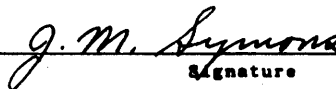
Plane of reference is mean low water, reading

1.0 ft. on tide staff at Matinicus Island

12.3 ft. below B.M. 5 (1945)

Height of mean high water above plane of reference is 9.0 feet.

Condition of records satisfactory except as noted below:


Signature

Acting Chief, Tides Branch

OFFICE OF CARTOGRAPHY

REVIEW SECTION -- NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8168

FIELD NO. ST-2154

Maine, Approaches to Penobscot Bay, Vicinity of Matinicus Island

SURVEYED: June - Oct. 1954

SCALE: 1:20,000

PROJECT NO. CS-265

SOUNDINGS: Leadline
808 Depth Recorder

CONTROL: Shoran
Sextant fixes on shore
signals

Chief of Party ----- R. A. Marshall
Surveyed by ----- R. A. Marshall
Protracted by ----- A. G. Atwill
Soundings plotted by ----- A. G. Atwill
Verified and inked by ----- S. Rose; C. Kupiec
Reviewed by ----- I. M. Zeskind
Inspected by ----- R. H. Carstens

DATE 4-28-61

1. Description of Area

This is an offshore survey south of Penobscot Bay, Maine, in the vicinity of Matinicus Island, Ragged Island, and Matinicus Rock. The bottom relief is extremely irregular and is characterized by an intermingling of reefs, pinnacles, knolls and deeps. Pinnacles and reefs of small extent rise sharply from deep areas and in many instances least depths have been determined only by intensive development and wire dragging. The bottom irregularities are probably composed of glacial moraine and rock outcrops.

2. Control and Shoreline

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

The shoreline of the islands falling within the limits of the survey originate with reviewed photogrammetric surveys T-11133S, T-11224 N and S, and T-11225N of 1952-53.

3. Hydrography

Depths at crossings are in adequate agreement. Considering the marked irregularity of the bottom, the delineation of the usual depth curves and bottom configuration and the development of shoals are reasonably adequate. About 25 soundings were retained from prior surveys, however, to supplement the present information.

4. Condition of Survey

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

5. Junctions

Adequate junctions were effected with the following surveys:

- H-8177 (1954) on the north
- H-7056 (1945) on the east
- H-7055 (1945) on the east in the vicinity of Wooden Ball Island
- H-8167 (1954) in the vicinity of No Mans Land, Matinicus Island, Ragged Island South Breaker and Matinicus Rock.
- H-7057 (1945) on the southwest
- H-6982 (1944) and H-8176 (1954) on the west
- H-7054 (1945) on the west, east of Large Green Island

The project survey on the south has not yet been received in this office.

6. Comparison with Prior Surveys

- A. H-943 (1866-67), 1:20,000
H-1051 (1866-68), 1:20,000

The present survey falls within the area of the prior surveys. A comparison between the prior and present surveys generally reveals differences in depths of 2-5 ft. However, there are a number of instances where greater differences in depths occur. These differences are attributed to the marked irregularity of the bottom, to the different methods of obtaining depths - leadline on the prior surveys and depth recorders on the present survey, and to incorrect plotting of fixes or spacing of soundings on the old surveys. The following discrepancies between the prior and present surveys are noted:

H-8168 - 3

1. The 69-ft. sounding charted in Lat. $43^{\circ}52.73'$, Long. $69^{\circ}01.83'$, from H-1051 (1866-68) falls in present depths of 120-152 ft. The sounding is considered to be 10 fms. too shoal and should actually be 129 ft. The 69-ft. sounding should be deleted from the chart.
2. The 90-ft. sounding charted in Lat. $43^{\circ}56.90'$, Long. $68^{\circ}59.64'$, from H-943 (1866-67) falls in present depths of 116-132 ft. The 90-ft. sounding is considered discredited by present depths and is believed to be 10 fms. too shoal. The sounding is plotted out of position on H-943 and should actually fall about 70 meters north-eastward where the revised prior sounding of 150 ft. would fall in comparable depths on the present survey.
3. The 144-ft. sounding charted in Lat. $43^{\circ}53.90'$, Long. $68^{\circ}58.95'$, from H-943 (1866-67) falls in present depths of 173-183 ft. The sounding was erroneously located on the prior survey and should actually fall about 150 meters west southwestward where comparable depths are found on the present survey.

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

B. Wire-drag Surveys

H-2969WD (1908-22), 1:20,000
H-3023WD (1909-10), 1:20,000
H-3025WD (1909-10-13), 1:20,000
H-3527WD (1913), 1:20,000
H-3528WD (1913), 1:20,000

There are no conflicts between the present survey soundings and the effective wire-drag depths. However, attention is directed to the following discrepancy between a wire-drag sounding and present survey depths.

The 38-ft. sounding charted in Lat. $43^{\circ}57.55'$, Long. $68^{\circ}50.60'$, from an unconfirmed grounding on H-3023WD (1909-10), falls in present depths of 97-175 ft. and should be deleted from the chart. Depths in this closely developed area on the present survey discredit the existence of the charted 38-ft. sounding.

Twenty soundings have been carried forward from the wire-drag surveys to the present survey.

7. Comparison with Chart 322 (Latest print date 10-5-59)

A. Hydrography

The charted hydrography originates principally with the previously discussed prior surveys which need no further consideration, supplemented by critical depths from the boat sheet (Bp. 52164-66) of the present survey, and with chart letter 799 (1954). Numerous newly developed bottom features not previously charted were found during the present survey. The following discrepancy between the charted and present survey data are noted:

1. The 57-ft. sounding charted in Lat. $43^{\circ}56.13'$, Long. $69^{\circ}00.20'$, from H-943 (1866-67) was erroneously plotted 1 fm. too shoal. The sounding has been revised to 63 ft. ($10\frac{1}{2}$ fms.) on the prior survey and has been carried forward to the present survey. The charted 57-ft. sounding should be revised to 63 ft.
2. The 27-ft. sounding charted in Lat. $43^{\circ}51.38'$, Long. $69^{\circ}00.65'$, originates with the boat sheets (Bp. 52164-66) of the present survey. In its charted position the 27-ft. sounding falls on the smooth sheet in depths of 54 ft. During verification and review of the smooth sheet of the present survey the sounding was revised to 24 ft. and relocated about 140 meters north northeastward where comparable depths are found. The 27-ft. sounding should be deleted from the chart.
3. The 26-ft. cleared effective depth charted in Lat. $43^{\circ}55.10'$, Long. $69^{\circ}00.20'$ and falling in present depths of 40-52 ft., was obtained by the ships Hilgard and Wainwright of this bureau in 1954 (chart letter 799, 1954). This wire-drag survey has not as yet been received in the Washington Office. The charted 26-ft. cleared depth will be considered in the review of the wire drag survey.
4. The following soundings charted from the boat sheets (Bp. 52164-66) of the present survey were revised during verification and should be disregarded:

<u>Charted depth</u>	<u>Location</u>		<u>Revised depth</u>
<u>ft.</u>	<u>Latitude</u>	<u>Longitude</u>	<u>ft.</u>
30	43°52.68'	69°00.20'	49
26	43°51.85'	69°00.60'	40
26	43°52.95'	68°56.85'	30
44	43°51.0'	68°52.05'	51

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

B. Aids to Navigation

The present survey positions of the aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended, except that the nun buoy charted in Lat. 43°49.70', Long. 68°57.04', is located on the present survey about 560 meters north of its charted position.

8. Compliance with Project Instructions

The survey adequately complies with the project instructions.

9. Additional Field Work

This survey, supplemented by soundings from the prior hydrographic and wire-drag surveys as noted in paragraphs 6A and 6B, is a good basic survey. No additional work is recommended.

Examined and Approved:

J. E. Waugh
Chief,
Nautical Chart Division
7/28/61

W. Richards
Projects Officer,
Operations Division

J. T. Darnan
Assistant Director,
Office of Cartography

K. G. Crosby
Assistant Director,
Office of Oceanography

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

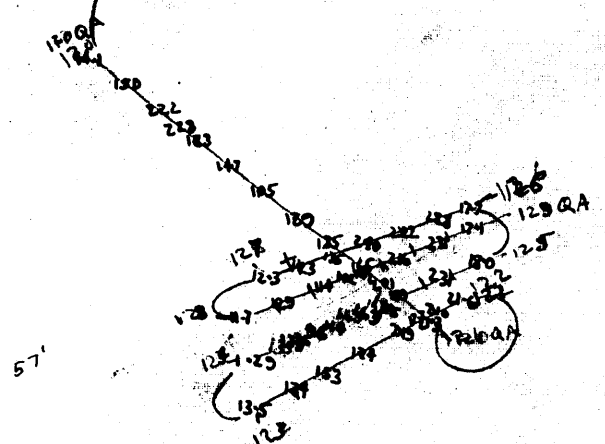
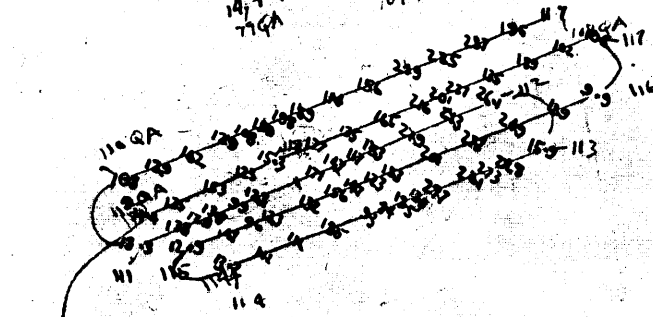
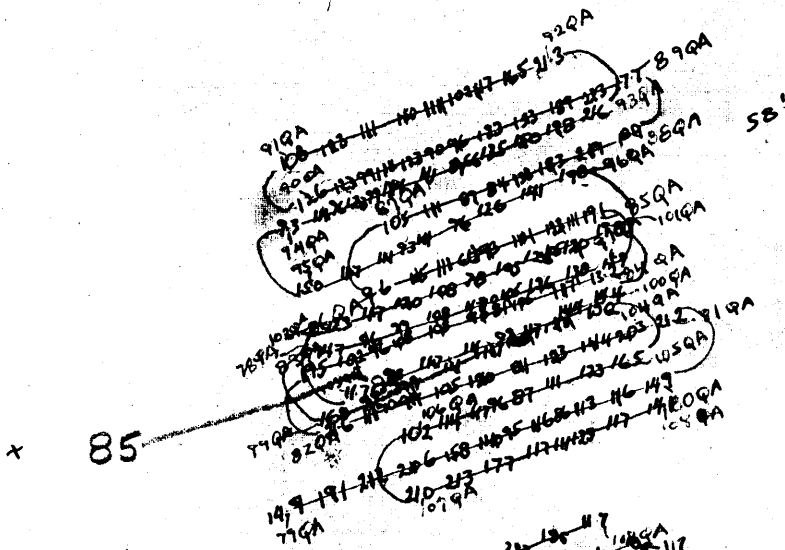
OFFICIAL BUSINESS

ST-2154
(H-8168)

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE \$300.
(PMGC)

50'

A-A



ST-2154

• overlay # 1

68° 50

43°58'

103 113 89 104 107 104 95 125 155 100
99 208 84 99 116 104 118 138 202 206
82 81

pos. 81-82
90-100 2A day
103-104

see 35-36 "E" dat

68°. 52

43°57'

pos. 79-92 W

OVERLAY

H-8168 (ST-21⁵₄)

43° 56'

Overlay #1

54' + 59'

#4

58'



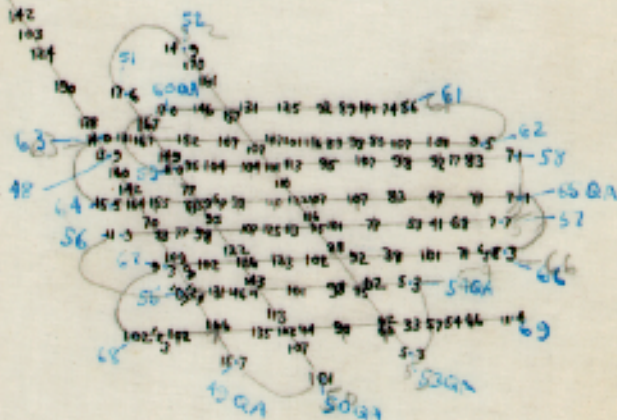
ST-2154

#2

52

+ 53

AT GA
17QA
11+2
70
100



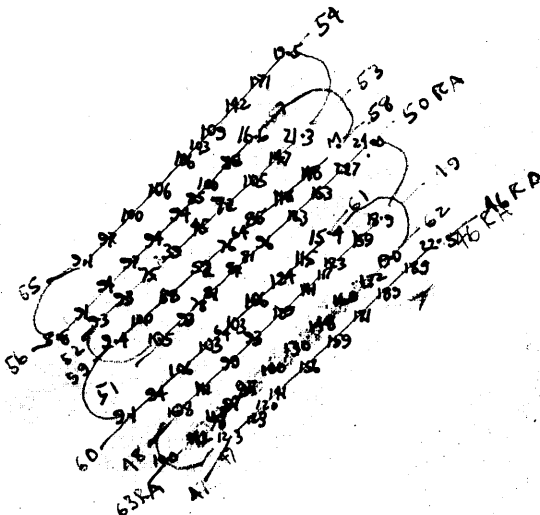
+ 58
52

ST-2154

69°00'
55' +

59'
+

43°54' +



ST-2154

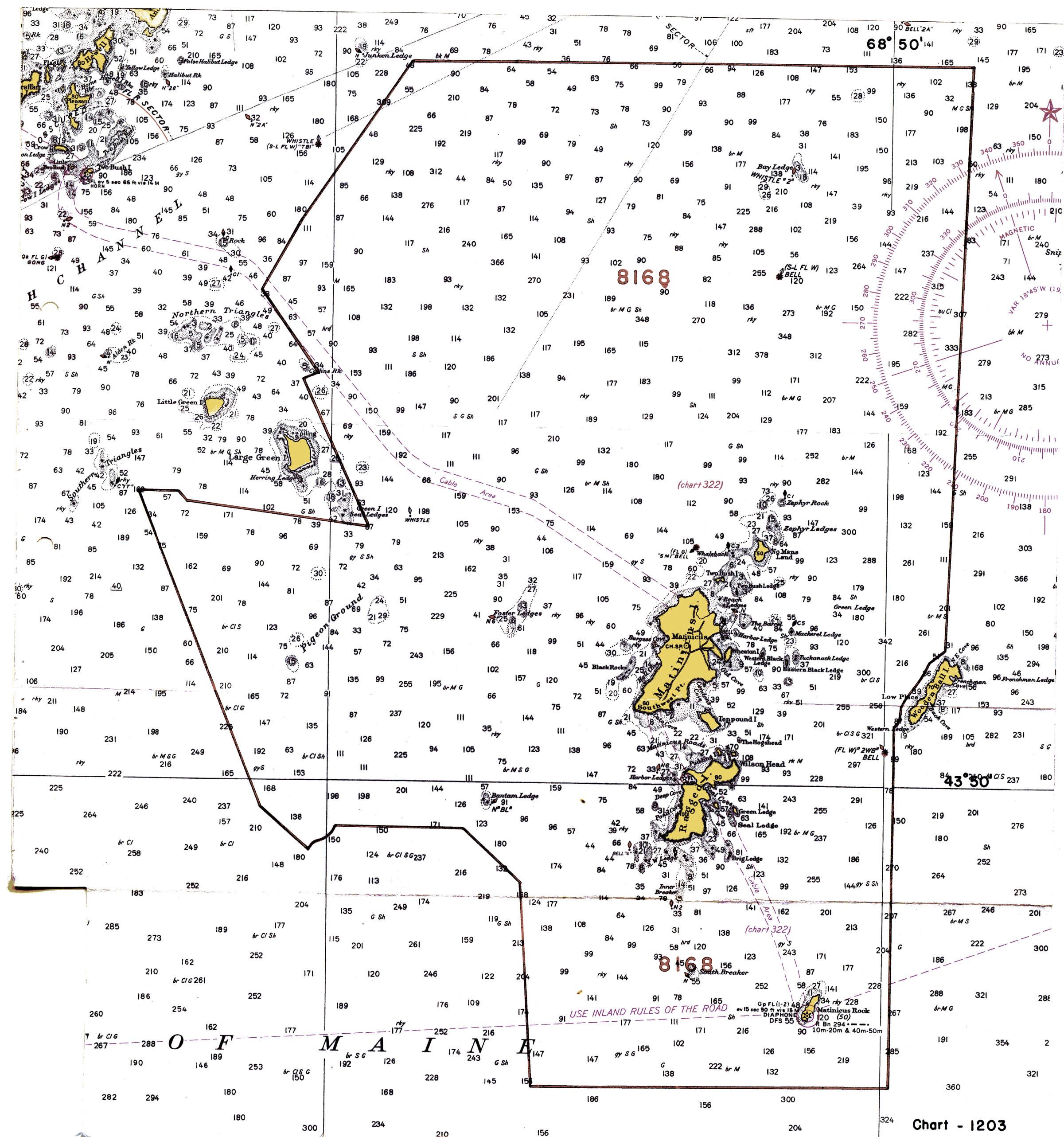
#7

53' +

[illegible]

52

ST-2154



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8168

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
6/20/58	322	F. P. McGinn	Before After Verification and Review Shoal soundings only.
1 July 58	1203	H. E. MacEwen	Before After Verification and Review Examined - ^{several} one sounding added.
7/16-58	71 diag 12	M. Rogers	Before After Verification and Review Examined and added 2 soundings thru diag. of chart 1203 Before After Verification and Review
5/13/59	1106	Eaton	Before After Verification and Review Thru chart 1203, #15
3-11-61	70	R. E. Elkins	Before After Verification and Review Partly applied thru chrt 71 diag 12. No revision
9-22-61	322	G. R. Johnson	Before After Verification and Review Fully Applied
11-20-61	1203	A. H. Jones	Before After Verification and Review revised soundings thru chart 322
5-8-63	1203 Recon.		Before After Verification and Review thru chart 322
3/4/68	1000	Svendson	Before After Verification and Review thru Ch 1203 Re- constr. (Ch 1106 in Repro. & at time of this compilation 3/4/68)

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.