

6959

6959

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Field No. Office No. H-6959

LOCALITY

State MAINE
General locality KENNEBEC RIVER
Locality MERRYMEETING BAY

194 4

CHIEF OF PARTY
W. R. Porter

LIBRARY & ARCHIVES

DATE JUN 9 1945

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-6959

Field No. _____

State MAINE

General locality KENNEBEC RIVER

Locality Merrymeeting Bay

Scale 1:5,000 Date of survey May - August, 1944

Instructions dated March 11, 1942 and March 11, 1944

Vessel Launch FARIS

Chief of party W. R. Porter

Surveyed by W. R. Porter

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

Protracted by J. D. Curd

Soundings penciled by J. D. Curd

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~

REMARKS: This sheet was processed in the Hydrographic Section, S. E. District,
Norfolk, Va.

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET H-6959

Scale 1:5,000

NOTE:

The following descriptive report was written from a combined report for sheets H-6800, 6801 (1944), 6959, 6960 and 6961 submitted by the field party and supplemented by information obtained at this office.

PROJECT:

This survey is part of Project CS-265 and was executed under Instructions dated March 7, 1942, Supplemental Instructions dated March 11, 1942 and March 11, 1944, and letter - Triangulation data - Kennebec River and Merrymeeting Bay (reference, 22/MEK and 1995 FA 4) dated May 3, 1944.

SURVEY LIMITS AND DATES:

This hydrographic survey extends from a junction with Sheet H-6800, 1942, scale 1:5,000, in the vicinity of Telegraph Point on the Kennebec River north into Merrymeeting Bay to the 44th parallel and southwestward in Merrymeeting Bay to a line connecting latitude $43^{\circ} 58.93'$.

VESSELS & EQUIPMENT:

This survey was conducted from the Launch FARIS basing at Bath, Maine. Launch No. 102 and a catamaran operated from the FARIS which was anchored in Merrymeeting Bay.

TIDE & CURRENT STATIONS:

A portable automatic tide gage was maintained at Sturgeon Island in Merrymeeting Bay near Chops Point.

<u>Name of Station</u>	<u>Latitude</u>	<u>Longitude</u>
Sturgeon Island	$43^{\circ} 58.83'$	$69^{\circ} 50.11'$

CONTROL STATIONS, SHORELINE & TOPOGRAPHY:

The control for the Kennebec River and northeastern portion of Merrymeeting Bay is mostly from the triangulation executed by the U. S. Engineers in 1940 supplemented by hydrographic signals picked from air photographic surveys and signals located by sextant fixes or cuts.

The shoreline for the area is thickly wooded and very similar in appearance throughout. The majority of the islands are wooded and covered with brush and grass with rather indefinite points and edges. Consequently, considerable difficulty was encountered in identifying many signals picked on the air photo map drawings, especially those described simply as point of marsh, bush, tree, point of island, end of dock and group of cedars. Winter storms and ice change the marsh and brush lines considerably. A particular brush or tree is often very difficult to spot in an area covered with brush and trees. The majority of docks are temporarily erected for the summer or hunting seasons and were not in place at the time of this survey. Many buildings back from the waters edge are not visible from any point accessible by boat or sufficiently visible for hydrographic purposes. Many objects suitable for signals either did not show well in the photograph or were not picked for use.

It was found necessary to locate a considerable number of signals by sextant for hydrographic control. Wherever possible these signals were located by strong sextant fixes at the signal or by cuts from previously located signals using triangulation stations when possible or signals from the air photo map drawings that could be picked with assurance.

Since the air photo map drawings/^{T-5974, T-5975, T-5976}for this area are controlled by plane coordinates and conversion of the plane coordinates to geographic positions do not agree with the geographic positions of the triangulation as computed (see letter May 3, 1944 - reference 22/MEK, 1995 FA 4), it was necessary to superimpose a transverse mercator grid on the polyconic projection in order to use the coordinate system. (Ref. letter filed with Desc. Report for H-6961)

The low water line was determined throughout this survey as far as possible. On steep slopes, especially in the Kennebec River, the low water line could not be located. And, in some instances, it could not be determined without endangering the fish and launch due to rocks or reefs, and in other instances, heavy grass and kelp prevented sounding without undue loss of time.

SOUNDINGS:

Depths were measured with the 808 Fathometer No. 71 S throughout this survey. A few lines of pole soundings were run. A pole sounding was obtained on each fix in very shoal area and in areas of kelp and grass as a verification of the fathometer sounding.

The fish was set at eighteen inches on the catamaran and at $2\frac{1}{2}$ ft. on Launch 102.

CONTROL OF HYDROGRAPHY:

Sounding lines were controlled throughout by sextant fixes taken from a point close by the fish or by reference to signals when very near them.

ADEQUACY OF SURVEY:

This survey is considered complete and adequate to supersede prior surveys for charting purposes. Junctions with previous surveys are good. No holidays are left other than those noted on the boat sheets as covered with heavy grass that could not be sounded by boat.

CROSSLINES:

Approximately ten percent of the lines are cross lines. Considering the irregularity of the bottom, the crossings appear to be good, except

Latitude 43° 57.04' and Longitude 69° 49.69', positions 3 & 4, 5 & 6 f (red).

The soundings on 5 & 6 f appear to be about 10 feet too deep. However, the surrounding hydrography seems to indicate the possibility of a deep.

Shoaler line 3-4f plotted. Slope, 45 to 55 ft depths

COMPARISON WITH PRIOR SURVEYS:

A least depth of 2 feet was found on Grace Rock in Latitude 43° 48.25', and Longitude 69° 49.73'. This is a very small rock with steep sides and soundings on the rock are obtained with difficulty. It is believed that this is the least depth. At the northeast end of Brick Island in Merrymeeting Bay a fix was obtained on only one of three* rocks and the other two were spotted in by estimation. (See the boat sheet for plotting.)

* (A fourth rock bare at MLW, 85m. N.E., represents a minus 1/2 ft. sounding on the fathogram, in 3ft depths.)

BANGERS & SHOALS:

^{Important}
All charted dangers, shoals and rocks were found as charted or shoaler depths were found.

COAST PILOT INFORMATION:

The Kennebec River and northern Merrymeeting Bay is well buoyed and is easily navigated at slack waters. Very strong currents, especially during ebb tide prevail in the Kennebec River.

It is believed that buoying would be necessary to follow the channel across Merrymeeting Bay to the Cathance River or to the Androscoggin River.

The Launch FARIS anchored in Merrymeeting Bay in Latitude 43° 59.2' and Longitude 69° 50.31' in 21 feet of water. The bottom is sand and gravel and is a good anchorage in moderate weather.

AIDS TO NAVIGATION:

Buoy No.	Latitude	Longitude	depth	Vol.	Pos.No.	Date	Sheet No.
N 8	43°57.13'	69°49.30'	17	1	-	May 24	H-6959
C 19	43°57.15'	69°49.51'	22	1	-	May 24	H-6959
N 10	43°58.24'	69°49.77'	31	1	-	May 23	H-6959
C 21	43°58.49'	69°49.75'	14	1	-	May 23	H-6959
C 23	43°59.09'	69°49.92'	28	9	60 d	June 26	H-6959
N 12	43°59.37'	69°49.74'	27	9	56 d	June 26	H-6959

BAR CHECKS:

All velocity corrections were obtained from daily bar checks. ✓

STATISTICS:

Launch 102

Vol. No.	Day letter	Date	No. Pos.	No. Sdg.	No. Stat. Miles
1 & 2	a	May 25	169		19.9
2 & 3	b	May 26	130		13.0
4	c	May 30	8		0.0
3	d	June 2	97		9.0
4 & 5	e	June 5	164		13.0
5	f	June 7	116		8.9
7 & 6	g	June 8	192		16.2
8	h	June 9	<u>39</u>		<u>2.1</u>
Total			915		82.1

Square Statute Miles = 2.5

Catamaran

6	a	June 2	47	360	4.9
6	b	June 9	28	125	1.5
6 & 9	c	June 23	168		18.6
10	d	June 26	137		13.2
10 & 11	e	June 27	156		15.6
11 & 12	f	June 28	144		14.7
12	g	June 29	91		12.2
12 & 13	h	June 30	117		7.7
13 & 14	j	July 3	154		14.3
14	k	Aug. 14	14		
14	l	Aug. 15	<u>21</u>		<u>1.3</u>
Total			1077	485	104.0

Square Statute Miles = 2.5

DISCREPANCIES:

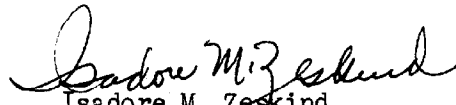
Latitude 43° 58.34' and Longitude 69° 49.40', Position 24 g(red);
Rock awash.

A note in the sounding record states, - "Rock projecting 4 ft. out of water, extending in northerly direction". It is not considered that this note sufficiently defines the position of this rock awash. This rock awash is not shown on the boat sheet. However, this note may refer to the rock awash shown about 30

concur

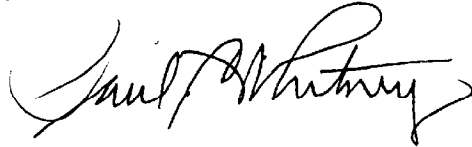
meters north of position 24 g. - concur

Respectfully submitted,


Isadore M. Zeskind
Cartographic Engineer

Norfolk, Va.
June 6, 1945

Approved and forwarded



Paul C. Whitney
Supervisor, S.E. District

TRIANGULATION STATIONS

ALDERS, U.S.E. 1940
ANDROS, U.S.E. 1940
BEEEBE, U.S.E. 1940
BLIND, U.S.E. 1940
BUSHWOOD, U.S.E. 1940
CENTER, U.S.E. 1940
CHOPS, U.S.E. 1940
COTTAGE, U.S.E. 1940
CRAWFORD, U.S.E. 1940
CROCK, U.S.E. 1940
FINNIS, U.S.E. 1940
JUNCTION, U.S.E. 1940
JUNIPER, U.S.E. 1940
 KEG (WISKEAG, U.S.E. 1940)
KENNEY, U.S.E. 1940
 KIT (WEST LINES, U.S.E. 1940)
LILAC, U.S.E. 1940
MAIN, U.S.E. 1940
MERRYMEETING, U.S.E. 1940
NORTH LINES, U.S.E. 1940
RACE, U.S.E. 1940
RAM ISLAND, U.S.E. 1940
SMELT, U.S.E. 1940
 SOL (SOUTH LINES, U.S.E. 1940)
TELEGRAPH, U.S.E. 1940
TENSION, U.S.E. 1940
THORNE, U.S.E. 1940
WHEEL, U.S.E. 1940

Topo Stations

Ace # Pal #
 Ant # Pole #
 Barn # Red #
 Bat # Rod #
 Bet # Shed #
 Bit # Small #
 Boy # Tow #
 Cop # Tree #
 Dot 2 # Uno #
 East # Val *
 End # Vic #
 Eno # West #
 Fun # Yet #
 Gab #
 Gay # # T-5975 (1943)
 Has # * ~~T-5966~~ 75975 (1943)
 Hot #
 Ida #
 Jack #
 Jim #
 Last #
 Nan #
 Nor #

Hydro Stations

Abe
 Boat
 Cat
 Dim
 Dog
 Far
 Fix
 High
 Imp
 Isle
 Jet
 Kay
 Kip
 Kit
 Lap
 Low
 Mal
 Mel
 Mis
 Mop
 Nut
 Obo
 Old
 On
 Pep
 Pip
 Quo
 See
 Sip
 Wil
 Yel
 Zip

Hydrographic Signals Sheet H-6959

Signals	Origin
Abe	Vol. No. 1, page 7
Ace	T-5975
Al	Alders, U.S.E., 1940
And	Andros, U.S.E., 1940
Ant	T-5975
Bat	T-5975
Bee	Beebe, U.S.E., 1940
Bet	T-5975
Bit	T-5975
Blind	Blind, U.S.E., 1940
Boat	Vol. No. 1, page 4 & 8
Bush	Bushwood, U.S.E., 1940
Cat	Vol. No. 1, page 8
Cent	Center, U.S.E., 1940
Chops	Chops, U.S.E., 1940
Cot	Cottage, U.S.E., 1940
Craw	Crawford, U.S.E., 1940
Crook	Crook, U.S.E., 1940
Dim	Vol. No. 4, page 5
Dog	Vol. No. 1, page 3
Dot	T-5975
East	T-5975
End	T-5975
Eno	T-5975
Far	Vol. No. 1, page 7
Fin	Finis, U.S.E., 1940
Fix	Vol. No. 1, page 7
Fun	T-5975
Gab	T-5975
Gay	T-5975
Has	T-5975
High	Vol. No. 1, page 4
Hot	T-5975
Ida	T-5975
Imp	Vol. No. 4, page 6
Isle	Vol. No. 1, page 4
Jack	T-5975
Jet	Vol. No. 8, page 30-31
Jim	T-5975
Jun	Juniper, U.S.E., 1940
Kay	Vol. No. 4, page 8
Keg	Whiskeag, U.S.E., 1940
Ken	Kenney, U.S.E., 1940
Kit	West Lines, U.S.E., 1940
Kip	Vol. No. 6, page 2
	Vol. No. 8, page 30
Lap	Vol. No. 6, page 2
	Vol. No. 8, page 30
Last	T-5975
Lil	Lilac, U.S.E., 1940
Line	No. Lines, U.S.E., 1940
Low	Vol. No. 4, page 6
Main	Main, U.S.E., 1940

Sheet H-6959

Signals	Origin
Mel	Vol. No. 4, page 6
Mer	Merrymeeting, U.S.E., 1940
Miss	Vol. No. 4, page 8
Mol	Vol. No. 6, page 2
	Vol. No. 8, page 31
Mop	Vol. No. 1, page 3 & 4 (H-6960)
Nan	T-5975
Nor	T-5975
Nut	Vol. No. 4, page 6
Oba	Vol. No. 8, page 30
Old	Vol. No. 1, page 5
On	Vol. No. 1, page 10
Pal	T-5975
Pep	Vol. No. 6, page 2
	Vol. No. 8, page 31
Pie	Vol. No. 1, page 7
Pole	T-5975
Quo	Vol. No. 6, page 2
Race	Race, U.S.E., 1940
Ram	Ram, U.S.E., 1940
Red	T-5975
Rod	T-5975
See	Vol. No. 1, page 4
Shed	T-5975
Sip	Vol. No. 6, page 62
Small	T-5975
Smelt	Smelt, U.S.E., 1940
Sol	So. Lines, U.S.E., 1940
Ten	Tension, U.S.E., 1940
Tel	Telegraph, U.S.E., 1940
Thor	Thorn, U.S.E., 1940
Tree	T-5975
Tow	T-5975
Use	Junction, U.S.E., 1940
Uno	T-5975
Val	T-5966
Vic	Vol. No. 1, page 6
West	T-5975
Wheel	Wheel, U.S.E., 1940
Wil	Vol. No. 1, page 4
Yet	T-5975
Yel	Vol. No. 1, page 10
Zip	Vol. No. 1, page 4 Sheet H-6960

DEPARTMENT OF COMMERCE

OFFICE OF THE DIRECTOR

U. S. COAST AND GEODETIC SURVEY

Refer to No. 22/MEK
1995 FA 4

WASHINGTON 25

May 3, 1944.

To: Officer in Charge,
U. S. Coast and Geodetic Survey
Launch FARIS,
General Delivery,
Bath, Maine.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Triangulation data--~~Dennebec~~^K River and Merrymeeting Bay.

With reference to your letter of April 21, 1944, requesting computations of 6 triangulation stations in the Kennebec River, 9 sheets of plane coordinates on the state grid are enclosed. While investigating the possibility of computing positions for the stations which you requested, it was discovered that your air photo map drawings are based on the plane coordinates being forwarded with this letter. Since your map drawings are controlled by plane coordinates, it is believed that your hydrographic work can be most successfully accomplished by their use instead of by the use of geographic positions. The geographic positions computed by Lieutenant Commander C. D. Meaney do not agree with the positions obtained by conversion of plane coordinates to geographic positions. Neither do the adjusted positions at stations SPRAGUE and HUNTER agree with Lieutenant Commander Meaney's computations, or with the positions obtained from the conversion of plane coordinates. All of this confusion will be avoided by using the coordinates upon which the map drawings are based.

The copies of coordinates being forwarded are preliminary copies of poor quality, to be followed by better copies now being made.

Copies of the air photo map drawings are being enlarged to a scale of 1:5,000 and these will be sent to you soon.

Enclosures.

Acting Director.



Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6959**

Records accompanying survey:

Boat sheets ..2.; sounding vols. .14.; wire drag vols.;
 bomb vols.; graphic recorder rolls .15...;
 special reports, etc.

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

Number of positions on sheet		<i>1992</i>
Number of positions checked		<i>215.</i>
Number of positions revised		<i>..7..</i>
Number of soundings recorded		<i>22000 (Estimate)</i>
Number of soundings revised (refers to depth only)		<i>..19..</i>
Number of soundings erroneously spaced		<i>..40..</i>
Number of signals erroneously plotted or transferred		<i>.....</i>
Topographic details	Time	<i>27..</i>
Junctions	Time	<i>12..</i>
Verification of soundings from graphic record	Time	<i>32..</i>

Verification by *A.P. STIRN!*..... Total time *234* Date *9/10/45*
G.F.J. *48*

Review by *G.F. JORDAN*..... Time *47* Date *11/29/45*
50

GEOGRAPHIC NAMES

Survey No.

116959

Name on Survey

	A	B	C	D	E	F	G	H	K
	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	
<u>KENNEBEC RIVER</u>								U.S.G.B	1
<u>MERRYMEETING BAY</u>			(All names on					"	2
<u>ABAGADASSET RIVER</u>			439 698)						3
<u>WHISKEAG CREEK</u>									4
<u>TELEGRAPH PT.</u>									5
<u>CHOPS PT.</u>									6
<u>LINES ISLAND</u>									7
<u>RAM ISLAND</u>									8
<u>CRAWFORD ISLAND</u>									9
<u>WOOD ISLAND</u>									10
<u>THORNE ISLAND</u>									11
<u>STURGEON ISLAND</u>	✓		(tide staff location)						12
<u>BRICK ISLAND</u>									13
<u>CENTERS PT</u>								U.S.G.B	14
<u>GRACE PK.</u>									15
<u>Maine</u>		(for title)						U.S.G.B	16
<u>East Branch</u>									17
<u>West Branch</u>									18
<u>Butler Cove</u>									19
<u>Stetson Rocks</u>									20
<u>Chops Creek</u>									21
									22
									23
									24
									25
									26
									27

Names underlined in red approved
 L. Heck 12/4/45

PAC
LJM

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 18, 1945.

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. W. MURRAY

Plane of reference approved in
14 volumes of sounding records for

HYDROGRAPHIC SHEET 6959

Locality Kennebec River and Merrymeeting Bay, Bath, Maine

Chief of Party: W. R. Porter in 1944
Plane of reference is mean low water reading
3.7 ft. on tide staff at Sturgeon Island
16.1 ft. below B. M. 1

Height of mean high water above plane of reference is 5.3 feet.

Condition of records satisfactory except as noted below:

L R Green

Chief, Division of Tides and Currents.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6959

FIELD NO. -----

Maine, Kennebec River, Merrymeeting Bay
Surveyed in May to August, 1944 Scale 1:5,000
Project No. 265

Soundings:

808 Fathometer
Pole

Control:

Three-point fix on shore signals

Chief of Party - W. R. Porter
Surveyed by - W. R. Porter
Protracted by - J. D. Curd
Soundings plotted by - J. D. Curd
Verified and inked by - A. R. Stirni
Reviewed by - G. F. Jordan, Nov. 29, 1945
Inspected by - H. W. Murray

1. Shoreline and Control

(a) The source of the shoreline and control is adequately covered in the descriptive report.

Survey T-5976, north of lat. 44° , is not available for shoreline detail comparison. Only map manuscript T-5975 has been reviewed.

(b) Numerous inshore rocks charted from T-967 (1860) and T-1061 (1859-1865) have been retained, having been neither verified nor disproved on the present hydrographic and topographic surveys. They are shown on the sheet in red as rocks awash.

2. Crosslines

The crosslines are very good in the shallow and smooth areas of Merrymeeting Bay. The agreement is satisfactory in other areas, considering the rough bottom and steep slopes.

3. Depth Curves and Submarine Relief

(a) All important depth curves have been satisfactorily drawn. Split lines and development would have been desirable in some areas so that

the curves could have been drawn with more confidence, as at lat. $43^{\circ} 57.7'$, long. $69^{\circ} 50.3'$ and at lat. $43^{\circ} 59.15'$, long. $69^{\circ} 51'$.

(b) Merrymeeting Bay is at the confluence of the Kennebec, Androscoggin, Cathance and Muddy Rivers. The shoals, deeps, and blocked channels in the sand bottom apparently shift about, according to comparison with the 1861 survey.

The bottom of the Kennebec River below the confluence is deep and irregular with rocky shoals.

4. Junctions with Contemporary Surveys

A satisfactory junction is made on the south with H-6800 (1942-1943). Investigation of rocks and development in the vicinity of lat. $43^{\circ} 56.5'$, long. $69^{\circ} 48.5'$ which was recommended in the review of H-6800 was accomplished on the present survey. Comparison with adjoining surveys on the north and west will be considered in the review of those now unverified surveys.

5. Comparison with Prior Surveys

The following surveys are superseded in the area of the present survey, with the exception of certain soundings, rocks and bottom characteristics which has been carried forward.

H-790 (1861) 1:10,000 scale

The agreement with this prior survey is satisfactory in the main channel of the Kennebec River. Disagreements in Merrymeeting Bay, such as prior 1 ft. depths (charted) in the present 20 ft. deep at lat. $43^{\circ} 58.95'$, long. $69^{\circ} 50.4'$, prior 11 ft. depths in the present area bare at MLW at lat. $43^{\circ} 59.2'$, long. $69^{\circ} 50.85'$, and the prior 6 ft. curve on the present low water curve at lat. $43^{\circ} 59.7'$, long. $69^{\circ} 50.1'$ indicate changeable bottom in this area of confluence.

(a) A 1-ft. prior uncharted sounding at lat. $43^{\circ} 57.74'$, long. $69^{\circ} 50.22'$, has been carried forward in 9 ft. depths at the end of a present shoal spit with least depth of 6 ft. This prior sounding on line was between 10 ft. and 5 ft. soundings, and may be a submerged ledge.

(b) Other prior soundings have also been carried forward on the large shoal area southwest of the above 1 ft. sounding.

The apparent crest of the prior shoal falls between present lines spaced 60 meters apart. This area may have deepened, but the present survey does not disprove the prior shoaler depths.

H-693 (1858) 1:10,000 scale

This prior survey is in fair agreement with the present survey in the deeper areas of the Kennebec River. However, the sounding lines were run across channel on the prior survey and controlled by reference to land features. This placed many of the inshore shoal soundings in present deeper channel areas.

(d) The 13 ft. prior sounding (Chart 314) at lat. $43^{\circ} 57.2'$, long. $69^{\circ} 49.7'$, the 4 ft. sounding between Ram and Crawford Islands and the 18 ft curve around the islands are too far offshore when compared with the present survey and should be disregarded.

(e) The 28 ft. prior sounding (Chart 314) at lat. $43^{\circ} 57.2'$, long. $69^{\circ} 49.2'$ should be disregarded. This sounding, with four other shoal soundings on line, disagree with the 60 ft. depths obtained by a special development in 1893 and on the present survey.

6. Comparison with Wire Drag Surveys

There are at present no wire drag surveys which cover the area of the present survey.

7. Comparison with Chart 314 (Latest print of July 14, 1944)

The hydrography charted within the area of the present survey is entirely from the prior surveys considered in the foregoing paragraphs, with the exception of the rock noted in the next paragraph.

(a) The rock awash falling in 50 ft. depths at lat. $43^{\circ} 56.54'$, long. $69^{\circ} 48.54'$ should be disregarded. The position of the rock which was obtained on H-6800 was questioned in the review of that survey and was disproved by the present survey.

(b) The rock awash symbol on Grace Rock charted at lat. $43^{\circ} 58.25'$, long. $69^{\circ} 49.7'$ should be disregarded. Both the present survey and H-790 (1861) show 2 ft. least depth in this vicinity. The rock awash has been charted for 25 years, superseding a bare rock previously charted.

(c) The bare rock charted since 1866 at lat. $43^{\circ} 57.38'$, long. $69^{\circ} 50.12'$ should be disregarded. No authority for the rock appears on the prior topographic survey. H-790 (1861) shows an 8 ft. shoal here.

Dredged Channels

No dredged channels are charted within the limits of the present survey.

Aids to Navigation

The present survey agrees with the charted aids to navigation, with the exception noted below.

(d) The present survey locates black can buoy No. 21 in 13 ft. depths at lat. $43^{\circ} 58.5'$, long. $69^{\circ} 49.75'$, 160 meters WSW from the charted position. The chart places the buoy in 51 ft. depths, whereas the Light List reports 22 ft. depths. The proper place for this buoy would appear to be in about 28 ft. depths 100 meters southeast of the

survey position.

8. Condition of the Survey

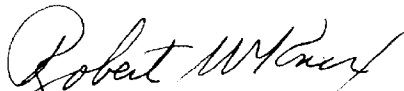
- (a) The sounding records and smooth plotting are satisfactory.
- (b) The descriptive report is complete in all detail.
- (c) The present survey is adequate. The development of the channel areas is very good.

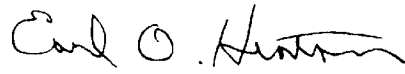
Paragraphs 1(b), 3(a), 5(a) and (b) mention areas where more development would have been desirable. Also development of the 23 ft. and 25 ft. shoals in the vicinity of lat. $43^{\circ} 58.45'$, long. $69^{\circ} 49.6'$ and closer spacing of lines at lat. $43^{\circ} 56.97'$, long. $69^{\circ} 49.9'$ would have been desirable.

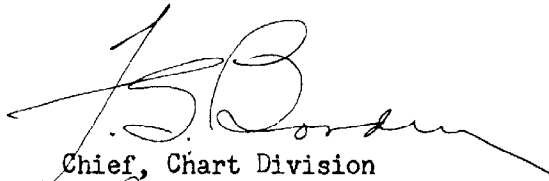
9. Additional Work

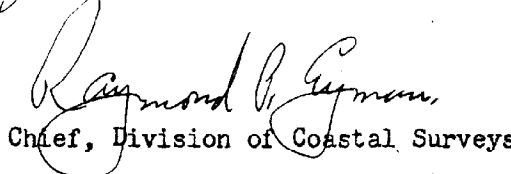
The present survey together with the retention of certain prior rocks, critical soundings and bottom characteristics, is considered a basic survey. No additional work is recommended.

Examined and approved:


Chief, Nautical Chart Branch


Chief, Section of Hydrography


Chief, Chart Division


Chief, Division of Coastal Surveys

