Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. 1146 Office No. 7150

LOCALITY

State MAINE

General locality PENOBSCOT BAY

Locality ISLE AU HAUT

194 6

CHIEF OF PARTY

John Bowie, Jr., Lt. Comdr.C&GS

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SEP 22 1947

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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. 7150

Field No. 1146

State	MAINE							
General loca	lity PENOBSC	OT BAY	1					
Locality	ISIE AU	ТИАН						_
Scale 1:	10,000		Date	of survey.	AugOc	. 1946		-
Instructions	dated 24	June 1946						
VesselSO	SBEE							
	ty John B							
Surveyed by	J. Bow	le,Jr. and	C.A. S	ch ce ne				
Soundin gs ta	aken by fathom	ster , graphic	recorde	r, hand le a	d, wire			
Protracted l	by M.E. B	/rd				************		
Soundings p	enciled byM.	.E. Byrd						
Soundings in	n fathons	feet at	MLW	MFFY		<u> </u>		
REMARKS:	This sheet	was proces	sed in	the Hydr	og raphic	Section	of the S.	E.
District	at Norfolk, V	/a.	····					
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U. S. GOVERNMENT PRINTING OFFICE 428975

DESCRIPTIVE REPORT TO ACCOMPANY

HYDROGRAPHIC SURVEY H-7150 (Field No. 1146)

PROJECT CS-265

SCALE 1:00.000

SHIP SOSBEE J. BOWIE, JR., COMDG.

PROJECT

Original instructions for Project CS-265 were issued 11 March 1944. Sailing Orders for the SOSBEE to work on this project were issued 24 June 1946.

SURVEY LIMITS

The area surveyed is from the South end of Isle Au Haut to a junction with H-7056 (1945) (1945) the 1945 survey of the LYDONIA (Sheets 2145 and 2345); and westward to a N-S line a little west of Saddleback L.H. The survey joins the GILBERT'S Sheet No. H-7152 (1946) 1146 to the E and NE. To the N and NW, the survey joins previous wire drag surveya. H-3025(199-10) W.D.

VESSEL and EQUIPMENT

The SHIP SOSBEE, and Launch No. 73, operating from the Ship, were used for the survey.

Depths were obtained by 808 depth recorders.

Turning radius: SCBEE: 100 Meters at 1200 RPM.

Launch 73: 25 Meters.

TIDE STATIONS

A portable tide gage located at BURNT COAT HARBOR, SWANS ISLAND, controls the reduction of soundings.

Predicted tides were used for reduction of soundings on the boat sheet.

CONTROL STATIONS

Triangulations in the area covered by the boat sheet were established by L.P. Raynor in 1945.

Topographic stations were obtained from AIR PHOTO COMPILATION Surveys Nos.

T-8552 and 8553, Fred L. Peacock, Chief of Party, 1946.

Signals located by hydrographic party:

1. By inspection of topographic details: BIG, TAN

2. By sextent fix : JOE, PAL, BOB, FOG

3. By cuts : TREE, BEA, PIT

4. Angle & distance : FLAG, REB, PAN, SUB,

5. Sheet No. 1146 (GILBERT) H-7/52 : CUT, FRO, LOT

Most of the above locations are contained in Vol. 7, Sheet 1246.

SHORELINE and TOPOGRAPHY

The Shoreline and topography were obtained from AIR PHOTO COMPILATION Surveys

Nos. T-8552 and 8553.

(1946) (1946)

Discrepancies:

- 1. Topographic stations 2024 and 2037 were too indefinite to use.
- 2. A rock located 110 m. WNW of Triangulation Station BASE (T-8552)

 [At 440-0.32, beng. 48 34.51]

 was found to be 50 m. SE of its air-photo position.

Review par.

- 3. A rock/located 400 m. ESE of Hydrographic Station PAN (T-8552) was jet web. 61, leng. 68 3278' found to be 16% m. NNE of its air-photo position.
- 4. A rock island 13 ft. in height exists 175 meters SW of Hydrographic lat 44° 0.66', long. 68°37.87'
 Station FOG. Location and limits determined by sextent positions
 (See Vol. 5, pages 23 and 24.)
- 5. An island 650 m. SE of Triangulation Station BASE does not exist.

 It is obviously a construction circle not erased on advance prior of 7-8581

JOUNDINGS

핑크

All soundings were obtained by means of 808 depth recorders.

GONTROL OF HYDROGRAPHY

The standard method of sextant fixes were used for hydrographic control.

ADEQUACY OF SURVEY

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

No holidays exist. Junctions with surveys of the LYDONIA and CILBERT are in good agreement. No depths were available for a comparison with the junction with prior wire drag surveys, so a large overlap was made.

CROSSLINES

Crosslines are adequate and in good agreement except for parts of "B" day which were too deep. We were having trouble controlling the depth recorder speed on "B" day and this is the cause of the discrepancies. Repairs were made by the GDLBERT'S radio technician before "C" day.

"Speed" (errections applied to A + B day's work eliminated discrepancies

Unless the processing office can make corrections for speed, all soundings on "B" day West of Longitude 68°-40° over 150 ft. should be rejected, where too-deep depths are obvious.

COMPARISON WITH PRIOR SURVEYS

No data on prior surveys was furnished by the Office.

COMPARISON WITH CHART

Chart No. 309, Published July 1943 (8th. edition) is used for comparison.

Except for such features as Roaring Bull Ledge, Western Ear Ledge, Flat Ledge, and Cape Ann Ledge, the off-shore surfey shows the bottom to be so irregular that it resembles very little on the chart. This will be obvious upon inspection. A 57 ft. sounding was obtained 0.8 mi. south of Saddleback Ledge where 87 ft. is charted. Southerly of this are several places less than 100 ft. where none show on the chart.

The following should be removed from the chart:

- 1. The 1 ft. depth at Lat. 44°-01. From .68°-37. A ledge exists here which bares at all stages of tide. Revised on present chart
- 2. At Lat. 44°-00.6' Long. 68°-37.2', the rock shown does not exist. Area searched at low tide in a flat sea. Vol. 5 pg.55

DANGERS AND SHOALS

1. Roaring Bull Ledge. lat. 43 59.62, leng. 68 37.98

The ledge bares at low tide (See notes in Vo. 7, Sheet 1846, page 18).

Beacon established on the ledge located by sextant cuts.

- 2. Western Ear Ledge. lat. 44°00.0, long. 68°39.37'

 Bares at low tide. Three most prominent rocks located by sextant cuts.

 Soundings taken over area at high tide, and around it at low tide.
- 3. Middle Ground. lat. 44°00.38, long. 68°38.55' Soundings of 17 ft. obtained.
- 4. Flat Ledge. lat. 44°00.51', leng. 68°38.80'

 A X ft. sounding obtained. Area investigated by hand lead and drift sounding at low tide with a flat sea. Bottom clearly visible.
- 5. Cape Ann Ledge. lat. 44°co. 39', long. 68°36.94'

 Soundings of % ft. and loft. obtained. thr. drift sounding with depth recorder and hand lead at low tide, flat sea. Top of rock visible on the 4 ft. sounding.
- 6. A ledge extends 1/3 mi. S.W. of Hydrographic Station FOG with a 10 ft.

 47'
 depth at L at. 44°-00.1', Long. 68°-37.93'.

All prevoius charted depths should be superseded by depths obtained by this survey.

AIDS TO NAVIGATION

Fixed: Beacon on Roaring Bull Ledge

Lat. 43°-59.63.

Long. 68°-37.98°

Floating : Whistle Bouy "10RB" (FL.W.)

Lat. 43°-58.96°

Long. 68°-37.761

Day letter: Vol. 7, page 10 (Cut book)

Depth: 200 ft.

LIST OF SIGNALS

Triangulation Stations

BASE (1945)

LIDGE

BACK (SÄDDLEBACK,L.H.)

HORSE (1945)

ITEM (1945) (Topo)

ENTERN STERM (1945)

Topographic Stations (Air Photo Compilation)

BOB FLAG MAP . PRO TRY

· CLO FOG MARK RAT WIN

CUT GAT NON REB

FIR LOW (HPAN (WSUE

Hydrographic Signals

BEA FOG *LOT PIT TREE F/99 506

(a) BIG JOE PAL (a) TAN Rim Pan

* Called Bob on H-7152

a = From Topo

COAST PILOT INFORMATION

Atlantic Coast - Section A-1941

Page 144.

HEAD HARBOR

Substitute the following:

HEAD HARBOR is a small bight in the south shore of Isle Au Haut, just west of Eastern Head. It is used mainly by lobstermen and furnishes good protection for small boats except in south-west weather. In normal weather, the off-lying ledges break up the swell causing the water in northeastern part of the harbor to be fairly calm. The bottom is generally rocky but some parts are clay. Depths are 2 to 4 fathoms in the northeastern semi-protected part, and 10 fathoms and over outside. There are a few houses in the northeastern part and two docks which are dry at low tide. The harbor should not be entered without local knowledge, except in periods of good visibility.

(The SOSBEE used this anchorage several times while engaged on subvey work).

ROARING BULL LEDGE

Line 35. Change "half"tide to "low" tide.

WESTERN EAR LEDGE

Line 39. Change "half" tide to "low" tide.

LANDMARKS FOR CHARTS

No landmarks exist other than natural formations which show on Chart 309. JEOGRAPHIC NAMES

Geographic Names as shown on Chart 309 are correct and no changes required.

John Bowle, Jr. V Lieut. Condr., C&GS

Comdg. Ship SOSBEE

TIDAL NOTE

To be supplied by Norfolk Processing Office.

SALINITIES

Obtain from CTLBERT.

STATISTICS FOR HYDROGRAPHIC SURVEY H 7/50 (1146)
SHIP SOSBEE, PROJECT CS-265

VOL. NO.	DAY LET.	DATE	No. SDGS.	NO. POS.	STAT. ME.	VESSEL
1	A	8/28/46	C.P.	102	29.5	SOSBEE
1 & 2	В	8/30/46	п	211	58.9	н
2	c	9/17/46	н	21.2	42.2	n
3	a	9/18/46	n	92	15.5	Launch 73
3	b	9/19/46	Ħ	190	29.5	** *
4	С	9/20/46	н	235	30.5	97 m
5	đ	9/21/46	12	90	9.2	10 0
5	8	10/15/46	19	171	27 •8	** **
6	D	10/4/46	**	232	59.0	SOSBEE

AREA : Square statute miles.

LIST OF SIGNALS H-7150

Triangulation

BASE, 1945
EASTERN, 1945
HORSE, 1945
SADDLEBACK LEDGE L.H., 1861-1934

Topographic

- + Bob
- + Clo
- x Cut x Fir
- x Gat
- + ITEM, 1945
- x Low
- + Map
- x Mark
- x Non
- x Pro
- + Rat
- ∄ Reb
 - + From T-8552
- + Try
- x From T-8553
- + Win

Hydrographic

From Boat Sheet

Big Bea Flag Tan

Fog

Lot

Pal.

Pan

Pit

Rim

Sub

Tree

ADDENDUM

to accompany

HYDROGRAPHIC SURVEY H - 7150 (Field No. SO 1146)

NOTE:

The corrections shown in/red on the preceding pages of this report were made at the Norfolk Processing Office and refer to data as shown on the smooth sheet.

Discrepancies:

Crossing 88-89 A. 134-135B, latitude 43°59.20° and longitude 68°40.34°.

An apparent discrepancy of 10 ft. exists at this crossing. No discernible error in the fathogram or reducers could be found.

Corrected by applying speed corrections.

Crossing 81-82 A, 42-43 C, latitude 43°59.66° and longitude 68°41.87°.

An apparent discrepancy of 20 ft. exists on line 81-82A. The profile on the fathogram is not clear. These A-day soundarys were rejected

<u>B Day:</u> (See "Crosslines" on page 3 of this report.) The amount of error in the speed of the fathogram was obtained for this day and the necessary depth adjustments were made. These adjusted depths were plotted on the smooth sheet, and are in excellent agreement with the surrounding hydrography.

Tidal Note: The tidal corrections for the soundings on the smooth sheet were obtained from a portable automatic tide gage which was located at Burnt Coat Harbor, Swan Island, Maine, at latitude 44°08.71 and longitude 68°26.971.

M.L.W. corresponds to a height of 2.1 ft. on the tide staff. M.H.W. corresponds to a height of 11.6 ft. on the tide staff.

Respectfully submitted,

Isadore M. Zerkind Cartographic ingr.

Norfolk, Va. August 17, 1947

Approved and Forwarded

George L. Anderson

Supervisor S.E. District

Dwg I. Cinderso

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Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H.7150.

Records accompanying survey:		
Boat sheets 1; sounding vols, 7; w	ire dra	g vols. Q;
bomb vols. Q; graphic recorder rolls	8 ;	
special reports, etc1 .Fath .Rent	• • • • • •	• • • • • • • • • • • •
•••••••	• • • • • •	•••••
The following statistics will be submitted wirepher's report on the sheet:	th the	cartog-
Number of positions on sheet	,	. 1535
Number of positions checked		297.
Number of positions revised		8.
Number of soundings revised (refers to depth only)		26
Number of soundings erroneously spaced		10
Number of signals erroneously plotted or transferred		
Topographic details	Time	13.hr
Junctions	Time	31 hr
Verification of soundings from graphic record	Time	40hr.
Verification by . R. K. D. LAWDER Total time	240 hrs	Date 3-3/-48
Reviewed by f. Jordan Time	40	Date 6/16/146.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7150

FIELD NO. So. 1146

Maine, Penobscot Bay, Isle Au Haut
Surveyed in August - October, 1946 Scale 1:10,000
Project No. CS-265

Soundings:

Control:

808 Fathometers

Visual fixes on shore signals

Chief of Party - John Bowie, Jr.
Surveyed by - J. Bowie, Jr. and C. A. Schoene
Protracted by - M. E. Byrd
Soundings plotted by - M. E. Byrd
Verified and inked by - H. W. Burgoyne R. K. De Lawder Reviewed by - G. F. Jordan, June 16, 1948
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline and topographic signals are from air photographic compilations T-8552 (1946) and T-8553 (1946).

The position of the <u>rock awash</u> on T-8552 at lat. 44° 00.32', long. 68° 39.51', (Chart 309) is 25 meters northwest of its correct position. According to the present survey, the rock is on line between Saddle-back Ledge L. H. and triangulation station Base, 1945.

The position of the <u>rock awash</u> on T-8552 at lat. 44° 00.61', long. 68° 38.78', (Charts 309 and 1203) is 165 meters south southwest of its correct position. A 35-ft. sounding was obtained at this position during investigation. Three sextant cuts on the present survey determine the correct position of the rock.

2. Sounding Line Crossings

The soundings at crossings are in very good agreement.

3. Depth Curves and Bottom Configuration

Configuration of the bottom is adequately delineated by the usual depth curves.

4. Adjoining Surveys

Junctions are adequate with contemporary surveys H-7152 (1946) on the northeast, H-7058 (1945) on the southeast, and H-7056 (1945) on the south. In the area west of Isle Au Haut, the northern limits of the present survey are the limits of the project and adequately overlap H-3023 (1909-10) W.D. as required in the instructions.

The depths on the present survey at the project limits west of Isle Au Haut are in adequate agreement with the charted soundings.

5. Comparison with Prior Surveys

H-1028 (1869) 1:20,000 scale; H-1406 (1878) 1:10,000 scale; H-1074 (1870) 1:20,000 scale; H-1357 (1877) 1:5,000 scale

A comparison between the present survey and these prior surveys reveals no change in the general depths of this area. However, the present survey closely develops the bottom irregularities and adequately supersedes the prior surveys.

The following important discrepancies are noted:

A bare rock on H-1357 at lat. 44° 00.69', long. 68° 38.75', (chart 309), probably originating with T-1311 (1872), is superseded by a rock awash on the present survey. The rock is awash at half tide.

Two rocks awash on H-1357 at lat. 44° 00.63', long. 68° 37.22', (one rock on chart 309) should be disregarded. According to the hydrographer's statement on page 3 of the Descriptive Report, the rocks are nonexistent. The rock symbols apparently represent the location of the highest breakers over a reef which is covered with 16 feet. Although the reef was not adequately developed, the hydrographer did investigate the area for approximately five minutes in a calm sea at low tide and reported that there were no rocks visible and that any dangers less than 10 ft. would have been clearly visible.

The 27-ft. sounding on H-1357 at lat. 44° 00.69', long. 68° 37.98', (chart 309) should be disregarded. The 28-ft. depths on the present survey are considered adequate.

The 37-ft. sounding on H-1357 at lat. 44° 00.13°, long. 68° $\overline{39.22°}$, (chart 309) should be disregarded. The adjacent soundings on line are greater than 10 fathoms and it is considered that the unreduced 7-fm. sounding was actually 11 fathoms. The sounding falls close inshore in present depths of 45-to 96-ft. and is unimportant.

6. Comparison with Wire Drag Surveys

There are no conflicts between the effective drag depths on H-3023 (1909-10) W.D. and depths on the present survey.

7. Comparison with Chart 309 (Print date of Oct. 6, 1947) Chart 1202 (Print date of March 22, 1948) Chart 1203 (Print date of Dec. 15, 1947)

a. Hydrography

Charted hydrography originating with the prior survey has been supplemented by rocks awash and critical soundings from the present survey before verification.

Chart 309 shows two rocks awash in lat. 44° 00.4', long. 68° 39.9'. The present survey and T-8552 properly show only one rock awash here whereas H-1406 (1878) shows a reef 25 meters long. The other part of Black Ledges is the rock awash 150 meters northeast.

Charted hydrography needs no further consideration except for reference to preceding paragraphs 1 and 5.

b. Aids to Navigation

Aids to navigation on the charts and on the present survey are in agreement, and adequately mark the features intended. The survey shows no new dangers which might require aids.

8. Condition of the Survey

a. The Descriptive Report and sounding records are complete and comprehensive.

- b. The smooth plotting was well done.
- c. Fathometer speed corrections of 2 to 16 percent when applied to the soundings of B-day by the Processing Office and to the soundings of A-day by the verifier, eliminated discrepancies amounting to as much as 36 feet in 250-ft. depths.
- d. The survey does not completely cover all of the areas close inshore. The areas adjacent to Western Ear and extending offshore to Middle Ground and Black Ledges are not fully developed. The coves in lat. 44° 00.4′, long. 68° 39.4′, and lat. 44° 00.88′, long. 68° 38.9′ were not surveyed.

9. Compliance with Project Instructions

The survey complies with the project instructions except that all shoal areas are not adequately developed.

10. Additional Field Work Recommended

Although the present survey supersedes all prior surveys in this area, the hydrography can not be considered adequate until there is complete wire drag coverage or unless considerable close development and drift sounding is accomplished over the more important shoal areas listed below:

- a. Shoals enclosed by 24-and 60-ft. curves east and south of Roaring Bull Ledge (lat. 43° 59.6', long. 68° 37.98'), including the ll-ft. sounding 130 meters northeast of the ledge.
- b. The south side of Western Ear Ledge (lat. 440 00', long. 680 39.88') where the sounding line spacing is 100 to 140 meters in 21-to 51-ft. depths.
- c. The 15-ft. sounding at the southeast end of Black Ledges (lat. 44° 00.4′, long. 68° 39.92′), and adjacent inshore areas.
- d. The 44-ft. sounding at lat. 44° 00.13', long. 68° 38.98', and area northward to Flat Ledge and Western Head.
- e. The 17-ft. sounding on line at lat. 44° 00.38', long. 68° 38.54', where the adjacent sounding line is 40 meters distant.
- f. The 44-ft. sounding on line at lat. 44° 00.19', long. 68° 38.43', where the adjacent sounding line is 60 meters distant.

H-7150 (1946)-5-

g. The shoal area enclosed by the 60-ft. curve in lat. 44° 00.4', long. 68° 37.4', (32-and 35-ft. soundings).

Examined and approved:

I. E. Rittenburg Chief, Nautical Chart Branch

Caseer)M. Durgin Chief, Division of Charts

Chief, Section of Hydrography

C. K. Green Chief, Division of Coastal Surveys

TIDE NOTE FOR HYDROGRAPHIC SHEET

BirisianxalxhydragraphyxandxTapagraphy:

15 October 1947

Division of Charts: H. W. MURRAY

Plane of reference approved in 7 volumes of sounding records for

HYDROGRAPHIC SHEET 7150

Locality - Isle Au Haut, East Coast of Maine

Chief of Party: J. Bowie in 1946
Plane of reference is mean low water, reading
2.1 ft. on tide staff at Burnt Coa

38.4 ft. below B. M. 4 (1911)

Height of mean high water above plane of reference is 9,5 feet

Condition of records satisfactory except as noted below:

E.C. McKay
Section
Chief, Division of Tides and Currents.

плини радитиче отчест 15482

NAUTICAL CHARTS BRANCH

SURVEY NO. 17150

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
11/18/47	1203	Risegari	Before After Verification and Review - Partially
1/22/48	1202	J.J. Stegman	Before Werification and Review Critical Styce and Laler added.
1/27/48	7/	Shout.	Before After Verification and Review
9/9/48	322	I Sevents .	Refere After Verification and Review
12/22/48	225	Goodrick	Before After Verification and Review outlies solgs.
7/31/50	1106	Program	Refere After Verification and Review cut, support
8/1/50	309	J.G. M. Sam	Before After Verification and Review
12/20/54	308 Reco	not. StE	Tartially applied Before After Verification and Review
5 -8-63	Reconstr 1203	m. Rogers	Before After Verification and Review
			Before After Verification and Review
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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.