

4539

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Form 504 DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY
State: SE. Alaska
11-5013
DESCRIPTIVE REPORT.
Hydrographic Sheet No. 4539
LOCALITY:
Chichagof I.-W. Coast
Pt. Slocum to Khaz Bay and
Outer Is.
1925
CHIEF OF PARTY:
A.M. Sobieralski

W W B
June 1, 1926.

~~Division of Hydrography and Topography:~~

Division of Charts:

Tide reducers are approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET NO. 4539

Locality: **S.E. Alaska.**

Chief of Party: **A. M. Sobieralski; in 1925.**

Plane of reference is **MLLW**
10.4 ft. on tide staff at **Ford Arm.**
12.3 " do **Kimshan Cove.**
9.8 " do **Sitka.**

For reduction of soundings, condition of records satisfactory
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted
3. Time meridian not given at beginning of day's work.
4. Time (whether A. M. or P. M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.



Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE
U. S. COAST & GEODETIC SURVEY.
E/ Lester Jones, Director.

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

to accompany

HYDROGRAPHIC SHEET #

Vicinity of Khaz Bay.
Scale-1:20000

Season of 1925.

Steamer SURVEYOR.

A. M. Sobieralski, H. & G. E., Chief of Party.

~~DEPARTMENT OF COMMERCE~~
U. S. COAST AND GEODETIC SURVEY.
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HYDROGRAPHIC SHEET NO. ____

VICINITY OF KHAZ BAY.

GENERAL DESCRIPTION AND LIMITS: This sheet extends from a point $1\frac{1}{2}$ miles south of Slocum Point to Deuce Island and extends to the ship's hydrography in a due westerly direction from the two points mentioned above. All the work is on the outside coast with the exception of the passages among the islands between Khaz Bay and also among the rocks and islands from the Outer Rocks 3 miles northward.

All of this hydrography was done on a scale of 1:20000 with the steam launch "Delta" with a steam sounding machine and hand lead with the exception of one days work with Launch #61 with the hand lead and 2 days work with the "Cosmos" with a steam sounding machine. Soundings have been reduced from data obtained from the tide gauge which was located in Ford Arm at Cape Edwards cannery dock.

From Slocum Point northwestward to Piehle's Passage the coast is foul from $\frac{1}{3}$ to $\frac{1}{2}$ mile off shore. Kelp grows over most all this area which is dotted with rocks both sunken and those which bare at some stage of the tide. Except in one place it was impossible to sound with the launch close to the beach on account of the kelp. Between the entrance to Piehle's Passage and Khaz Bay are a group of low islands mostly wooded. Off shore from these islands for a short distance are scattered breakers but kelp groups only in scattered patches.

DANGERS: The outstanding breakers on this sheet are the Khaz breakers and the Middle Breakers which are 2.6 and 1.3 miles respectively W.x N. of triangulation station "Zak" (Khaz).

Other prominent breakers are, 1.3 miles, 264° (true) from triangulation station "Outer" which breaks with heavy swell; 600 meters, 212° (true) from triangulation station "Outer", from which spot in a heavy swell the seas break all the way to the island off shore from the one on which is located triangulation station "Outer"; 1100 meters, 228° (true) from triangulation station "Outer" which breaks in a heavy swell and which has a small kelp patch growing on it; 1530 meters, 1840° (true) from triangulation station "Zak" (Khaz) which breaks with a moderate swell with low tide; 1120 meters 189° (true) from triangulation station "Dace" which breaks in a heavy swell.

Banks were found 2.5, 269° (true) from \odot Rus, 1400 meters, 223° (true) from \triangle Zak (Khaz); 1550 meters, 193° (true) from Middle Breaker, 1.5 miles, 269° (true) from \odot Hom, 1550 S.W. of \triangle Ramp; 2250 meters, 222° (true) from \triangle Ramp. West and Southwest of \triangle Outer there are several spots where the 20 fathoms surve is a long distance off shore but the only isolated banks are about 3 miles West of \triangle Outer.

Chart as next am.
PHISHLE'S PASSAGE: Phishle's Passage is a short cut from the southward for those with small boats who wish to enter Slocum Arm. It is also used by boats going through Smooth Channel. The entrance is narrow and can not be used when there is a heavy swell. There are two alternative routes through this passage. Soundings were taken over the routes commonly taken. The best route is to pass east of the bare rock island on which is located \odot Eel, located on a sharp pinnacle on the north end of the island; then pass to the eastward to the small wooded island on which is \odot Run, although there is more water to the westward. On this latter route one must pass between two rocks which bare, the more northern of which bares only at low tide. About 100 meters N.N.W. of Two Bush Island is a sunken rock on which there is a very small patch of Kelp. Two fathoms was found on this rock. Boats going toward Chichagof may go to the westward of this rock and others to the eastward.

ANCHORAGES: The only possible anchorage for ships on this sheet is a fair weather anchorage about 300 meters south of \odot Gap. Small boats may anchor at the Fox Farm, 250 meters N.E. of \odot Farm, or in the head of the cove east of \odot Mam.

RANGES: A line of soundings was taken between Khaz and middle breakers with Black Island and larger of the outer rocks on range. This range is used by ships passing between the breakers.

STATISTICS OF HYDROGRAPHIC SHEET #

KHAZ BAY

Date	1925	Letter	Volume	Soundings	Positions	Miles of Sounding Lines	Miles to and from Work	Launch
September	10	a	1	229	115	20.7	14.9	Delta
	11	b	1	272	141	25.6	17.5	"
	12	c	1	48	34	5.2	16.3	"
	15	d	1	187	103	15.7	16.2	"
	16	e	2	247	134	22.4	20.1	"
	17	f	2	177	94	16.9	20.0	"
	18	g	2	273	142	25.6	11.0	"
	19	h	2	47	25	4.0		
	19	h	3	72	36	4.5	13.4	"
	22	i	3	113	46	5.6	8.8	"
	23	j	3	181	63	8.0	10.1	"
	24	k	3	259	138	22.2	11.8	"
	25	l	3	112	59	10.9		
	25	l	4	147	74	12.9	12.8	"
	26	m	4	115	59	10.5	12.9	"
	28	n	4	292	146	26.0	13.6	"
	29	o	4	203	102	17.4		
	29	o	5	87	44	7.8	15.4	"
October	1	p	5	168	85	15.0	21.9	"
	8	q	5	6	5	0.2	21.9	"
	9	r	5	43	27	3.7	11.0	"
	9	a	1	140	45	5.0	11.0	# 61
	10	s	5	60	28	4.5	14.4	Delta
	14	t	5	47	26	3.7	16.2	"
	15	u	5	99	52	7.0	26.8	"
	17	v	5	161	130	3.0	17.0	"
	17	a	1	97	53	12.2	18.5	Cosmos
	20	b	1	144	84	16.5	8.7	"
	20	w	6	227	128	10.1	17.5	Delta
				6464	4253	341.8	386.9	
					Area	51.48 Sq. Mi.		

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO.

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

October 7, 1926.

REPORT ON HYDROGRAPHIC SHEET No. 4539.

This sheet was well protracted.

The sounding records are complete with the exception of Boat courses.

Fractions of fathoms were not plotted at all and ^{feet} .5 fathom was not considered as the next whole fathom as called for in the instructions.

The drafting conforms to the general instructions.

There is a 3 fathom spot that should have been developed in Lat. $57^{\circ} 33' 55''$, Long. $136^{\circ} 12'$.

The work left in pencil was evidently done as reconnaissance only, therefore was not inked in.

H. R. Edmonston

H. R. Edmonston.

The rock awash symbol^{of} was used to indicate breakers.

E.P.E.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 11-DEM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

November 19, 1926.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4539

West Coast Chichagof Island - South of Khas Bay

Surveyed in 1925

Instructions dated February 4, 1925 (SURVEYOR)

Chief of Party, A. M. Sobieralski.

Surveyed by C. M. Durgin, W. F. Scaife.

Protracted by C. R. Bush.

Soundings plotted by C. R. B., A. M. Sobieralski.

Verified and inked by H. R. Edmonston.

1. The records conform to the requirements of the General Instructions except that boats' courses were omitted.
2. The plan and character of development conform to the requirements of the General Instructions.
3. The plan and extent of development satisfy the requirements of the specific instructions except that all indications of dangers were not developed.
4. Wherever cross lines were run there is a good agreement at the crossings. The bottom is too irregular to permit of a comparison of adjacent sounding lines.
5. The usual depth curves could be drawn except near shore where little work was done, due to the area being foul and thick with kelp.
6. The field plotting was completed to the extent prescribed in the General Instructions with the exception that fractions of fathoms below 9 fathoms were entirely dropped and in depths of over 9 fathoms, five feet was not plotted as the next whole fathom. Also geographic names of water areas were lettered in vertical instead of slanting letters. Otherwise the sheet was well executed.

7. The junction with H. 4524 is adequate.

A proper junction was effected with H. 4528. There are differences in depths but this is not surprising in a bottom as broken as this is.

The junction with the old surveys is adequate except in the vicinity of the islands about 2 miles to the north of Outer Rocks. The work between these islands forms the connecting link between the older surveys (H. 2857 and H. 2859) making all the work continuous. The work done here is without control and the positions on the smooth sheet were transferred from the boat sheet. While the work shows in a general way the depths in these narrow channels and may be adequate for charting on a small scale, its use cannot be recommended for large scale charts and it should be considered as reconnaissance.

A comparison of this sheet with H. 2319 shows differences in places amounting to 10 fathoms. This is particularly noticeable in the area between Khaz Breakers and the 10 fathom shoal to the northward. It is significant that in all cases compared where a marked difference was observed the shoaler sounding was always on the old survey. The 80 fathom sounding charted in approximately latitude $57^{\circ} 32' 1350$ m., longitude $136^{\circ} 06' 850$ m. (authority H. 2319) is manifestly an error, as the present survey shows 10 to 19 fathoms in this vicinity.

8. The survey, while showing a good general development, is inadequate insofar as all indications of dangers were not developed. Additional work will be required over all these and if possible wire drag work is recommended, at least in all channels and approaches.

Special attention is called to the following important shoals where development is regarded as insufficient:

a. The 11 fathom sounding (lat. $57^{\circ} 33' 1230$ m., long. $136^{\circ} 14' 520$ m.) surrounded by depths of 28 to 41 fathoms, falls close to the sailing directions for entering Khaz Bay from the northward.

This is similarly true of the 14 fathom sounding in lat. $57^{\circ} 32' 1790$ m., long. $136^{\circ} 13' 130$ m., surrounded by depths of 19 to 29 fathoms.

b. The 14 fathom sounding in lat. $57^{\circ} 30' 80$ m., long. $136^{\circ} 05'$ lies in the range for entering Khaz Bay from the southward. It lies in depths of 17 to 32 fathoms and contains no development at all.

c. If sufficiently important, additional work should be done in Piehle Passage. The present survey shows several shoal soundings in this passage that are not shown on H. 2858.

9. Attention is called to the fact that the boat sheet shows rocks awash in places where it is evident that sunken rocks are meant.

The careless use of such symbols is always misleading to the cartographer and an effort should be made to conform to the General Instructions on this point.

10. The soundings on HH day shown on this sheet are taken from the records for H. 4528 (Vol. 9).
11. Character and scope of field operations - good.
Field drafting - good.
12. Reviewed by A. L. Shalowitz, Nov., 1926.

Note:

The entire control on this sheet is based on Dickens triangulation of 1906 and that on H. 4524 to the northward is based on Quillian's triangulation of 1917. There are unadjusted differences between the two systems of triangulation amounting to approximately 35 meters in latitude and 4 meters in longitude, which should be cartographically adjusted when applying these sheets to the charts.

Approved: *Additional investigation of indications noted in 478 desirable when this area assumes greater commercial importance than at present. This day of spots recommended*

Chief, Section of Field Records (Charts)

L. C. Gilbert

Chief, Section of Field Work (H. & T.)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 4539

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.

Field No. _____

REGISTER NO. 4539

State Alaska SE. Alaska

General locality Chichagof I., W. Coast
~~W. Coast Chichagof Is.~~

Locality Khay Bay, Slocum Pt. - Outer Rk.
Pt. Slocum to Khay Bay and Outer Rocks

Scale 1-20,000 Date of survey Aug. Oct, 1925

Vessel Surveyor

Chief of Party A. M. Sobieralski H + G E.

Surveyed by C. M. Durkin + W. M. Schife

Protracted by C. R. Bush Jr.

Soundings penciled by C. R. B. + A. M. S.

Soundings in fathoms ~~feet~~

Plane of reference M. L. W. Ford Arm, Kinichau Cove + Sitka

Subdivision of wire dragged areas by _____

Inked by _____

Verified by _____

Instructions dated April Feb. 4, 1925

Remarks: One days ship work recorded in records for ship sheet 1-80,000 plotted on this sheet. Soundings not yet entered.

(see 4528)
Vol. #7

8248 2/27/74

Exam. with reconstruction
of chart 8248 D.J. Kennon