

4602

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Form 504

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

....., Director

U. S. COAST AND GEODETIC SURVEY U. S. A. Acc. No.

State: SE. Alaska

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic

Sheet No. ² 4602

LOCALITY

W. Side of Yakobi I.

S. Entrance to Lisianski Strait

to Surge Bay, also Ilin Bay

1926

CHIEF OF PARTY

A.M. Sobieralski

H. 4602

Average error in
protracting - 60 meters.

Time on var. & ink by
by Buss 20 days.

Books, keep etc. incomplete
on smooth sheet.

E. P.

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET NO.

WEST COAST OF YAKOBI ISLAND

This sheet was executed under instructions dated Feb. 12, 1926, issued to the Commanding Officer of the Str. SURVEYOR.

The sheet joins the 1925 inshore hydrography on the south, the 1925 ship hydrography on the west, and the 1926 inshore field sheet No. 3 on the north. At the mouth of Lisianski Strait it joins the survey of that entrance made by C. G. Quillian in 1917. The inshore hydrography between Lisianski Strait and Cape Cross, including Takanis Bay, was executed on a 1:10,000 scale, this years Field Sheet No. 1. Ilin Bay was shown on an insert (scale 1:10,000) to this sheet, to show additional soundings taken during the season.

GENERAL DESCRIPTION

The coast between Lisianski Strait and Cape Cross is described in the report accompanying the inshore (1:10,000) sheet. Northward from Cape Cross, the coast is bold, rugged and broken, with innumerable rocks and islets lying close offshore. The coast is heavily wooded but the high mountain peaks are all bare.

OUT-LYING DANGERS AND SHOALS

Some of the shoals off the entrance to Lisianski Strait were developed on this sheet, but no new shoals were found in this vicinity, except the one found by the wire drag in the entrance which is described below. A series of shoals extend southward from Cape Cross, but the most outlying danger to navigation is the rock, swash at high tide, called O Wash. This rock always shows a breaker and is a prominent mark for vessels entering Takanis Bay. Northward from Cape Cross there are no dangers lying more than 1/2 mile off the general shoreline.

INSHORE DANGERS

There are no inshore dangers of importance except in the entrances to the principal bays.

ANCHORAGES

The anchorages in Takanis Bay and Squid Bay are described with the inshore sheet report. The small open bight, 1-1/2 miles northward of Cape Cross has kelp in the entrance and does not afford protected anchorage. Small boats with local knowledge sometimes anchor in the small cove on the sotheastern side of the bay. Surge Bay affords protected anchorage among the islands in its extreme northern end, for small craft, but the approaches are difficult for strangers. The descriptions and *sailing* directions for this bay have been forwarded in the Coast Pilot Notes.

SURVEYING METHODS

Sounding lines, 400 meters apart, were run to the 50 fathom curve, 200 meter lines to the 20 fathom curve, and closer development was made of the inside waters and all indications of shoals. Additional soundings were taken with hand lead while drifting across the shoal, on all shoals southward of Cape Cross. The soundings in Ilin Bay were taken to supplement the incomplete survey of the previous year.

Wire Drag.- The entrance to Lisianski Strait was wire dragged and the work plotted on this sheet. The hydrography of this area was executed by C. G. Quillian in 1917. A very important rock was found in the western half of the entrance with 2-4/6 fathoms of water over it. This wire drag survey is also shown on the 1:10,000 sheet.

CURRENTS

It was noticed during the execution of the hydrography, that during flood tide there was a current setting northwestward along the coast parallel to the shoreline. On ebb tide there appeared to be little current, but when current was noticed it set to southeastward. These tidal currents are greatly influenced by winds.

Respectfully submitted,

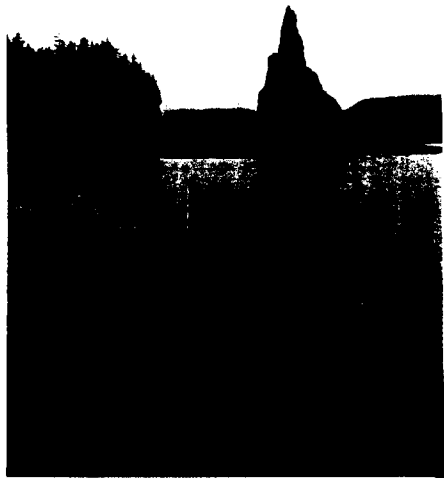


Wm. D. Patterson
H & G Eng. C. & G. Survey

STATISTICS

Date, 1926	Day	Miles Stae	Pos.	Sdgs.	Vessel	
Apr.	27	A	15.6	98	180	Cosmos
	29	B	7.0	52	105	"
	30	C	16.0	95	110	"
May	7	D	11.4	73	145	"
	8	E	7.7	49	93	"
	10	F	12.0	96	185	"
	11	G	14.4	91	176	"
	13	H	8.6	67	127	"
	17	J	15.0	89	166	"
	18	K	23.2	110	215	"
	22	L	18.0	97	183	"
	24	M	13.7	82	156	"
	25	N	25.4	145	322	"
	26	P	25.0	140	307	"
	27	Q	11.5	69	145	"
	28	R	2.1	16	31	"
June	5	S	27.7	133	258	"
Aug.	10	a	11.75	68	194	Delta
	11	b	1.5	20	35	"
	12	c	14.5	128	352	"
	13	d	16.5	194	450	"
	16	e	26.5	160	412	"
	17	f	17.2	162	443	"
	19	g	2.3	32	75	"
Sept.	15	h	11.4	108	226	"
	16	i	6.5	57	115	"
	22	j	4.5	49	199	"
TOTALS			366.95	2480	5405	

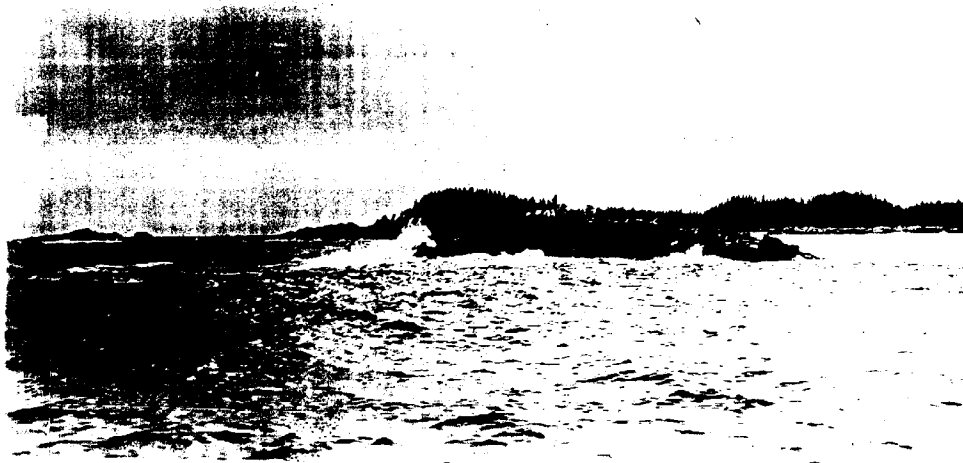
Pinnacle Rock - Entrance to
Lisianski Strait from Cross Sound
Showing need of wire drag



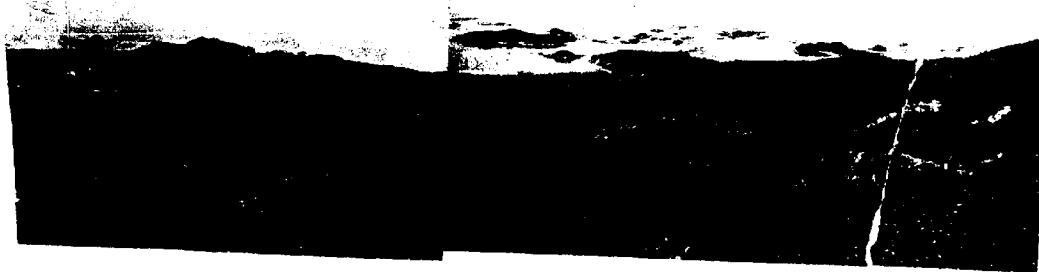
Breaker lying probably 200 or 300 meters from
the shore nearest Lisianski Strait. Does not
break all the time. Have never seen it
here.



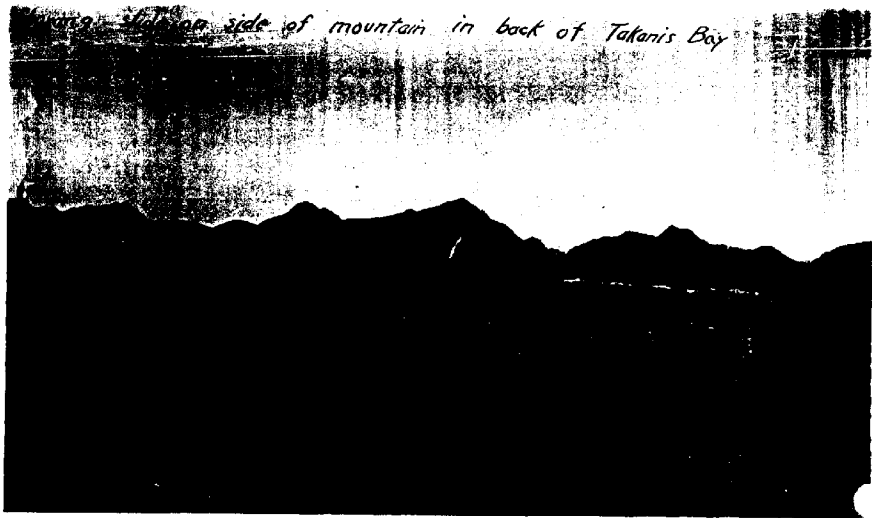
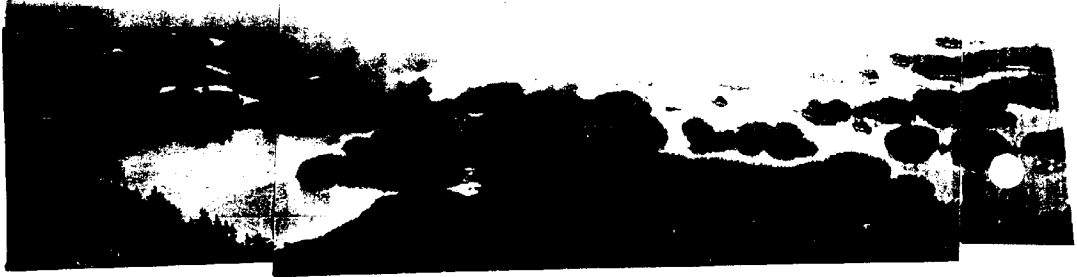
Entrance to Takamis Bay from ship's anchorage inside of Bay



Surge Bay North



Outer Coast of Yakobi Island S.



IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-VEC

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

June 20, 1927.

FIELD RECORDS SECTION

Report on Hydrographic Sheet No. 4602

South Entrance Lisianski Strait to Surge Bay, Alaska

Surveyed in 1926

Instructions dated February 12, 1926 (SURVEYOR)

Chief of Party, A. M. Sobieralski.

Surveyed by A. M. Sobieralski, W. D. Patterson, F. Yegt, A. P. Ratti.

Protracted and soundings plotted by E. B. Latham.

Verified and inked by R. C. Rowse.

1. The sounding records comply with the General Instructions.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. The sounding line crossings are adequate.
5. The usual depth curves can be drawn.
6. The field plotting was completed to the extent prescribed in General Instructions.
7. A good deal of drafting had to be done over in the office. See #10.
8. Not all adjacent sheets completed at time of report.
9. Further surveying is not required to fully develop the area covered by this sheet.
10. The protracting is, in general, accurate. A good many mistakes were found, however, especially in the upper part of Surge Bay where the passages are narrow and the lines were run close to shore. It is probable that this is due to the use of a Court's protractor in places where the signals are too close for accurate plotting,

10 (Cont.)

instead of a paper compass rose, which was used in checking those positions. Δ Cross was erroneously plotted on the hydrographic sheet, which necessitated replotting all positions in which it was used as an object.

In the work of the Launch DELTA the degree of accuracy may be judged from the following statistics:

Total no. of positions	1002
No. positions tested	511
No. positions found wrong	82
% found wrong	$\frac{82}{511} \times 100 = 16.0$

The following statistics are for the Launch COSMOS:

Total no. of positions	1583
No. positions tested	710
No. positions found wrong	218
% found wrong	$\frac{218}{710} \times 100 = 30.7$

The high percentage of error in the work of the COSMOS is due principally to the erroneous plotting of Δ Cross on the hydrographic sheet.

The soundings were in general plotted accurately. Through a probable misunderstanding of the General Instructions the soundings 7 fathoms 5 feet and 8 fathoms 5 feet were plotted as 8 fathoms and 9 fathoms respectively whenever they occurred. In the work of the DELTA the soundings of the entire line 105d - 118d were plotted in reverse order. These were the only mistakes discovered.

The development of channels and shoals is sufficient.

In general the size of the figures for the soundings was too large. Reduction of the size permitted the plotting in the office of practically all soundings which were not plotted in the field.

The field drafting was evidently done in a hurry. The shore-line and signals are not of uniform weight of line throughout and one signal (Δ Cross) was plotted about 30 meters from its true position.

- Character and scope of surveying - excellent.
Field drafting - fair.

- Reviewed by R. C. Rowse, June, 1927.

*Sheet inspected
E. P. C. June 21, 27*

Approved:

Chief, Field Records Section (Charts)

L. O. Pollock

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

(11)

March 28, 1927.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
 11 volumes of sounding records for

HYDROGRAPHIC SHEET **4602**

Locality: **S. E. ALASKA.**

Chief of Party: **A. M. Sobieralski**

Plane of reference is **M L L W**
6.2 ft. on tide staff at **Sitka**
7.8 ft. -----do----- **Surge Bay**
6.0 ft. -----do----- **Takanis Bay**

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.

G. Wade

Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 4602

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. 2

REGISTER NO. 4602

State S. E. Alaska

General locality ~~Yakobi Island~~ W. Side Yakobi I.

Locality S. Ent. Lisienski Strait to Surge Bay also Ilin Bay

Scale 1:20,000 Date of survey Apr. - Oct. 1926

Vessel Str. SURVEYOR

Chief of Party A. M. Sobieralski

Surveyed by Wm. D. Patterson and F. Vogt

Protracted by E. B. Latham

Soundings penciled by E. B. Latham

Soundings in fathoms ~~1000~~

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by E. B. Latham

Inked by E. B. Latham

Verified by

Instructions dated Feb. 12 1926

Remarks: 5 Photos with Desc. Rep.