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Form 504
 DEPARTMENT OF COMMERCE
 U. S. COAST AND GEODETIC SURVEY

State: *Alaska*

11-5613

DESCRIPTIVE REPORT.

Hyd Sheet No. **4010**

LOCALITY:
Rall Island

1917

CHIEF OF PARTY:
J. J. Maher

4010

11-5613

DEPARTMENT OF COMMERCE.

COAST AND GEODETIC SURVEY.

Dr. E. Lester Jones, Superintendent.

DESCRIPTIVE REPORT

HYDROGRAPHIC SHEET, SAKIE BAY, DALL ID., ALASKA. 4010

STEAMER EXPLORER.

July, 1917.

T. J. Maher, Chief of Party.

*Name should be Sea Otter 742.
See letter 574 (1909) + Rep. 13212 +
descriptive rep. Rep. 2875
(By direction of Chief Hydrographer)*

To the Superintendent,
Coast and Geodetic Survey,
Washington, D.C.

Sir:-

The attached report of work in Sakie Bay, Alaska, is submitted. The survey was started during the early part of July. It was necessary to use the bay as an anchorage. Nothing was known about it. Such reports as were received were unfavorable. The launch sounded out ranges on which the ship entered. Hydrography was started immediately. Signals were located on boat sheet paper by plane table triangulation. Scale, 1:10000. These controlled the hydrography in the North Arm. A topographic survey, scale-1:20000, was carried from the entrance as far as Gap Point. No work of any kind was done in the South Arm. I rowed around it in a skiff, but made no sketches. Its general appearance is as shown on the present chart (8150).

The ship left Sakie Bay on July 19th., and proceeded to Wrangell for coal and for men who had been shipped from Seattle. Orders were received to transfer the Str. Cosmos, three officers and eight men to the Patterson, and to send one assistant engineer to another party at King Cove, to close work and proceed with the rest of my party to Seattle. The party did not return to Sakie Bay.

On the hydrographic sheet, the shore line from Entrance Id. to Gap Point was transferred from the topographic sheet; it was enlarged from 1:20000 to 1:10000. The plane table triangulation of the North Arm was then transferred from the boat sheet paper on which it was executed, to the smooth sheet. Signals, common to each sheet, furnished control for the junction and orientation. On the topographic sheet a few cuts to signals at the head of the North Arm will be found. These, if transferred to the smooth sheet will plot in positions which differ slightly from those given. The determinations of the positions on the topographic sheet are weak; I do not believe that any advantage will be gained by making any change until a proper topographic survey is made of this section. Many of the hydrographic stations have been marked in a permanent manner, so that recovery is possible. These will furnish means for orienting new work to old, or the reverse.

No notes, descriptions or elevations were left by the sub-parties who did this work. All of the Officers engaged on it were transferred. Such information as is given comes from the bridge log.

Respectfully,



Chief of Party, C. & G. S.

SAKIE BAY, ALASKA.

- (1) On the West Coast of Dall Id. at the southern entrance of Meares Pass.
- (2) The names of the bays along the West Coast of Dall Id., are confused. Local fishermen and others who use these waters do not agree among themselves as to names. Information derived from these people is not authentic; such as they have comes from indefinite sources; few, if any, have made attempts to get information from reliable sources. Mr. Gould, of Sulzer, Alaska, has been in this country for years and has spent considerable time traveling over Dall Id. He states that the Bay, designated as Sakie Bay on chart 8150 is known to him as Table Rock Bay, while the Bay to the north (which this report describes) is known as Sakie Bay. Considering the relative importance of the two as determined from their natural advantages as harbors, the Bay herein described should be given the preference in regard to names. There is no traffic, nor any industry in this vicinity. Any change of names or assignment of new names will cause no confusion.
- (3) Cape Lookout is at the S.W. point of the entrance to the Bay. The entrance, about one and one-half miles wide, lies between Lat. 55° 06' and Lat. 55° 07' 30" on Long. 133° 15'. It extends in an easterly direction to Long. 133° 07'. About one and one-half miles from the entrance, the bay narrows to a width of three-fourths of a mile. At this place it divides (at Goose Id.) into two arms, one extending in an E.N.E. direction; the other in an E. x S. direction.
- (4) There are numerous bays along the West Coast of Dall Id. Those which afford excellent anchorages have entrances which are difficult to make at night or in thick weather, others are too deep, furnish insufficient swinging room, are exposed in some direction or are subject to williwaws. Sakie Bay has fewer of these defects than any other; though, future surveys may develop dangers which at present are unknown.
- (5) On account of the incomplete state of the surveys in this vicinity, the bay should be approached with caution, even by those who have local knowledge. A prominent conical mountain on Cape Lookout furnishes an excellent landmark. There are higher peaks in the vicinity but their formation is less symmetrical than

the cone referred to. Entrance Id., about eighty feet high, lies approximately one half mile in a N.N.W.'ly direction from the S.W. point of the bay. It is about seventy-five meters in diameter and is rocky. During clear weather it has been seen easily from a distance of eight miles. There are two small rocky islets near it. Westward from it for a distance of five-eighths of a mile rocks and breakers can be seen. Rocks and breakers extend from Entrance Id. to the south shore. There is a channel among these which has been used by launches.

(6) The approaches to the bay have not been surveyed, soundings which have been made show great irregularity. Breakers, two to three miles westward from the entrance are reported. These show only during heavy seas. The bay has been entered as follows:--from the westward;--on a due East (true) course, heading about one half mile south of the conical peak near Cape Lookout. Then North (true) so as to leave Entrance Id. between one and one and one-half miles off the starboard beam. When the south tangent of Goose Id. bears E. x N. $\frac{1}{2}$ N. (magnetic) -- S. 78 E. true, head in on that course. Rocks in the southern arm of the bay will then be in range with the south tangent of Goose Id. ---From the southward;--A course from Port Bazan to Sakie Bay has been made along shore, about one mile off the coast, until the above bearing on Goose Id. was made. ---From the Northward;-- the course from Meares Pass was S. x W. $\frac{3}{4}$ W (magnetic) -- S. 50 W. true -- passing between Millars Rocks and Divers Rocks. When the 1930' shoulder on the southern end of Suemez Id. bore N.W. (magnetic) the course was changed to S.E. (magnetic) this course was continued with the shoulder astern, until the south tangent of Goose Id. bore E. x N. $\frac{1}{2}$ N. magnetic. This course passes over unsurveyed waters. There are breakers to the westward of it. As mentioned before, Caution must be exercised.

(7) The general appearance of the bay is characteristic of S.E. Alaskan waters. Heavily wooded ridges extend to the beach, the latter is rocky and broken. Rocks, reefs, small islets, kelp patches and breakers mark both shores, for a distance of about one mile from the entrance. One and three eighths miles, N. 78 E. (true) from Entrance Id. is Gate Rock. It is about one eighth of a mile south from the north shore. Rocks, breakers and kelp extend one sixth of a mile westward from it. Between

Gate Rock and the North shore are rocks and reefs. Gate Rock is about 120 meters long in an E. & W. direction, about 30 meters wide and about 30 feet high. There are a few bushes on it. About $1/3$ of a mile in an E. x S. direction from Gate Rock is Goose Id. It is high, heavily timbered and has rocky shores. A kelp patch makes off the west end of the island; there are indications of shoal water off the point. Goose Id. is about two-thirds of a mile long; at high water it forms two islands. The bay is here divided into two arms; Goose Id. is at the Western end of the ridge that divides the bay. A narrow channel, apparently with deep water, separates Goose Id. from the ridge. From Goose Id. the North Arm extends N.E. x E $1/2$ E. (true) for about one and one-half miles. Near the north end is Channel Id. It is on the north side of the channel, which at this place is reduced to a width of one-sixth of a mile. W. x S. from the south end of Channel Id. is a small wooded island. Off the West end of Channel Id., near the north shore of the bay is a reef about one hundred meters in length. It covers at high water, with the exception of two knobs, one at each end; these bare about two feet. Due south (true) from the West end of Channel Id., midway between the north and south shores of the Arm, is a reef about fifty meters in diameter. The centre and highest part is awash at high water. South from the centre of the south shore of Channel Id. are Channel Rocks. These rocks constrict the width of the Channel to about three hundred meters. West Channel Rock has an elevation of about eight feet at H.W. East Channel Rock is awash at half tide. Gap Point, opposite the east end of Channel Id. is heavily wooded to the waters edge. Close to the Point, on the West side of it is a small reef which bares at half tide. There is a small sand and shingle beach in the small bight west of Gap Point. Between Channel Id. and the north shore of the Arm is a small channel which may be used by small boats at high tide. The North Shore of the Arm and Channel Id. form a bight about one third of a mile in diameter. It appears to be clear; no soundings have been taken in it. Close to the East end of Channel Id., on the north side, is a small rock, awash at half tide. From Gap Point, the Arm rounds in a general easterly direction, and has a width slightly less than one-half of a

mile. About one-half mile easterly from Gap Point, near the south shore of the Arm is Tree Islet. It is covered with grass and bushes and has two small trees on it. At half tide it is connected with the shore by a shingle beach. About seventy meters off the north shore, N. x E. 1/2 E. from Tree Islet, is a small rock awash at high water. Eastward from the rock, about two-thirds of a mile, near the north shore, are some small islets. There is a flat grassy area at the head of the bay. The beach is of sand, mud and small shingle. If necessary, a vessel could be beached there. A small mountain stream flows into the head of the bay. It is very shallow; spreads over a considerable area, and has no regular channel.

(8) The courses followed in entering were as follows: -E x N. 1/2 n. magnetic, S. 78 E. true, on the south tangent of Goose Id. Gate Rock is passed close to. Change course to N. E. 1/8 E. magnetic, N. 76 E. true; pass close to Bold Point. Change course to N. N. E. magnetic, N. 52 E. true, passing close to Gap Point. Anchorage may be had, anywhere easterly from Gap Point. Twenty to twenty-two fathoms may be had in the vicinity of Tree Id. Twelve to Fourteen fathoms near the head of the Bay, Mud bottom.

(9) The bay has been only partially surveyed. From long. 133° 12' to long. 133° 13' 30" depths of seventy to ninety fathoms were obtained. The area between Gate Id. and Gap Point was not surveyed. West of Gap Point the submarine sentry struck at thirteen fathoms. The above courses are not recommended. I have used these courses several times and apparently they are good. The courses are given so that if another vessel finds it necessary to enter these waters before the survey is completed some information will be available about waters regarding which, heretofore nothing had been known.

(10) The difference in height between the highest and lowest tides observed at Sakie Bay is eleven and nine-tenths feet. These observations were made on July 19-20, 1917. The mean range, derived from comparative readings, with the staff at Craig, is 7.97. Tide observations were made from July 13 to July 20. An automatic gauge at Craig furnished data for the derivation of the tidal planes.

(11) In the bay there are no currents other than those due to the flood and ebb of the tide.

(12) Disagreeable weather prevailed while this work was in progress; it was not accompanied by strong winds and no williwaws were observed.

(13) Of the various names applied to the channels and islets, Sakie Bay is the only one known locally. The other names were applied by members of the party. All names used are either somewhat descriptive of the object or refer to its location.

(14) The nearest village or settlement is at Waterfall, Ulloa Channel, from which place there is a weekly mail service. A wireless station was to be established at Klawak, Craig, Alaska.

Respectfully,
S. J. M. C.

Chief of Party, C. & G. S.

Statistics Sheet (7) 4010

Sakie Bay, Dall Id., Alaska.

Date, 1917. Letter Volume Positions Soundings Statute Miles Vessel

July 16	a	1	124	124	12.4	Launch 46.
" 17	b	1	192	192	7.9	"
" 19	c	1	130	130	7.3	"
			446	446	21.2	

Plane of reference, M.L.L.W. Reading on staff 0.924 ft.
Staff in Sakie Bay.

West Coast Dall Island,
S. E. Alaska.Party on Steamer "EXPLORER"
Season 1917.

T. J. Maher, Commanding.

All stations marked, described on Form No. 524.

<u>Stations.</u>	<u>Lat.</u>	<u>D M's.</u>	<u>Long.</u>	<u>D P's.</u>	<u>Remarks</u>
Bad	55 06	349.0 ✓	133 11 -	1008.0 ✓	Whitewash
Ban	07	318.0	07 -	146.0 ✓	
Buz	06	343.5 ✓	- 11 ✓	157.0 ✓	Whitewash
Cat	07	962.5 ✓	- 09	161.0 ✓	
Clam	07	154.5 386	- 13	162.0 ✓	Marble
Cot	07	103.0 ✓	- 12	396.0 ✓	Whitewash
Cox	06	1398.0 ✓	- 10	960.0 ✓	
Cre	07	405.0	- 06	890.0	Large Tripod
Cut	07	1073.5 ✓	- 09	539.5	
Dead	07	277.0 ✓	- 11	25.5 ✓	Dead Tree, Banner.
Doc	06	1476.0 ✓	- 11	409.0 ✓	
Dry	06	608.5 ✓	- 12	558.5 ✓	Whitewash
Ed	06	1842.0 ✓	- 12	113.5 ✓	Whitewash
End	07	1705.0 ✓	- 09	429.0 ✓	
Fred	07	15.0 ✓	- 12	730.0 ✓	Whitewash
Gate	06	1527.0 ✓	- 12	154.5 ✓	Banner
Gru	07	586.0 ✓	- 10	246.0 ✓	
Han	07	1670.0 ✓	- 08	10.0 ✓	Tripod
Hat	06	514.0 ✓	- 12	2935.0 ✓	Whitewash 273.5
Hink	07	450.0 ✓	- 10	770.0 ✓	See 3w
Hit	07	1048.0 ✓	- 08	93.0	
Is	08	112.0 ✓	- 09	182.0	Marked
Jo	06	1394.0 ✓	- 10	912.0	
Lan	07	1772.0 ✓	- 08	341.0 ✓	Marked
Lee	06	1598.0 ✓	- 10	577.5 ✓	
Man	07	33.0 ✓	- 10	170.0 ✓	
Midn	07	1157.0	- 07	493.0	Marked
Mil	06	1377.5 ✓	- 11	554.0	Banner
Moe	07	108.5 ✓	- 13 //	772.5 ✓	Whitewash
Out	07	1202.0 ✓	- 08	904.0	Banner
Paul	07	69.5 ✓	- 11	450.0 ✓	Banner
Pep	06	1743.5 ✓	- 11	934.5 ✓	Whitewash
Pod	07	800.0 ✓	- 09	960.0 ✓	Centre high rock
Pop	08	121.5 ✓	- 08	746.5	Whitewash
Rag	07	1030.0 ✓	- 06	1060.0	
Rain	07	447.5 ✓	- 13	521.5	Whitewash
Roc	07	837.0	- 07	798.0	Marked
Ros	06	716.5 ✓	- 13	404.5 ✓	Whitewash
Rot	06	327.0 ✓	- 11	503.5 ✓	Whitewash
San	07	372.0 ✓	- 13	394.5 ✓	Whitewash
Sid	07	1068.0 ✓	- 09	142.5	
Sno	06	612.5 ✓	- 13	209.0 ✓	White marble.

(continued)

STATIONS OF HYDROGRAPHIC SHEET NO. 4010

West Coast of Dall Island
S. E. Alaska

Party on Steamer "EXPLORER"
Season 1917

T. J. Maher, Commanding.

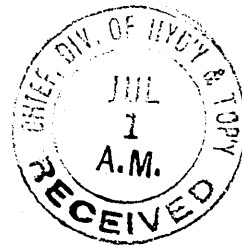
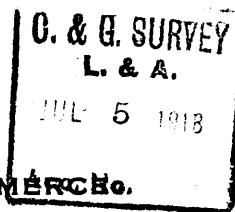
<u>Stations.</u>	<u>Lat.</u>	<u>D M's.</u>	<u>Long.</u>	<u>D P's.</u>	<u>Remarks</u>
Sob	55 06	587.5 ✓	- 133 12	942.0 ✓	Whitewash
Star	07	1325.0 ✓	07	614.0	
Sto	07	543.5 ✓	07	426.0	
Ted	07	192.0 ✓	- 11	266.5 ✓	Whitewash
To	07	711.5 ✓	- 10	486.0 ✓	
Top	07	960.0 ✓	- 10	310.0 ✓	Whitewash
Tre	07	1192.0 ✓	- 08	467. ✓	Tree on Islet
Was	07	07.5 ✓	- 12 //	584.5 ✓	Whitewash
Wil	06	1348.0 ✓	- 10	673.5 ✓	
Wop	07	392.5 ✓	- 12	862.5 ✓	
Yak	07	1238.0 ✓	- 10	68.0	Banner, Marked.
Yel	06	1765.0 ✓	- 10	540.0 ✓	
Yid	07	587.0 ✓	- 09	619.0	
Yu	07	1130.0 ✓	- 09	722.0	Marked
Zar	07	1620.0 ✓	- 09	1034.0 ✓	Marked
Zip	07	1587.5 ✓	- 09	715.5 ✓	Marked, Banner.
Zo	07	442.5 ✓	- 09	872.5	
Zu	07	453.0 ✓	- 10	758.0	Banner <i>See Hint</i>



ADDRESS
U. S. COAST AND GEODETIC SURVEY
WASHINGTON, D. C.

REFER TO NO. 5-ACC

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



CHARTS (H) ✓

July 1, 1918.

Division of Hydrography and Topography: *HCS*

Division of Charts: *LIBRARY*

Tidal reductions have been approved in *Place with descriptive report*
1 volume of Sounding records for *of hydrographic sheet No. 4010*

Hydrographic Sheet 4010

Drawing Section. *S*

Sea Otter Harbor, Dall Island, S. E., Alaska
T. J. Maker in 1917.

Plane of reference is
Mean lower low water, reading

0.9 ft. on staff at Sakie Bay, Alaska

L. P. Shidy
Acting Chief, Section of
Tides and Currents

Hyd. Sheet 4010.
Sea Otter Hbr.

This survey is only partially completed, as explained by the Chief of Party in his report.

The sds. were plotted in feet, but as all the other work in this vicinity and the chart show fathoms depths, they were reduced back to fathoms and so re-plotted & verified.

S. L. Rosenberg,
May 20, 1919.