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| Department of Commerce and Cabor COAST AND GEODETIC SURVEY |
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| Superintendent. |
| State: WasKa |
| DESCRIPTIVE REPORT. |
| 1. Sheet No. 3302 |
| Chalif Bay |
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| 1912 CHIEF OF PARTY: |



Assistant in Charge

3302

DEPARTMENT OF COMMERCE AND LABOR
COAST AND GEODETIC SURVEY

O. H. Tittmann, Superintendent

Descriptive Report

to accompany

Topographic Sheet #3302

Aialik Bay, Kenai Peninsula

Alaska

Steamer McArthur

C. G. Quillian, Assistant Commanding

Topography by

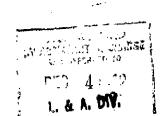
A. M. Sobieralski, Assistant

and

F. F. Harbour, Aid

Executed July > September

1912



Sheet forward by Express.

CONTROL

The topography of Aialik Eay is controlled by a system of tertiary triangulation starting from the secondary line Light House Rock to Chiswell. The situation of the triangulation stations was such that none of the topographic signals were fixed by triangulation cuts, and all had thus to be determined by the plane table. The secondary triangulation station Seal Rock was frequently used in orienting or determining the plane table position.

Through Granite Island passage, up Holgate Arm and for the last five miles at the haed of the bay beyond the triangulation, a plane table triangulation was carried.

The west side of Granite Island was run by a very difficult traverse and may be subject to revision.

From 0 Quill to 0 Shag was not run as accurately as the rest of the bay, being only sketched between a few points which were cut in.

METHODS

The greater part of the work shown on this sheet was done with theplane table. Along certain parts of the shore, especially on the islands, sextant angles were used to fill in stretches where the plane table could not be landed or set up.

GENERAL CHARACTER OF THE BAY

All of the islands at the entrance to the bay are rugged in the extreme. The shores are rocky and precipitous, the contours very irregular, and the slopes are ebtirely covered with fir trees except where they become cliffs. The shores of the mainland show these same characteristics near the entrance to

the bay. As you go up the bay, beaches begin to appear, the shores are generally less precipitous, and the firs give way to alders and grass. The entire lower half of the bay on both sides is a succession of coves and bights, but in the upper half the shores are straighter.

On the eastern side of the bay, the bights extend almost through to Resurrection Bay and the hills do not rise above 1800 feet until you get near the upper end of the bay, when the shores rise to 3000 feet of more.

On the western side, the heights increase more rapidly and three well defined peaks of about 3200, 4200 and 4500 feet occur below Holgate Arm. Above this arm are a number of peaks exceeding 3000 feet.

At the extreme head of the bay, the mountains rise directly from the water, forming a long even ridge of about 4000 feet.

DESCRIPTION OF ISLANDS IN DETAIL

AIALIK CAPE. The extreme end of Aialik Cape is a grass cevered point 155 feet high, terminating in a cliff. Outside of this are a succession of bare rocks separated one from the other by a few meters of water, the innermost being about 40 feet high, then a low rock, then a rock bearing a very marked resemblance to a camel lying down, the highest part of the rock (the camel's hump) being 115 feet high. Outside of this is a low rock, then at intervals of 40 meters are two rocks just awash at high water.

CHAT ISLAND. About one mile west of Aialik Cape is Chat Island, 470 feet high, with no pronounced summit. Its whole surface is solidly wooded to the shore. As seen from about

east or west, the southern edge terminates in two high narrow rocks 75 feet high, just detached. About 50 meters from the most westerly part of the island are two rocks awash at low water.

One eighth of a mile east of this island is a small island about 150 meters in diameter and 170 feet high. It is capped by a clump of firs. An eighth of a mile further east is a rock about 75 meters long and perhaps 10 feet above high water.

SEAL ROCKS, the most southern islands in this vicinity, are a group of four rocky islets, entirely bare. The eastern one is 92 feet high, the next one 172 feet, the third, largest and most northern is 278 feet high and has an arch through it from SE to NW; and the most western is 206 feet high. The extreme stretch of the group is about three quarters of a mile. Between the largest and the western one are two small rocks. These oslands are the gathering place of as many as 500 seals and sea lions.

CHISWELL. The most eastern of the Chiswell group is 586 feet high. From east or west its outline is quite regular, and much steeper on the south slope, which becomes a sheer cliff of 500 feet. As seen from north or south, it appears double, having a promontory to the eastward 290 feet high, terminating in a cliff, the whole almost separated from the main island. The north and easy ascent is covered with a group of fir, and on the east and west there are grass and cliffs. Less than one eighth of a mile east of this is a rock about 15 feet above high water, terminating to the east in a line of rocks awash.

SECOND CHISWELL is the name given to the island three quarters of a mile to the west of the above. It has two very distinct peaks, the southern being 490 feet high and the northern 543 feet, and the island being 180 feet high in the low place between the two peaks. The eastern side is cliffs or steep grass slopes, the western slope being more gentle and each peak having a little clump of trees near the top. of the northern peak and a little distant from the main island are two narrow rocks 50 and 75 feet high. The southern extremity of the main island is a 300 foct ridge terminating in a elcliff, just off which is a rock 100 feet high and a rock awash at high water. About 300 meters south of this is a rock about 50 meters in diameter and about 30 feet above high water.

LONE ROCK, about two miles southwest of Second Chiswell, is a rock with a circular base about 100 meters in diameter and is 154 feet high. It has steep shores, rounding off very evenly on top, and it is entirely bare.

TOMAHAWK ROCK is a long low rock not more than 25 feet above high water, at the eastern end, and awash at the western end. As seen from the north or south, it resembles a hatchet.

THE HAYSTACK. About a mile NNW of Second Chiswell is a rocky island bearing a very decided resemblance to a haystack and it is 492 feet high. Its slopes are very even and are covered with grass. It has be trees except one small lone tree near the summit.

THE EEEHIVE is somewhat similar to the Haystack, except that it is not so regular in cutline, has steeper sides, including an overhanging cliff on the southeast side, and has a

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Descriptive report, topographic

small clump of firs on the summit, which is not very marked. It is 538 feet high.

MOTHER ISLAND if the largest of the Chiswell group. It has one pronounced summit, 750 feet high and the rest of its outline is very irregular. As seen from the south and east its shore line and sides are of the most rugged character imaginable, the shore being a mass of large rocks, some detached and some awash, and the sides are entirely cliffs of the most The extreme southern extremity is a sucirregular character. cession of recks 50 to 75 feet high. On the northeast side the slopes are more gentle and are covered with fir, but this corner has a great many rocks awash or covered at high water, extending 150 meters off shore. The "inside" of the island has moderately steep slopes, fir covered, with a cliff on the NW corner, and a decidedly overhanging cliff on the SW corner.

LIZARD ISLAND is only about 40 meters from the above cliff. From a distance it resembles a lizard or a dagger, as it tapers gradually on the west side, and rises in a lump, tree covered and 240 feet high, on the east end.

CORA ISLAND is just off the NW corner of Mother. It is 240 feet high, rather regular in outline, and with the upper half covered with trees.

SLAB ISLAND, RHINO ISLAND. Just off the southern side of High Island are three islets, two of them almost connected with each other and with the main island. Rhino Island resembles the head of a rhinocercs, as it has a pronounced horn near the southern point. It is 380 feet high and has fir trees on the upper half. The little island just south of this is 100 feet

high and has a clump of trees on the top. Slab Island has a very regual cutline, attaining its altitude of 210 feet near each end, and being about the same height throughout. It has steep sides and is grass covered, with a little stump near the southern edge.

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HIGH ISLAND is the southeasternmost of the three large islands in the entrance to the bay. It has one very decided high peak of 1050 feet, in the center, and a sharp pinnacle peak of 850 feet just SW of this. As seen from the outside, the high part of the island is very steep, being sheer cliff. East of the peak is a low place about 100 feet high and then a wooded peak of 505 feet. East of this is frist a grass topped rock of 180 feet, them a fir topped islet of 275 feet, and on the extreme northeast a bare rock of 90feet. The southern slope of the island is wooded where there are not cliffs, as is almost the whole western and northwest side, except for the peak above 800 feet, and a ravine from below the peak.

Between this island and the next to the northwest is almost entirely rocky and foul. There is one rock about 40 feet high, a grass covered islet of about 50 feet, and quite a number of rocks awash at high or low water.

MIDDLE ISLAND is rather regular in outline. It has a gradual summit of 660 feet on the SW end and the northeast half is a ridge. The entire island isswooded to the water, except for a series of prominent ravines on the NE end. The SW point terminates in a number of rocks awash and submerged.

WEST ISLAND is as irregular in outline as in shoreline. It has five distinct summits and one low place of 180 feet. Its

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slopes are generally gradual and entirely wooded except for a few prominent cliffs on the NE end. Its northern end resembles a boar's head.

GRANITE ISLAND. There is a rock just above high water and sometimes awash, about 75 meters off the southern end of this island. The island is quite irregualr in skyline, the lower part being an irregular ridge, the central part having a double peak of more than 1500 feet, and the upper part having two or more peaks. The lower third on the western side is entirely almost sheer cliff with no ravines: further along the slopes become more gentle, but on the whole side there is nothing like a beach. The side of the island beyond the cliffs is wooded to a height of about 1000 feet. The cove shown about two thirds of the way up is almost entirely landlocked, but the entrance apparently clear for small launches. The southern part of the island on the esstern side has very steep slopes entirely wooded to a height of about 1000 feet.

PASSAGE ISLANDS. These little islands are a little more than 200 feet high, and both have steep shores and are crested with firs. The shores of both have a good many rocks awash close by. The little rock between these islands is not more than 10 feet above high water.

SOUTH TWIN ISLAND has one central summit and two secondary summits. The entire island is fir covered. The detached part is about 100 feet high and is fir crested.

NORTH TWIN ISLAND also has a central summit with two secondary ones. As viewed from up the bay, the little arch near

the southern end is a feature. This island also is entirely fir covered.

VEGETATION

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Care was taken that the topographic symbols should represent as accurately as possible the timber line, extent of grass, etc. As shown on the sheet, the vegetation is almost entirely fir alders and grass. The fir woods have a little undergrowth and the forest floor is everywhere covered with tundra moss. The area above the timber and grass line (shown dotted on the sheet) is entirely bare rock, frequently becoming cliffs. Some of the heights above 3000 feet are covered with snow all summer.

WATER

Fresh water may be obtained at a good many places other than those shown on the sheet as prominent waterfalls.

MINING PROSPECTS

The entire bay has been prospected fairly thoroughly, but nothing has been found worth mentioning, although a few claims have been staked, but never worked. The rocks bear gold, copper, iron and coal, all in small quantities.

CANNERY SITES

The bay contains no sites well adapted for cannery, whaling station or large camp sites. A cannery site has been staked on the small flat in Camp Cove, but in dry weather very little fresh water is at hand.

The bight just south of Holgate Arm has a good sized flat a and a permanent stream, but the ground is partly quicksand and

the bight is not adapted for shipping.

Mc Mullen's Anchorage is a good anchorage with a small

glat, but there is no permanent water supply.

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The small bight just south of Coleman Bay was used for a camp, and combines a fair sized flat, a permanent water supply and a possible anchorage, but there is little shelter against the strong glaciers winds which prevail in fair warm weather. This also would furnish an objection to the flat just above Co Coleman Bay, and above and in Holgate Arm, glacier ice is very prevalent.

DERIVATION OF NAMES

The names Aialik Bay, Seal Rocks, Chiswell Islands and Lone Rock seem to be generally known and accepted.

The names Granite Id/, The Beehive, Harbour Islands, Cape Aialik, Chat Island, Twin Islands, Holgate Arm, Coleman Bay, Slate Island, Squab Island, Holgate Glacier, Pederson Glacier, Aialik Glacier and Skee Glacier were all taken from the map of the southern side of Kenai Penansula recently issued by the U. S. Geological Survey.

Pederson Glacier seems to have been named after the Rev. Mr. Pederson of Seward. Alaska, otherwise the macnings of these names are unknown to the writer, except where the object itself seems to have suggested the name. The Beehive somewhat resembles one, the Twin Islands are very similar in outline, and Slate Island is composed of slatey rock.

All other names given on the sheet were given by various members of the party on the Steamer McArthur, mostly by Capt.

C. G. Quillian.

Paradise Bay has been so called by Capt. McMullen of the Alaska Steamship Company's Steamer Dora, after whom McMullen's Anchorage is named.

All the other islands, bays and points were given names suggested by their appearance or location, excepting one or two named for incidental reasons.

GLACIERS

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Pederson Glacier only on a part of its face, back of the flat, and even here it is only moderately alive, as the whole front part of the Glacier has very little rise.

Aialik Glacier has a high face and runs back very steep hence it is very active, except in the southern corner, which is dead. From the top of Squab Island, the face subtended an angle of 51°57' on September 20, 1912. A very good measure of the movement of this glacier can be had from the fact that the face just connects with the little island, without covering it at all. There is also a bit of rock showing just flush with the face, as shown on the sheet.

Holgate Glacier has a high face and runs back very steep being very active. To determine the movement, sextant angles were taken from two points on September 4, 1912, the points being marked, as follows:

On the extreme top of the rock lying about 40 meters from the north shore of the bay and about half a mile from the face of the glacier, a 3/4 " hole was drilled about 3" deep. From this point the following angles were taken.

Width of main face of glacier 28 20 Width of shore between glaciers 14 40 16 15

Width of secondary face

A 3/4" hole was drilled to a depth of about 3" on the first point below the smaller face of the glacier. This point projects quite prominently and has a rather flat surface 35 feet above the water, and the drill hole is in the middle of this surface From this point the following angles were taken.

Width of main face of glacier

33[°] 201

Width of shore between glaciers

45 30'

Width of secondary face

about 18

Respectfully submitted Aid, C.7 J. Surry

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