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Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

Superintendent.

State: Alaska

DESCRIPTIVE REPORT.

Hyd. Sheet No. 3420

LOCALITY:

South Coast of Alaska -  
Approaches to Resurrection  
+ Araluk Bays

1913 — 1912.

CHIEF OF PARTY:

C. J. Gilliam

11-4845

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MAR 18 1913

U.S. Coast & Geodetic Survey

O.H. Tittmann

Superintendent No

Approaches to Aialik and Resurrection Bays, Alaska.

From Barwell Is. to Wedge Cape

by the

Party in charge of O.G. Quillian, Asst. C. & G.S.

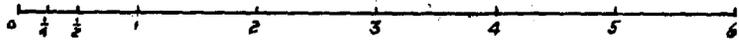
Steamer W.P. McArthur

Begun- June 19, 1912

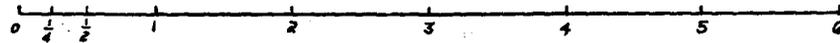
Ended- Sept. 22, 1912

Scale - 1 to 100 000

Statute Miles



Nautical Miles



C.G. Quillian, in charge    H. Bernhardt, Mate, Rt. Angle  
A.M. Sobieralski, Asst. L. Angle    C.G. Braunlin, Asst. Surg. Rec

Automatic Tide Gauge #82 at Camp Cove, Alaska  
" " " #92 at Seward, Alaska

DESCRIPTIVE REPORT

Resurrection and Aialik Bay, Alaska.

Resurrection Bay

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The Coast Pilot gives a good description of Resurrection Bay and I only wish to add a few notes.

During the summer, the contours on each side of the bay were completed as well as could be sketched from Resurrection Bay. Several plane table stations were occupied, position fixed by tangents and the contours sketched on a copy of chart #8538.

The elevation of Peak 25 (approx Lat 59-54, Long 149-17) is given on chart 8538 as 1205 feet. I believe this error was caused by the elevation being inclosed in parenthesis mark and in inking or cleaning the sheet the right hand figures were obliterated leaving what was (2050) as (205) and it was read as 1205 feet. The correct elevation as checked from several positions is 2050 feet.

The eastern shore of the bay is rocky; in places precipitous and there is <sup>scant</sup> ~~dense~~ vegetation until near the sand spit on east side of Renard Island. Above that point spruce timber begins on the shore line and continues to the head of the bay. The valleys are heavily overgrown and the spruce is thick to the five or six hundred foot contour, then becomes scant; above the 1000 foot contour there is very little, if any, spruce; and the vegetation consists of moss, and at places, alders.

Rugged, Hive, and Renard Islands are sparsely wooded. Spruce extends to above 1000 feet and is heavy only <sup>on</sup> ~~at~~ flats at the heads of bights; Sunny Cove, for example.

The islet north of Renard Island is 340 feet high and capped

2.

with thick spruce. Thumb Cove also has quite a bit of spruce and several glaciers terminate above the 1000 foot contour.

Along the western shore the vegetation is heavier, spruce thickets growing from Cape Aialik to the glacier and both Cheval Island and the smaller island near Cape Aialik being covered with spruce. The shores are all rocky and steep.

The glacier is dead; so far as I could learn, it never throws ice into the bay and is receding slowly. This glacier is called Bear Glacier locally at Seward, and is also called Bear Glacier by Dr. Brooks of the Geological Survey. The coast from Bear Glacier to Caines Head is very steep and precipitous. Contours were sketched in here. It is covered with clumps of spruce and fir. Each of the valleys above Caines Head is thickly wooded and from about 2 miles above Caines Head the coast is all wooded to about the 1000 foot contour.

The notes regarding Seward as given in the Coast Pilot are ample. Vessels docking are charged \$5:00, and fresh water supplied for \$10:00. Good water is obtainable from the pipe line on the dock, The water is from the glacier stream which runs through the town and the pipe line taps the stream well above all chances of pollution. There are a number of stores and supplies of all kinds may be secured *in moderate quantities*

At the railroad shops, machinery repairs may be made and there is a blacksmith and small machine shop in addition.

Coal in quantities of more than 10 to 25 tons should be arranged in advance, as only the requirements of the town and a moderate supply for the Str. "Dora" is on hand.

The population is about 500 in winter to 1200 to 1500 in summer.

There are a couple of gasoline launches in the town but parties wishing launches should make inquiries beforehand.

Seward is the terminus of the Alaska Steamship Co. and has a weekly mail service. Fresh supplies are brought in by the steamers. Native vegetables are grown in small quantities. No attempt is made at raising cattle.

The town has some prospect of becoming a small mining center and in time will doubtless be of more importance when the railroad is extended into the interior. At present the railroad extends to ~~Turn Again~~ <sup>Turnigan</sup> Arm. In the summer an automobile car makes the run to Kern Creek (~~Turn Again~~ <sup>Turnigan</sup> Arm) about twice a week, and will make the trip anytime for about 10 passengers.

At Kern Creek launches may be taken to Knik and also for points in Cook Inlet; fare to Kern Creek about \$22:00., also, persons desiring to go to Kenai may leave the railroad at Lake Kenai and go by launches and boat to Kenai, on Cook Inlet.

The Revenue Cutters anchor close in to the S.E. of the town. The U.S.S. "Maryland" called at Seward during 1912 and anchored S.E. of Lowell Point. The master of the Steamer "Dora" informed me that in Southerly weather he frequently anchored off the north side of Lowell Point in 10 to 20 fathoms.

#### AIALIK BAY.

The Bay extends nearly true North for about 25 miles from Seal Rocks and about 14 miles North from Cape Aialik.

There are numerous small bays and indentations, as mentioned elsewhere the shores are steep, and rocky and very rugged. Landing everywhere is difficult and unpleasant.

At the mouth of the bay are two group of Islands. I have called the outer group Chiswell Islands although on the charts

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Chiswell Islands enclose the entire group. I included in the Chiswell Islands ~~are~~ the following.

CHISWELL ISLAND, 586 feet high, steep and rocky. South side precipitous: N.W. side slopes, and highest point <sup>is</sup> on S.E. side. Is wooded. Land on N.W. side, scale very slippery granite rocks for about 60 feet to timber line, after which the ascent is easy.

SECOND CHISWELL, a steep, precipitous sided, island with two peaks on it, one 543 feet high, other 490 feet and having a few trees on N.W. side. A bare rock lies about 1/4 mile S.E. of island.

THE HAYSTACK, 492 feet high, somewhat resembles a haystack. Sides are very precipitous and cannot be scaled. Bare, except for scattered grass patches and one small tree on top.

THE BEEHIVE, 538 feet; like a conical beehive, steep and unscalable, bare, save for a few small spruce trees and scattered grass patches.

MOTHER ISLAND, the largest of the group is heavily wooded to the tops of the three summits of 750, 436 and 435 feet, shores are steep and rugged with many rocks showing way off shore <sup>South</sup>

CORA ISLAND, 240 feet, small and wooded.

LIZARD ISLAND, 240 feet, wooded on top and looks like a giant lizard, the tail being formed by the rock sloping to the S.W., and head composed of higher, wooded portion.

LONE ROCK, 154 feet, bare, grass covered and unscalable.

The inner group I called HARBOR ISLANDS as they are called on a reconnaissance map of the Geological Survey. The group consists of:

WEST ISLAND, about 4 miles long, 1/2 mile wide of irregular outline, steep rocky shore and wooded to the summits of the hills, greatest elevation 890 feet.

MIDDLE ISLAND, 660 feet high, steep rocky, heavily wooded.

HIGH ISLAND, 1050 feet high, steep, rocky, irregular outline. The summit is bare and steep, very difficult to ascend. Placed a triangulation signal on top. It has a lower and heavily wooded peak of 880 feet to South of Highest peak.

RHINO ISLAND, 380 feet high, from S.W. and N.E. resembles a rhinoceros.

SLAB ISLAND, 210 feet, bare except for grass patches and 1 dead tree, flat, rocky, and precipitous shore.

The remainder of this group <sup>comprised</sup> ~~are~~ the small islands closely assembled with the others.

SEAL ROCKS, a group of six rocks which lie about 6 miles South of the Chiswell Islands. Four of these rocks are prominent and are 206, 278, 172 and 92 feet high respectively. The highest and largest is most prominent and has an archway through it from N.W. and S.E. It is the habitat of numerous seals and sea-lions, and is of importance, as <sup>it</sup> is made by all vessels passing to the westward.

GRANITE ISLAND, on the S.W. side of the bay <sup>the</sup> outline resembles The "Big Stick" of recent cartoon fame and I would suggest that as a name for it. It is conspicuous, greatest elevation, 1570 feet, in a group of bare granite hills. Fir trees grow along the top to an elevation of about 1000 feet; above this all is bare granite. The S.E. end is steep and on the off shore side the shore line is a sheer cliff of over

500 feet elevation.

The inside shore is wooded and landings may be made on it.

WEDGE CAPE, on the S.E. end of the above island <sup>and so</sup> ~~was~~ called by Capt McMullen of the "Dora"; is an apt and descriptive name as it resembles a great wedge. It is steep and rocky.

N. & S. PASSAGE ISLANDS, two rocky, precipitous islets, capped with trees, and are 235 and 200 feet high respectively.

PASSAGE POINT, so called because of proximity of Passage Islands, is of no great importance.

N. & S. TWIN ISLANDS, are 550 and 400 feet high respectively, are capped with a dense growth of spruce or fir. Sides are rocky and steep. These islands resemble each other closely in contour.

CHAT ISLAND, lies about 1 mile S.W. of Cape Aialik, is 470 feet high and capped with trees; shores are rocky and steep. On the south side of the island and connected at low water are two prominent pinnacle rocks (Signal Chat was on the outer rock).

<sup>The pinnacle rocks</sup> They are about 50 feet high and notable. A rock which bares <sup>at low</sup> lies 50 meters of the S.W., end of Chat Island.

LITTLE CHAT ISLAND, is 170 feet high, has a cap of trees on ~~sum~~ summit. The islet north of Little Chat Island is a bare rock about 30 feet above tide.

CAPE AIALIK, is the southern end of the curiously shaped peninsular which separates Aialik and Resurrection Bays. The point is wooded and at the end is a group of bare rocks about 1/4 mile in length <sup>which</sup> and from the east or west resembles a procession of animals. One rock causes me immediately to think of a camel. A rock which bares at the lowest tides is about 200 yards off the outer rock.

BOAR'S HEAD<sup>as</sup>, Capt McMullen of the steamer "Dora" ~~is~~ called the northern end of West Island from its fancied resemblance, ~~It~~ is a rocky point about 60 feet high.

TOE POINT was the name I gave to the southern point of West Island. It is rocky and about 40 feet high. Trees grow to near the bluffs.

CAMP POINT, so called by this party, as a camp was pitched in Camp Cove for the greater part of the summer. It is rocky and precipitous. An exposed reef lies about 100 yards off shore.

⊙ Camp was on the wooded summit back of Camp Point. It is 820 feet high and is a prominent peak, being conical and sharp.

BLUFF POINT is the rocky bluff about 75 feet high and forms the southern entrance of Camp Cove.

CAPE Q<sup>the</sup>, so called for lack of a better name, is a low rocky point which is conspicuous from the entrance. The tree line begins about 40 meters back from beach. *Down S. side of entrance to Pedersen Bay*

ALDER POINT, named by this party, is a rocky point wooded at summit. It is very steep and precipitous.

HOLGATE POINT, so called from Holgate Arm, is the southern extremity of Holgate Peninsula. It is a rocky bluff with a couple of rocky islets close inshore.

TOOTH POINT, from a pinnacle rock at this point which resembles a giant tooth. The tooth is about 100 feet high. (approx)

SPIT POINT, so called because of the sand spit making out from it. It is a rocky bluff on south side and towards Colman Bay. A shingle beach extends northward.

GLACIER FLAT was so called because it extends off Pedersen Glacier. It is a low, gravel flat covered with grass and alders.

SLATE ISLAND, name taken from a Geological Survey map, is about one mile long, 1/4 mile wide, has its axis in a north and south line, and <sup>is</sup> 1/4 mile off the western shore of the bay. Greatest elevation is 270 feet. Is composed of slaty rock and is barren except for small patches of grass.

SQUAB ISLAND, name from Geological Survey, is 85 feet high and is a small, barren, rocky islet. Highest point used for a signal.

FROZEN ROCK, named by this party, is a small bare black rock. Is about 5 feet above tide and usually hidden in slush ice.

SLUSHY BAY was the name I gave to that part of Aialik Bay northward of Glacier Flat as it usually filled with slush ice from Aialik Glacier.

USELESS COVE was the name given to the small cove on the east shore of Slushy Bay.

AIALIK GLACIER is the name given by the Geological Survey to the glacier at the head of Slushy Bay. The name is appropriate and should be retained. The northern portion of the glacier is most active and casts off ice every few minutes. The face of the glacier is about 1 mile wide and is about 250 feet high. Its height increases rapidly as it extends back into the mountains. There is a rock, as yet, only partly uncovered about the center of the face and a bare hill is also apparently being uncovered. The rock and hill are located on the sheet and angles were taken to locate the present position of the face of the glacier so that its rate of recedence may be determined.

For these angles see the Descriptive Report by Mr. Harbor, *Aid. 1888*.

PEDERSON GLACIER is a dead glacier of considerable extent.

on the west shore of Slushy Bay and about 5 miles from Aialik Glacier. It does not cast ice into the bay, though some ice is falling continually into the sloughs at the glacier face.

This glacier is the most prominent of those two in Aialik Bay as it is not hidden away as are Holgate and Aialik Glaciers.

The name Pederson Glacier seems to have been given by Grant of the Geological Survey. He named the glacier after the Methodist Minister at Seward, Rev. L.H. Pederson. His reasons for applying the ministers name to the glacier I could not determine.

Rev. Mr Pederson has been located at Seward a number of years and in addition to his ministerial duties has made many photographs of Alaska scenery. However, he has never visited the glacier named after him.

HOLGATE GLACIER at the head of Holgate Arm is very active. This glacier is split by a mountain and each portion is active.

The name is from the chart and Geological Survey map. This glacier is quite active and usually the greater part of Holgate Arm is full of slush ice. With a strong N.W. breeze the ice is driven out of the Arm and at times pieces of moderate size ( some 20' X 10' X 5 feet above water ) are seen in Aialik Bay. On two occasions during the summer a number of these pieces were driven beyond the Harbor Islands.

The water is deep to the head of the glacier. On the day the McArthur sounded out this Arm, we were fortunate in finding very little ice and were enabled to sound quite close to the glacier. Its face is about 200 feet high and usually a large piece of ice drops at intervals of one to three minutes.

It is a dangerous place for small boats, as the ice falling.

sets up a nasty swell. Dr. Braunlin was nearly swamped in attempting to land and photograph the glacier, as was also a prospector. The rocks on the south shore of the Arm are scarified by recent ice and would indicate that the glacier probably fitted all of Holgate Arm until recent years. I believe the Geological Survey party found evidence that it extended a couple of miles further as recently as ten years ago. The hills on the south side of the arm attain an elevation of about 4000 feet a couple of miles inshore and the summits were snow covered all summer and there were numerous hanging glaciers. See the topog. sheet, Descriptive Report by Aid. ~~Har~~ Harbor, for description of points and angles cutting the face of the glacier. Points were marked and angles taken so that at some future time the rate of recession may be determined.

PEAK "GLORY", 3232 feet, a bare, black rock projecting above a field of snow. However, it is not conspicuous and there are several similar peaks in vicinity.

"SPIKE" PEAK, 2100 feet, a sharp pointed granite peak. Should be readily identified from vicinity of Camp Cove and when around the N.W. end of Granite or The "Big Stick" Island.

#### BAYS, ANCHORAGES AND PASSAGES.

FIRST BAY, so called as it is the first bight after rounding Cape Aialik. It is open, clear and deep. No anchorage; depth of 46 fathoms being within 1/4 mile of the head of the bay.

CLIFF BAY, so called from the precipitous shore line. It is the next bight northward from First Bay, is clear and deep, depths of over 40 fathoms within 1/4 mile of the head of the bay. It is about 3/4 mile wide by about 1 mile deep.

PARADISE BAY is the next bay to the northward. It has three arms each about 1/2 to 3/4 mile wide and 3/4 to 1 mile deep. All are deep and clear. The southern arm has depths of about 40 fathoms, though anchorage may be had in 30 fathoms about 1/4 mile off head of the bay. The left or northern arm is also very deep, depths being about 40 fathoms, anchorage may be had at the very head of the bay in 30 fathoms.

The middle arm is, however, the best anchorage. Anchor in 30 fathoms, muddy bottom and good holding ground near the head of the bay. The McArthur lay in this arm of the bay during a heavy northeaster. No sea can enter. However, willowows are bad. Fresh water may usually be obtained from streams in the bay if the weather is rainy. The streams would doubtless dry after two weeks clear weather.

Sailing directions are unnecessary or may be taken from the sheet. Follow mid channel courses. The points are all clean and may be approached within 100 yards except Alder Point near  $\Delta$  Bear, which should be given 200 yards berth. The name Paradise Bay was given by Capt McMullen of the Str. "Dora" who sometimes used the bay as shelter from N. Ely, weather.

BEAR COVE so called by this party from seeing a couple of black bears on the hillside when first entering the bay, ~~It~~ is about 1 mile wide and 2 miles deep. Like the other bays, it is deep and free from dangers. There is a sand beach on the southern side and anchorage may be had in 30 fathoms. Anchorage may also be had in the head of the bay in 30 fathoms. Follow mid-channel courses or take sailing direction from sheet.

The next cove to northward was not named, it is a small and

12.

deep cove and not available for anchorage. A small flat is at the head of the bight and the shores are rocky and precipitous. There is a rock which <sup>bears</sup> at L.L.W. Springs about 200 yards N.W. of the southern point of entrance.

TOOTH COVE, the next bay was so called from proximity to signal Tooth on a tooth like rock at the entrance. It is small and deep and not available for anchorage. The shores are precipitous and steep. A small beach is at the head of the bight. No fresh water. There is a rock which bares at lowest tides about 200 yards off signal Tooth.

ROUND BIGHT so called by this party from its shape. It is about 1 mile deep by  $3/8$  mile width. Small vessels may find anchorage in 30 fathoms near its head. Keep mid channel and anchor  $3/8$  mile from the head of the bight. The shores are steep and willowows should be heavy. Fresh water from temporary streams.

McARTHUR ANCHORAGE is one of the best in the bay in Nly weather. It is about  $3/8$  mile off shore off the small double bight between Round and Colman Bays. Fresh water is always available here from the streams from the hanging glacier. It also is an excellent camp site. Anchor in 23 to 25 fathoms soft, sticky bottom midway between and just outside of line between signals Mark and Lund. In Wly blows some small sea may be felt also in southerly blows. The McArthur lay here in a couple of violent southerly squalls. The hanging glacier bears about S.E. from the anchorage.

COLMAN BAY is the next bay to the north. The name is from a recent geological Survey map and I believe was applied by

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them after the hotel at which they stopped in Seward. It is about 2 miles deep and has two arms. The southern arm is about 1/4 mile wide and 1/2 mile deep and at the head is a large bank of snow. The McArthur anchored in this arm a couple of times. The anchorage is too cramped for comfort and while the lead showed muddy bottom, the chain rattled around over boulders. The depth is 15 to 18 fathoms. Water may be had at all times in this bight; streams are convenient for boating water.

The northern arm of the bay is too deep and narrow for anchorage. There are some prospects of low grade ore at the head of this arm.

AIALIK SPIT extends from Spit Point to Glacier Flat. It is a narrow, gravel spit which bares for 3/8 mile off Spit Point and has a greatest depth of 20 feet about mid-way between Glacier Flat and Spit Point. The spit was sounded over but not dragged and vessels should slow down in crossing it as there may be boulders here. It is evidently the terminal moraine at the time Aialik Glacier filled all of Slushy Bay. The spit has a width of about 50 meters in mid-channel to 200 meters at the shore. It shoals very sharply, depths of 15 fathoms being had 75 meters from the center of the shoal and over 50 fathoms 250 yards off the center of the spit.

Anchorage in 18 to 12 fathoms soft, muddy, bottom may be had 3/4 mile off the eastern shore just above the spit. It would not be comfortable in N.W. blows as drift ice would be blown in from Aialik Glacier.

USELESS BAY, named by this party, is too small and narrow for use.

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SLUSHY BAY, the portion of Aialik Bay above Aialik Spit is usually filled with ice. It is deep in the center with moderate depths along the eastern shore. The eastern shore has several gravel beaches and the beach extends from Useless Bay to Aialik Glacier. Several hanging glaciers in the valleys supply streams along here.

The western shore of Slushy Bay is steep and precipitous. The hills on each side are barren. No vegetation except moss is above the 500 foot contour and only alders at the water line.

Anchorage in 18 fathoms muddy bottom may be had close in shore between Glacier Flat and Slate Island. Ice will be troublesome at times.

Southward of Pederson Glacier on the western shore the water is very deep. Depths of 50 fathoms being had close inshore. A shoal with 4 fathoms on it is 1/2 mile off Holgate Point. This was not dragged and should be avoided.

HOLGATE ARM is deep and usually filled with ice. The southern shore is fringed with boulders and the soundings in approaching it are irregular, indicating that it is a glacial moraine. There are probably dangerous boulders as far as 1/4 mile off shore.

McMULLEN ANCHORAGE, so called after Capt McMullen of the Str "Dora", who described the anchorage to me, is the second bay below Holgate Arm. It is 7/8 mile deep by 1/2 mile wide. A flat with only 2 fathoms on it extends half way over from the southern shore and makes the anchorage very small. The steamer "Dora" anchored here in N.E. gales last winter in

15.

some 20 fathoms. The inner bay is called HOOK BAY from the hook of low land at the entrance; it is 20 fathoms in depth but is too small to be used as an anchorage. I entered Hook Bay with the McArthur but would not care to ride out a gale in the bay as would probably ground while yawing to the willows. If desirable to enter it one should keep the northern shore on board all the way in.

Midway between McMullen anchorage, <sup>44</sup>Hook Bay, and Camp Cove is a dangerous rock with only 6 feet over it. It is 3/4 mile off shore, and called DELTA ROCK by this party.

HUB ROCK lies 3/8 mile off shore just north of Camp Cove and consists of two pinnacle rocks which bare at 1/2 tide. There are depths of 8 to 12 fathoms close along side and Hub Rock is cleared by a good margin when South Twin Island is open to the left of N. Twin Island.

CAMP COVE is, with the exception of Paradise Bay, the best anchorage in Aialik Bay. It is about 3/4 mile deep by 1/2 mile wide and anchorage may be had in the center of the bay in 30 fathoms, good muddy bottom. The anchorage is small for large vessels but is secure. A little chop is caused by N.E. gales, and with very heavy south easterly weather a slight swell sometimes rounds Bluff Point: The McArthur maintained a camp party here during July and August. Good shelter may be found for launches inside the spit in depths of 5 to 10 fathoms. Sufficient fresh water may be found for camp parties and after a rain storm numerous streams will supply water for a ship. A stream on the west side near signal Big ran all last summer; it is hidden in the trees.

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OPEN BAY is of no value. It is open to all ocean swells and a rock which sometimes bares is 1/4 mile off signal "Bird".

The survey did not extend to the bays inside The "Big Stick" Island. Of these Fire Cove seemed to offer good anchorage in 20 fathoms. There is a rock slide on the eastern side which extends 200 yards in-to the bay and vessels should hold and anchor well to the western side of the bay.

Camp sites are few and far between after leaving Camp Cove. Probably a camp site can be found near N.W. Glacier.

#### PASSAGES.

THE BIG STICK PASSAGE is clear and deep apparently though not surveyed. At the narrowest point it is about 3/8 mile wide.

DORA PASSAGE is the passage between West and Twin Islands, was called from the steamer Dora, which has made use of it of late and given it considerable newspaper publicity, is 2 miles wide, clear and deep.

Vessels should keep 1/4 to 1/2 mile off shore and take sailing direction from sheet.

A rock awash at H.W. lies 1/4 mile off Wedge Cape. It should be given a berth of 1/2 mile.

MIDDLE PASSAGE is between West and Middle Islands. It is 1/4 mile wide at most narrow place, least depth found was 5 fathoms. Current runs 3 to 5 miles.

This was not surveyed as carefully as I wished and I do not recommend it to steamers.

The passage North and East of Harbor Islands is clear and needs no description.

The survey shows that there is deep water between the Chiswell

Islands and Harbor Islands but owing to the likely<sup>d</sup> hood of pinacles, I did not take the McArthur inside the islands and cannot recommend it.

The Seal Rocks cutoff is the route usually used by steamers to the westward. I sounded it between Lone Rock and Seal Rocks and found depths of 60 fathoms and no indications of dangers.

Vessels should not approach Lone Rock nearer than 1/2 mile on southern side and keep about 1 mile off the southern side of Chiswell Islands.

A rock which bares is about 1/4 mile northward of Lone Rock and I fear shoals extend from Mother Island to Lone Rock.

Bad weather prevented sounding out this space.

Seal Rocks may be approached within 1/4 mile on northern ~~island~~ sides. I would recommend vessels keep about 1/2 mile off. The passages between the islands were found to be deep and apparently clear but a strong current runs through them and a vessel is only taking chances to try and use them.

Aialik Bay is, in general, deep and clear. Hub Rock and the rock 2 miles northward are the outlying dangers. The shores are all rocky steep and precipitous. Anchorages are scarce and the water is very deep. Fresh water can be had during rainy weather in any of the bays and near the glaciers at all times.

Ice is at times a menace to navigation. The head of the bay may freeze. There are no fish, and no suitable cannery sites, although canneries could be built if there were fish. No mines and practically no prospects of mines. No inhabitants of any kind. The timber is too small to pay for cutting. No game was seen except a few black bear. No ducks, grouse or ptarmigan

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The season was late and cold and vegetables planted by my party did not thrive. In short, this bay appeared to offer the least advantages to settlers of any bay in Alaska which I have visited and I cannot recommend it for any purpose other than temporary harbor of refuge.

The upper end seems to be shut in by the glacier. Geological Survey sketches indicate that the entire interior is a vast snow field with glacier arms extending into Resurrection Bay (Bear Glacier) Aialik, Harris and Nuka Bays

#### WEATHER.

During 1912 the weather was disagreeable. Heavy rain at least 75% of the time, with N.Wly breezes, would have clear weather usually two clear days consecutively, and <sup>on</sup> the second <sup>day</sup> stormy N.Wly breezes <sup>would</sup> blowing off the glaciers and bringing some ice into the bay.

During August had rain on about 25 days. This must have been exceptional. A prospector told me of being in Aialik Bay a couple of years before when had two weeks running of fine weather. During 1912, the prevailing wind was easterly with rain. The summer gales did not blow hard from more than a day or so. During September at times would blow three days.

#### DANGERS

HUB ROCK, bare at half tide, covers at high water, about 3/8 mile off shore and just north of Camp Cove.

DELTA ROCK, 6 feet at low water, is 3/4 mile off the west shore and half way between Camp Cove and McMullen Anchorage.

ROCK which bares and is about 200 yards off Tooth Point.  
(Signal Tooth)

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ROCK which bares 200 yards off south point of the bight just north of Bear Cove.

ROCK which bares, midway between Harbor and Chiswell Islands.

ROCK which bares, 1/4 mile north of Lone Rock.

ROCK which bares at L.W., about 50 meters S.W. of Western end of Chat Island.

ROCK with 1 fathom on it about 1/4 mile off signal Bird in Open Bay.

AIALIK SPIT, a dangerous gravel bank 50 to 100 meters in width and extending from Glacier Flat near Pederson Glacier across Aialik Bay to Spit Point. Depth of 20 feet in mid-channel and shoaling towards shore.

Boulders are along the South side of Holgate Arm.

A SHOAL with 4 fathoms lies 1/2 mile S.E of Holgate Point.

WEDGE ROCK awash at H.W. 200 yards off Wedge Cape.

*Automaton T. G. established & maintained in head of Camp Cove. also one on wharf at Seeward.*

*Respectfully submitted  
C. G. Quillian  
and Co. S.S.  
Chief of Party*

STATISTICS, AIALIK BAY, ALASKA

1 - 100.000

C. & G. SURVEY,  
LIBRARY AND ARCHIVES  
MAR 18 1913  
Acc. No

Date	Letter	Vols	Angles	Sdgs	Miles	Vessel
July 27	A	1	108	54	42.7	Str. McArthur
" 31	B	1	86	42	43.4	" "
August 13	C	1	168	84	49.8	" "
" 14	D	1	204	104	40.8	" "
" 23	E	1	80	56	51.0	" "
" 26	F	1 & 2	224	147	59.1	" "
" 27	G	2	56	48	9.0	" "
" 31	H	2	52	27	12.3	" "
Total 8 days		2	978	562	308.1	Str. McArthur.

Recapitulation.

Str. McArthur	: 8 days	: 2	: 978	: 562	: 308.1	:
Grand Total	: 8 days	: 2	: 978	: 562	: 308.1	:

3420

C

VEC  
Apr. 10, 1913.

HYDROGRAPHIC SHEET 3420.

Aialik Bay, Alaska, by Assistant C. G. Quillian  
in 1912.

TIDES.

	Camp Cove ft.
Mean lower low water, or plane of reference on staff	6.5
Lowest tide observed " "	2.7
Highest " " " "	19.7
Mean range of tide	8.4

Coast and Geodetic Survey  
APR 10 1913  
TIDAL DIVISION

Department of Commerce and Labor

Hyd. @ 3420.

The hydrography of this sheet consists of a survey of the approaches to Resurrection and Aialik Bays - Alaska.

The positions were originally plotted by the Field Party, but the entire work had to be replotted on tracing cloth, as the position numbers were absolutely too large, in every case interfering with the soundings.

The soundings were plotted in pencil by the Field Party, but as no allowance was made for tide reduction, this part of the work had to be rejected. Soundings are plotted in fathoms, and the shallowest spot (17 fathoms) was located near "Seal Rocks".

A few positions, which for some reason or other could not be plotted, were rejected without, however, any material injury to the general character of the work.

The work on the whole is fairly good, although lack of crossings does not afford a desirable check.

J. B. Shklean