

4003

Diag. Chit. No. 8002

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey *Topographic*

Field No. Office No. *4003*

LOCALITY

State *Alaska*

General locality *Fry Bay*

Locality *West Shore*

1922

CHIEF OF PARTY

H. B. Campbell

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DATE *March 12, 1923*

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Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
State: <u>Alaska</u>	
11-5613	
DESCRIPTIVE REPORT.	
<u>Topo</u>	Sheet No. <u>4003</u>
LOCALITY:	
<u>Icy Bay</u>	
<u>west shore</u>	
192 <u>2</u>	
CHIEF OF PARTY:	
<u>H. B. Campbell.</u>	

C. M. Thomas, Aid,
C. M. Thomas. U.S.C. & G.S.

DESCRIPTIVE REPORT
TOPOGRAPHIC SHEET "B"
1922

ICY BAY - ALASKA

Launch "WILDCAT"

C. M. Thomas, Deck Officer, Topographer.

By H. B. Campbell, H. and G. E., in charge.

REPORT ON TOPOGRAPHIC SHEET "B"

Bluff - Latitude $59^{\circ} 57' 47''$.17 Longitude $141^{\circ} 33' 58''$.11
Magnetic variation, mean of 3 values this sheet - $30^{\circ} 18' E$

This sheet includes the West shore of Icy Bay from its entrance to Δ Goat and also about four statute miles of the exposed beach line to the West of the Bay. The scale is 1:10000. The topography was done by C. M. Thomas, Deck Officer. The sheet was started in July, 1922 and the work was continued at various times through a part of September, most of it being accomplished in August.

I did not have a position or azimuth at the time the sheet was started but the triangulation triangles had been computed and the stations were plotted on the sheet by distance using directions laid off with an alidade.

The change in the sheet seems to have been quite constant. As determined on February 16th the paper had contracted between .7 and 1%.

The sandspit which forms the point on the West side of the entrance to Icy Bay and which protects the mud flats in Guyot Bay from the sea has apparently been built out by the combined action of the sea and of the glacial streams discharging into Guyot Bay. On Plate IV, U.S. Geological Survey Bulletin No. 592, the end of this spit is shown as being one mile West of the point on which Δ Dock is located or about 1.6 miles West of its present position. The shore line of the West of Icy Bay is shown on this plate very nearly as it is at present and the scale is very good. The evidence may be considered quite conclusive, therefore, that since the formation of the present Icy Bay the spit has been built out over one and one half miles. The map drawn by Mr. Asa Baldwin in 1920 of this locality shows the spit practically as it is at present.

There can be little doubt that the tendency is for this spit to build out to the Eastward. The streams which empty into Guyot Bay carry a great deal of silt and mud in suspension. This silt has lately been filling in the channel into Guyot Bay and extending the bar across that channel into Icy Bay. In 1920 Mr. Baldwin found a one and one quarter fathom channel into Guyot Bay at low water but we, on the "WILD-CAT", found only a small running stream a few feet deep at the lowest tides.

The spit is very low and flat, and its surface is of sand and gravel. The beach on the seaward side is very gently sloped. On the land side inside Guyot Bay the beach is somewhat steeper in places near the water. The top of the bar has some driftwood, tree trunks etc., scattered on it, especially near its Western end. The center and Eastern

end are fairly clear of drift but some is to be found in places. The Eastern end of the spit slopes very gently into the water and this easy slope is continued for some distance off shore as evidenced by the low water line and the soundings.

At its Western end the spit joins the higher ground West of Guyot Bay. This is an old moraine deposit irregularly covered with alders and willows, with marsh and ponds on it. It extends about one mile West of the Western end of the sand spit and its Western limit falls off this topographic sheet. To the West of this higher moraine is a large high water lagoon, most of which is bare at low water and into which several streams discharge from the Robinson Mountains. To the West of the sandspit the high water line is the foot of a bluff from 30 to 40 feet in height. This bluff is partly hard clay and partly gravel moraine. Its top is generally covered by alder growth.

This sandspit which protects Guyot Bay does not entirely cover at even the highest tides. The ordinary storm seas do not wash over it. A very heavy storm occurring on the highest tides of the year might cause some seas to wash over this spit in places. I have reliable information from a man who was observing conditions there this Winter that during what is reported to have been one of the heaviest storms in twenty years the sea did not wash over this sandspit.

Inside and to the North of the sandspit lies Guyot Bay. This is mostly mud flat and gravel moraine deposit. Two streams, Priest River and Crystal Creek, discharge into the Northern end of Guyot Bay as do several other smaller streams. These streams subdivide and form a number of channels at low water across the mud flats. This mud was found to be very soft in places, but is believed to be generally a thin deposit on a moraine of sand or gravel.

There is a small area in the Southern and Eastern part of Guyot Bay which does not bare at low water. No soundings were taken in this area but I believe the part South of Δ Dock and the part for some distance to the West of Δ Dock to be fairly deep. A channel roughly follows the line of the spit as shown on the topographic sheet. At high water a skiff may be taken without difficulty nearly to \odot Tent. At low water there is considerable current in this channel and the water is too shoal to permit the easy passage of a skiff more than a third or one half the way from Δ Dock to \odot Tent.

The flats in Guyot Bay slope gently upward to the East to the narrow strip of higher ground which forms the Western shore of Icy Bay between Δ Dock and Δ Bay. The high water line on the Guyot Bay side of this strip is very indeterminate and could not have been determined with any degree of accuracy. It was believed that the higher high water line would be of far greater value and this was located. Just East of this h.h. water line the slope of the land increases.

To the North of Δ Dock for a distance of 2200 meters runs a ridge of land about 400 meters wide and up to 53 feet above high water, which will probably be the part first used in case Icy Bay is developed for commercial purposes. This is a sort of a bench of hard clay terminating in a low bluff with many gullies and irregularities on the Icy Bay side and sloping more gently to the mud flats in Guyot Bay to the West. The top of this bench gives the impression of having been at one time a level piece of ground into which gullies and waterways have been cut and on top of which heaps of sand and gravel moraine have been dumped in places. The top of the Southern end is very level for nearly 600 meters, as far North as Δ Hill. From there North for nearly two miles as far as Δ Bay the frequency of occurrence and the irregularity of these mounds increase. Twenty foot contours were located between Δ Dock and \odot Punk. This work was done by using a wye level and rod with the plane table and it is believed to be unusually accurate.

The soil on the top of this point varies from a hard clay, which softens somewhat in rainy weather and hardens in the sun, to sand and gravel.

For a distance of 2200 meters North from the end of the point on which Δ Dock is located, the high water line on the Icy Bay side of this point is formed by the base of a low clay bluff. This bluff is somewhat irregular and indented by small washouts or gullies. One can climb it anywhere and usually getting up it consists only of a short walk up a very steep grade. Its steepness would not greatly hinder landing gear on this point as a fairly easy grade may usually be found where there has been a slip or washout.

This clay is a hard kind which in dry weather is very solid. In wet weather the surface becomes a little sticky and soft and the bluff is slippery. A pedestrian might sink in an inch or two in places. On the beach there are a few outcrops of this clay through the sand between the high and low water lines but even here a man will only sink in a very few inches.

The beach at the foot of the bluff is of sand, with a little clay or mud in places. At the low water line the sand is often covered by a thin deposit of glacial silt but the ground is solid.

The width of this sand beach between high and low water is about one hundred and fifty meters. It is generally clear of boulders and the slope is gentle and uniform. In some places, near the extreme low water line, there are boulders. In landing near low water, if any swell were running these would have to be avoided. These boulders are small, up to two or three feet in diameter, and can at most places be avoided in landing with a small boat at low water even if there is some surf. At various places along the low water line between Δ Dock and Δ Hill these boulders are numerous enough to be an obstacle to landing when the tide is way out, if any sea is running.

The low water line in this locality was run in at low tide with a plane table and should be shown on the chart. It was not feasible to determine this low water line by sounding.

On the extreme end of this point a dock site, about 2000 feet square, has been staked by the Alaska Development Syndicate. In the center of the point about 600 meters North of Δ Dock a small board cabin has been built by Mr. M.J.Sullivan. A pipe line right of way has been filed on by the Alaska Development Syndicate. This pipe line is to run Northwest across this point to the base of the Robinson Mountains behind Guyot Bay and then West.

Six hundred and ninety meters North of Δ Dock is a prominent mound of moraine forty feet high which is an excellent landmark. Δ Hill is located on top of it. North of Δ Hill the mounds of moraine become more irregular, and more frequent. They are so confused that they are not valuable as landmarks.

North of \bigcirc Punk the land forming the West shore line of Icy Bay becomes a little lower. The small mounds of moraine continue and there are occasional small lakes, usually of salt or brackish water. The beach is of sand and widens to its maximum width at Δ Bay. The low water line on this sheet which is shown as a dotted ink line was run in at low water with a plane table. That which is shown as a dotted pencil line is sketched from memory by me.

At Δ Bay there is an especially fine beach approximately 600 meters long and 300 meters wide at low water. It is very flat between the high and low water lines and the sand is unusually hard and clean.

Three hundred meters South of Δ Bay is a high water slough which leads to a lake or pond which fills on the highest tides.

For about 1500 meters North and South of Δ Bay the ground is of sand and gravel covered with a sparse growth of grass and a very few small bushes, mostly alders. Small mounds of drumlin shape start just behind the high water line. These mounds are quite low, their tops averaging ten to twenty feet above high water.

This formation continues along the shore line without appreciable change to the Northeast as far as the dry stream bed which comes out on the beach 1900 meters Northeast of Δ Bay. It appears as though in recent years there had been changes in the courses of some of the streams here. Of course it is possible that this river bed has been cut by the flood water from the Robinson Mountains when the snow on the slopes melts. Plate IV Geological Survey Bulletin No.592 shows a stream from the Eastern end of the Robinson range emptying into Icy Bay near Δ Bay. This is apparently the Priest River of Mr. Baldwin's survey, which in 1920 and at present empties into Guyot Bay. This evidence is quite conclusive as on both sheets the sources of the stream are showed to be the same. There can be little doubt then that formerly the Priest River discharged into Icy Bay at this point.

This is an excellent illustration showing the nature of the low flat just to the North and West of the old mouth of this stream. It may be that the course of this river has been affected by the Beare Glacier which lies just to the Northwest. This is a small glacier lying on the seaward slope in a valley of the Robinson Mountains. It is at present dying and apparently receding quite rapidly judging from its appearance. It may be that formerly this projected onto the plain far enough to prevent the Priest River from taking the course into Guyot Bay as it now does.

To the Northeast of this old stream bed as far as Clay-Bluff Point the beach continues to be formed of sand. Back of the high water line the beach rises with varying slopes to the tops of sand mounds. These mounds in this locality are rather rolling next the beach and generally parallel it. The three ponds which are shown near this beach contain salty water. The land behind this beach is covered with gravel and sand mounds which are very irregular in form and rise to heights of from 20 to 30 feet. These may be called barren but they have on them scattered low bushes and some grass.

The end of Clay-Bluff Point, on which Δ Bluff is located, is formed by a sheer hard clay bluff about 36 feet high which under some light conditions is easily identified and forms a very good landmark. The portion which shows up best is indicated by the closer hachuring and a note. It is quite narrow. Its base is being eroded by the sea and occasionally a chunk of the clay drops off into the water where for some time it resists the disintegrating action of the sea. This bluff has been eroded back into the center of the highest mound on the point and the edge of the bluff is the highest point in this locality. At low water the sea very nearly reaches the base of this bluff. The bluff line shown around the rest of this point indicates a bluff that is considerably lower; 15 to 20 feet and in most cases less precipitous. It can usually be scaled. It is probable that in three or four years this bluff will have been eroded far back enough, only a few feet will be required, to reduce its elevation about five feet.

In the bight just North of Clay-Bluff Point the water is comparatively shoal and the low water line extends well off the beach. The low water line here was not run in nor was the sounding done. The beach is of sand and gravel and just behind the high water line are found sand and gravel in mounds from ten to twenty five feet high. The banks in places are very steep but can be climbed.

From here North to Δ Goat the beach is of sand and gravel and the land behind the beach is scattered with these mounds.

The land area on this sheet which lies inside of the shore line between Δ Bay and a point 1000 meters South of Δ Goat and as far back as the base of the Robinson Mountains has the same general character. It is a flat area sloping gently from the beach to the base of the mountains with irregular heaps of sand and gravel on it. The vegetation is scanty, being small bushes, some alders and some grass. The general elevation of the tops of

these mounds near the beach is twenty to thirty feet and the elevation near the base of the mountains is very little greater. The base of the mountains is here formed by a bench which has a generally steep face with a comparatively level top. Its elevation varies, being in general from three hundred to four hundred feet. There are numerous irregularities in its face and in its top. The face is for the most part of bare rock and its top is covered with a thick alder and timber growth. There are occasional gorges in it. The Priest River flows behind a part of it in what I am told is a very picturesque gorge.

About 1000 meters South of Δ Goat the character of the beach changes. From this point North the beach continues as before to be sandy but here it approaches close to the base of the Robinson Mountains and just behind it are found the benches which form the base of the mountains. From 750 to within 180 meters of Δ Goat is a flat bench of moraine with quite steep sides. It is about 200 meters wide and directly behind it is found the bluff rock face of the four hundred foot bench. Just South of Goat 150 meters, a small stream enters the sea from a gorge which runs back into the Robinson Mountains. This stream comes from beneath a small dead or dying body of ice at the head of the gorge. Most of this small glacier is covered with debris. The stream contains glacial silt. The gorge is a conspicuous landmark from the Northern half of the Bay. When the mountain goat are on the Eastern slopes of these mountains this gorge is a comparatively easy route to the slopes where the goat may be found.

Δ Goat is located on the edge of a low bench of moraine deposit about fifty feet high at the edge, which lies at the base of the bench. The face of this bench is steep but it can readily be climbed. Its top is partly covered with alders.

To the North of Δ Goat the base of the Robinson Mountains lies only a few hundred meters from the high water line. This shore line is shown on Sheet "C".

From Δ Goat to the West the base of this mountain range extends in nearly a straight line towards Umbrella Bar and Yakataga. Very few of the peaks or even of the foot hills would have come on this sheet and it was planned to do the contouring on a scale of 1:40000. A sheet was laid out to cover this area and a few of the peaks on it were located by triangulation. Time did not permit me to do this contouring.

This mountain range as is shown by the prints attached to my various reports is of considerable importance, not only to the navigator who is entering Icy Bay, but also to those running coastwise, close in-shore. I do not believe that at present anyone runs along this shore within twenty miles of the beach except in small boats, but if Icy Bay becomes a port of call, as is very likely, the location of these mountains will become more valuable.

The main part of this range lies behind a series of foot hills that are considerably lower. In general the foot hills are covered with alders and heavy timber. These growths also extend up the mountain sides to an elevation of a thousand or fifteen hundred feet. The foot hills are very irregular. From the West shore of Icy Bay a bench extending several miles to the West forms the base of the mountains. Beyond this, farther West, the foot hills become more irregular.

This mountain range is composed principally of dark and red shales and sandstones. It has apparently been formed by an upheaval of the crust which has lifted one edge of the fracture up to form these mountains. The observer from seaward sees the edges of the various strata. A good idea of this may be gotten from the prints attached.

As a rule the top of the ridge is so irregular and so lacking in distinctive points that can be readily identified that its value to the navigator is more limited than might be supposed. One of the points of value is the Beare Glacier.

There is a variety of animal life on the West side of Icy Bay. In the Robinson Mountains are found mountain goat. These are of the slender horned whiskered kind that will weigh as much as 250 to 300 pounds. There are large numbers of them. Most of the Summer they were in the back ranges but after the new snow covered the peaks and tops of the mountains down to about 3000 feet, they came over on the Icy Bay side of the range and could be reached quite easily. We had three aboard the "WILDCAT" in September. Their flesh is excellent.

Bear are numerous along the beach to the West of Icy Bay. It is reported that there are more black bear on this side than brown ones. The only bear killed by the party was a black one, which was shot between Δ Bear and Δ Goat. Fresh bear tracks were seen near Δ Bay. Near Johnson Creek, West of Icy Bay, I nearly ran into three bear in the fog and all along the beach to the West the tracks are plentiful.

Wolves and wolverine are reported and tracks were seen. Fox were seen on both sides of Icy Bay.

There are some mallard and teal as well as fish ducks, but they are not numerous. The flats around Guyot Bay are used as a stopping place by both geese and swan on their migrations North and South.

Some salmon berries are to be found on the slopes of the Robinson Mountains and strawberries grow in some places on the flats. Around Δ Bay are many strawberry plants and these bloomed profusely in June. The later part of the season was not favorable however and but few of the berries developed and ripened.

Marten were trapped on the West shore of Icy Bay during the 1921 season by two white men. They were rather successful.

Feb. 26, 1923.

Respectfully Submitted
H. B. Campbell.
H. G. Engman.

STATISTICS FOR SHEET "B"

Shore line ----- 19.3 stat. mi.

Shore line of ponds, sloughs, etc. --- 8.5 " "

Area ----- 27 sq. mi.

TRIANGULATION STATIONS on Topographic Sheet "B"

Bay	59-57-22.51 (696.6)	141-39-35.67 (553.6)
Bluff	59-57-47.17 (1459.8)	141-33-58.11 (901.8)
Dock	59-55-22.19 (686.7)	141-40-44.51 (691.6)
Goat	59-59-13.59 (420.6)	141-30-54.43 (844.0)
Hill	59-55-44.19 (1367.6)	141-40-34.72 (539.3)

PLANE TABLE LOCATIONS on Topographic Sheet "B"

Cabin	59-55-(1235)	141-40 (643)
Edge	59-56 (1675)	141-39 (692)
Fini	59-57 (1305)	141-35 (841)
Mound	59-57 (1310)	141-38 (768)
Punk	59-56 (939)	141-40 (63)
Root	59-54 (1585)	141-40 (243)
Slat	59-55 (130)	141-40 (854)
Spit	59-55 (1569)	141-43 (229)
Tent	59-56 (1067)	141-44 (496)

DESCRIPTIVE REPORT

CONDITIONS IN ICY BAY AND
ALONG THE BEACH TO THE WEST
AS OBSERVED FROM SEPTEMBER
1922 TO JANUARY, 1923

Information from Mr. Frank J. Friedle, C. E.

By H. B. Campbell, H. and G. E.

Conditions in Icy Bay and along the beach to the West as observed from September, 1922, to January, 1923.

The following information I obtained from Mr. Frank J. Friedle, a civil engineer who spent part of this Winter in Icy Bay. He arrived in Icy Bay September 24th and from then until late this January he spent most of his time in the cabin on the West side. He made a number of trips West as far as Yakataga and left the country late in January. He and one other made the trip from Icy Bay to Katalla afoot. I first met him in July, 1922, but know him very well and I am acquainted with friends of the people that he is representing. I have every confidence that the information that I received from him is correct. He has seen and verified this report.

Up to the time he left Icy Bay there was about two feet of snow on the ground. The lowest temperature observed at Icy Bay or Little River was 14° above zero. The lowest observed at Yakataga was 8° above zero. He observed the effect of a number of storms from the cabin. None of these storms lasted more than two days. The wind in all of these storms came from approximately Northeast. I know that the cabin was faced South by using a compass. He especially noted that all high winds struck the Northeast corner of the cabin and came from the direction of the glacier. We spoke especially of the heaviest storm he had seen which impressed him as being stronger than the one of September 24th when he was with us. On September 24th I am very sure that the wind blew as high as sixty miles per hour. During this heavy storm the sea inside the West spit in front of the cabin, as well as the wind, came from the direction of the glacier, approximately Northeast. A heavy sea was raised but it was a short sea and went down rapidly after the wind fell. His opinion is that a dock would have stood it and that a ship could have ridden it out at anchor on the West side. During this storm the seas broke heavily on the South side of the spit protecting Guyot Bay but did not wash over it. Only very light winds were noted as coming from any direction other than from the glacier.

Ice conditions as far as the locality of the West spit was concerned continued to be about as they were earlier in the season. The glacier apparently froze up to some extent late in November but falling ice was heard in November. In January there was some small ice ashore along the beach on the West side. These were small pieces that stranded on the beach. Nothing was noted of sufficient size to trouble a ship or a dock.

The value of different routes from Icy Bay to the oil fields was carefully investigated. It was found that the best route would be along the West shore of Icy Bay up to Δ Bay and then toward the benches between Priest River and Big River, thence between the lagoon and benches and along the beach to the fields. Well back from the lagoon a gravel bottom is found in these rivers. The advantage of this can hardly be

realized by one who has not crossed these streams near their mouths, where the bottom is of mud and silt. Priest River is easily fordable. Big River at times is large enough to cause some trouble.

The trip from Yakataga to Katalla along the beach is difficult and dangerous. The streams are frozen most solidly usually in February and this is the best time for this trip. January of the present year was too early. One of the men who came out this year in January, went through the ice into one river but the water was shoal. Last year this same man made the trip in February and went through the ice in one place in 16 feet of water with a pack on his back. He got out. This January part of the crossings were made on rubber ice just above open water.

There are a few cabins built along this stretch of coast. This year three relief cabins were built for the government, so spaced that now there is a cabin every fifteen miles between Yakataga and Katalla. Going afoot, a party will stop over night at each cabin. With dogs a stop is made at every other cabin.

The cabins built this year are located as follows -

One at Cape Suckling, near the beach and visible from the beach.

One at the Sujou River is located at the crossing about one mile up the river from the beach.

One at Middle Timber River, located at the crossing about one mile up the river.

The timber around the cabin located near Little River on the Davis claim has been cleared out and the cabin is now easily seen from the beach.

Respectfully submitted,

Feb. 26, 1923

H. B. Campbell

H. B. Campbell,

H. and G. Engineer.

DESCRIPTIVE REPORT
AIDS TO NAVIGATION
FOR
ICY BAY, ALASKA
1922

Launch "WILDCAT"

By H. B. Campbell, H. and G. E., in charge.

Aids to navigation for Icy Bay.

It is recommended that the following landmarks be shown on the chart of Icy Bay -

△ Tongue.

The Eastern extremity of the ridge of the Robinson Mountains which projects into the Guyot Glacier. The point computed is the tip of the ridge where it is tangent to the ice. This is the point on which my sailing directions recommended a bearing be carried in entering Icy Bay.

Medial moraine.

This is the South point of the most prominent medial moraine at the face of the glacier. Its direction on top of the glacier should be shown as on topographic sheet "C" and from pictures.

○ Hill.

Pyramid in form and of gravel moraine. It is the highest point near the end of this flat on which the cabin is located. It shows prominently from the direction of Riou Bay, but from farther to the South it shows against the distant Robinson Mountains and is not so readily distinguishable. It is important to anyone navigating on the West side near the recommended anchorage or to the North of there.

Clay-Bluff Point.

The bluff at the end of this point indicated on topographic sheet "B" as being a vertical bluff should be clearly shown. It appears prominent in some light conditions.

Cabin.

Just below ○ Hill on topographic sheet "B". It is prominent from the East and very often for some distance offshore.

Bluff at △ Dock.

The bluff near △ Dock, just South and Southeast of the station should be clearly shown. The other bluffs around this point should also be indicated but this part is especially important as bearings may be taken on it from Icy Bay.

Tent house at Western edge of Guyot Bay.

This is a substantial frame of cut lumber with a tent on it. It has been there for about two years and will probably be left there until it falls.

Edges of glacier.

The West edge of the glacier is of importance. A note in the Coast Pilot might be made saying that its position varies slightly. The line of discolored ice behind Δ Bar should also be shown. The former may be obtained from topographic sheets "C" and the 1:40000, and from prints. The latter can be obtained from topographic sheet "C" and prints.

Robinson Mountains.

The positions of the peaks computed should be shown and the mountains themselves from Tongue to the West, as far as the plan of Icy Bay extends. I have sketched these roughly on the 1:40000 sheet and the pictures will show their importance.

○ Bow.

Topographic sheet "A". It is a large boulder and is white washed at present. It is large enough to be seen from the anchorage in Riou Bay.

○ Rock.

Topographic sheet "A". It is a large boulder and is prominent from most parts of Riou Bay.

Pt. Riou.

Prominent from directions from which it is recommended that bearings be taken in my sailing directions.

Δ Pyra.

Topographic sheet "A", is a prominent pyramidal shaped hill. It is very conspicuous from the direction of Riou Bay.

Feb. 26 1923.

Respectfully submitted
H. B. Campbell
H. B. Engineer.

PHOTOGRAPHIC REPORT

ICY BAY, ALASKA.

1922.

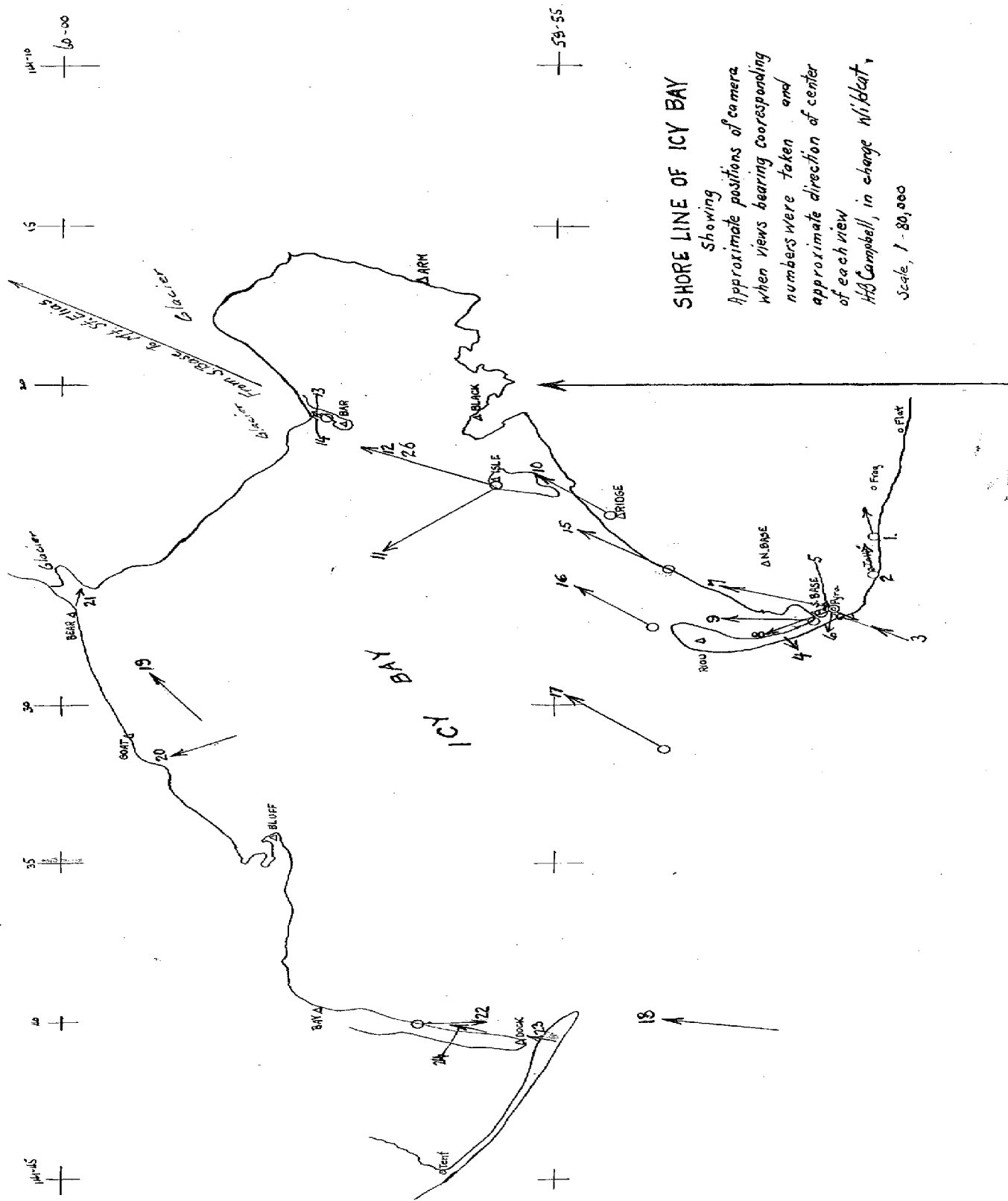
Launch "WILDCAT"

H. B. Campbell, Chief of Party.

Since three topographic sheets of the Icy Bay records are being transmitted to the Office before inking, this photographic report is made for the use of whoever inks the sheets. The approximate positions of the camera when the pictures were taken is shown by the circles on the attached tracing. The arrows indicate the directions of the centers of the pictures as closely as possible.

There are views which illustrate the importance of the Robinson Mountains and others show the point to be used in entering the Bay, which is the triangulation intersection station Tongue, that is, the Eastern end of the Robinson range.

The approximate limits of the brilliant white ice can be taken from these prints and should be shown on the chart.



SHORE LINE OF ICY BAY

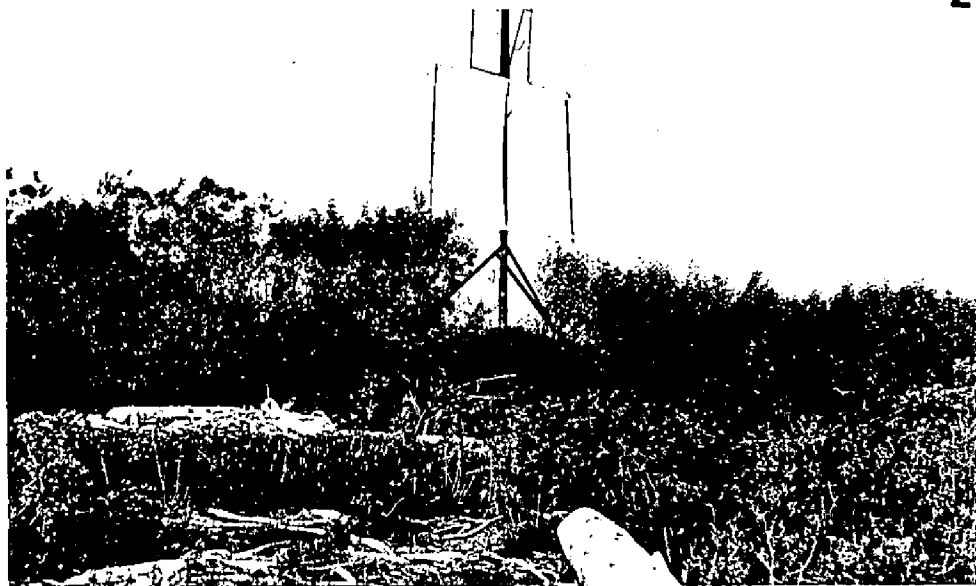
Showing
Approximate positions of camera
when views bearing corresponding
numbers were taken and
approximate direction of center
of each view
H.B. Campbell, in charge Wildcat,

Scale, 1-80,000



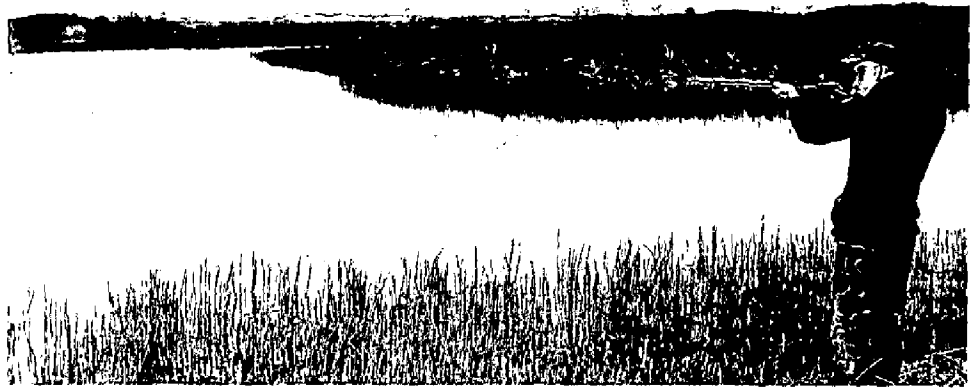


Sheet A. Position of whale is perilled on sheet (Lopo)
Shows appearance of growth to NW. of O 4rog.



Sheet A, O Tall shows nature of low brush
found in some places, scattered

3



Sheet 7. shows one of many small ponds
and character of vegetation in the flat
North of O Pyra late in the season.

4



This is the character of the beach on the
outside of both sand spits and both to the
East and West of Ley Bay.



Vegetation around camp in June.



The flat at the top of the bluff just west of Pyra.

7



These two views show flat at head of and
North East of River Bay. Sheet A. Δ S. Base is on
both.

8



Note sand spit protecting River Bay.

9

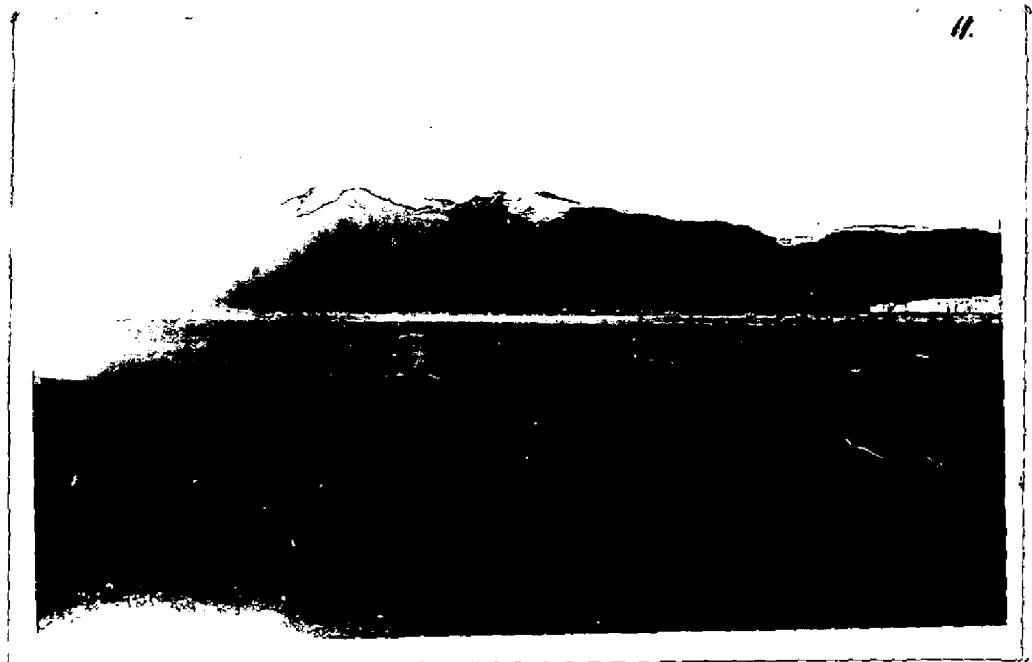


Sheet A. End of River sand spit and
beach at head of River Bay.

10



Sheet A. shows general character and
irregularity marine deposit, but not
the steepness of the mounds. See II, p. 12.



Typical line or flow of ice in Bar.
 Robinson mts.
 Pile of moraine in foreground.



Moraine in foreground
 shows other moraine on ice behind & Bar.

13



These two nearly join. 13 shows moraine
on glacier fore behind A Bar

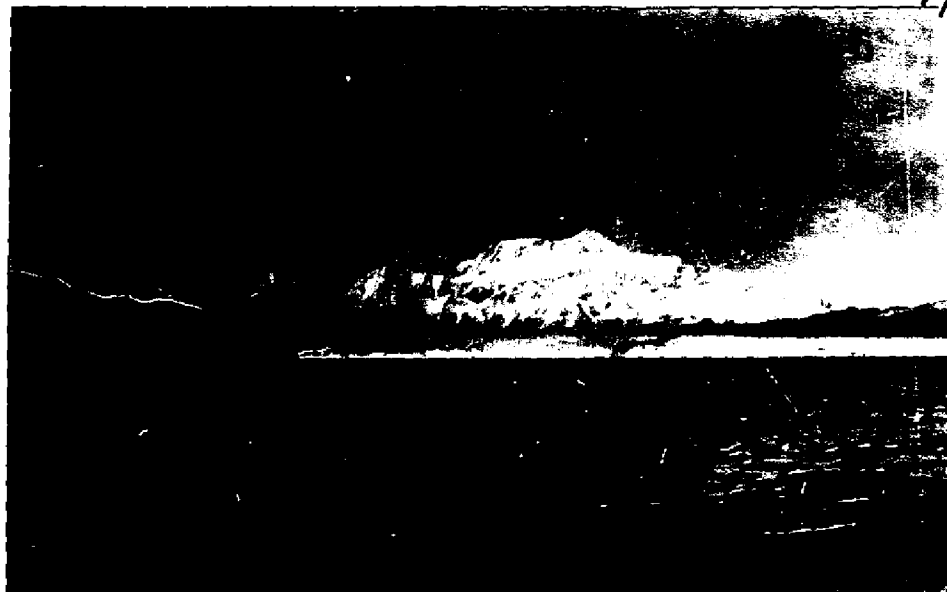
14





These two were included to show the way the end of the Rabun mountains will appear as ^{East Bay is} approached from the East. Referred to in my Hydrographic report.

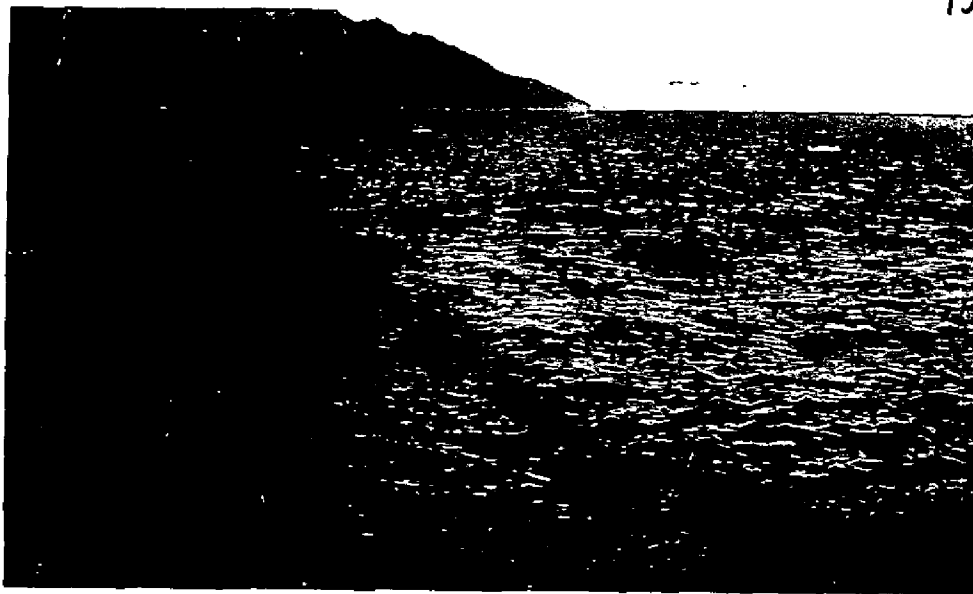




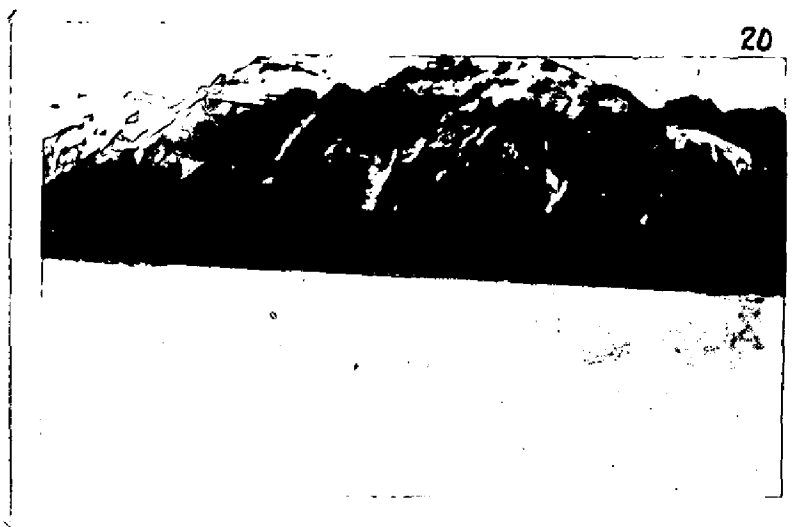
Showing end of Robinson mts projecting
into glacier approximately as it will appear
when entering Ley Bay on bearing given.
Is probably taken from farther off than indicated



As the Robinson mts appear from
off shore, Bear glacier in rt. center.

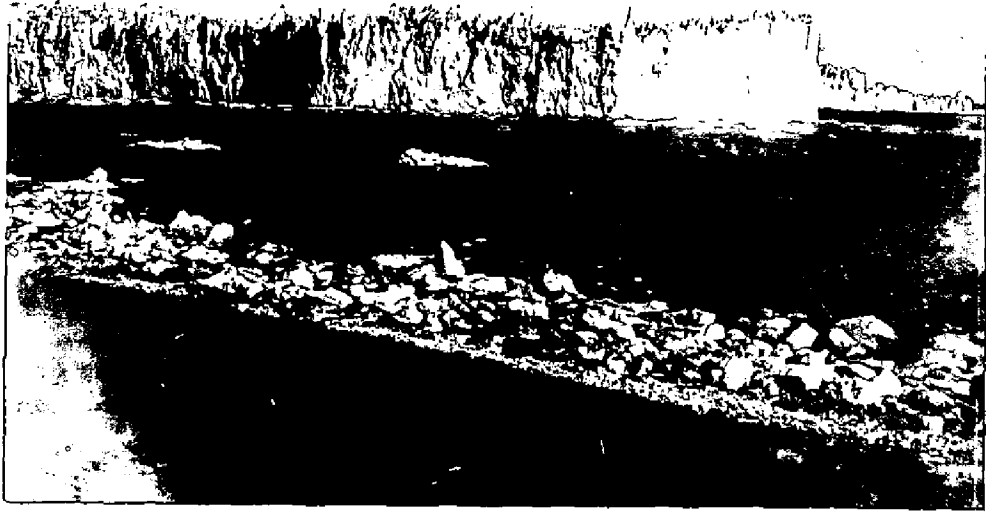


Shows way in which Eastern part of Robinson's Mts are wooded. The black is alders & trees.



Robinson mts. and bench showing extent to which wooded.

21



The face of the glacier is nearly always a sheer wall
 of ice. This is probably its most active part.
 Its top continues broken, irregular and
 crevassed for many miles back from its face.

22



character of West beach.

Locality of A Rock

23

23

23

23

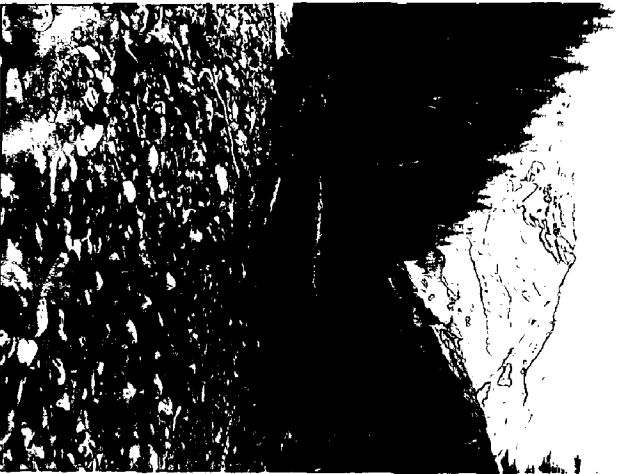
The fine ground in the lower bank of the river and up to the point on which A Rock is located lies in the center of the two left columns.

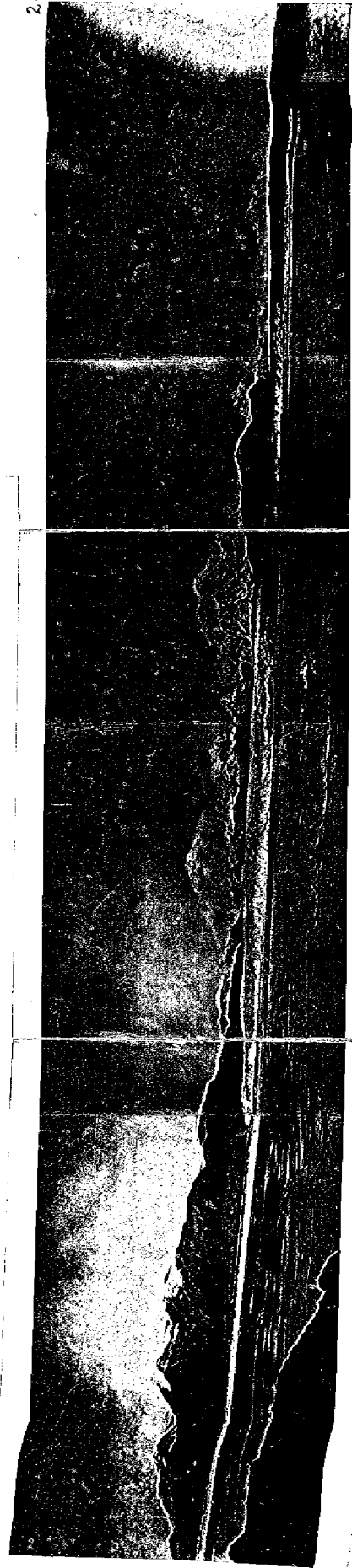
25

24

More of track on west side.

26
Looking up between creek showing stratification somewhat better in bottom right, shale and sandstone.





The Robinson Mountains, Mt. St. Elias and the
Malaspina Glacier, as they appear from a boat.

Feb. 16, 1923.

Respectfully Submitted

W. Campbell
St. Eugene

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

B

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. B 4003

~~Survey~~ Territory of Alaska.

General locality . . . Icy Bay.

Locality . West shore.

Chief of party H. B. Campbell, H. and G. Engineer.

Surveyed by C. M. Thomas, Deck Officer.

Date of survey July to September, 1922.

Scale 1:10000

Heights in feet above

Contour interval . 20 . feet.

Inked by Lettered by

Records accompanying sheet (check those forwarded): Photographs, ^{XX}

Descriptive ^{XX} report, Horizontal ^{XX} angle books, Field ^{XX} computations,

Data from other sources affecting sheet Blue print of map by

Asa Baldwin; report on coast to West of Icy Bay.

Remarks: For head of Guyot Bay and rivers see above blue print.