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Form 504 Ed. June, 1928	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
....., Director	
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State: .....	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No.
LOCALITY	
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19 .....	
CHIEF OF PARTY	
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3672

U.S. COAST AND GEODETIC SURVEY.

DEPARTMENT OF COMMERCE

E. Lester Jones, Superintendent.

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*Map. 3672*

Descriptive Report

of

Topographic Reconnaissance

in the vicinity of

PATTERSON BAY

Baranof Id. S.E. Alaska

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compiled by

H.T.Kelsh, Ass't

June 19-23,

1917

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WIRE DRAG PARTY #3

A.Joachims, Chief of Party

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HYDROGRAPHIC SURVEY  
SUPERINTENDENT  
*W*

Report of Topographic Reconnaissance  
Vicinity of Patterson Bay.

Patterson Bay extends as shown on the chart in a general NNNWly direction, and with a length of about 5.7 miles (statute). One mile south of the end of the bay a rounding point extends from the eastern shore, nearly closing the bay. Inside this the bay again widens and extends with a width of somewhat over a quarter mile to the end.

A small island lies at the head of the bay which is not shown on the chart. It is about 200 meters long and 35 meters wide, and is wooded. The long side parallels the shores of the bay. There is an anchorage for small boats on either side of the island that on the west having a depth of 8 to 9 fathoms. The sides of the bay are very steep, increasing in steepness towards the head of the bay, where they rise as high cliffs, with an elevation of 1000 to 1400 ft.

Two lakes were discovered flowing into the head of the bay. The first lies just beyond, and at right angles to, the head of the bay, on the west side. It is about one to one and a half miles in length and a half mile in width. The elevation is about 550 feet, and it sets a half mile back from the bay. The water flows in a series of falls directly down the side of the mountain. The lake is surrounded by high cliffs.

The other lake is about one mile N by W (true) from the head of the bay. It has an elevation of 200 feet. It is roughly oval in shape, and is judged to be three-quarters of a mile in length, and with a width of slightly less. It flows out through an opening 10 to 15 meters in width into a bottle shaped neck 40 meters wide and 300 meters long. From the end of this the stream falls

rapidly for the first half mile, and then in a lesser series of rapids it descends to the bay swinging to the left and running along the base of the cliff, near the mouth.

Owing to the fact that there is considerable difficulty in travelling through this country; and to the fact that the party was not equipped for lengthy exploration, and therefore that no time could be wasted following wrong leads, it was decided to scale one of the mountains, hoping to find a place from which the whole valley could be seen, and also one high enough to see over the ridge to the eastward, so that a sextant location could be secured, and from this at least a partial location of any lakes found, obtained. By hard climbing, and occasionally travelling over snow slides, an elevation of slightly over 900 feet was reached, but here impassible cliffs barred further progress. From this elevation pictures were taken of the head of the bay, showing the island.

It was from this point that the higher lake was seen, and estimates of its size and position made. A photograph of the lake and falls accompanies the report.

The second lake was discovered by travelling up the right side of the stream flowing from it. Any future attempt to reach this lake should be made along the west side of the stream, for it flows the greater portion of the distance along the east wall of the valley. After reaching a point within 200 meters of the inner entrance to the lake, progress was completely stopped. A photograph of the lake was made from this place. It shows the narrow entrance and the amount of the lake visible, from which the estimate of size was made. High walls surround the lake.

General Topography of the Country.

## General Topography of the Country

A contour map of this vicinity, with special consideration of Mt. Elizabeth and Mt. Cecil, was made by occupying stations Ellis, Sullivan, Jut, and Kingsmill, on the east side of Chatham Straits, and cutting in with a seven inch theodolite the more prominent peaks. Vertical angles were also taken from all the stations. A summary of results is attached.

Station Jut was not recovered. The blazed tree used as a witness mark was found and using this and the cross ranges given, ( the distance given of 100 meters from the tree is not correct) a signal was erected and this taken as station Jut. It was assumed that this was sufficiently correct for location of mountain peaks. The location of the various peaks from Ellis and Sullivan, (intervisible) was taken as correct and the cuts from Jut and Kingsmill taken as checks.

Due to the distance between the shores of Chatham Straits at this place and to the hazy weather, an attempt to more accurately locate Jut from the other side would have considerably delayed the work.

Cuts were taken to all the peaks of Mt. Elizabeth and Cecil. Numerous photographs were also made from the stations occupied, and from offshore. These were however only partially available at the time of filling in the contours.

The whole country is very rugged, and the peaks rise mostly as sharp pinnacles above the general core of the mountains.

Mt. Elizabeth is the highest mountain in the vicinity. It has two peaks close together. The southern peak is a sharp tooth with an elevation of 4537 feet above mean sea level. The north top is larger, and the extreme top is not as clearly

recognizable from the various directions. An elevation of 4526 feet was computed.

A lowere jagged ridge extends towards the southwest.

Mt. Cecil is about two and a half miles to the southward. It is more regularly conical in form. The top is split up into three humps, having the following elevations  
outer peak 3211, middle 3216, and inner 3255.

The peaks located as Elizabeth and Cecil differ from those on the chart in location and elevation, but presumably the original location was merely an approximation, for it will be seen from the photographs that there are no other prominent peaks in the vicinity. Also the party was assured by a man familiar with the country that the higher peak located, was the one known as Elizabeth.

The contouring on the tracing is intended to show the general trend of the country to an approximate degree of correctness, but in as much as the time available and the equipment did not allow of a thorough survey it is not presented as strictly accurate. The shoreline shown was transferred roughly from the 1/200000 scale chart. The head of Patterson bay is however shown as sketched.

In addition to the elevations listed on the following pages, numerous elevations of the lower peaks and humps were computed with the hypsograph. These will be found on the original sheet, or on the tracing. Data is available in the record for their trigonometrical computation, should a more accurate determination of position and elevation be required.

*To The Superintendent  
Coast and Geodetic Survey*

*Respectfully forwarded  
J. A. Schmitt  
Chief of this party No. 2.*

Respectfully submitted,

*Harry T. Kell Jr.*

Assistant, U.S.C. & G.S.

# Positions of the Peaks

## Mt. Elizabeth N. Peak

	56	40	44.80	(accepted as correct)
from Sullivan and Ellis	134	41	36.88	
	56	40	44.34	
Checks from Jut and Sullivan	134	41	40.23	
	56	40	45.88	
" " Jut and Kingsmill	134	41	35.58	

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## Mt. Elizabeth S. Peak

	56	40	37.25	(accepted as correct)
from Sullivan and Ellis	134	41	35.10	
	56	40	36.74	
Checks from Jut and Sullivan	134	40	35.86	
	56	40	37.63	
" " Jut and Kingsmill	134	41	35.20	

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## Mt. Cecil Outer Peak

	56	38	14.97
from Sullivan and Ellis	134	39	01.80

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## Mt. Cecil middle Peak

	56	38	15.31
from Jut and Kingsmill	134	39	14.56

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## Mt. Cecil Inner Peak

	56	38	13.14
from Jut and Kingsmill	134	39	28.95

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## High Point to southward called Near Hub in record

	56	34	54.51
from Sullivan and Ellis	134	38	32.32

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## Elevations of the Peaks.

### Mt. Elizabeth N. Peak

from Ellis	4508 ft.
Sullivan	4530
Jut	4524
Kingsmill	4546

Mean of elevations above Mean Sea Level:- 4527 ft.

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### Mt. Elizabeth S. Peak

from Ellis	4537 ft.
Sullivan	4539
Jut	4532
Kingsmill	4538

Mean of elevations above Mean Sea Level:- 4536 ft.

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### Mt. Cecil Outer Peak

from Ellis	3219 ft.
Sullivan	3204

Mean of Elevations above Mean Sea Level:- 3212 ft.

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### Mt. Cecil Middle Peak

from Jut	3213 ft.
Kingsmill	3218

Mean of Elevations above Mean Sea Level:- 3215 ft.

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### Mt. Cecil Inner Peak

from Jut	3258 ft.
Kingsmill	3252

Mean of Elevations above Mean Sea Level:- 3255 ft.

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### Near Nub

from Jut	2274 ft.
Sullivan	2270
Kingsmill	2289

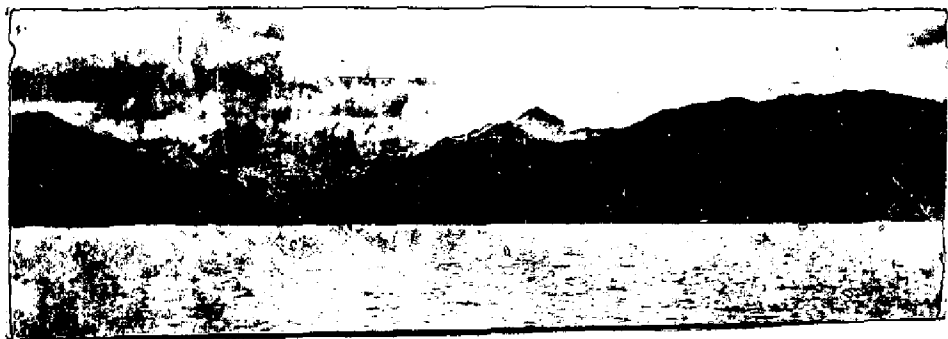
Mean of Elevations above Mean Sea Level:- 2277 ft.

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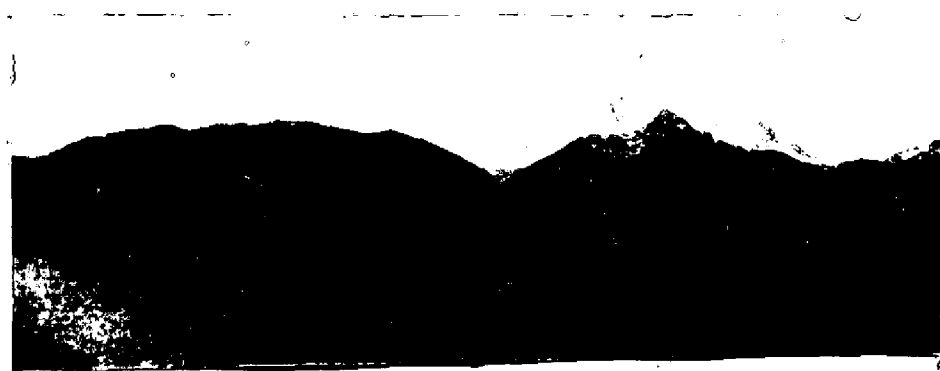




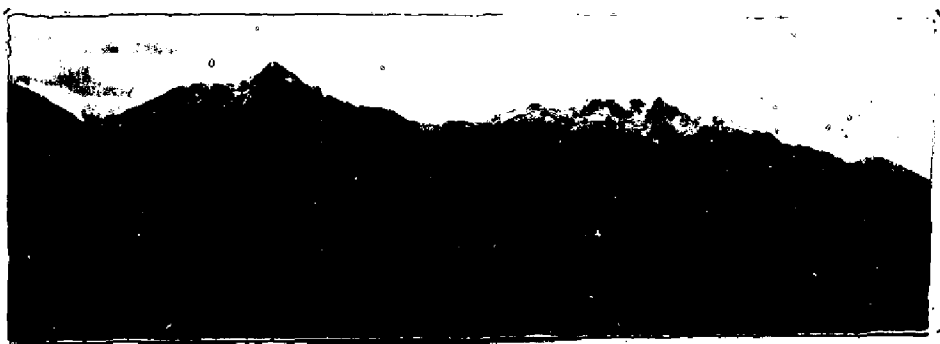
#1 from position "a" Entrance to Patterson Bay, & Mts. to S.



#2 ditto First hill north of Pat. Bay



#3 ditto The sharp peak is called Near Nub in record



#4 ditto Looking north towards Cecil and Elizabeth

Ellis 52 05  
 POSITION "a" N.Ent. Washington Bay  
 Kingsmill 13 59



\*1-

*Ada*

Mt. Elizabeth and peaks to the north from position "b"  
It shows the two humps on the north slope of Mt Eliz.



\*2

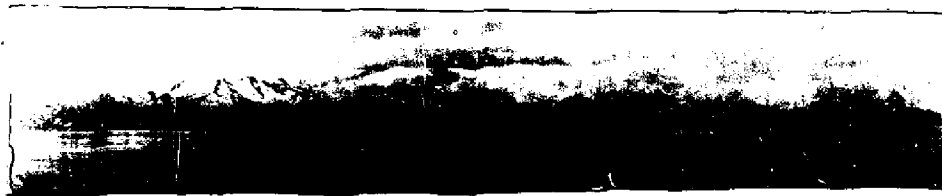
Mt. Elizabeth and Mt. Cecil  
from position "b"



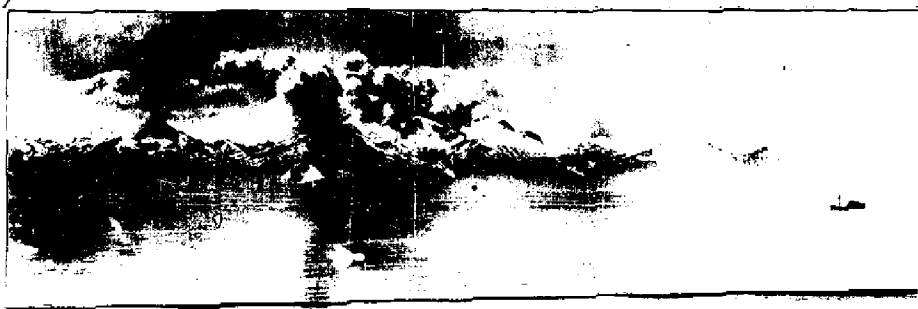
\*3

Mt. Cecil and peaks to south from position "b"

POSITION "b"	Ellis 27	06
	Sullivan	
	Jut 37	13



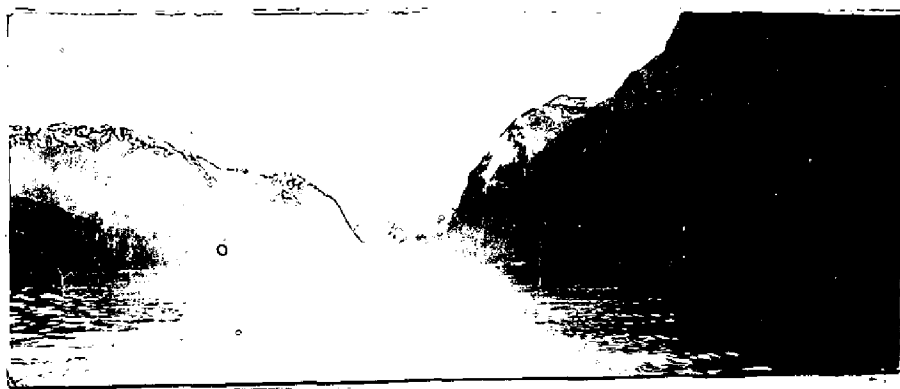
The range from signal Ellis. The light shown on the picture was cut in from Ellis and Sullivan but the cuts are acute.

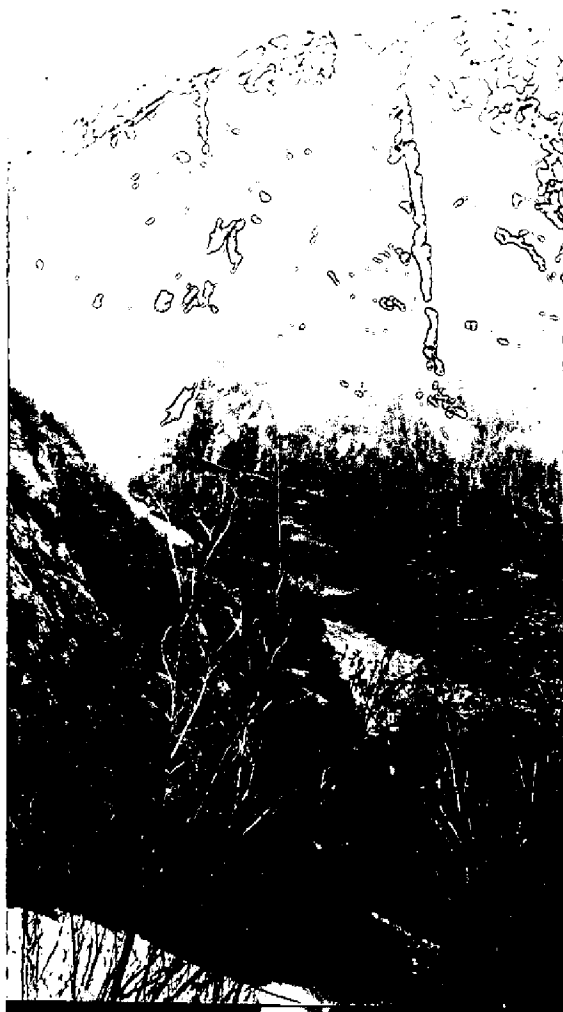
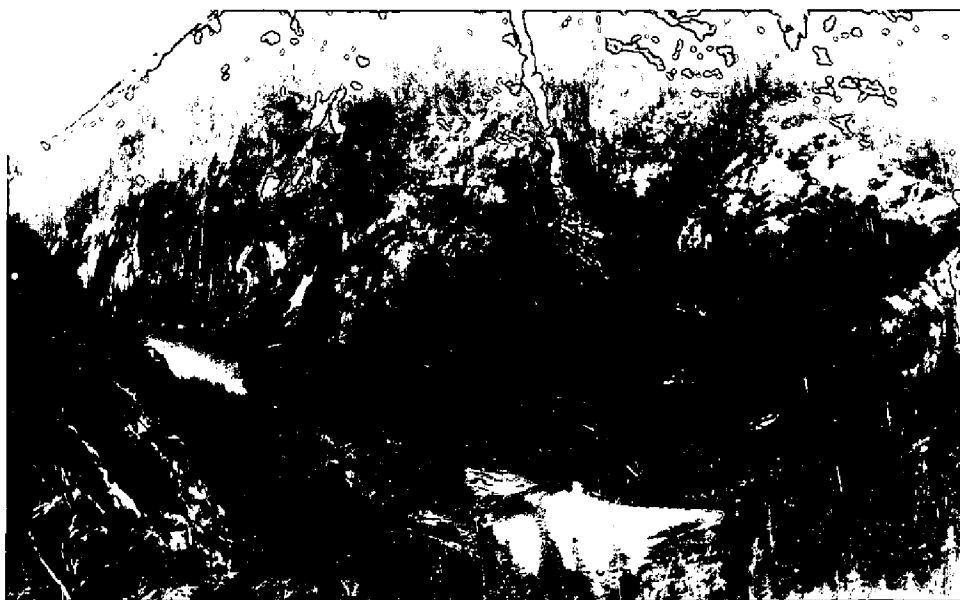


Mt. Elizabeth and Cecil from the east shore of Chatham St.

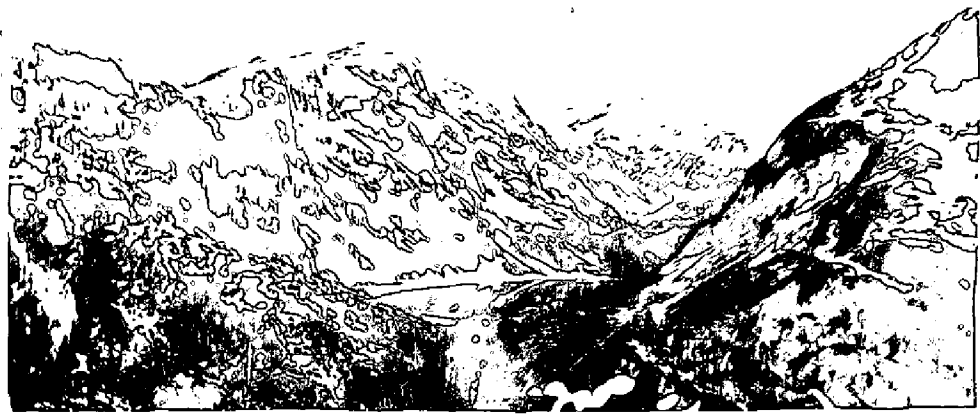


Three views looking north in Patterson Bay at about a quarter, half, and three quarters way down the bay.





Two views of the head of  
the bay, and the island.  
It shows the formation  
of the cliff like sides  
of the bay.



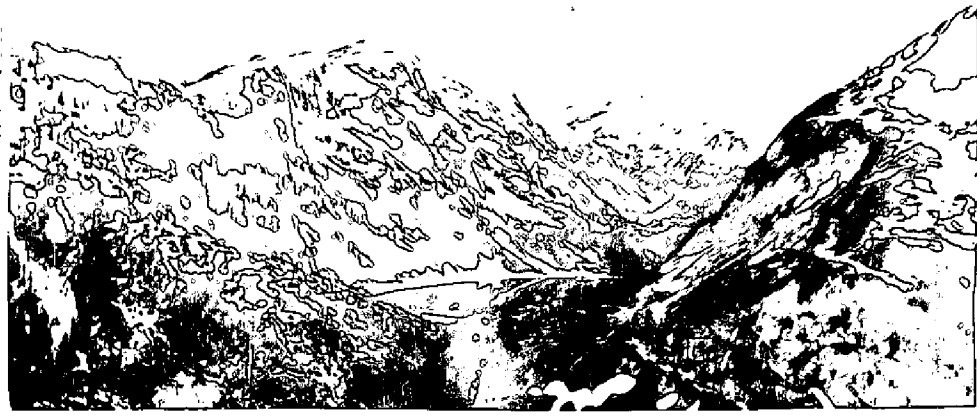
*Brentwood*

The higher lake and the cliffs surrounding it.



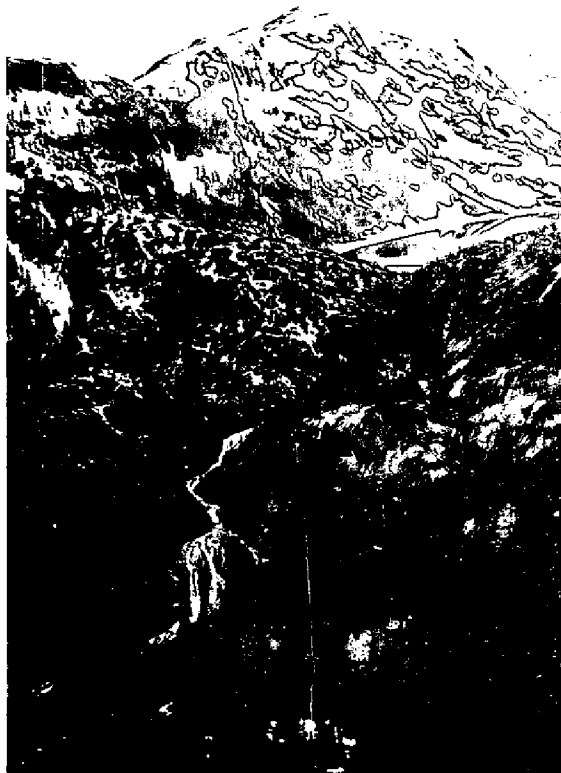
*Brentwood*

The series of falls coming from the lake. They run directly into the head of the bay, except that there is a level strip for the last 300 meters. View taken from 700 ft. elevation.



*Brentwood*

(The higher) lake and the cliffs surrounding it.



*Brentwood*

The series of falls  
coming from (the) lake.  
They run directly into  
the head of the bay,  
except that there is a  
level strip for the last  
300 meters.  
View taken from 700 ft.  
elevation.



The inner entrance to the north lake is shown here, opening into the bottle shaped neck. The lake was covered with thin ice.



The entrance and surrounding country. An abrupt cliff made it impossible to get nearer the entrance.





The start up the snow  
Slide.

Even near the base of the  
mountains the trees are  
scanty.

After climbing somewhat  
farther up the cliff  
shown on the left it  
became impossible to go  
on.





Near the top of the snow  
slide, at 800 feet.  
Above this on this mountain  
there were no trees, and  
only a scanty growth of  
brush.  
The top of the first series  
of cliffs can be seen  
above.

View looking northwest in the  
valley where the (lower)  
lake was found

*(Parry)*



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

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. 3672

~~SE Alaska~~ Alaska Territory

3672

General locality SE Alaska, Baranof Island

Locality Patterson Bay and near vicinity

Chief of party A. Joachims

Surveyed by Harry T. Kelsh, Jr.

Date of survey June, 1917

Scale 1/40,000

Heights in feet above mean sea level

Contour interval 100 feet.

Inked by A.J. Lettered by A.J.

Records accompanying sheet (check those forwarded): Photographs,

Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet

Remarks: There is one triangulation record, four recovery slips for triangulation, computation data for the geographical positions and elevations of six mountain pks, accompanying this sheet.