

2574a

Treasury Department,
U. S. COAST AND GEODETIC SURVEY.

O. H. Jettmann

Superintendent.

State: *Alaska*

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JUN 28 1904

Acc. No. *2574a*

DESCRIPTIVE REPORT.

Top

Sheet No. *2574a*

LOCALITY:

Prince William Sound,

Knowles Head to

Pt. Freemantle.

1903

CHIEF OF PARTY:

Homer P. Ritter, Asst.

2574a

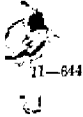
(1)

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Department of Commerce and Labor
RECEIVED
COAST AND GEODETIC SURVEY
COAST AND
GEODETIC SURVEY

Washington, D.C.

April 7, 1904.

Descriptive Report
to accompany
Topographic Sheet

RECEIVED
COAST AND
GEODETIC SURVEY

No. 2574 a

Hamner P. Ritter

Asst. C & G. Survey
SUPERINTENDING

Title:

Department of Commerce ^{and} Labor
Coast ^{and} Geodetic Survey

O. H. Tittmann, Superintendent
Prince William Sound
Alaska

Topographic Reconnaissance, Knowles Head
to Pt. Fremantle, by Homer O. Ritter,
Assistant, Chief of Party
1903.

Scale $\frac{1}{40000}$.

Shore line from surveys made in 1901-02
and 1903.

Elevations in black from trigonometrical
survey 1901; Elevations in red and
salient contour features were determined
with sextant. The elevations are
given in feet above mean high water.
Contour intervals 250 feet

Inking and general lettering by H.O.R.
Title lettered by.

The topography shown on the sheet was executed on a photographic ^{reproduction} print of topographic sheet No. 2574; and consisted in augmenting the shore line topography shown on that sheet by extending the topography some distance inland.

The country thus mapped embraces the northern shore of Valdez Arm from Pt. Freemantle to vicinity of Sawmill Bay; Bligh Island; the land between Tatitlack Narrows and Galena Bay; vicinity of Copper Mt; vicinity of Knowles Head and both sides of Fidalgo Arm from the entrance as far as Fish Bay. The areas thus surveyed aggregates about 150 square miles. In addition the shore line of both sides of Fidalgo Arm and contiguous bays from the entrance to Fish Bay was determined.

Knowles Head:

Knowles Head is the southwestern extremity of the mountainous range separating Fidalgo Arm on the north from Cordova and Gravina Bays on the south.

Local report has it that the head was named after Capt. Knowles (now deceased) one of the principal owners of the "Artic Oil Works of San Francisco ^{and} the Pacific Steam Whaling Co."; and who was engaged in the Salmon cannery industry in this vicinity some years ago.

The seaward face of the head is steep and bold, rising from the waters edge to an elevation of over 1500 feet.

The head is densely wooded with spruce and hemlock from the waters edge to the top.

On the face of the bluff a conspicuous land slide, starting from near the top and reaching to the bottom has stripped off the timber, exposing

the rock which is of a grayish yellow color.

This slide is quite prominent and is often a guide to the mariner in recognizing the head in thick weather.

The shore in the vicinity of the head is very rocky with numerous exposed and submerged rocks close to shore.

Knowles Head to Red Head.

To the eastward of Knowles Head the general direction of the shore is easterly. About 4 miles of the shoreline is shown on the sheet and nearly reaches to Red Head.

In this stretch the neck of high and mountainous land which lies between here and Fidalgo Arm is cut across by 3 narrow valleys which extend to the south side of Fidalgo Arm. The western one of these valleys reaches to the southern end of Inug Corner Cove. The highest part of the floor of this valley lies

midway between the two ends and is less than 100 feet above sea level.

From here the drainage extends both north and south.

The middle one of the 3 valleys has its northern outlet at the southern end of the western arm of Bowie Bay; it also has a divide of less than 100 feet midway between the northern^{er} & southern end of the valley.

The third or eastern one of the valleys has its northern outlet at the head of the eastern arm of Bowie Bay; but the divide in the middle is about 700 feet above sea level.

The general topographic features, forests, ponds, tundra meadows etc. are shown on the sheet.

In the stretch between Knowles Head and Red Head, the shore is rocky except in front of the valleys and at the eastern end where extensive gravel and boulder beaches are found.

Knowles Head to Porcupine Pt.

Going northward from Knowles Head the general direction of the shore is northwesterly for about 5 miles, when it makes a sharp turn to the eastward forming what is known as Porcupine Point.

In this stretch the land contiguous to the shore after leaving the immediate vicinity of Knowles Head is low and consists of tundra meadows with occasional patches of conifers. The beach consists of gravel, shingle and boulders.

As you approach Porcupine Pt. the land again becomes high and densely wooded with rocky shore and beach.

About $1\frac{1}{2}$ miles to the westward of the middle of this stretch is the southern end of a small island known as Goose Island.

The channelway between the mainland and the island has in the middle a rocky islet and connecting reef known as Gull Island. To the eastward

of Gull Isld. and all along the shore of the mainland and a considerable distance from shore are numerous submerged rocks and reefs.

Goose Island:

Goose Island is a small island $1\frac{1}{4}$ miles long and $\frac{1}{2}$ a mile wide. The highest part of the island is about 320 feet above the sea. The northern end of the island is about $1\frac{1}{2}$ miles southwest of Porcupine Pt.

The island is heavily wooded with the usual spruce timber.

The shore is rocky with the exception of a sandspit and shingle beach near the northeastern end;

Here are several dwellings, bathhouses and foxhouses. A settler and his family reside here and are engaged in raising foxes, the island having been stocked by him with the so called blue foxes.

Porcupine Pt. is a rounded wooded bluff between 8 and 9 hundred ft. high with a rocky shore and has submerged rocks some distance beyond the extreme northern end of the point.

Inug Corner Cove:

Between Porcupine Pt. and a sharp point of land 3 miles to the eastward is a triangular shaped bay extending inland for a distance of 3 miles.

This bay is known as "Inug Corner Cove" which name was given it by Captain Cook in 1778 when he discovered and named Prince William Sound.

At the extreme head of the bay and on the eastern side there are rocks and rocky reefs.

The bay with the exception of Porcupine Pt. is surrounded by a strip of low land, $\frac{1}{4}$ to $\frac{1}{2}$ a mile wide, covered with tundra meadows, bogs and a few spruce and hemlock.

The low land generally extends to the foot of the steep mountain slopes which are mostly covered with spruce.

At the head of the bay the low valley, already mentioned on page , southward to the shore just east of Knowles Head.

Another low depression extends from the western side of the Cove, towards the westward across to the waterway separating the mainland from Goose Island.

Plenty of fish in the Cove and game from grouse and geese to bear may be had in this vicinity.

Bowie Bay:

This bay indents the southern side of Fidalgo Arm just east of Inug Corner Cove, a mountainous neck of land about $1\frac{1}{2}$ miles wide separating the two bays.

At its mouth the bay is about $1\frac{1}{2}$ (naut.) miles wide and extends inland in a southeasterly direction

for $1\frac{1}{4}$ miles, when it separates into two arms; the western one taking a southerly direction while the other one at first extends to the eastward and then gradually swings around to the southwestward and near the end again separates into two short and narrow forks.

From the mouth to the head of the western arm is about two miles while to the extreme end of the other arm is about three miles.

At the head of the western arm of the bay is a narrow and comparatively low valley which extends in a southerly direction across to that part of Prince William Sound just east of the southern end of the valley connecting with Inug Corner Cove.

Another and somewhat similar valley starts from the head of the southeastern end of the eastern arm of the bay and extends to the low land west of Red Head.

The land contiguous to the shores of Bowic Bay and the sides of the above mentioned valleys is steep and in many places precipitous and in general densely wooded.

Spruce and hemlock timber predominates.

Close to the shore and in places where landslides or snow avalanches have stripped off the coniferous trees, alders are found growing in dense profusion.

Areas of tundra meadows or bogs are found along the lower levels of the valleys and in a number of places in the vicinity of the shore and occasionally on the sides of the mountain.

The tops of the mountains surrounding the bay vary from 1000 to nearly 2000 feet in height.

The shores of the bay in general are rocky; here and there is a shingle beach often strewn with boulders. A number of small streams, coming down the mountain sides, enter the bay and its arms.

Southern shore of Fidalgo Arm east of Bowie Bay:

About 5 miles of this shore is shown on the sheet.

From Bowie Bay the general direction of the shore is to the eastward.

Several coves, a small peninsula and a rocky reef not far from shore, are found in the western end of this stretch.

About 3 miles east of Bowie Bay there is a narrow bay extending inland in a southerly direction for about $1\frac{1}{2}$ miles.

This bay is less than $\frac{1}{2}$ a mile wide at the mouth, gradually narrows up towards the head and was found to terminate in a stream less than 50 yards wide; the source of which was not investigated during the survey.

The land contiguous to the shore in this stretch of 5 miles is mountainous, rising to from 1500 to 1700 feet.

The mountain slopes are densely wooded.

About $\frac{1}{2}$ a mile east of Bowie Bay, and extending several miles to the eastward, the foot of the steep slope of the mountain is some distance back from shore. Between here and the shore the land is comparatively flat and low and is covered with tundra.

As in the case of most of the shores in this section, wherever the slopes of the mountain come close to the water, the shore in general is rocky with a rocky beach while in front of the low lands the shores are low with shingle or gravel and boulder strewn beaches.

Fish Bay:

On the northern side of Fidalgo Arm, and about 5 miles east of Landlocked Bay, is a bay which indents the land in a northeasterly direction.

This bay is locally known as Fish Bay. The native indians call

it by a name which sounds like "Nuneviyak" which they say means fish bay.

The length of the bay from its mouth to the head is a little over 2 miles (naut.)

At its mouth the bay is about a mile wide, $\frac{1}{2}$ a mile inland it narrows up to $\frac{1}{2}$ a mile in width and from here to the head has a width varying from $\frac{2}{3}$ to less than $\frac{1}{2}$ a mile.

Fish Bay is flanked on both sides by high mountains forming a valley which extends several miles beyond the head of the bay.

A large and swift flowing stream having its origin in the high mountains at the head of the valley, empties into Fish Bay at the upper end.

The debris brought down by this stream has formed an extensive mud and gravel flat which here fills the bay from side to side and extends out into the bay some distance.

The mountain slopes on both

sides of the bay are heavily wooded with hemlock spruce and alder, from the waters edge up to an elevation of about 2000 feet.

at the head of the bay the mountain slopes are very steep, rugged and bare; one of the peaks rising to an elevation of 5886 feet.

Numerous mountain streams, often consisting of a succession of waterfalls empty into the bay on all sides.

Both shores of the bay in general are rocky; the beach consisting of fragments of rock varying from a few inches to several yards in diameter and covered below the mean high water line with kelp of the short leaved variety.

Here and there a shingle beach is found.

Wherever a stream enters the bay a delta composed of rocky debris, brought down from the mountain, is found close to shore; the size and

fall of the stream determining the extent of the rock pile.

A number of small and shallow coves indent the shores of the bay.

At the head of the bay are found a number of indian huts or shacks, which are occupied by the natives during the fishing season.

Close to the point forming the western side of the entrance to the bay are two small islands, surrounded by rocks and connected with the point by a neck of rocks, boulders and gravel bare at low water.

In the bay about one half a mile northeast of the point is a small rocky wooded island.

The point of land forming the eastern entrance to the bay has a number of outlying rocks.

Landlocked Bay:

Just east of Copper Mt. Pt. and about 3 miles west of Fish Bay is a bay emptying into Fidalgo Arm, known as Landlocked Bay.

The bay extends inland about 4 nautical miles. For the first 2 miles the bay extends in a northerly direction and varies from $1\frac{1}{4}$ to $1\frac{1}{2}$ miles in width; then it narrows up to $\frac{1}{4}$ of a mile, makes a turn to the eastward and keeps that direction to the end, varying in width from $\frac{1}{4}$ to $\frac{1}{2}$ a mile.

The southern slope of Copper Mountain which is very bold and precipitous, forms the northern shore of the bay. The eastern side of one of the spurs of the mountain which extends and descends to the southward and terminates in Copper Mt. Pt., bounds the western side of the bay. The land contiguous to the eastern side of the bay is also mountainous, rising from comparatively low ground near Fidalgo Arm to steep mountain sides at the upper end of the bay.

The extreme eastern end of the bay ends in mud flats and a narrow valley extending into the mountains out of which comes a large and torrential creek of ice cold water.

The usual spruce trees and alder bushes are found along the shore and part way up the mountain slopes; but near the upper end of the bay the timber does not go up so high and the upper elevations of the slopes are mostly bare, often perpendicular, worn smooth and even polished.

Near the head of the bay considerable development work is being done in prospecting for ores containing copper and gold. Several buildings have been erected also a small wharf to which a number of good sized steamers have come to take on board ore for shipment to Tacoma (State of Washington) smelters to test the ore on a large scale. A prospecting tunnel was under way when the

party on Str. Taku was surveying in this vicinity.

Additional mining reconnaissance work was carried on here during the summers of 1902 and 1903.

The eastern side of the bay contains numerous small islands, exposed rocks and submerged rocks and rocky reefs along the shore and considerable distance out into the bay.

The beach along the western and part of the northern shore, extending from Copper Mt. Pt. for nearly 3 miles up the bay, is from 50 to 100 yards wide at low water and is strewn with boulders varying from a foot to several yards in diameter.

This material forms the bottom of the bay close to shore.

In the eastern end of the bay both shores are rocky with numerous exposed and submerged rocks close to shore.

Boulder Bay:

Two miles north of Copper Mt. Pt. and east of the southern end of Tatitlack Narrows is a pear shaped bay which is locally known as Boulder Bay, from the large number of boulders (some of enormous size) which cover the beach between high and low water and extend in numerous places out to deep water.

The bay is about $1\frac{1}{2}$ miles wide at its mouth and extends in a northerly direction two miles.

The land contiguous to both sides of the bay is comparatively low at the southern end; rising rapidly as you proceed northward, with steep rugged and high cliffs coming down to the waters edge at the northern end.

It is the foot of the western slope of Copper Mountain which forms the eastern shore of the bay.

Numerous waterfalls come down the mountain side, and in the

Spring and early summer snow avalanches are frequent.

A number of mineral lodes, mostly copper ores, have been found in this vicinity.

Starting from the middle of the bay and extending in a northerly direction and nearly joined to the shore is a rocky reef and several small islands.

This partially submerged ridge divides the upper part of the bay into two halves.

The timber and its distribution is similar to that in Landlocked Bay.

Eastern shore of Tatitlack Narrows.

From the somewhat low and tundra covered point which separates the southwestern end of Boulder Bay from the Narrows, to Virgin Bay the shore is low, having a shingle beach thickly strewn with boulders and rocks a number of which project out of the water some distance from shore.

Half way between the point and Virgin Bay is a small rock-surrounded island which is connected with the mainland at low water.

Inland from the shore the ground rises gradually for half a mile or so and then ascends abruptly up the mountain side.

Tundra meadows and a few scattered spruce cover this flat or bench, while the mountain side is heavily wooded.

On the southern end of the flat and close to shore is the Indian village of Tatitlack.

This village consists of a score of modern looking frame dwellings and a church of the Russian denomination.

From Virgin Bay to Rocky Pt. the shore is bold and rocky with numerous small islands and rocks along shore and some distance out.

A number of coves indent the shore.

The land contiguous to this stretch is high and densely wooded; the northern end of which is a high neck of land $\frac{3}{4}$ of a mile in width forming the western boundary of Galena Bay near its entrance.

Virgin Bay:

On the eastern side of Tatitlack Narrows and about midway between Copper Mt. Pt., and Rocky Pt. the mainland is indented by a cove or small bay known as Virgin Bay.

The bay is less than a mile long and half a mile wide with a rocky ledge in front, leaving a narrow entrance to the bay.

The northern end of the bay is sometimes called Gladhaugh Bay, after the locator of a large copper bearing vein of ore which here crops out at the waters edge.

The mineral worth of the vein is now being explored by a company which is sinking shafts and has

put up quite an extensive plant of machinery necessary for the work.

The plant consists of a steam hoisting gear - compressed air apparatus - electric lighting - machine shop - steam lathe and drills - blacksmith shop etc.

The ore taken out is shipped to a smelter at Tacoma, Washington.

The monthly shipment (by steamers) amounts to about 500 tons or more.

The company has an assay office and has erected a wharf with facilities for watering ships.

There is a Post office here known as Ellamar P.O.

The company operates a store having a good assortment of stores and general merchandize suitable to the wants of the surrounding community.

A hotel and from 20 to 30 residences comprise the settlement at present.

Western shore of Tatitlack Narrows.

Close to the shore and along the entire front of the eastern side of that part of Bligh Island which forms the western side of the Narrows, is a cordon of islands and rocky ledges.

The islands vary from 10 feet to 30 feet in height and are covered with tundra meadows and patches of spruce. North of the northern end of Bligh Island and separated from it by a narrow, shallow and rock filled channel is Busby Island, forming the western extent of the northern entrance to the Narrows.

Here the shore also is rocky, some of the ledges extending out some distance.

Bligh Island:

Bligh Island is an island of some extent in the northeastern part of Prince William Sound.

It lies close to the mainland, from which it is separated by a narrow waterway known as

Jatitlack Narrows.

The island is about half way between Knowles Head and Pt. Freemantle.

The island is about 5 miles long and 4 miles wide.

The main body of the island is mountainous, a number of the peaks attaining elevations of from 1400 to 1500 feet above the sea.

A large part of the island is wooded (spruce); the remainder of the island has the usual covering of peat, moss, bushes, grass, flowers, bogs & ponds.

The southern and south half of the western shore is bold and precipitous with a rocky beach but deep water quite close in.

From the middle of the western and thence around the northern and eastern side of Bligh Island and contiguous to the shore are numerous outlying islands varying in extent from a few square yards to $\frac{3}{4}$ of a

square mile; the principal ones being Seal Island near the western and Busby Isld. near the northern end.

Between Seal and Busby Island, forming the southern side of Valdez Arm Entrance, the approach to the shore and Busby Bay, which here indents Bligh Island, there are numerous rocks and rocky reefs contiguous and some distance out from the shore.

Seal Island:

This island is about one mile long; a little less than a quarter of a mile wide; is densely wooded (spruce) and in the middle (the highest part) is something over 300 feet high.

The waterway between it and Bligh Island is about $\frac{1}{2}$ a mile wide.

Busby Island.

This island sometimes called "Fox Island" is an irregular

shaped island, just north of the northern end of Bligh Island, from which it is separated by a narrow, shallow and rock filled channel.

The island is comparatively low; the highest part (near the north shore) being about 250 ft. high.

Part of the shore is rocky, the remainder shingle beach strewn with boulders.

Numerous rocky ledges extend out from shore on all sides.

The island is partially wooded.

Several small coves indent the island; on the shore of one of them (the one emptying into Tatitlack Narrows) are the dwelling houses and other buildings of a Mr. Busby who is engaged in raising blue foxes on this island.

Busby Bay:

This bay indents the northern end of Bligh Island.

At the entrance and for about

$1\frac{1}{2}$ miles inland the bay is approximately half a mile wide, extending in a southeasterly direction; it then makes a sharp turn to the westward and from here to the head of the bay, $\frac{3}{4}$ of a mile distant, is less than $\frac{1}{4}$ of a mile wide.

The beach along the shores of both sides of the bay is mostly shingle, strewn at a number of places with boulders. The land contiguous to the western shore is high, steep and densely wooded while that on the eastern side is low with tundra meadows and patches of spruce.

Some timber is being cut in this locality by natives from Tatitlack who take it over to the mine at Ellamar; two natives in a bidarka (skinboat) towing from one to two or three logs at a time.

Cloudman Bay:

This bay indents the eastern side of Bligh Island and lies just

west of the southern end of
Iatitlack Narrows.

The bay or more properly speaking
cove is approximately $\frac{3}{4}$ of a mile
long and $\frac{1}{2}$ a mile wide.

at the western end of the bay
are the dwellings and other buildings
belonging to a Mr. Preston Cloudman
who lives here and is engaged in
raising blue foxes.

He also raises chickens + garden
truck, having a ready market for
his chickens, eggs etc. at the neighboring
mining town of Ellamar.

Northern shore of Valdez Arm from
Pt. Freemantle to Sawmill Bay.

In this stretch the shore
is bold and rocky, perpendicular
cliffs coming down to the waters
edge the entire distance with but two
exceptions, where there are shingle
beaches of limited extent, covered
with boulders along the shore and
out into the water some distance

forming submerged reefs.

The land close to shore rises abruptly. The mountain tops close to shore near Pt. Freemantle attain heights of from 2000 to 2500 ft and become much higher as you ascend the Arm.

Along the shore and up the sides of the mountain up to about 1500 feet above sea level, spruce, hemlock, alder and dense underbrush predominate.



Capt. "Bowie" Valdez Arm
Prince William Sound
Alaska.

Showing rock strewn
beach at low water - etc.

Descript Rep. (34)
2574a



Camp Bowie" Valdez Arm
Prince William Sound,
Alaska.

Showing shingle + rock
strewn beach at low water -
low rocky point - etc.



Camp "Bowie" Valdez Arm.
Prince William Sound
Alaska

Showing beach at
extreme low water -
single beach in front of tents -
angular rock strewn beach in foreground
patches of short leaf. Kelp etc.

Descript. Rep.
2574a

(36)



North side Valdez Arm
Prince William Sound
Alaska.

Shoring shingle beach -
gravel spit - timber growth
along shore - top of mountains July Aug.
etc.

Descript. Rep.
2574a

(37)

Rocky Pt.
↓



View from north shore (opposite Jacks Bay.)
of Valdez Arm — looking
towards Rocky Pt.
Prince William Sound

Alaska.

showing rock strewn beach.
etc.

Descript Rep.
2574a

(38)



View from north shore (opposite Jacks Bay)
of Valdez Arm, Prince William Sound,
Alaska.

Looking towards Pt. Freemantle.



View from islet in middle of
entrance to Galena Bay - Pr. S. Alaska.
looking east.

showing edge of
flower covered islet (in foreground) -
wooded mountain sides -
rock islets, etc.

Descript. Rep.
2574a

(40)



View from islet in middle of
entrance to Galena Bay - P.M. Sound.
Looking towards head of Bay.

Showing edge of
flower covered islet (in foreground) -
low wooded shore - shore
fringed with rocks & rocky islets -
etc.

Descript. Rep.
2574a.

(41)

→ Rocky Pt.



Gatena Bay
Prince William Sound,
Alaska.

Showing kelp covered
rock at low water -
and edge of grass covered islet.

Descript Rep.
2574a

(42)

Glacier I. ↓

↓



Looking west
Valdez Arm Entrance, from Galena Bay
Prince William Sound
Alaska.

Showing appearance
of uncovered rock - etc.

Manuscript. Rep.

2574a

(43)



North shore Valdez Arm - Vic. Pt. Free mantle towards eastward.
Prince William Sound,
Alaska.

Descript Rep.
2574a

(44)



showing rocky beach in foreground -
steep and wooded mountain side -
shingle beaches - etc.

Tacks Bay,
Prince William Sound
Alaska



Jacks Bay
Prince William Sound,
Alaska.

showing kelp covered
rock at low water - low wooded
rocky point - rugged glacier
covered mountain - rounded foot
hills - etc.

Descript. Rep.
2574 a

(45)



Coast + G.S. Str. Takie
4th July 1901.

Oliver Rep.
2574a

(46)



showing Boulder stream beach -
halibut - etc.

Vic. Jacks Bay.
Prince William Sound
Alaska.

Descript. Rep.
2574a

(47)



"Jacks Bay"
Prince William Sound,
Alaska.

Showing shingle beach -
rock strewn beach - at low water -
timber growth along shore - etc.

Descript. Rep.
2574a.

(48)

Point Freemantle



Bushby Isl.



Prince William Sound,
Alaska.

Showing Islets off
western side to entrance
Galena Bay - etc.

Descript. Rep.
2574a

(49)



West end of Sawmill Bay
Prince William Sound
Alaska.

showing - timber growth
along shore - beach -
etc.

Descript. Rep.
2574a

(50)



4

Camp Snug Corner Cove
Prince William Sound
Alaska

showing shingle beach -
tundra meadow - wooded
shore, and mountain.

Descrip. Rep.
2574a

(51)

Mt. Denison.



Copper mt.

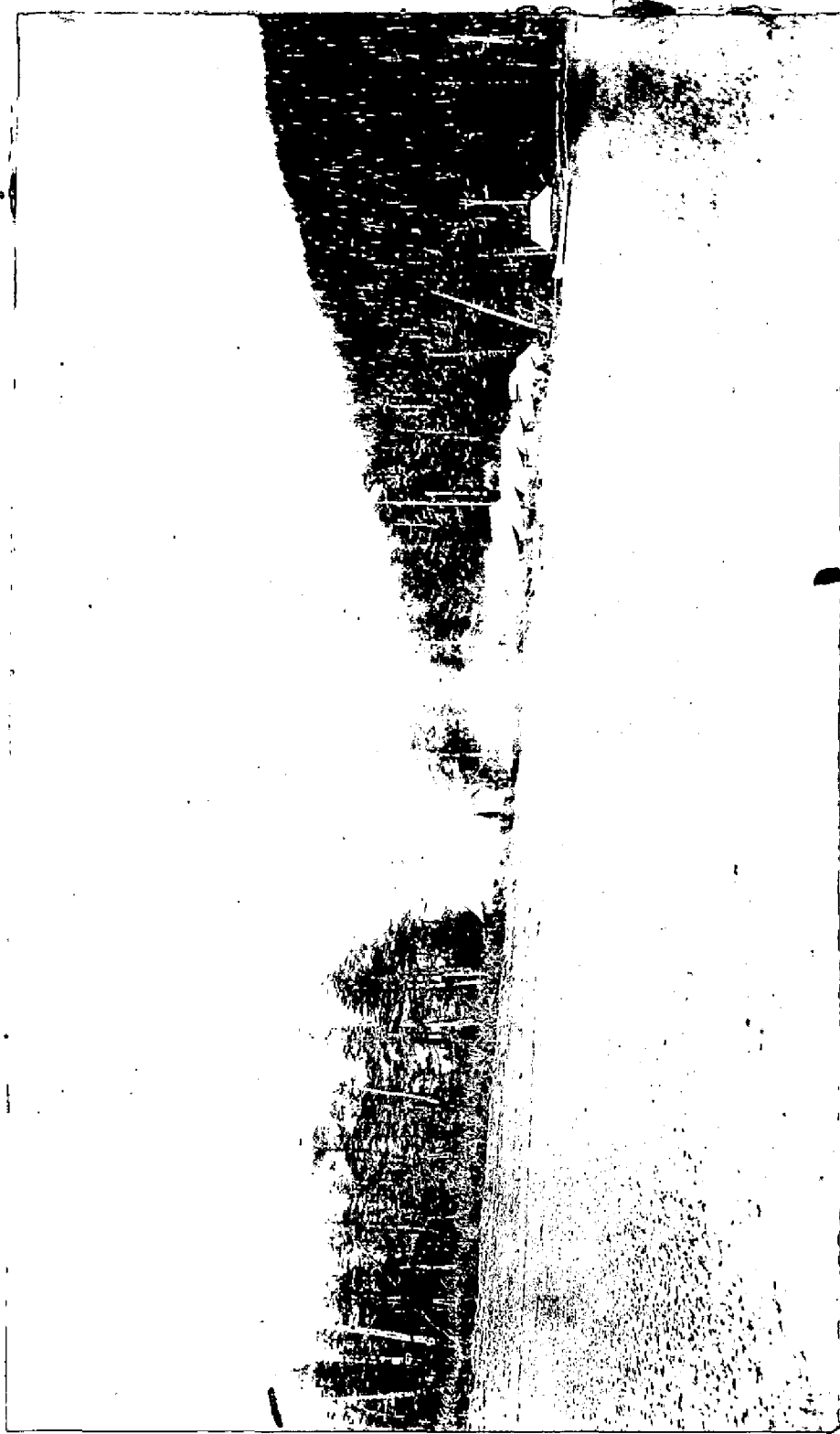


North shore Vidalgo Arm - from Copper Mt.
to Mt. Denison.
Prince William Sound
Alaska.

View taken from
south shore of
Sneeg Corner Cove

manuscript Dep.
2574a

(52)



Camp Snug Corner Cove
Prince William Sound,
Alaska.

Shoring shingle beach -
wooded ridge - grass flat -
etc.

2574
2574a

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey *Topographic*
Field No. _____ Office No. *2574*
2574A

LOCALITY

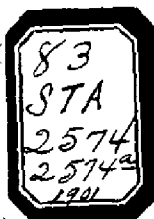
State *Alaska*
General locality *Prince William*
Locality *Sound Eastern*
End of Valdez arm
1907

CHIEF OF PARTY

LIBRARY & ARCHIVES

DATE

2574
2574a



Treasury Department,
U. S. COAST AND GEODETIC SURVEY.

Superintendent.

State: *Alaska*

DESCRIPTIVE REPORT.

*Topographic Sheet No. 2574
and 2574a*

LOCALITY:

Prince William Sound.

Eastern End of Valdez

Arm.

1901

CHIEF OF PARTY:

Homer P. Ritter, Asst.

U. S. C. & G. SURVEY.
LIBRARY AND ARCHIVES
MAY 18 1904
Acc. No. *2574*
2574a

2574
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FORM 167.

Treasury Department,
COAST AND GEODETIC SURVEY,
Archives
Washington, D. C., *Feb 18*, 1904

Respectfully ⁷⁻⁴⁵¹⁸ { returned
referred } to
forwarded }

Drawing Section.

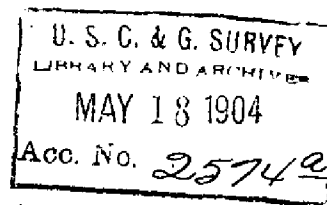
For sheet number.

2574 & 2574a

G. L. F.

Leary & Archibald

Title:



Treasury Department
 U.S. Coast & Geodetic Survey
 O. H. Tittmann, Superintendent.

- - Topography -
 Eastern End of Valdez Arm -
 Prince William Sound
 Alaska.

Shore line Topography from eastern end
 of Arm to 5 miles west of and including
 Jacks Bay.

by Party of Homer O. Ritter, Assistant.
 Surveyed in conjunction with other work
 during July, August & September 1901.

Scale $\frac{1}{40000}$.

Statute miles

Observers:

Homer O. Ritter, Assistant.
 B. A. Baird, Aid.

Local names appearing on Sheet.

Name	Authority
Valdez Arm	Mariners - Local usage - Ritter
Port Valdez	" " " War Dep. Map.
Valdez (town)	Articles of Incorporation of Town
Mineral Creek	Local usage.
Gold "	" " "
Camp Bowie	Ritter - anchorage of Str. Taku.
Shoup Glacier	War Dep. Maps.
{ Valdez Narrows	Mariners - Local usage - Ritter
{ Stanton "	War Dep. Maps.
Jacks Bay	" " " - Local usage
Camp J. B.	Ritter - anchorage of Str. Taku.
Entrance Island	War Dep. Maps.
Sawmill Spit	Local usage -
Swanport	" "
Jackson Pt.	War Dep. Maps.
Fort Lisicum	War Department.
Solomon Gulch	Local usage - War. Dep. Maps.
Lowe River	" " " " " "
Robe "	War Dep. Maps.

General Description of Valdez Arm:

Valdez Arm, $\frac{2}{3}$ of which (the eastern part) comprises the topographic sheet, is the northeastern one of the numerous long deep and comparatively narrow waterways entering into Prince William Sound.

From Pt. Fremantle at the western end to the town of Valdez at the extreme eastern end of the Arm is about 30. miles.

At the entrance the Arm is about 6 miles wide; from here it extends in a northeasterly (true) direction to the Narrows, 15 miles distant where the width for a short distance is less than a mile but soon widens out again, the Arm taking an easterly direction and having a width of from $2\frac{1}{2}$ to 3 miles to the end.

Both sides of the Arm are flanked by mountains 4000. to 6000 ft. high.

The northern shore between Pt. Fremantle and the Narrows is rocky, bold and precipitous and is indented by one small bay.

The southern shore in this stretch is indented by two narrow bays of considerable length.

Where these bays join the Arm the shore is somewhat broken up with small islands and numerous rocks.

The eastern end of the Arm is almost entirely landlocked, surrounded by mountains from 4000 to 6000 ft. high.

West of the Narrows the islands, and the slopes of the mountains from the water edge up to 1000 to 1500 ft in elevation are covered with spruce, hemlock and a dense growth of underbrush.

Higher up bushes take the place of the forest trees; above the bushes are found mosses - lichens & bare rocks.

A number of the highest elevations in this vicinity are capped with glaciers and snow the year round.

In a number of places where mountain slides and snow avalanches have stripped off the spruce forest the surface is now covered with alder bushes.

East of the narrows the floral aspect of the adjacent country assumes a marked change.

Spruce and hemlock are only found at a few places along the shore while from a distance the mountain slopes appear to be covered with a carpet of low bushes and pastures green.

But on closer investigation the meadows ^{or} copses will be found to consist of the densest and most impenetrable jungle of alders, berrybushes ^{and} vines varying in height from a few feet to ten or twenty.

In the vicinity of Thoup Glacier a few and on the morain on which Valdez is situated quite a growth of cottonwood or poplar are found.

Description of the area shown on the Sheet.

Beginning at the western end of the south shore the direction of the shore is a little east of north for a distance of about 3 miles to the fiord like indentation known as Jacks Bay.

The shore is rocky though somewhat low;

a number of sand, shingle or boulder beaches are found in this stretch.

Close to the shore the flora consists of spruce, alder and patches of tundra meadows.

Description of Jacks Bay.

by B.A. Baird, ~~2nd~~ ^{1st} Lieut. of Hon. Co. Ritter ass.
July 1901.

"The Topographic Sheet shows the high and low water lines indicating the character of the beach and the character of the land near the water as regards woods, marshes, open flats etc.

All the country in the vicinity of this bay is very mountainous and the shoreline consists almost entirely of rocky bluffs.

There are practically no sand or gravel beaches excepting near the entrance or mouth. The bay is long and narrow.

It extends in an easterly and westerly (magnetic) direction.

Going eastward towards its head it divides into two arms, the right hand or south one being much the longer.

Each of these arms terminates in a mud flat and is fed by a good sized creek.

The flat at the the head of the main or south arm is quite extensive being a mile or so long and about half a mile wide where it ends at low water.

The valley at the head of the mud flat extends for some distance inland but is wooded, the trees or bushes being mostly alder on the low land between the bluffs.

The north or left hand arm is somewhat similar but much less extensive.

There is a dead glacier at its head. The flats do not seem to be boggy or contain quicksand as far as we could determine but quite readily support one at time of low water, when they are bare.

They seem to be for the most part a rather compact mud.

As already noted the country is very mountainous. The ranges enclosing the bay run east and west.

A high range separates Jacks Bay from Galena Bay on the south and another from the eastern end of Valdez Arm on the north.

For about the first thousand feet in

elevation the slopes of the mountains are covered with a dense growth of spruce and hemlock, intermingled with more or less alder bushes and considerable undergrowth.

The ground or rockbed is covered with a spongy saturated layer of moss and tundra, decayed wood and vegetable matter and is very tiresome to walk over.

On this account together with the thick undergrowth it is usually a very difficult matter to do much walking on the mainland. There are some open places, also covered with tundra.

On the north side of the main arm of the bay, about 4 miles from the entrance, for a distance of a thousand or 1500 ft. the side of the mountain is very steep, rising out of the water almost perpendicular, and down the side of this bluff come numerous waterfalls.

Steep as is this slope it is nevertheless covered with trees moss and undergrowth, wherever they can get a sufficient hold.

Trees are sometimes seen growing directly out of the sides of huge boulders, the roots

clinging into the crevices.

Excepting near the entrance to the bay there are no ^{visible} rocks except close to the shore and the bluffs are mostly very steep.

A large proportion of the bluffs are of hard basaltic formation but shale and slate are also found.

These latter nearly always lie in vertical layers projecting obliquely to the shoreline and towards the entrance of the bay, that is towards the west and northwest.

No soundings were taken in the bay during the season. At the camping place (Camp J.B.) is a good anchorage of limited extent, the Str. Taku using it while the survey was under way in this locality.

There are no inhabitants on this bay. (except bears and other wild animals.) and no roads or trails near.

All travel is by water. There are many small waterfalls and mountain creeks which could be turned to good use in furnishing power in case

The country should be developed.

It is a question whether any of the land in this vicinity could be turned to agricultural purposes or not, but there are some open places which if broken up and drained (at a great expense) would probably make good soil.

The question of climate would also have to be considered. Still judging from the trees and undergrowth, considerable land might be reclaimed.

The average height of the trees ~~are~~ ^{is} about fifty to seventy five feet although in some places, especially up a ways on the mountain sides they grow much larger.
B.A. Baird, aid.

During the time the party was in camp here plenty of halibut, cod and other kinds of fish could always be caught, some of the halibut weighing over a hundred pounds.

Just north of Jacks Bay the Arm narrows to about a mile in width for a distance of two miles and at the upper end the channel way is further

restricted by an island near the north shore and a rock midway between the island and the south shore, but deep water is found close to the shore, island and rock. The island has a few spruce trees on it; the rock is generally out of water except at the high water stages of big tides.

A short distance from the rock the Arm widens out again and extends in an easterly direction for about 15 miles.

The south shore of the eastern end of the Arm is rocky with numerous small islands and rocks close to shore, but the deep water generally extends close up to them.

About half way between the Narrows and the eastern end of the Arm is a circular sand spit about $\frac{1}{2}$ a mile long with a steep front outside of the low water shoreline.

On the spit a small sawmill plant was in continuous operation during the season when the survey was made.

The logs were cut in some of the bays west of the Narrows and towed to the mill and made into building material for local consumption.

Two miles east of the spit a small outlying island (Jackson Pt.) joined to the mainland at its eastern end by a sand neck forms a small harbor called Swanport; here the Alaska Commercial Co. have built (1898) a wharf + warehouse.

Just east of Jackson Pt. is the Military Post "Fort Lisicum".

Here the Government has built (1900) a wharf extending from the shore out to deep water.

A short distance east of the Government wharf the high water shore is fronted by a mud flat which extends all along the entire eastern end of the arm, in front of the town of Valdez and along the north shore 3 miles west of the town to where a low rocky bluff begins which extends several miles to the westward.

At the western end of the bluff quite an extensive valley heads into the mountains.

This valley is drained by a large creek (Mineral Creek) at the mouth of which is a mud flat extending along the shore several miles to the westward where it again meets the foot of the mountain;

From here the deep water close to the rocky shore extends as far as the bay which terminates at the base of Shoup Glacier.

This bay which is just east of the narrows is about a mile wide and two miles long. Across its mouth stretches a sand barrier which is nearly dry (with a narrow channel in the middle having about 6 ft. of water at L.W.) the entire distance at low water.

This bay is often filled with floating ice, some of which escapes into the Arm when wind and tide are favorable.

From the western end of the bay the shore has a southwesterly direction as far as opposite Jacks Bay.

The shore is rocky and bold, with numerous boulders and rocks close to shore.

In the narrows the face of the mountain is almost perpendicular coming down

to the waters edge.

Numerous slides and many waterfalls which have their origin and are fed by snow fields and glaciers thousands of feet up the mountain, and in plain view, give a decided grandeur to the scenery.

Close to the shore and part way up the cliffs, spruce and hemlock grow wherever they can get a foothold;

The slides when sufficient time has elapsed are generally covered with alder and other bushes; the latter owing to their light green foliage form a vivid contrast to the dark colored firs and somber hued cliffs.

Just opposite the mouth of Jacks Bay there is a sand spit with outlying boulders and probably rocks.

From here the shoreline takes a more westerly direction until it reaches a small bay which extends several miles inland. In this bay logs were being cut for the saw-mill before mentioned.

The owner of the sawmill (Mr. Roberts) told me that he contemplated moving

his saw mill from Saw Mill Spit to this bay in the near future.

Several large creeks enter this bay at its head.

Valdez:-

The town of Valdez is situated on an extensive and comparatively level gravel morain which starts at the shore and has a gradual ascending slope inland to the foot of Valdez Glacier about 4 miles distant.

In front of the town this morain extends from the high water shore to deep water (when it slopes off abruptly) for a distance of from $\frac{1}{4}$ to $\frac{1}{2}$ a mile.

This part of the morain, submerged at H.W. from a few feet to several fathoms, is bare at low water stages and covered with mud.

The town had its beginning in the Spring of 1898 when it was the landing place of many of the thousands of gold hunters going into the Copper River Country. Since that time it has gradually assumed a more

permanent status.

It now (1901) consists of some 325 dwellings, ranging from tent shacks and log cabins to three story frame buildings.

There are a number of establishments carrying quite a stock of goods selected with reference to local needs.

There are hotels, restaurants, saloons, two or three churches, a Post office, U.S. Custom House, Town Hall etc.

The town is now (1901) incorporated and under municipal rule.

From here starts the Government Trail and Telegraph Line into the interior of Alaska. They are now in course of construction by the War Department.

The Alaska Overland Mail route between Valdez and Eagle City on the Yukon River starts from here.

Pack horses in summer and dogs and sleds in winter are used.

During the season 1901. three regular lines of steamers making monthly trips, stopped at Valdez both on their westward and eastward runs.

One of the lines operated by the Alaska Commercial Company ran between Seattle and Kodiak, touching at way ports.

The second line operated by the Pacific Steam Whaling Co. (now 1902. The Pacific Packing and Navigation Co.) ran between Seattle and Cooks Inlet touching at way ports.

The third line also operated by the latter company ran between Juneau and Unalaska, touching at way ports.

All the vessels carried the U.S. mail.

In addition a number of tramp steamers and government transports came to Valdez or Fort Lisicum during the season.

At present the cargoes of the ships are lightered ashore or put on the beach at low water and carted into the town.

The Pacific Steam Whaling Co. had a wharfloat moored in front of the town upon which they discharged the freight.

Importance of Locality :-

at present the indications are that this locality will be of considerable importance in the near future and is destined to be the starting point of one of the principal "All American" (U.S.) routes into the interior of Alaska.

It has the advantage that the largest ocean steamers afloat can come from the ocean, through Prince William Sound and up Valdez Arm to its extreme eastern end during every month of the year and at any stage of the tide.

The mineral resources of this section and the country in the interior accessible from here promise to be of importance.

Respectfully
Homer O. Ritter

Asst. U.S. Geol. Survey.



Looking up Jack's Bay.
from Camp J.B.

U.S. Navy. J. Photo. 1901.



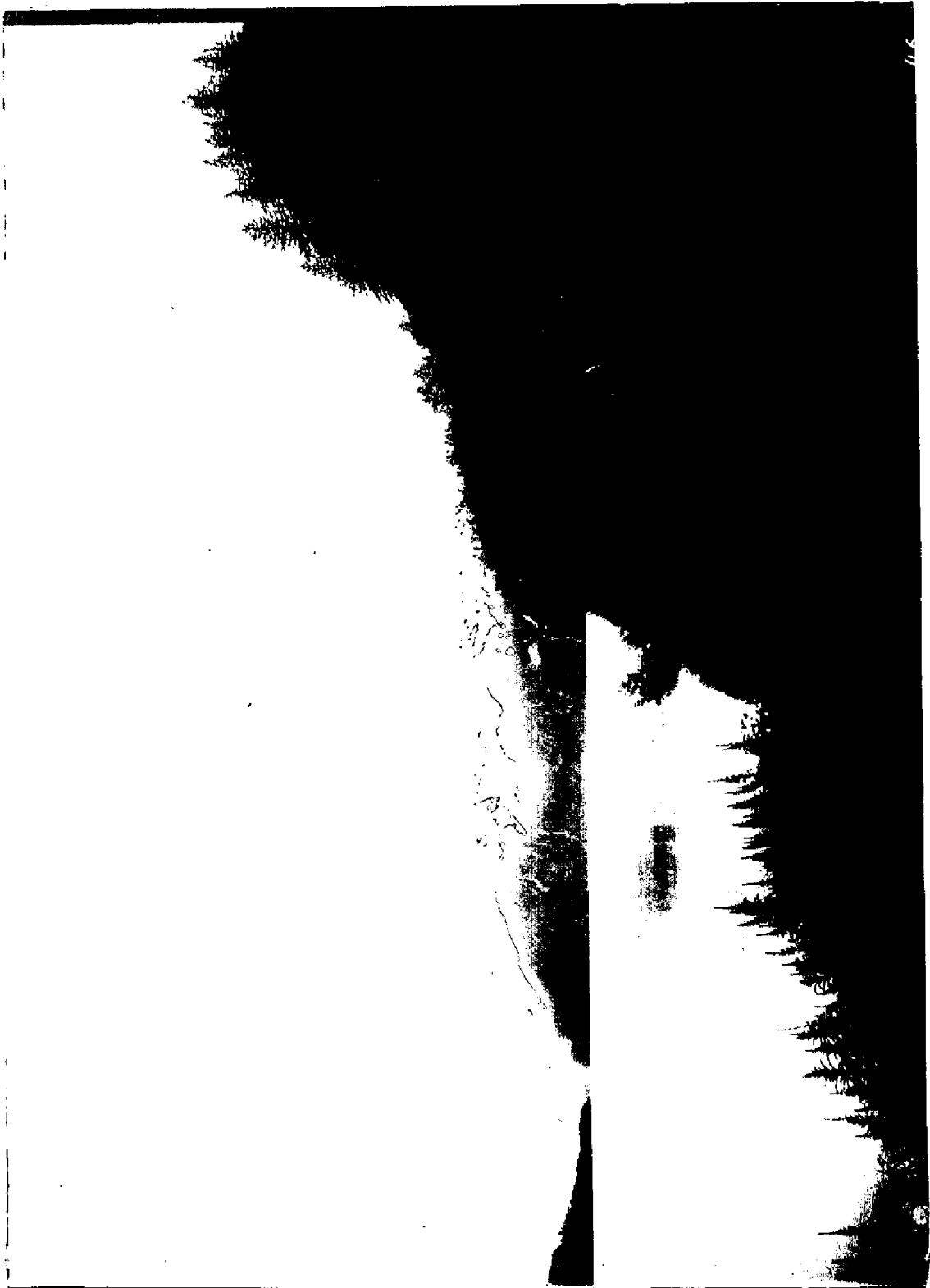
One hours catch
vic. Camp. J.B.

U.S. Army, J.O. 1901.



One hours catch
vic. Camp. J.B.

U.S. Geol. Surv. 1901.



North shore Valdez Arm.
vicinity Narrows.

U.S. G. S. Photo. 1901.



Shoup Glacier
Valdez Arm.

U.S. Geol. Surv. Photo. 1901.



Camp "Bonnie"
Valdez Arm.

U.S. Army, J. Photo. 1901.



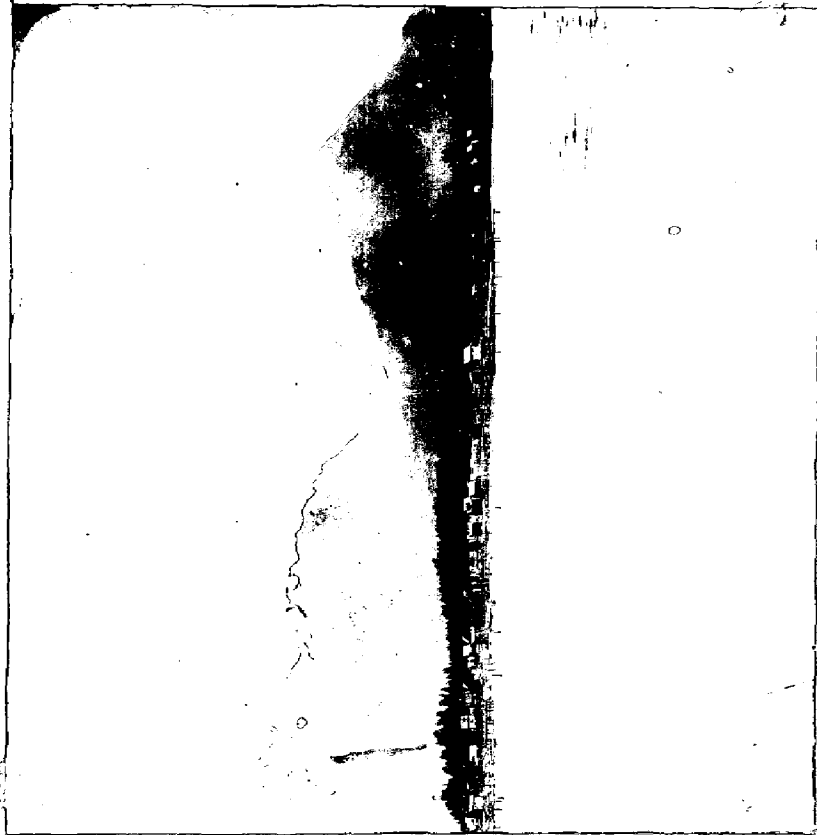
U.S. Army. 10 Photo. 1901.

Fort Lisicum.
Valdez Arm.



Salmon Camp, Bonvic
Valley, Ariz.

May 1906



Valdez, Alaska
1901.



U.S. City S. Photo.