



3650

U. S. SURVEY
L. S. A.
MAR 30 1917
Acc. No.

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: ALASKA

11-5613

DESCRIPTIVE REPORT.

Top Sheet No. 3650

LOCALITY:

1916

CHIEF OF PARTY:
L. O. Collier

DEPARTMENT OF COMMERCE
E. Lester. Jones. Superintendent.

DESCRIPTIVE REPORT
to accompany
TOPOGRAPHIC SHEET No. __

of

SOUTHEAST ALASKA;
EASTERN PASSAGE,
SOUTHERN END.

SURVEYED by WIRE DRAG PARTY No. 4.

1916

L.O. Colbert,
Chief of Party.

Scale. 1 - 20,000.

DEPARTMENT OF COMMERCE.
COAST AND GEODETIC SURVEY.

E. Lester Jones, Superintendent.

Descriptive Report to accompany Topographic Sheet No. 3650

SOUTHEAST ALASKA, EASTERN PASSAGE, SOUTHERN END.

Surveyed by Wire Drag Party No. 4, under instructions from
the Superintendent, dated February 26, 1916.

Limits, Scale, Method, Party:

I have the honor to report as follows on Topographic sheet No. 3650, which shows Eastern Passage from \triangle Mill on the east and \triangle Midi on the west, south through the Narrows to the end. . The remainder of Eastern Passage from the above named Triangulation Stations westward is shown on sheet No. _____. At the juncture of the two sheets is where the Passage changes its direction abruptly from east and west to north and south.

The Geographic limits are:

Latitude $56^{\circ}-19$, $56^{\circ}-33$.
Longitude $132^{\circ}-05$, $132^{\circ}-19$.

The scale is 1 - 20,000.

The entire work was done by plane table with the exception of the elevations measured on the southern end of the sheet where the contours have been omitted.

The party consisted of observer, boat engineer and rodsman. A clinker built skiff with outboard motor was used throughout the work. Smooth water favored the use of the motor, and made the handling of the boat by one man both possible and rapid. The party was in charge of Nathaniel P. White, Aid, C. & G. Survey.

Control, Traverses, Contours, Heights:

The work on the sheet is controlled by secondary and tertiary triangulation.

The only traverse was run in the bay north of Point Madam, starting at \triangle Saturn and checking on \triangle Turn, a distance of five and one-half miles. The remainder of the work being done by three point fixes.

The contour interval is 100 feet.

Assistance in drawing in the distant interior contours was obtained from the " Alaskan Boundary Tribunal " sheet No. 9, after the elevations had been measured, many of which fell off this sheet and had to be worked in on an extension.

The highest peak measured was (3,980) feet, and lies due east of Δ Cleo. This peak and a chain of others, off the limits of this sheet and lying to the northward, were snow capped all summer, and until late in September the valleys gave the appearance of existing glaciers. These are the most conspicuous mountains and are always easily recognized when entering the western end of the Passage.

From a glance at the sheet the topography of Wrangell Island is seen to be considerably more diversified than that of the mainland, the latter being gently rounding and regular with only one prominent deep stream bed, that of Mill Creek which enters the Passage midway between triangulation stations Mill and Virgin and is supplied by a lake of some extent. At the mouth of the stream there is a falls, approximately 25 or 30 feet high and 50 feet wide, easily seen by passing boats.

On the southern end of the sheet where the contours have been omitted the elevations show the ground to be low in the center with many knolls, and on each side to be bordered by mountains of (2500) feet in height. South of Bella Island where no elevations are shown is a high bare topped mountain that slopes abruptly down to the waters edge. The top is level at an elevation of about (2500) feet, bare of all tree growth but covered with moss and grass. The mountain is deeply cut by one stream bed that starts from the top. This apparent mountain is the end of a long ridge of nearly uniform elevation that runs south between Blake Channel and Fools Inlet to Bradfield Canal. At the northern end of the ridge is Eastern Passage Narrows, which connects the Passage with Blake Channel. It is an average of three to four hundred meters in width, and nearly one statute mile in length. The shoreline of the northern side is rocky between high and low water, and is lined with grass and bushes. Going inland the ground rises immediately to (500) and (1000) feet. Everywhere the slopes are heavily wooded. The southern shore is of quite a different character, the hills sloping down steeply, terminating in rocky cliffs ten feet above high water, and heavily overhung with bushes and trees.

General Remarks;- Mountains, Character of Shoreline, Vegetation, Animal life:

The mountains on the mainland average (2500) to (3000) feet in height and are heavily wooded from foot to summit. Those on the Wrangell Island side average about (2000) feet and are also heavily wooded.

General Remarks Continued:-

The shoreline is generally rocky between high and low water with here and there stretches of cliffs ten or fifteen feet in height. Wherever the shoreline is devoid of cliffs the trees, bushes and grass grow down to the waters edge. The Eastern Passage is characterized through out by its deep water, which continues to the very shoreline.

The timber is principally spruce, pine, hemlock and cedar. Near the shore they are all small in diameter but very dense. The underbrush is very thick and profusely crowded with devil clubs and windfalls, which render travelling for hunting or other purposes most difficult until well up the mountain side.

The animal life consists principally of :- for the land, deer, wolves mink, porcupine and black bear; for the water, salmon, porpoise, hair-seals (plentiful) mud sharks and herring, and trout in the streams;- for the air, crows, ravens, ducks, geese, sandhill cranes, gulls, oystercrackers, blackbirds, snipe and eagles. In the fall of the year sandhill cranes fly over this territory by the thousands on their way south.

Prominent Points, Detailed description of the shoreline:-

Point Madam forms the extreme southern end of a peninsular one and a half miles long that juts off from the mainland running due north and south. This peninsular is quite low until reaching the southern end where it rise to a rounding knoll (530) feet high. It is thickly wooded, and easily distinguished by mariners as soon as they pass Δ Isla going south. In a direct line one half a mile due south is Channel Island, probably at one time a part of Madam peninsular. It is oblong in shape, between four and five hundred meters in width and a thousand in length, its greatest dimension being north and south.

This island situated as it is, divides the channel into two nearly equal parts. The northern one between the island and the peninsular is slightly the larger and is always used by the steamers. Channel Island is heavily wooded and rises to about (300) feet. The shoreline on the north-west is rocky with cliffs averaging ten feet in height. On the southeast it is low and damp and grassy all along the waters edge.

North of Point Madam is a well sheltered bay (two statute miles in depth.) extending about two statute miles inland. Although well sheltered from wind the water is too deep to afford good anchorage. Soundings taken in the middle of the bay gave no bottom at twenty fathoms until within a hundred and fifty meters of the head where it was seventeen and a half fathoms and then shoaled up very abruptly to seven and less. At the head the shoreline is damp and grassy to the waters edge. On either side of the bay it is steep and rocky. leading off directly in very deep water.

Prominent Point and detailed shoreline Continued:-

Starting now at the extreme southern end of the sheet we will traverse the shoreline noting the important features. At Δ Titan the shore is low and wet, high water advancing well into the grass, the extent of which is quite broad covering nearly a hundred meters before the timber line is reached. A small stream enters here draining a large valley, and probably attains considerable ^{size} after a heavy rain. There is one easily distinguished boulder about a hundred and fifty meters due west of the signal, of about three feet in diameter. Starting at Δ Dione and extending for three hundred meters, is a perpendicular cliff which can be seen from well down Blake Channel. The main body of the cliff is a dark weather worn granite, and is well marked with quartz. Above this cliff the end of the ridge rises abruptly to (2200) feet, and in many places, especially two, as shown, are exposed large outcrops of quartz, which on bright days shine brilliantly, forming a very definite mark of the entrance to the Narrows for any boat approaching from Blake Channel. To the west of Δ Dione two small streams enter, which make the ground damp and grassy. Northwest of Δ Jupiter the west face of a knoll of granite, seven hundred feet in elevation is bare for a hundred from the top. Passing Δ 's Mars, Pisces and Trix, we find the shoreline rocky between high and low water, and fringed with grass above high water, from there on rising abruptly and heavily wooded. The water in the Narrows is deep and unobstructed except for a group of rocks marked by Δ Leo. This patch bares about one hundred meters square at low water, and several of the rocks show at half tide. There is no surface disturbance of any kind to indicate their presence when covered. The tides from Blake Channel and Eastern Passage meet not far from here, which fact eliminates any current to ripple over them, the water at all times being quite smooth. Between the Δ 's Trix and Saturn the shore is of the same character as that from Δ 's Mars to Trix. From Saturn northward one and one-eighth miles into the bay the shore is made up of low steep cliffs well overhung with tree growth; From this point around the head of the bay there are no cliffs, the shore being sandy and grassy; and going inland it is flat for a few hundred meters and then rises rapidly. Two small streams enter the bay at the head. All along the western side of the bay the shore is notably steep with few exceptions. The cliffs are only about ten feet in height, but are vertical and go immediately into deep water, and are well overhung with trees and brush. From Point Madam around to Δ Aries the shoreline is quite similiar in character, being low cliffs four or five feet in height and thickly overhung with tree growth. One and a half miles due north of Δ Turn is a group of rocks that bare at low water. This appeared to be the end of a ledge projecting out from the shore with moderately deep water between. They lie about two hundred meters off shore and are of no danger to the traffic of even small boats, as the shoreline has a gentle curve inward. Due north one mile from Δ Turn is a single large rock bare at all stages of the tide. The top of this rock is covered with grass. It stands about two hundred meters offshore, and is about fifty meters by ten meters.

About one half mile on sheet

Prominent Points, and detailed description of Shoreline, Continued:-

Between signals Aries and Cleo is a small indentation that might be used as an anchorage for small fishing boats. It has a smooth mud bottom and is from five to twelve fathoms deep. From \triangle Aries to \triangle Mill the shoreline is characterized by occasional patches of low cliffs, rocky between high and low water and overhung by tree growth. About midway between \triangle 's Virgin and Mill is the entrance to Mill Creek. Here the haschures represent a mound of earth. This was originally the mill site, but at present nothing remains but the embankment. The elevation from a boat has the appearance of a breast works, it remains a beautiful soft green through the summer. Boats going south pick this up before seeing the falls, which do not show until nearly abeam. At present a gold claim is staked and started, and it will probably develop quickly into a mining camp. With little expense a great deal of water power could be developed from the falls. This lake or the stream was not mapped because of a lack of time, but was transferred from the " Alaskan Boundary Tribunal " sheet no. 9. The lake is known locally as Mill Lake.

Starting at \triangle Midi and going along the south Wrangell Island shore to \triangle Hops, we find the shoreline precipitous nearly all the way consisting of rocky cliffs some ten feet above high water. \triangle Hops stands on a point between two very good harbors for small boats, well sheltered and not too deep. At the head of the bay south of \triangle Hops a large stream enters. At its mouth is a small falls ten feet high. Going inland from the same station the ground rises very gradually. It is noticeably scarce of timber and marked by frequent brown spots indicating swamps. Grass and low bushes are plentiful however. Further along to station Wheel, with the exception at Orion, the shoreline has very few cliffs. It is low and wooded with sand and coarse rocks between high and low water. Southwest from Orion there is a long low valley that appears to stretch all the way across Wrangell Island. Chichagof peak appears in the distance. It is bounded on both sides by steep mountains. It seems quite probable that there are lakes in this valley. At signal Ret there are two boulders prominent. The more northerly eight feet in diameter and the southerly one six. Back of the signal to the west the land is low but marked with many knolls and heavily wooded. A long valley enters here with high mountains in the background near the extremity of the sheet. The bight south of station Venus affords a fair harbor, the disadvantage being that the water is deep until well in, when it shoals up rapidly. A large stream enters here. To the east are high mountains of (2500) feet, to the south low knolls. To the southwest a high green gently rolling mountain rises to (2600) feet. Due south about four or five is the head of Fools Inlet. This is all low country with prominent knolls.

four or five what (mills?)

STATISTICS

Area surveyed in square statute miles 71
Length of general coastline, in statute miles. 34 $\frac{1}{2}$
Length of shoreline of rivers in statute miles. 00
Length of shoreline of creeks in statute miles. 00
Length of shoreline of ponds in statute miles. 00
Length of roads in statute miles. 00
Topographic sheets finished, number of, 1
Topographic sheets, scales of, 1 - 20,000.
Topographic sheets, limits and localities of:

S.E. Alaska, Eastern Passage Southern End.

Latitude 56° - 19, 56° - 33.

Longitude 132° - 05, 132° - 19.

Respectfully submitted,

Approved.

Signed Nathaniel P. White.

L.O. Pollock

Aid, C. & G. Survey.

Assistant, C. & G. Survey.

RIL

List of Positions

NAME	Latitude	D.M.	Longitude	D.P.	Description	Elevation
Rocks	56° - 23'	1767	132° 10'	1000	Grass covered rock.	5' above H.W.
Rocks	23'	952	10'	909	Rock 2 ft. bare at low water.	
Boulder	20'	1433	09'	788	Boulder 6' diam.	
Boulder	20'	1304	09'	626	Boulder 6' diam.	
Banner	24'	450	10'	103	Banner on bush	
Banner	23'	353	10'	22	Banner on bush	
Bay	23'	1173	10'	107	Banner on bush	