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U. S. COAST AND GEODETIC SURVEY.

O. N. Pittman
Superintendent

State: *Alaska*

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DESCRIPTIVE REPORT.

Topographic Sheet No. *2613*

LOCALITY:

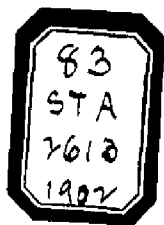
Pont Etches
Prince William Sound

1902

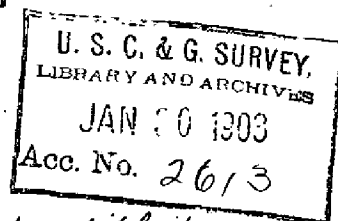
CHIEF OF PARTY:

F. Westdahl, Asst.

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Descriptive Report

to accompany topographic sheet entitled

Treasury Department

U. S. Coast and Geodetic Survey

O. H. Tittmann, Superintendent

Topography of Port Etches Prince William Sound Alaska

Executed by W. F. Appleton, Watch Officer

Samuel McAuliffe

J. Wettdahl, Assistant, Commanding

1902

Scale 20.000

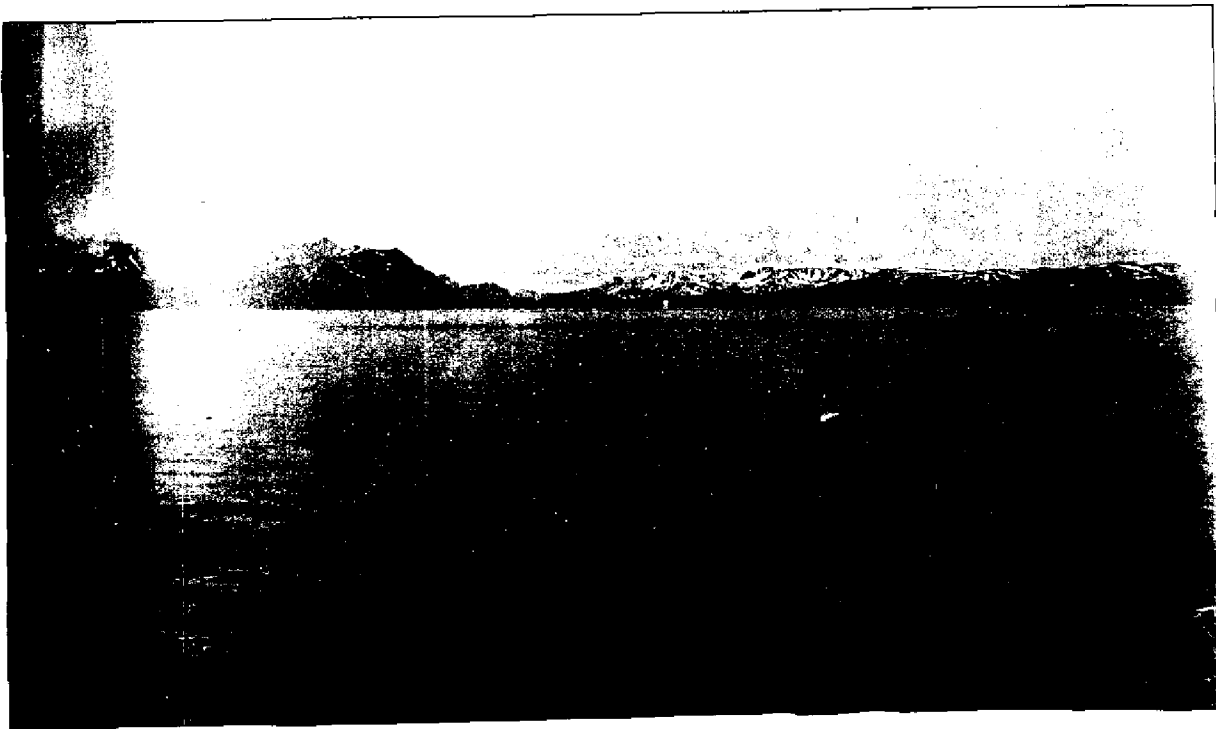
This projection was sent from the Office and was originally intended for the topographic survey of the shore from Johnstone Point to and including Port Etches, but for reasons stated in the descriptive report of the northern sheet of the Entrance another projection on scale 40.000 was made on board for that purpose. By changing the minutes of longitude a considerable distance to the eastward it was found

that it would do for the topographic survey of Port Etches. At the request of Watch Officer Appleton for an opportunity to gain some experience in plane-table work I instructed him in the use of the instrument and started work on the sheet when a sufficient number of triangulation points had been computed and plotted upon it. When Mr. Christian finished the northern entrance sheet the party in the chartered schooner was turned over to Mr. Appleton for the topographic and hydrographic survey of Port Etches, and this is the result of the former. On account of the scarcity of weather fit for topographic work contouring was not attempted. Whenever the summits of the peaks and ridges could be seen they were cut in and heights approximately determined, but they were not all seen, particularly in the region back of English Bay and eastward from it.

The general topographic features of Port Etches resemble those already described in the reports of other sheets. I have there called attention to the two main ridges forming Hinchinbrook Island and that Port Etches lies in the depression between them at their southwestern ends. This is true when considering the large topographic features of the entire



Views of the Northern main, the subordinate,

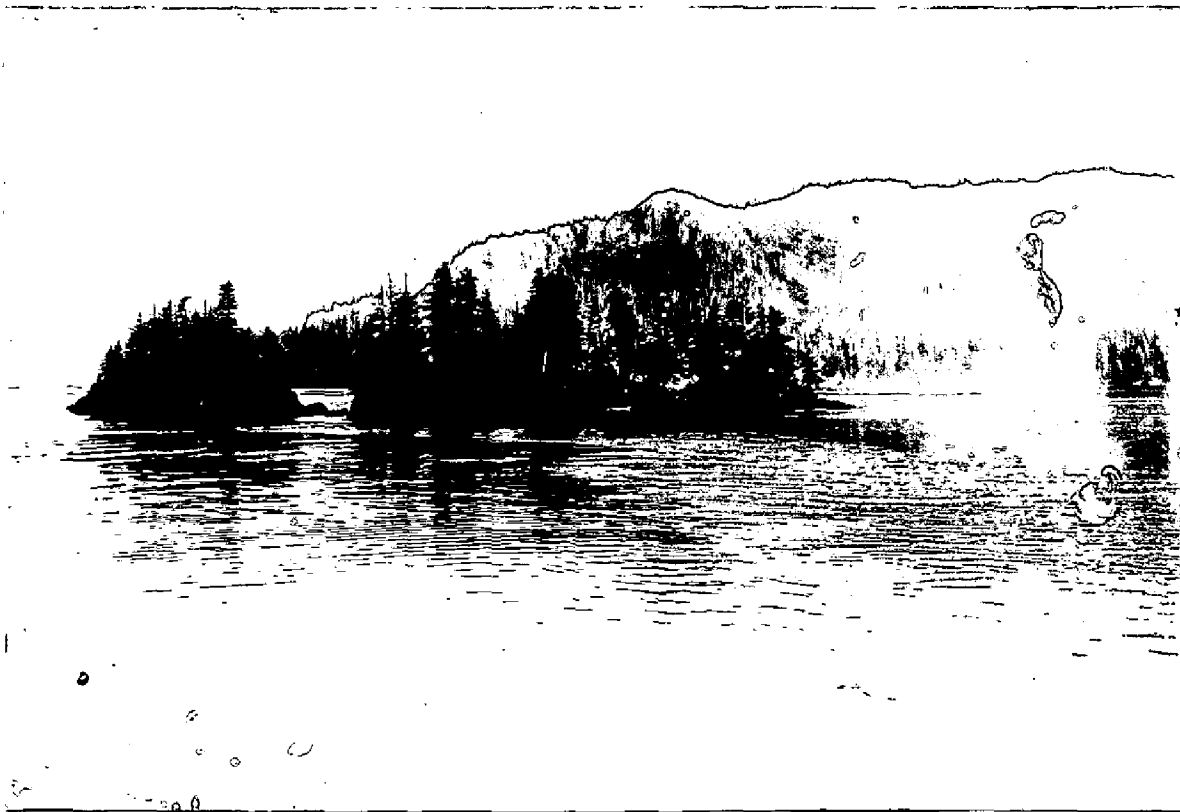


and the Southern main ridges of Hinchinbrook Id. Id.

island and its relations to ridges on adjoining islands and the mainland. When describing Port Etches in particular it is necessary to state that there is a third ridge, not so high nor so long as the two already mentioned, and evidently a branch from the northern main ridge as the lowest divide between the two main ridges lies to the southward of this subordinate, third ridge. The depression between it and the northern ridge forms the lagoon called Constantine Harbor, a comparatively shallow sheet of water the natural outlet of which has become closed by a very remarkable ridge of shingle and boulders, probably the terminal moraine of the glacier which carved the lagoon originally, since reinforced by wave action in grinding up the material of which it is composed and carrying the lighter parts upward. The waters of the lagoon have forced another outlet at a point about two miles from the present extremity of this subordinate ridge where a low place probably existed in it originally, and which has since been worn deeper by the strong in- and out-flow of the tidal waters of this shallow basin. The detached portion of this ridge is about three hundred feet high near its northeastern end and falls rapidly into a lower terrace of about fifty feet elevation above the



Bear Cape and Northern Ridge, showing the steep southern slope.



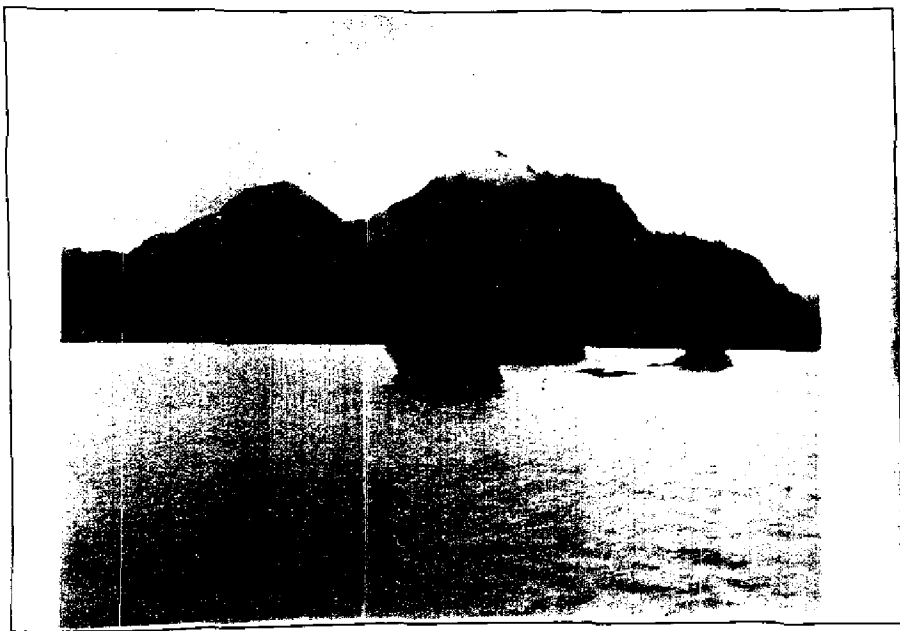
The Subordinate Ridge, showing the steep southern slope.

View from Mosquito Bight.

sea; like the fragments of it found elsewhere around
 the shores of Hinchinbrook and Montague Islands. The
 Porpoise Rocks are evidently remains of it as the prin-
 cipal islets are flat on top and of the same general level
 above the sea, and the reef connecting them with the
 extremity of the ridge points to a former, now eroded,
 exposed connection between them. To the northward
 of the mouth of Constantine Harbor the subordinate
 ridge rises rapidly to heights of twelve hundred and
 eighteen hundred feet, then decreases to between hund-
 red and fifteen hundred feet; whereas the northern
 and southern main ridges on either side reach ele-
 vations of twenty-three hundred and eighty and twenty-
 two hundred and sixty feet respectively. The striking
 peculiarity about all of them is the gradual slope on
 the north sides and the more abrupt descents on the
 south, as witness the northern main ridge from Bear
 Cape all along the northern shore of Constantine Harbor,
 the steep southern slopes of the subordinate ridge towards
 Port Etches, and the southern main ridge towards the
 sea along the southeast coast of Hinchinbrook Island,
 described elsewhere. The timberline reaches an ele-
 vation of about one thousand feet, above which occurs
 scattered scrub trees and thick brush.

Constantine Harbor has four islands within it, one of which lies almost in the center of the shingle ridge above described and therefore strictly not now an island. Their foundations are rock with strata almost perpendicular and not higher than about twenty to thirty feet above high water, and all covered with scrub timber and brush. Down the steep slopes of the ridge on the north side of the lagoon pour several streams of pure water. These seem to issue from the mountain side above the timber line and are undoubtedly fed by the many lakes and remains of glaciers upon the broadened summit of the ridge, and find their way through and under the loose, volcanic debris above the timber and brush. Streams sometimes enter Constantine Harbor to fill water from these streams, and the inhabitants of the village of Kuchuk bring their drinking water from them. Pure water is scarce on the peninsula which divides this lagoon from Port Etches they bring only a lake of brown swamp-water unfit for use immediately south of the village. Rain is however almost incessant and so copious that water pours over the edges of the cliffs in every depression.

Just outside of the entrance to Constantine



*The subordinate ridge and
rock-islets off entrance to Constantine Harbor*



*Axial view of the subordinate ridge and part of
southern ridge.*

Harbor lie three small rock-islets of peculiar shape, more particularly described in the report of the hydrography of Port Etches, which probably are remains of the low terrace which bordered the subordinate ridge. There are several other smaller and lower rocks close to the beach northeastward from the three prominent ones which exhibit the same characteristics as to topography.

Along the southeast shore of Port Etches are four indentations in the otherwise almost straight line of coast, and the points on either side of these bights are fragments of the low, bordering terrace, ending in cliffs about fifty feet high. Back of each of these indentations is low land containing lagoons and lakes, gradually rising into wide semicircular valleys tracking far in towards the high ridge. High up under the rims of these valleys can still be seen the remains of the glaciers which carved them into shape and pushed their resistless way through the bordering table land to join the larger body of ice which filled Port Etches. The northeast point of the indentation which has been named Mosquito Bight is an exception to this general rule in that it rises rather abruptly into a conical, tree-covered



*View of the subordinate and the southern main
ridges of Hinchinbrook Island.*

hill about eleven hundred feet above the sea and connected with the southern ridge by a much lower neck. The remains of the table land even here are not totally obliterated in that the islands, one immediately off the point and another about twenty feet high on its prolongation, with some rocks between them almost covered at high water, testify to its former existence.

The Porpoise Rocks, included on this sheet, are about forty to fifty feet high, like the table land and bordering cliffs of the point with which they have probably been connected. There are three principal islets with numerous small rocks between and around them. The westernmost of the three, upon which the triangulation station "Porpoise" is located on the southern extremity, is the largest and has a luxuriant crop of grass on its flat summit during the summer season. There is no sign of any larger growth and probably no bushes or trees would flourish there owing to the tremendous force of the wili-waws which sweep over it. Even during the summer months these are very violent. The signal erected by the party on its summit was swept off the islet twice during July and August although but twenty

feet high and consisting only of centerpole and three braces with some muslin banners tacked to the pole. The third signal erected there was reduced to ten feet in height and secured by braces to a platform upon which several sacks of sand were piled up. This remained in place when the ship sailed. The other islets have no soil upon them and are not so flat on top. All of them exhibit the same peculiarity as the rock-islets off the mouth of Constantine Harbor in that the bases are worn by wave and ^{ice} action so that the summits overhang, and they cannot be readily scaled without the help of ladders.

Kuchuk village is situated at the southern extremity of the shingle ridge which divides the waters of Constantine Harbor and the Sound, thus enabling the inhabitants to launch their kayaks in either of them. It is a very old settlement of natives, at present a mixture of Esquimaux and Aleuts, and numbering probably about one hundred souls. There are from twenty to thirty houses in all, mostly built of boards and painted in the white man's fashion, but there are many original native huts among them. The place has been of much greater importance formerly and was occupied as a trading station by the old

Russian American Fur-trading Company since very early days. Some of their store-houses built of large logs still stand though much decayed. Their successors, the Alaska Commercial Company, maintained this trading post until recent years but have now abandoned it.

Their last Agent, a white man married to a half-breed Russian woman, still resides here and carries on some trade on his own account. He and the priest in charge of the Russian Greek-Catholic Church located here are the only white residents of any permanent character. The natives ek out a precarious existence by fishing, hunting the almost exterminated sea-otter, bear, and other fur-bearing animals, and some of them work in the canneries at Orca and Eyak during the busy season.

For further information regarding Port Etches I beg to refer to the descriptive report of the hydrographic sheet of this locality.

Respectfully submitted

Ferdinand Westdahl

Assist. C. & G. Survey

Com'dy "McArthur"

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Photo of Top 2613
Prince William Sound
Port Etches
Alaska

F. Matdahl, W. S. Appleton
1902

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