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DESCRIPTION OF CONING INLET PROSPECT, LONG ISLAND, ALASKA.

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By

J. C. Roehm

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The following description is based on an examination of the property that was made for the Territorial Department of Mines by J. C. Roehm, associate mining engineer, during the month of August, 1942:

H. F. Foster, logger for the MacDonald Logging Co. situated at Coning Inlet, Long Island, made a discovery of lead, silver and zinc bearing siliceous ore in April of this year. The discovery is located at an elevation of 420 feet, 200 feet from a good planked logging road that extends from the head of Coning Inlet and one and one-fourth miles to the top of the divide on Long Island. Two claims; namely, Coning Inlet No. 1 and No. 2, were staked following the strike of this deposit. Development to the extent of one trench into the deposit with a little stripping had been accomplished prior to the date of visit.

Long Island is situated off the southeast portion of Dall Island and opposite the south end to the west of Prince of Wales Island. Its length is 15 miles and it reaches a maximum width of 7 miles at its widest portion. Coning Inlet is situated in the central portion of the east side.

The geology of the island, as shown by Buddington[1], consists mainly of sediments of the Wales group of greenstone schists, limestones and slates, underlying Silurian sediments of limestone, conglomerate and argillite beds. The central or higher portion of the island shows small intrusive masses of diorite and porphyry, which apparently is the underlying formation and invaded both the Wales group and the Silurian sediments. The ore discovery is genetically associated with the diorite, and parallels it in strike on the west contact of the diorite and in the sediments at a distance of 300 feet.

The discovery consists of a massive quartz lens or vein exposed a distance of 170 feet and maintains an average width of 12 to 15 feet. The strike and dip parallels the foliation of the sediments which average N. 42° W. in strike and 75° E. in dip. The foliation of the altered sediments may or may not represent the original dip and strike, and has resulted from the pressure and metamorphic action of the invading diorite. The prevailing structure, which contains the quartz lens or vein, could not be determined

[1] U. S. G. S. Bull 800, "Geology and Mineral Resources of Southeastern Alaska", Plate I.

due to lack of development and extensive cover. The quartz contains numerous partly replaced inclusions of limestone and green schist which give it an impure limy nature. The surface is leached and weathered to a dull brownish to chalky white. Buff colored limestone, with small thin strata of blue limestone, crystallized and in part silicified, forms the hanging wall and footwall. A band of schisted greenstone outcrops to the west on the footwall side of the vein and at a distance of 20 feet away. This schist band is mineralized and highly altered, and contains small quartz stringers. On the hanging wall small stringers lead off into the wall. These represent small tangent veins which apparently die out a few feet from the main vein. The showing goes under cover on both ends, and apparently has a greater length than its present exposure. However, on a small exposed knoll 300 feet to the northwest of the strike, no evidence shows of any vein. To the south float quartz of the same character can be traced a few hundred feet.

The outcrop as it appears on the surface is nearly barren due to leaching action. However, the cut as shown on accompanying sketch, has a depth of 10 feet on the vein, and reveals the metallic content. In fact the ore on the unaltered surfaces appears fresh, with a drusy nature, and contains an abundance of sulphides of lead and zinc. On the northwest end of the outcrop either a second quartz vein or lens begins parallel to the first or an undisclosed fault has offset the main vein. The sketch shows a mass of quartz, identified as the main vein, 20 feet to the northeast. There has not been sufficient work to determine the relation of this body to the main vein.

The metallic minerals noted in the vein in order of abundance consist of pyrite, chalcopyrite, sphalerite, and galena. In the weathered portion, secondary lead and zinc minerals with malachite, mainly stains, with iron oxides were noted. The gangue minerals consist of limy impure quartz, calcite, chlorite, talc, with other altered limestone and green schist pieces.

Two channel samples were taken in the discovery cut. Sample 1062 was taken in the bottom from the hanging wall toward the footwall and represents 5 feet in width. It gave the following returns: Au. nil, Ag. 0.10 oz. per ton, Cu. 1.20, Pb. 0.55 and Zn. 1.22 percentages.

Sample 1063 was also taken in the bottom of the cut and represents another 5 feet toward the footwall. The following assay results were received: Au. 0.02, Ag. 0.30 oz. per ton, Cu. 0.47, Pb. nil, Zn. 0.18 per cent.

The owner was encouraged to do further surface work along the strike and to cut the vein at a lower elevation. The latter could be done with a short crosscut tunnel. Geological conditions are favorable along the diorite contact zone for sulphide ore deposition.