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PE-119-03

PRELIMINARY REPORT OF HOLDINGS OF SAN ANTONIO METALS COMPANY,
PORT SAN ANTONIO, BAKER ISLAND, KX 119-145
June 18, 1936.

Location:

The holdings of the San Antonio Metals Company consisted of 26 claims and a fraction, located along the beach and extending inland for nearly a mile between Thimble Cove and Port San Antonio on the eastern central coast of Baker Island. Baker Island is located in the Ketchikan mining district off the west coast of Prince of Wales Island directly north of Dall Island. This property is easily accessible by boat with the major showing and the camp located on the beach.

History:

Within the boundaries of the claim group are three different types of showings. All three represent discoveries made several years back and this group represents a restaking and grouping of these three showings. The gold-molybdenite showing located on the beach south of Port San Antonio is mentioned in U. S. G. S. Bull. 347, "Ketchikan and Wrangell Mining Districts, Alaska" by F. E. and C. W. Wright, 1908, page 182. The quartz fissure vein located at the head of the south arm of Port San Antonio and extending inland in a southeast direction is partly included in this group. This was discovered in 1916 and was known as the Blue Streak. This vein was opened up with trenches, rock cuts and one short tunnel for over a distance of 4,000' following its discovery. On molybdenum claims No. 2 and No. 3, located a mile inland from south shore of the entrance of Port San Antonio is a flat vein containing values in silver, lead and zinc. This discovery was made by a prospector named Sigburdson in the year of 1917 or 1918. He did some stripping on the vein and put in a few rock cuts.

Between 1927 and 1930 the molybdenum group of 26 and a fraction claims was staked by J. G. Galvin and associates. Some work, which consisted of a little stripping and surface blasting, was done on the outcroppings along the beach line. Later a report was made by M. M. Reese, M. E. of the property. Portions of this report is held on file by this department from an advertisement occurring in the Alaska Weekly of 3/17/33. During the summer season of 1932 four diamond drill holes were drilled a few feet back from the beach on the gold-molybdenite showing by Lynch Brothers of Seattle. Following the drilling very little if any work has been done. This season assessment work was in progress by Wm. A. Freveland and F. C. Schumacher on only ten claims of the 26 claim group. They reported this work was being done and the ten claims are being held by J. G. Galvin and associates.

Geology:

The section covered by this group contains a contact between granite and argillites. The latter contains interbedded schistose lavas. This contact extends across the peninsula of land between the south arm of Port San Antonio and the east coast of the island on a strike N. 70° 75° W. The dip of the granite is northeast. The granite is associated with the coast intrusives of upper Jurassic age and has intruded the sediments and volcanics of Paleozoic age. (Reference Bull. 347, U. S. G. S., aforementioned).

Earth movements subsequent to the cooling of the granite has occurred in a zone that is approximately 600 to 700' in width on the east coast cutting the contact at a low angle and developing into a strong fissure vein in the sediments. This zone occurs approximately 1,000' south of the contact in the granite on the east coast. Here the zone is a shear zone with numerous parallel shears which have been impregnated with silica and mineral bearing solutions. As a result several hundred small quartz veins have been formed and the rock has been impregnated with silica to the extent that the granite is altered and may be classed as a granite porphyry. Following this zone across the peninsula the shear zone loses its width and as the contact is approached the shear zone develops into a fissure zone and fissure vein. This fissure vein is filled with quartz and cuts from the granite into the slates and is associated with a parallel granitic dike for some distance. This zone and fissure vein strikes N. 65° W. and dips vary from 50° to 55° N. The fissure vein (note accompanying sketch) can be traced over a distance of 4000' and the shear zone a distance of over 6000'. The slates along the contact are metamorphosed, schisted and granitoid porphyry dikes occur in them. Granitic contact minerals are evident in the seams of the slates and portions show slight mineralization. In the shear zone the quartz veins and veinlets contain a slight mineralization. The area on the beach contains a greater amount. In this section the shear zone is intersected by a shear zone of later origin. The width of this later zone could not be accurately determined as it strikes slightly east of north and parallels the beach line and back from the beach the area is densely timbered. However, a width greater than 300' is estimated. The shears dip 50° to 55° W. while the shears of the former zone are nearly vertical with a slight dip to the south. Slight movement has occurred on the later shear or fault zone which has along some shears produced a little gouge and displaced the veins slightly.

The Showings:

At the intersection of the two shear zones which occurs on the beach between high and low tide lines and extends back under the covering of moss and vegetation on the bank, several hundred quartz stringers varying in width from less than an inch to 3' occur over a distance of 600'. These stringers are interjoined somewhat, but generally parallel.

Across some portions they are very close together. Across the most concentrated portion a distance of 250' a total of 120 quartz stringers were counted over an inch in width. While quartz stringers occur over a distance of 1000' along the beach, they are most heavily mineralized and concentrated over a 600' portion of this distance which represents the intersection of the two shear zones. Within this area the development work of the company has been confined. This has consisted of some stripping and surface blasting and four diamond drill holes.

No. 1 and No. 2 drill holes are located on the Doma claim, which represents the most easterly point of land extending into the water and nearly the central portion of the intersection of the shear zones south of Port San Antonio. They are located a few feet apart at high tide line and drilled in opposite directions. No. 1 drill hole strikes S. 45° W. and was drilled on a 40° dip. (Dip taken from casing in hole). The length of the hole was reported 170'. No. 2 drill hole strikes N. 45° E. and dips 38° NE. This hole evidently cut the greatest amount of quartz stringers. Its reported length was 165', approximately.

No. 3 drill hole is located 100' back from the beach and approximately 400' northew of No. 2 drill hole. This hole strikes S. 45° W. and dips approximately 30° SW. This hole was reported to have an approximate length of 175'. Further reports added this hole contained only small amounts of quartz and consisted mainly of solid granite.

No. 4 drill hole is located approximately 100' back from the beach and nearly 500' north of No. 3 drill hole. This hole strikes S. 45° W. and has a dip between 50 to 60° SW. The length of this hole was reported at 376'. Small seams of molybdenite were reported cut and some quartz veins.

Gold values were reported from assays made of the cores. The mineralization consists of pyrite and associated molybdenite. Both occur very irregular in both the small quartz stringers and disseminated in the granite. The greatest amount of molybdenite occurs along the small seams of the fractures and walls of the quartz veins. Due to the irregularity of the mineralization and the uneven distribution of the veins and the sparse mineralization in them, channel samples for assay were not taken. It was reported that one of the original ideas of the company was to combine the molybdenum and gold values making an ore in which the gold values would pay for the mining and milling costs and the molybdenum sold at a profit. Whether or not this was an original idea, these facts must be taken into consideration upon the metallurgical treatment of this ore: To make a concentrate of the molybdenite and pyrite with its low percentage in the rock would be costly. To smelt this product

directly would be at the expense of either the gold or molybdenum. To save both would necessitate more costly processes combined with smelting charges. It was reported the drill holes averaged $3.20 per ton in gold. Later reports were to the effect the gold values were less.

Silver, Lead, Zinc Showing:

Located on Molybdenum No. 2 and No. 3 claims approximately one mile west of the camp site located on the beach is a small silver-lead and zinc showing. This vein follows the bedding of the slaty argillites with a strike of N. 80° W. and a 28° dip to the north. It has been exposed for nearly 300' along the south bank of a small creek by old opencuts and rock cuts. The vein averages between 18 to 24 inches in width and contains massive bunches of sphalerite-galena with small amounts of pyrite and tetrahedrite. The gangue minerals make up the major portion of the vein between the bunches of sulphides and consist of a little quartz, feldspar, epidote and pieces of argillites. No work has been done for several years on this showing, which could be opened for a greater length. Sample No. 19 was taken across 22" at a rich portion of the vein, 25' south of the discovery posts which are also the center end post of the two aforementioned claims. Gold showed a trace, silver 9.20 ounces per ton, 0.3 per cent copper, 6.4 per cent lead and 15.3 per cent zinc.

Quartz Fissure Showing:

The quartz fissure vein, that outcrops on the beach at the head of the south arm of San Antonio Bay, can be traced on the surface for a distance southeast along its strike of S. 65° E. for a distance of 4000'. Only the southern portion is on the group of claims held by this company. However, since it is associated with the same granite intrusion and sediments, it is herein described.

The vein averages between 2 to 3' in width. Half of its exposed length is in granite and the other half in clay slates. Its greatest width and most intense mineralization is exposed over a distance of two to three hundred feet on each side of the granite and slate contact. Most of the early development work was confined to this section. This work consists of several trenches and opencuts now partly filled. Five hundred feet back from the beach at 160' elevation a tunnel follows the vein into the slope for 77' alongside a small creek. A small granitic dike paralleling the vein on the hanging wall was noted in several places. The walls are free showing strong movement. The mineralization is sparse in some sections, but generally it appears good. It consists of pyrite, sphalerite, galena and small amounts of

chalcopyrite and bornite. The gangue minerals are quartz, calcite, pieces of wall rocks and in the slates a very persistent gouge of a bluish material 2 to 3 inches in width.

Two channel samples from this vein were taken: Sample No. 17, taken in rock cut 30x5x12' at El. 360', 300' from granite contact west, 50' SE. of old discovery posts, across vein hanging wall to footwall, 32", gold trace, silver 2 oz. per ton. Sample No. 18, tunnel, El. 160', 500' from beach, west end of tunnel across vein, 26". This sample only gave a trace of gold and silver.

This vein was reported by E. W. Steers who did most of the work shortly after its discovery in 1916, to average $3 (old price) and 4 oz. of silver per ton over the number of samples taken in the various cuts for a distance of 3000'.

This vein near the beach was restaked August 18, 1930. However, no work has been done on it for several years. The island is heavily timbered and being a relatively small island no large streams are available for water power.

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DEPARTMENT OF THE INTERIOR

INFORMATION SERVICE

GEOLOGICAL SURVEY

For release November 19, 1943.

BAKER ISLAND MOLYBDENITE DEPOSIT, SOUTHEASTERN ALASKA

The Baker Island molybdenite deposit, southeastern Alaska, was examined during the summer of 1943 as a part of the war-minerals investigations of the Geological Survey. The deposit is on the east coast of Baker Island, one of the large islands off the west coast of Prince of Wales Island.

The greatest molybdenite mineralization is localized in an area of silicified granite and hornblende granite, which is cut by many quartz veinlets. The molybdenite occurs in the quartz veinlets and also may be disseminated in the granites. Most of the quartz veinlets occupy joints that trend N. 65° W., but some occupy more northward-trending joints.

A preliminary map of the deposit has been prepared on a scale of 1:2,400 (1 inch = 200 feet), with a contour interval of 40 feet. Several rock units are differentiated on the map, but their designations may be changed after laboratory study of specimens. At the time of the examination the deposit was being drilled by a major mining company. The holes drilled by the company up to the close of the investigation late in July, as well as some older drill holes, are shown on the map.

A limited number of photostat copies of the map are available and may be obtained by those directly interested upon application to the Director, Geological Survey, Washington 25, D. C.

P.I. 30673