

SUMMARY AND ITINERARY REPORT OF INVESTIGATIONS
IN THE GLACIER BAY AREA

PE-111-02

by
J. C. Roehm
Associate Engineer,
FOR THE TERRITORIAL DEPARTMENT OF MINES
September 24 to 27, inclusive

The Victory group of lode claims, recently staked by Messrs. Crookes, H. Ellingen and Wm. Hering, who operate under the name of LeRoy Mining Company, is located, beginning on the beach and extending 1500 feet in a northwesterly direction on the north shore of Reid Inlet, directly opposite Lampugh Glacier.

Two small lenses containing stibnite occur along a fissure vein a short distance from the beach. The largest is 50 feet in length and up to 15 inches in width -- the smaller is 30 feet in length and up to 12 inches in width. This vein was originally discovered by J. P. Ibach, who reported to the owners that assays of six dollars per ton in gold had been received from the vein material. Development work to the extent of opening up these lenses in order to determine whether greater widths and lengths exist, was recommended. Unless such a condition is found, these lenses are not considered minable.

The discovery consists of a fissure vein which begins in a small canyon or bight on the shore and strikes N 43° W up the slope. The fissure dips 80-85° NE.

The formations traversed by this fissure consist of a contact zone with a granitic mass to the east which changes into metamorphosed limestone, slates and green calcareous slates to the west. These altered sediments within the contact zone occur as large and small broken fragments and masses, engulfed in the whole, through which the ore bearing fissure cuts. Due to the various fragmental masses, the fissure is irregular in strike, but generally follows the strike of the sediments, N 43-45° W. It contains mainly gouge material made up of the particular rock through which it cuts. Occasionally a split occurs along the fissure and follows along the walls of the particular enclosed block, usually joining again on the strike. Small hanging wall tangent slips were noted, which terminate at the fissure. Since the dip of the fissure is steep and easterly toward the main mass of granite, its origin may be associated with the cooling of the magma below, forming contraction cracks followed by movement. The two small lenses containing stibnite are the result of ascending hot solutions

upward at loci points of splits and intersections of the hanging wall fractures and slips. The action of hot solutions is evident in the successive concentric banding around the rock fragments, precipitating mainly stibnite, with a little pyrite, and alternate banding of the vein. Nearly horizontal movement shows along the walls of some of the bands, which show movement during ore precipitation. The most abundant gangue mineral associated with the stibnite is quartz which forms bands and concentric zones of growth around rock fragments. Other gangue minerals consist of feldspar, lime carbonates and silicates, chlorites, limonite, oxidation products of stibnite and altered wall rock products. These lenses are classified as in the upper middle vein zone. They are similar in appearance, such as successive banding of the ore, concentric quartz precipitation, and similar associated gangue minerals, with the quartz lenses on the Parker property across the inlet. The writer is of the opinion that in depth these antimony lenses will change to a similar type of gold vein. Low gold values were reported associated with the stibnite, which presumably will increase with change of mineralization in depth. Small amounts of stibnite occur in the gold ore of the Parker property.

No. 1 lens is located on the Victory claim 400 feet from the beach, as measured along the slope, at an elevation of 180 feet. Here the wall portion contains the most stibnite in small bands and disseminations across a width up to 15 inches at the widest portion. The formation here is a calcareous green slate. The seams of nearly massive stibnite range up to one inch in width and zones of disseminations up to 3 or 4 inches in width.

Sample 990 was taken across 12 inches near the central portion of lens. This contained _____ oz. gold and _____ percent antimony per ton. The footwall section of the fissure at this point shows small amounts of stibnite disseminated and ground up within the gouge. An open cut into the vein at a point below the intersection on the lower side of this lens was recommended. Development work on this outcrop would show the downward tendency of the ore.

No. 2 lens is located above No. 1, at an elevation of 380 feet, and a measured slope distance of 850 feet from the beach. The length of this outcrop is 30 feet and its maximum width is 12 inches. The formation containing this lens consists of a contact rock consisting of feldspar and quartz grains and lime minerals. Banding of the ore is again evident as in No. 1 lens, however, it contains fewer and lesser amounts of stibnite,

Sample 991 was taken across the central portion of the lens and represents a width of 12 inches. Results amounting to _____ oz. gold and _____ percent antimony per ton were obtained.

Slide No. 472 represents the contact rock in which the larger blocks and inclusions of other formations occur.

Le Roy Mining Company-Gold Lode

The gold property operated by the LeRoy Mining Company consists of one claim leased from Leslie Parker and three other surrounding claims staked and held by the company. These claims are located, extending from the south shore of Reid Inlet at the mouth of a small creek midway between Reid and Lampugh glaciers, inland up the valley in a southeasterly direction. The workings are located on the Parker claim, which is situated one mile from the beach at an elevation of 1050 feet. The mill is situated 1400 feet below, slope distance, and the camp is situated below the mill along the bank of the creek.

The underground workings comprise two adits, with the upper adit at an elevation of 1080 feet, which has a developed length of 150 feet on the vein. The lower tunnel, 30 feet vertically below, has nearly 300 feet of development, with 100 feet into the hanging wall off the vein. Stopping to the extent of displacement of 1200 tons of ore has been done, with several short raises. The upper tunnel is stoped to a height of 45 feet, which nearly reaches the surface. The curved vein is followed in the upper tunnel to a point where it ends against a dike at the present face. The general strike is N 40° E and the dip is 68° W. At a point 50 feet in from the portal a small vein, which strikes N 20° E, intersects the main vein and forms the widest portion of ore up to 4 1/2 feet in width. Normally the vein is 12 to 15 inches in width. Following the vein is a small greenish gray dike which cuts from wall to wall and ranges from 4 inches up to 1 foot in width. The hanging wall of the vein is a contact rock of a dioritic or granitic composition and the footwall changes from a light green rock to an altered igneous rock.

Specimen T. D. M. 470 represents a fresh section of this dike.

Specimen T. D. M. 476 represents the footwall altered igneous rock taken at the portal of the upper adit.

Specimen T. D. M. 475 is from the dike in the face of the lower adit.

Specimen T. D. M. 474 is the hanging wall rock in the lower adit.

Specimen T. D. M. 471 is a piece from a 4 1/2-foot lamprophyre dike which outcrops in the surface above the lower adit and may be the dike which cuts or ends the vein in the lower adit at the face. This dike strikes N 70° E and has a steep dip.

The lower adit shows some slate and graywacke on the footwall, together with green slate. The hanging wall appears to be a contact rock. The vein was encountered at a point about 100 feet from the portal and followed to the dike which again cuts off the vein as in the upper adit. Development on the surface and underground has not revealed the extension of the vein past the dike.

Several small veins outcrop on the surface above the tunnel, some as curved lenses, others as intersecting stringers in a metamorphic and changeable rock complex. Due to the partial covering of talus and loose mantle of rock, the structural relations which formed the openings were not revealed. However, it appears to be associated with some type of folding. The veins range in outcrop from a few feet up to 50 feet in length. They are banded, and contain comb structure, and the contained sulphides are arranged in bands and disseminations in the quartz. The walls are free, with a narrow gouge, and alteration of the wall rocks is evident. The ore minerals are pyrite, sphalerite, marcasite, arsenopyrite, galena, stibnite and chalcopyrite. No free gold was noted and the most abundant ore minerals are pyrite and sphalerite. The associated gangue minerals are limonite, antimony oxides, quartz, and various other altered minerals of both the ore minerals and wall rocks such as graphite and talc.

The ore mined in the stopes is trammed from the lower adit to the top of the upper tram terminal bin. Thence it is carried by aerial tram in 500-lb. buckets a distance of 1400 feet to the mill. Two aerial trams have been constructed, one of 5/8 inch cable for ore and operated by gravity, and another of 7/16 inch cable used to haul up supplies that is powered by a small gas engine and has a 1/4 inch haul back cable. At the mill terminal the ore is dumped into a 1/2 inch mesh steel grizzly with the fines going to the 30-ton ore bin and the coarse material to a 6 x 8" Straub crusher. The ore is fed to the 24-ton capacity Straub ball mill

by a Straub dip feeder. Ten-pound steel balls are used in the mill which grind to 35-mesh, as controlled by a cylinder screen classifier on the mouth of the mill. The flow from the mill is run over an Overstrom concentrating table, where both a low and high concentrate is taken off, with the low concentrate fed to two Kraut, 20 x 22" cells. The high grade concentrate is run in an amalgam barrel and a small amount of free gold is recovered. The greater portion of the gold is still retained in the concentrates which are shipped to the smelter.

The mill is powered by a 25 H. P. Allis Chalmers high speed motor via a line shaft which operates the crusher, mill and amalgam barrel, and also a 7 H. P. generator, which furnishes lights and operates by motor the two flotation cells. A Buick automobile engine is used as an auxiliary. At the portal of the lower adit a Chicago pneumatic compressor, portable style, is operated by gasoline motor. A Fordson tractor with rubber tires is used to haul concentrates and supplies from the mill to the camp and to the beach over a roughly constructed gravel road along the creek bank.

Seven men are employed, two in the mill, four in the mine and on the tram lines, and a cook. This season the company expects to operate until October 20 with a total production of 700 tons of ore, which averages in recovery \$80 per ton. Last year a total of 500 tons was milled with a recovery of \$135 per ton. No samples were taken during the visit. One shift is operated in the mine and two in the mill.

The company was advised to do a small amount of surface work to locate the vein on the south side of the dike, thence extend the underground development.

TERRITORY OF ALASKA
DEPARTMENT OF MINES

BOX 1391
JUNEAU, ALASKA

October 7, 1942

Excerpt of SUMMARY AND ITINERARY REPORT OF INVESTIGATIONS IN THE GLACIER BAY AREA
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LeRoy Mining Company - Gold Lode:

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