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Property File
082N 021

REPORT OF EXAMINATION

OF THE

A L B I O N G R O U P

HAWK CREEK,

KOOTENAY NATIONAL PARK,

B. C.

By
Charles C. Starr,
October 16, 1930.

LOCATION: The claims are on the northwest bank of Hawk Creek about $2\frac{1}{2}$ miles east of the Vermilion River and the Banff-Windermere highway. They are in the Kootenay National Park.

PROPERTY: There are six claims in the group; the Albion Nos. 1 to 4 are located north and south (magnetic), in a line, and Albion Nos. 5 and 6 are on either side. They are owned by Fred Jowett and E. J. Morigeau of Athalmer, B. C., who have sold a part interest to Lancaster and others of Calgary.

TOPOGRAPHY: The topography of the district is very rough, but on the claims there are usually steep soil covered slopes with occasional steep outcroppings of rock. The elevation at the discovery is 5700 feet (aneroid).

TRANSPORTATION: The property is about 30 miles by road from the nearest railway point at Castle on the main line of the C. P. Railway. There is a fine highway to within $2\frac{1}{2}$ miles of the property; then a poor, narrow road to within a quarter of a mile of the workings. The nearest supply point is Banff or Lake Louise.

WATER: There is no nearby water above the workings, but several small springs come out a few hundred feet below. Hawk Creek, at the lower end of the claims, has sufficient water for all purposes except power.

TIMBER: There is a good supply of mine timber nearby.

GENERAL: There are no buildings or other equipment. The Park authorities have made no objection to trenching through the soil, but permission from the proper authorities at Ottawa will be necessary before any blasting is done.

DEVELOPMENT: The work consists of a few open cuts and trenches, and in no place has any rock been blasted. On the map herewith, the un-colored parts of trenches have not reached bedrock.

OREBODY: The ore consists of sphalerite, with a little galena, replacing limestone and has an apparent strike of N 30° W and dip of 50° west. At one point it has been opened across a width of 25 feet, and it is to be presumed that this is its full width although neither wall is definitely proven. The known length at present is 90 feet; beyond this it has not been found under the soil, which is quite deep. The footwall of the ore appears to be a thin bed of limestone, closely followed by shale. The hanging wall has not yet been exposed.

There is evidently a small east-west fault just north of the big cut; a second one is presumed to occur just north of the last deep cut, as neither ore or the same limestone is found in the area of bare rock beyond.

Six moiled samples were taken (See Map) which show high zinc content.

The four across the big cut, for a width of 25 feet, show an average of 1.4 Oz. silver, 0.5% lead, 32.0% zinc. The sample beginning at the hanging wall contains some oxidized material, and that at the foot is nearly all oxidised; the other two are practically clean sulphides.

The sample in the first cut north extends in sulphides from the footwall to where the ore goes under the soil. The first cut south of the big cut does not show the full width of the ore, which is capped by a cement.

GEOLOGY: The sketch map, herewith, gives in a general way my observations of the geology of the vicinity.

The age of the rocks exposed is uncertain, but they are probably younger than the lower middle Cambrian. They consist of limestones, slates, shales, quartzites, etc. and in general are not strongly metamorphosed. There are no igneous rocks known in the vicinity.

Hawk Creek appears to follow the course of a fault of some three hundred feet throw, down on the northwest. This is crossed by a NW-SE fault with three or four hundred feet downthrow to the south.

In the north quadrant of the map the strata lie practically flat and are well exposed on the face of a 700 foot cliff, and on the steep slopes above.

In the west quadrant the strata are nearly flat immediately west of the fault, but gradually bend to a dip of 60° west in the middle of the quadrant, where they strike N 30° W. In this area shearing at a small angle with the bedding is rather strong. The limestones here contain the known ore and should be carefully prospected.

In the East quadrant the dips are flat on the west side, but become strongly westerly near the top of the high mountain. A vein of unknown size and value is reported high up on the mountain.

Nothing is known of the south quadrant.

A massive bed of coarsely crystalline calcite, containing a little quartz in coarse crystals, and a little barite is a prominent feature and outcrops in at least three quadrants. It is from two to three hundred feet thick and has the field relationships of an igneous sill. In general it follows the bedding of the limestones, but occasionally jumps from one bedding plane to another. Small dikes or offshoots of the calcite mass often penetrate up into the limestone for a hundred feet or more. There also appears to be a slight contact metamorphism in the limestone along the top of the calcite. Occasionally solid masses of talc or steatite are found in sheared zones along the calcite-limestone contact.

On the cliff in the north quadrant, a large lense of red stained limestone suggested the possible presence of ore. It is accessible only at the extreme feather edge at the west end; here there is a gray limestone with a slight surface stain of iron which, on breaking, appears entirely unmineralized and uninteresting. A search was made for float immediately below the lense but absolutely nothing of interest was found, and at least the lower seven hundred feet of strata in the north quadrant may safely be assumed to be unmineralized. These same limestones, however, contain the ore in the west quadrant where they have been bent and sheared.

CONCLUSION: Tracing of the orebody is slow on account of the frequently heavy overburden, but the size and value of the ore as now exposed justifies considerable further work to outline its extent, and I recommend that a permit to work be obtained and the work continued.

Further prospecting is also to be recommended in this series of limestones in the west quadrant and in other areas where they are sheared and tilted. Prospecting along them in the north and east quadrants appears to be useless.

Respectfully submitted,

Chas. C. Starr