1750 0011

White Pine Co. General

PROPERTY NAME: Sawmill Canyon Mine Group

OTHER NAMES: (Hendrickson Mine)

MINERAL COMMODITY(IES): Cu, F

TYPE OF DEPOSIT: Hydrothermal breccia & veins breccia pipe deposit cross-cutting igneous dikes, shears & fracture fillings

ACCESSIBILITY: Good, see map.

OWNERSHIP: ?

PRODUCTION: ?

HISTORY: ?

County: White Pine J Dan 56

Mining District: Ellison

AMS Sheet: Lund

Quad Sheet: SawMill Canyon 7 1/2'

Sec. 8?, T 12N, R 63E

Coordinate (UTM):

North 4 3 1 0 8 9 0 0 m

East 0 6 1 7 9 4 4 0 m

Zone +11

DEVELOPMENT: On N side of road in vicinity of sample 821 there are a number of shallow shafts 2 or 3 short generally north striking adits & several minor prospects developed in outcrop of volcanic breccia on south facing slope.

ACTIVITY AT TIME OF EXAMINATION: None.

GEOLOGY: The geology of this area is very interesting & warrents further study. As it is not well understood by the author.

On the north side of the road in the vicinity of the workings at 821 are prominent resistant sheared rock pinnacles of igneous pebble breccia locally containing silicified mineralized limestone blocks which appear to be caught up in the breccia. The workings explore areas where silicified grey-green is containing bornite (chalcopyrite) & pyrite occur. These blocks can not be followed along strike of bedding laterally from one working to another.

The breccia can be followed for a lateral distance of about a 1/4 mi both E & W of these workings (actually can be followed in E for a greater distance). There is a general N60E, 80 vertical foliation or shear orientatation observed in the resistant rock pinnacles altho on the hand specimen level the breccia does not reflect this foliation. The breccia is highly silicified & carries sulfide mineralization (mostly pyrite) in small flecks & pods in the matrix. The breccia is grey yellow in color, weathers red-brown & contains clasts of intrusive & extrusive rhyolite frags grey color), quartzite & what appears to be silicified limestone. The clasts are ¢ to sub-rounded & completely silicified Quartz phenos occur in the clasts (igneous) & in the matrix. The highly silicified & altered nature of the rock make it difficult to discern textures. Thin sections would be helpful. Phillip Playfords' 1961 Stanford PhD Thesis shows this area mapped as Tertiary pebble dike with surrounding rhyolites & porphyrys. (Rhyolite is oligocene in age)

Numerous oxidized E-W vertical shear zones cut the breccia & when they intersect with the limestone beds & blocks the rock is bleached, silicified & carries pods of bornite with minor pyrite. Fine grained intrusive rhyolite dikes also occur in the

XXMXHXX mineralized areas.

At sample location 821, there are veins of white to purple Flourite which fill vertical fractures. A N20E, 80W fracture intersects a N60W, 80-90°dipping fracture in a shaft above the short adit where the flourite was found. Fracture filling flourite can be found on the N20E system & be traced from the lower adit to the shaft. Also found along these fractures is most of the massive mineralization including pods & veins of CuOxs, Chalcocite & bornite.

A highly silicified, grey rhyolitic intrusive? (hypabyssal?) occures in this area as cross-cutting dikes. It has a very finely crystalline, silicified grandmass with abundant quartz & minor hornblende phenocrysts. In some places plag crystals are dissolved out of the matrix while quartz is unaffected. Cross-cutting relationships seen to the E (OVER)

REFERENCES: Sample 821A- Grey-green recrystallized limestone with bornite malachite, chalcocite? chalcopyrite, pyrite in pods occurring along with calcite pods. 821B- Same as a except that limestone is more bleached & silicified & contains more bornite & azurite. Poss. tetrahedrite

EXAMINER: Bentz/Smith DATE VISITED: 6/14/81

781- Altered igneous breccia, no obvious min. Except for scattered sulfides.

Photos.

(SawMill Canyon Mine - geology continued)

indicate these bodies are probably intrusive & generally strike E-W, with vertical dip.

Most of the rock on the dump of the workings are silicified grey to grey-green limestone with abundant bornite & other sulfides occurring in pods & discontinuous lenses. Calcite veins & pods are also common. A small amount of coarse crystalline calcite, white mica & chalcocite were found as vein fillings on dump.

Orientations on bedding & shear direction did not make much sense. Also, there are probably more than 1 kind of intrusive rock, volcanic & breccias in the area. Which were not sorted out in the short time we visited the workings.

E of the workings in the vicinity of a dozer trench is a fig. rhyolitic dike (?) which appear to cross-cut what appears to be a green-colored pyroclastic breccia. This breccia differs compositionally & texturally from the silicified volcanic (or breccia).