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DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine 'Hoot Owl Claim

Date November 25, 1964

District Walker Dist., Yavapai Co.

Engineer Lewis A. Smith

Subject: Conference with J. H. Waterhouse

Location: NE $\frac{1}{4}$, S. 19, T. 13, N., R. 1 W., (1 $\frac{1}{2}$ miles by road from the Walker Road to the W from the New Strike Group).

PROPERTY: One unpatented lode claim.

OWNER: Thomas LeNoir, 1724 W. Vogel, Phoenix, Arizona.

GEOLOGIST: J. H. Waterhouse (phone 944-1706). (*New River 465-7340*)

WORK: Two shallow shafts, 200 feet apart, both about 15 feet deep. One short adit, near the north shaft (12 ft. long), one open cut and short shaft on a vein that parallels the vein on which the other workings are located. Considerable sampling was done in these workings.

(a) At the North Shaft, main vein 1.5 feet wide, these ran about 18.6 oz. Ag, and 0.02 oz. Au, and 5-10 percent Pb, on an average.

(b) At the south shaft, main vein 1 foot wide, ran 14.7 oz. Ag, 0.050 oz Au, and 1.8 percent Pb.

(c) In the open cut the exposed portion of the ^{Composite} vein is 3.5 feet wide. Three quartz-calcite veins lie within this width. The principal one is 3/4 ft. wide at the top and 1.2 feet wide at the lowest exposure. (This ran 18.6 oz Ag, 0.02 Au and 10.0 percent Zn.) The second vein is in the middle and is 0.20 feet wide. (This ran 0.65 oz. Ag, 0.20 percent copper, 5.2 percent Zn, and 1.82 percent Zn.) The third vein is 0.25 ft. wide and assayed 0.25 oz. Ag and 5 percent lead. A third vein W of the main vein has a greenish gray quartz filling that assayed 0.35 oz. gold.

GEOLOGY: The principal rock is schist cut by a north trending diorite dike. Three veins generally trending N 20 deg. E, N 27 deg. E and N 25 deg. E (W to E). The westmost vein (Argenauve Vein) is not much developed. The "Main" vein (next to E) trends N 27 deg. E for several hundred feet then changes abruptly to N 20 Deg. E. Near the point of change it appears to be offset. The dip is generally about 74 deg W. The fault trends about N 70 Deg. W. The third or "East" vein has not been traced to the fault. Its dip is roughly 70 deg. W. The rock between the 3 veinlets that so far have been uncovered in the East are separated by a fine grained gray rock which is severely altered, and soft, but has not yet been determined. The area between the "Main" and "East" veins has been intensely altered but has not yet been prospected. In the 3.5 foot section of the "East" vein the three veinlets are composed of quartz, calcite, limonite, fine grained galena and sphalerite with sporadic alteration of the galena to plumbojarosite and anglesite. Pyrite is present, but minor, but arsenopyrite is more prevalent. The limonite is derived from the pyrite and arsenopyrite and locally shows indications of copper. The galena, is coated by thin films of "sooty" argentite that probably accounts for the silver values. Some vugs are lined by calcite and quartz crystals. The calcite locally fluoresces to a crimson red color but much of it does not fluoresce. Most of it is crystalline. The absence of cerussite or copper oxides is surprising in view of the large amount of calcite present. In this district the primary silver minerals are usually argentiferous tetrahedrite (Friedbergite) or sulph-antimonides or sulph-arsenides of silver. (Since arsenopyrite is the main iron sulphide, it is possible that pyrargyrite was the silver primary mineral)

Calcite Fluoresces yellow

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