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YEAGER MINE

October 6th., 1921.

No further development has taken place to alter the conclusions suggested in the report by B. T. Rocca-May 1918, excepting that the work on the 1300 level projected at that time and since carried out has failed to justify the hopes of encountering any ore on that level of commercial value. There remains a remote possibility of striking more ore by continuing the 1300 level a distance estimated by Mr A. L. Ferris, at present in charge of the property, of some 200 feet. The general rake of the ore bodies would place the corresponding ore body on the 1300 level at a point approximately 200 feet beyond the present face. The work in the intermediate levels at 1000 and 1100 was disappointing and there is no indication, excepting the general supposition that primary ore would be encountered in depth, that the 1300 level would show any great improvement over the upper levels.

The work of the past year has yielded some 800 tons of high grade ore (19% Copper and 10 Ounces Silver per ton) from the narrow high grade veins and of this the greater portion was taken from a pocket on the 900 which opened up to 3' in width. The nature of the ore is Bornite and Chalcocite with various altered phases and an occasional trace of Chalcopyrite. It is estimated that this 800 tons will just about pay expenses on the operations of the past year.

According to Mr Ferris all visible ore has been mined and without additional expenditure in development no further ore can be hoped for. It therefor remains to be decided what the future policy will be. It is Mr Ferris's belief that his principals will not care to go on with the development work but will try to dispose of the property.

The equipment, now electrically driven and ample for all requirements is in splendid condition, and includes Allis Chalmers hoist, Sullivan Air Compressor (700 Cu Ft) Ingersoll-Rand Drill Sharpener, some 10 Drills, Pumps and equipment to handle the 18000 gals of water which the mine is making at this time. The original equipment including boilers, steam hoist, Fairbanks Morse Gas Engine etc is also on hand and apparently capable of being operated at any time. Buildings are in good order and will accomodate a crew of approximately 50 Men. In the event of discontinuing operations Mr Ferris is of the opinion that the equipment would be moved to another property owned by the Shannon Copper Company.

From the viewpoint of the CASCO the Yeager Mine could supply the 800 tons of high grade ore but no further shipments could be counted on.

Assuming a market of 13 cents for copper the net return to the Yeager Mine would be approximately \$25,500.00 under the old contract terms of \$5.00 treatment and 6cents Insoluble penalty, together with an estimated cost of \$4.50 transportation. For each advance of 1 cent per pound of copper above 13 cents this return would be increased by some \$2800.00 and it would appeal to me that the attitude of the Shannon Copper Co would be to dispose of the stock of ore when the market forecast would seem to indicate a maximum return on the shipments allowing for cost of further upkeep and caretaking at the mine. This policy might prevent our obtaining the ore for some little time to come.

Mr Ferris is of the opinion that he could load 3 - 40 Ton cars per week using 1 - 4 ton truck.

H. R. Banks.

DISTRICT

Yeager Canyon

PROPERTY

Yeager Canyon Mine

LOCATION

N. 10° E of Humboldt, 13½ Mi. by road - 8 Mi. south of Jerome.

OWNERS & OPERATORS

Shannon Copper Company

DATE VISITED

May 10th, 1918 - by B T Rocca.

NOTES

The Yeager Canyon Mine is located on an E-W fissure, dipping about 40° S, near the irruptive contact of a rock, known locally as diorite, with the Yavapai Schist. This fissure is known as the Yeager vein, the present working shaft having been sunk on a small outcrop showing some copper carbonate in the diorite, the outcrop disappearing within a few feet from the shaft in either direction. 250' East of this shaft, considerable work was done on a N-S fissure, to a depth of 100', but no ore discovered beneath the copper stained outcrop. To the West of the shaft is the diorite schist contact striking to the W of N, dipping steeply to the E, and being marked on the surface by a rather wide zone of crushed, kaolinized and leached material.

Prior to 1907, the main shaft being drawn a few hundred feet, on the incline, 15 vertical diamond drill holes were put down to a depth of 500' - the ore indicated in these holes, leading to the sinking of the shaft to the 900' level. Stations were cut at 100' intervals, and some work done on the upper levels. From the 500' to the 900' level, considerable drifting was done on the vein, mostly to the E, and some 20,000 tons of ore stoped and milled in the stamp mill (which burned in 1907), from a narrow streak of high grade chalcocite and bornite ore, averaging from 6" to 18" in width, lying in a vein several feet wide of gouge and brecciated diorite. The ore developed raked strongly to the E in depth, about paralleling the schist contact, and several hundred from it. 275' E of the shaft on the 900' level, an incline winze was put down on the vein to the 1200' level, with stations cut and drifts driven each way 200' to 300', at the 988', 1060' and 1200' levels.

No work was done from 1907 until 1917, when the Shannon Copper Company started unwatering the mine. This was a very difficult process, the shaft and working being badly caved, spilling being necessary in all the drifts. On the 600' level, new work was driven to cut the contact zone, which is here a wide zone of kaolinized material, evidently resulting from the action on mineralizing solutions, yet no trace of copper was discovered.

The winze below the 900' level was unwatered and the lower workings examined, which, according to Mr Dyer, show from 6" to 18" of 20-30% copper ore, with local pinches and occasionally widening out to 3', with a maximum of 5'. This small tonnage of very high grade ore is the only ore tonnage considered at present and they are now 200' below the 900' level with the main shaft, which is to be sunk to the 1300' level before any drifting is done. The 900' level drift and winze are inaccessible, the water being bulk headed off while shaft sinking is in progress.

NOTES

Mr Dyer stated that in taking over the mine, they were largely influenced by the possibilities of finding some copper ore at and below the ground water level in the contact zone. It is so highly altered and leached that if it originally did contain copper where cut on the 600' level, that all trace of it might have been carried downward by meteoric waters. Work on the 1300' level will be of interest, especially at the intersection of the Yeager Vein with the contact zone, for in the upper levels all valves seem to disappear as the vein nears the contact.

The secondary character of the high grade ores so far encountered, even on the 1200' level, also suggests possibilities in depth. No chalcopryite ore has ever been noted - the chief ore being chalcocite, which Mr Dyer stated is clearly seen in polished sections to be replacing bornite, which in turn may or may not be primary. The expectation of finding lower grade primary ores in depth seems to be reasonable, in the Yeager Vein at least. Mr Dyer stated that he hoped to develop sufficient ore to enable him "to secure a favorable smelting contract.

The tailings dump from the stamp mill, is estimated as containing 20,000 tons assaying 1% copper. The large waste slump sampled the same grade as the tailings, I was informed.

The team hoist and steam pump are soon to be replaced by electric machinery, the Arizona Power Company's transmission line to Jerome 8 Mi. to the N. crossing the property.

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(signed) H. R. Banks.

District	Properties	Location	Owners & Operators	Date Visited	Notes
Yaeger Canyon, Yavapai County.	Yaeger Copper Co's., Mine.	7 mi. S.W. Jerome (in air line). 8 mi. by road from Yaeger Siding. Elevation 5700-5800.	Shannon Copper Co., Clifton, Arizona. Ferris Sup't. Reopening old workings.	1917 August 10th	<p>Surface showings, Yavapai schist with the usual N-S strike to west of main shaft, and altered diorite to East. 1200' west is lenticular quartz vein with iron stained gossan running N-S with the schist, here very siliceous. 75' East of main shaft is a 350' shaft, now inaccessible, in diorite. Main incline is on E-W vein with rather obscure outcrop. Ore struck at 200'. Incline dips S. about 50° but is sometimes much flatter. Now unwatered and retimbered to 750'. Total depth 900'. Below this 900' level, to west, is 300' winze with stopes in which operators expect to find good ore remaining. The eighth level has been driven 800' west and it is proposed to extend this a further 400' to prospect the N-S quartz vein showing on the surface. The 400' level west, spiled through for a few hundred feet, mostly stoped ground, shows lenses of quartz with a little tetrahedrite, maximum width 3' country rock schist. The lenses occur in a light colored crushed, sticky, material, usually about 6' wide between walls. Uncrushed vein filling has the appearance of quartz porphyry. The 500' level East reopened for a short distance shows similar lenses of quartz, with diorite country rock. Ferris thinks one half of the vein filling throughout the mine may possibly have been ore. One drift now being reopened is in a soft bluish material, having appearance of rhyolite, perhaps colored with manganese. On the dump is less than a carload of nice looking sorted ore, quartz with tetrahedrite, and a little bornite. The reserves of ore so far found have been small. The plant consists of a 120 H. P. Hendrie &amp; Bolthoff steam hoist; a type E. R. Ingersoll-Rand compressor now under repair; pumps now being run by steam; boilers being fired temporarily with pine slabs, costing \$4.25 a cord F.O.B., Flagstaff. The next level to be unwatered, the eighth, being the longest, rather slow progress is being made.</p>

*Hunter  
May*