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NOTE RE MONICA MINE

Dec. 1938

Road turns off in Peeples Valley at cattle guard of the Hayes Cattle Co.

Probably in bad shape but should be passable to mine.

Old workings are still partly open and there is a long adit which intersects the vein where it has a width of 5' and will assay \$10.00 per ton.

Fennell thinks that this should be well worth investigating.

*Supplemental*

JEROME, ARIZONA

January 7, 1936

1. LOCATION.

The Monica Gold Mine is situated in the southwestern part of Yavapai County, Arizona. It is located in the Weaver Mountains, about 35 miles south of Prescott. The nearest rail point is Kirkland on a branch line of the Santa Fe, and about 14 miles from the mine, over a paved and improved Highway. The mine itself is on the north slope of the mountains about 6 miles from paved highway 79. A good road leads to the tunnel mouth.

2. HISTORY.

There has been nothing written about the Monica Gold Mine in either the Economic Geology books or the Reports of the Arizona Bureau of Mines. It was originally located in the nineties but at this period neither railroads nor highways had been constructed. It was evidently opened by an inclined shaft (29°) on the vein 138 feet in depth. Then someone with capital became interested in the mine and at a point about a quarter of a mile below this shaft a haulage tunnel 6' x 8' was driven for 1300 feet where the vein was cut and a shaft was raised on the vein. Two offsets were made and the one shaft came to the surface but has since caved. A connection was also made with the first shaft. After the main shaft was completed, mining was commenced and kept up for several years. This work probably was done between 1904 and 1909. For some unknown reason the mine closed down and was not opened for several years. Then the mine reopened and operated until 1915, probably due to the high cost of cyanide and other operating costs, the mine closed down.

3. GEOLOGY.

The Monica Mine is at an approximate elevation of 4500 feet in the Weaver Mountains. This range of mountains consists essentially of coarse grained biotite granite, which is the basic rock at the Monica. One large aplite dike intrudes the granite and borders the hanging wall of the vein. Near the junction of the haulage drift and

the vein, a large greenstone dike cuts across the drift and later shows up on the east drift of the vein. No work has been done on this dike.

The veins of the Monica consists of a well defined fissure dipping  $25^{\circ}$  to  $30^{\circ}$  to the north. The fissure is filled with fine grained to massive quartz showing traces of pyrite galena and manganese oxides. The vein is from two to six feet in width and strikes north  $30^{\circ}$  west. The vein is traceable on the surface for about 1000 feet when it pinches out in the surrounding wall rock.

As the surface is very rough, not much exploration work has been done beyond about a 300 foot limit on the strike of the vein although there is a mine about a quarter of a mile south where a vein similar to the Monica is exposed. There is a slight fault in the shaft between the 700 and 900 foot levels. From the apparent movement, this fault is toward the foot wall and while the vein appears to continue, the stoping is very limited below this fault although some good values do appear in sections of the vein on the 1000 foot level. The values of the Monica are indicated in an assay report at the end of this letter.

#### 4. DEVELOPMENT AND STOPING.

As before noted, the mine is opened on its lower level by a 1300 foot crosscut which was used as a main haulage drift. Where this intersects the vein an inclined raise has been run about  $27^{\circ}$  to the vertical for about 600 feet, then this is offset, one shaft set to the west and a raise is run to the 300 foot level which has a shaft connecting it with the surface about 150 feet east of the connection with the main shaft.

The mine is stoped over a distance of about 200 feet on the strike of the vein from the 250 foot level to the 800 foot level. Some of the larger stopes are so badly caved that it would be extremely dangerous to sample them. However, from samples cut on the 400-500-600 and 700 foot levels the average value of the vein can be placed at 0.80 ounces of gold or about \$21.00 per ton. Below 800 stoping has shrunk so that the stope on the 900 is a small room about 25 feet in diameter. There is no other stoping below the 900.

*Probably the Monica mine*

About 5000 tons of recoverable ore of the above grade remains in the mine.

Although nothing appears in print about the Monica, giving the tonnage, grade and average values extracted from this mine, I have talked with the foreman of the mill and he said the heads of the mill would average about an ounce of gold, also he gave me a figure that about three to five million dollars had been extracted from the Monica. This appears to be extremely high on this grade of ore and from figuring an average of an ounce with the estimated tonnage extracted, a figure from between one or two million dollars would seem more in line.

#### 5. CONCLUSION.

This is the first mine I have ever seen where the formation was not crosscut. In expectation of a parallel fissure also where the fault occurred in the shaft the former management should have crosscut the formation to the south. At that time it would not have taken a great deal of money or time to prove the existence of the vein being faulted into the south wall.

However, the vein is well exposed on the 1000 level and one place near the shaft assays well. This mine is not a high grade but a medium grade mine where large tonnage might be easily developed and mined. The vein on the 1000 seems to be changed, both in regard to the character of the filling as well as massiveness. It is much harder and where it is softer higher values occur.

Some exploratory work should have been done along the greenstone dike. Also the shaft should have been sunk deeper. At present there is a small sump on the 1000 level which is filled with surface water, depth unknown. So with these points in mind, I would like to recommend:

1. The formation be crosscut on the 900 level for about 100 feet.
2. That the dike be explored for about 200 feet.

3. And finally, that the sump be bailed out and the shaft sunk for about 150 feet with the same amount of drift or crosscut.

With this small outlay of work a good prospect should be proven and the further plans for development may be considered.

Respectfully submitted,

---

F. H. Lyons.

ASSAY SHEET

MONICA GOLD COMPANY

NO.	oz. GOLD	oz. SILVER	WIDTH	LEVEL
1.	0.20	0.60	26"	500
2.	0.22	0.23	36"	600
3.	1.08	8.52	30"	700
4.	0.38	2.70	36"	700
5.	0.27	0.27	30"	700
6.	0.46	0.64	26"	700
7.	0.23	0.27	28"	900
8.	0.27	0.50	28"	1000
9.	0.75	0.53	34"	1000
10.	0.68	0.46	30"	1000
11.	0.27	0.25	24"	1000

Monica Mine

By G. M. Colvocoresses

March, 1938.

I have never visited this mine but have frequently heard of it.

The report by Lyons, - whom I do not know, - seems reasonable but it may be noted that neither his samples nor Gohrings indicate that there is any large reserve of \$21.00 ore and it would be strange to find that an easily accessible shoot of such material had remained unworked for the past 30 years. I could obtain no assay maps.

C. G. Fennell who gave me this report tells me that he personally opened up the mine in 1902 or 1903 and sold it in 1906 for \$150,000 to a San Francisco capitalist.

The subsequent operations do not appear to have been profitable or continuous but Fennell thinks that it should do better with the present price of gold.

I have recently been told that the property has been sold or optioned for \$15,000 and that work is soon to be started.

G. M. C.

DISTRICT	MINE	LOCATION	OWNERS & OPERATORS	DATE VISITED	NOTES
Kirkland - Yavapai County, Arizona.	<u>Monica</u>	14 m. south Kirkland - Elevation Collar of #2 shaft 5100. 15 claims of which 13 are patented.	Richard G. Park owner. Richard Osmundson in charge as Receiver for Monica Mining & Leasing Co., whose option runs until Oct. 31, 1918. Idle after few months operation.	October 3rd, 1917.	<p>Lenticular gold bearing quartz, with a little pyrite, said to average \$8.00 per ton, in Bradshaw granite. Inclusions of diorite in the granite. Fine grained acidic dike, locally called trachyte, dipping about 75° S. W., cuts through ore bodies, which have flat dip of about 26° N. E. No. 2 Incline, 1000' slope, has bottom (Tunnel) level about 400' vertically below surface. A crosscut tunnel 1000' long, running S 20° W, connects with bottom of Incline, where the "1000 Foot" level has been driven East 390' and west 540', cutting dike 360' west of Incline. The drift is now caved at the dike, which is about 55' wide where exposed above. Lenticular quartz bodies of an average width of 4 to 5' show up here and in the levels and stopes above, but they are not continuous and stoping has been practically limited to one shoot, presumably higher grade, East of the Incline. On the 900' level East is one such stope, near the Incline, from which the last operators are said to have obtained most of their ore. The west breast of the 800' level shows about five feet of quartz with a little galena, a sample of which assayed (#266).04 Au;.60 Ag</p> <p>A short shoot on the 700' level is said to run \$12.00 to \$48.00 gold. The quartz here is marked with small spots of iron oxide, but visible coarse gold is said to be unusual, even in the higher grade ore. A little stoping has been done west of the shaft, as well as on the East shoot, on the 500' level. Above the 400' level are old workings connected with No. 2 and No. 1 Inclines, between which the ore appears to have been removed, except for small pillars and perhaps broken fines.</p> <p>Richard Osmundson, the Receiver in charge, estimates that there are available 35,000 tons of ore, averaging \$8.00 in gold, with a little silver. He also estimates that the</p>

*Monica file*

NOTES

MONICA MINE CONT'D.

new equipment, which the lessees are entitled to salvage, can be sold for at least as much as the \$16,000.00 they owe. For this amount of cash, he offers to turn over the lease and bond and the lessees' equipment. The lessees are said to have expended \$40,000.00. The royalty to the owner is 15% and \$3000.00 royalty has been paid to apply to the purchase price of \$50,000.00.

The plant consists of a 20 stamp mill and cyanide plant, in fair operating condition, besides the additional equipment lately added by the lessees, consisting of two 90 H. P. "Western." oil engines, Imperial Type 10 Ingersoll-Rand  $7\frac{1}{2}$  x 9 x 14 compressor, Westinghouse D. C. Generator, etc. The stock of cyanide has been sold, but the lessees have a contract for further deliveries at  $42\frac{1}{2}$  per lb.

Mining operations appear to have been conducted in amateurish fashion. For example - the stopes are very flat, but no crosscuts and chutes have been made in the foot wall to facilitate handling of ore. Moreover, shoveling in the stopes has been from rough bottoms, without flat sheets. A new elaborate ore pocket at the bottom of the Incline is very unhandy. The percentage of extraction in the cyanide plant is said to have been low until towards the end of the lessees' operations.

The ore now available may be of sufficient grade and quantity, to pay for further development, especially the deepening of the shaft, on which the future of the mine would appear to depend. It may, however, be expected that the ore bodies, all in granite, will be irregular in size and value. The prospect appears to have merit.

*L. F. H.*

SAMPLES TAKEN FROM MONICA MINE BY  
W. B. GOHRING AS PER  
ARIZONA ASSAY OFFICE'S  
Docket No. B-2883-No. 32G0

NO.	width inches	Oz. - Au	Value \$35 Gold	Description
1	NS	.15	5.25	Stope Floor 300 level
2	24	.14	4.90	Stope Face above 300 E near
3	38"	.61	21.35	50' upshaft from 300 (#1
4	20"	1.96	68.60	Floor 300 E $\frac{1}{2}$ way
5	12	1.34	46.90	at 400 station
6	12"	1.54	53.90	500 east floor
7	27	.08	2.804	600 W in 50' floor
8	24	.41	14.35	700 E in 100' "
9	21	2.07	72.45	do E in 50' Floor Red
10	18	.09	3.15	" " " " Yellow
11	32	.24	8.40	700 W Stope
12	48	.21	7.35	" " " further west
13	12	.20	7.00	" Banded S102
14	60	.03	1.05	Face W Drift
15	24"	.40	14.00	800 E in 30 ft. on floor
16	48	.08	2.80	" " above 15 pyritic qtz.
17	48	.08	2.80	900 W up in stope
18	28	.10	3.50	900 W side of stope
19	23	.09	3.15	1000 Level 3 side in 30 ft.
20	31	.08	2.80	do in stope
21	33	.21	7.35	" N 50'
22	30	.09	3.15	" N 65
23	30	.05	1.75	" S just beyond stope
24	54	.07	2.45	" " near tunnel
25	24	.17	5.95	" " "
26	36	.222	7.70	" " S 75 Feet