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Item 11

THE BUCKSKIN MINE
(Visited March 14, 1937)

Location and Management:

The mine is located at the Northwest end of Smith Valley, 18 miles from Wellington, Nev. The property is owned by the Ambassador Mining Co., Mr. Lackey, Manager; W.A. Burton, superintendent; R. Hume, mine foreman; and Benston, mill foreman.

Labor:

A total of 22 men are employed at the mine. Workiis carried on two shifts per day. The wage scale is $2.70 to $3.60 plus board. This gives a labor cost of approximately $1.60 per ton of ore milled.

In the past good miners have not remained on the job, due mainly to the irregularity of the payday. Also during the past winter supplies for the boarding house have not been easy to secure, thus making it even harder to secure and keep good labors.

The boarding house is near the mine workings so that the men on day shift have their lunch in the boarding house.

Breaking Gorund:

For drilling there are two mounted jackhammers, (IR-S-49) two spare jackhammers, one self-rotating stoper and one hand-rotated stoper. Detachable bits are used, requiring at least one set of bits per hole. The bits are reground on the property by the foreman and the hoistman, but after grinding the bits do not give as good service as before. According to the foreman detachable bits are not adapted to drilling in this ground.

40% gelatin DuPont dynamite is used for breaking and safty fuse and No. 6 blasting caps are used to set off the charge. In drifting not more than 10 holes are required to break the ground 5x7.

Two portable compressors furnish air for the drills. The largest (220 cu. ft.) is used continously during the shift the smaller (110 cu. ft.) is used when more air is required to keep the pressure up. These two compressors use 60 gallons of gasoline per day. The main air line is of 2 in. pipe, and distribution to the working faces is through three quarter in. pipe.

The water for drilling is stored in a 200-gallon tank at the collar of the working shaft, and piped through three quarter in. pipe to the workings faces, flowing by gravity. 20-gallon pressure tanks are used in the upper tunnels. The water pressure is great enough without the use of pressure tanks on the lower levels.

Transportation:

In the upper levels the ore is trammed from an adit on the same elevation as the course crusher in the mill, and trammed directly to the mill, in 18 cu. ft. cars. From the lower level the ore is mucked into 660 pound buckets and trammed to a vert-

ical shaft where it is hooked onto the cable and hoisted to the surface. Two buckets are used one is being filled while the other is being hoisted. The buckets are dumped (by means of a swinging slide) into an old inclined shaft to the main haulage adit. The old shaft serves as an ore bin. An old Keystone drill has been converted into use as a hoist. A four cylinder gasoline motor runs the hoist. It is said by the hoistman that the motor uses 2 to 2 and a half gallons of gasoline per shift, hoisting 65 to 70 buckets.

General Conditions:

The ground stands well where it is permitted to break to a natural arch, but has a tendency to be blocky.

The main complaint of the foreman is that development never gets ahead of the mining far enough to permit the most economical extraction of the ore. A well organized program has not been adopted.

The condition of the compressors is such that they are no longer reliable.

In the 90-level ventilation is provided by air coming thru a six inch pipe from a blower situated at the collar of he shaft. The blower is driven by a 3-h.p. electric induction motor.

Drinking water is carried underground in one gallon glass jugs.

All of the timber used is wrough finish, trucked to the mine from Reno. (96 mi.) No round timber is being used.

From a safty stand point there were but two places seen in the mine that are dangerous. The first of these places is near the end of the drift on the mill level, where preparations are being made to raise in the ore. Here are faults and fracture plains filled with talcy gough causing the ground to give way in large blocks. The other place that is dangerous is on the 90-level where an ore chute has been incountered and the drift has been widened out 15 to 20 ft. This condition alone was bad enough but a raise is being started in one of the widest parts of the drift thus weakening the back greatly by breaking the arch that was none too good to begin with.

Subject: A $5000 loan to the Buckskin Mine to unwater flooded portions of supposed value.

Remarks: The area under discussion lies on the 130' level of the Buckskin Mine. Unfortunately, the water level lies at a depth of approximately 90' and the area is flooded in consequence of this.

In an effort to ascertain the values in this flooded area, the first reference is Mr. L. E. Snider, company engineer since 1929. Mr Snider estimates that below the 130' level there exists a block of proven sulfide ore

$\frac{340' \times 20' \times 100}{10\text{-ft}^3 \text{ @ ton}}$ = 68,000 tons. The average value of this ore is given by Snider as $10.70 (Au, $20) This amount of "proven" ore - 68,000 tons - is based, it seems (by interpreting his assay map, Sept 1929) on one single assay, #18 on the 210 level where 15' of ore was encountered of $10.60 total value. To base "proven" ore on one assay seems unwarranted and therefore I believe his figures on ore below the 130' level are fantastic. Proven ore should be blocked.

A second reference is Mr. A. Syverson who examined the mine in 1930. Since the 260' level was submerged at the time of his examination, his inspection was confined to above the 130' level. He estimates above the 130' level 33,500 tons of proven ore, average value $10.13 (Au $20.) Below the 130' level he estimates probable ore, 50,000 tons @ $10 per ton (Au $20.) This estimate, just as Snider's estimate, is based on sparce information. Syverson says in his report, "from reliable sources he learned that

Buckskin Mine

Outline of report:

1) Ore below 130' level

2) Ore above 130' level

3) Conclusion

Reports used:

Snider 1929.

Syverson 1930

J.A. Carpenter 1936.

chalcopyrite ores of commercial grade were encountered on the west drift, a short distance from the 260' station." Lyverson goes on to state, "The edges of the old dumps, which contain rock from the 260' level, show strong mineralization in the form of chalcopyrite, identical in character to the ores exposed on the 130' level."

~~This fact seems to me that the tonnage produced from above the 130' level serve as a guide to ore lying below, since there is little proof of real ore as low as below 130' in either Sinclair's or Lyverson's~~

Now for ore lying on and around the 130' level. Sinclair estimates that above the 130' level there is a block of ore $\frac{340 \times 30 \times 60}{10 \text{ ft}^3/\text{ton}} = 41{,}000$ tons, average value $10.70 (Au \approx 20)$. Samples were taken from both "A" and "B" orebodies. Lyverson, in a later report, found the assays checked closely with Sinclair's estimates on ore above the 130' level; his calculations are:

$$\frac{60 \times 375 \times 20}{13 \text{ ft}^3/\text{ton}} = 57{,}500 \text{ tons of proven ore.}$$

value $10.13 (Au \approx 20)$

In addition there is an area beneath the developed ore on the tunnel level near #2 shaft. This has not been explored from the 130' level, and may hold promise of fair values.

In conclusion I believe that enough proven ore exists above the 130' level to warrant a loan for unwatering this area. The undeveloped region west of the 130' level may contain a good tonnage of millable ore.

There also is some basis for belief of more surface ore bodies below the 130' level

Charles A. Tenney II

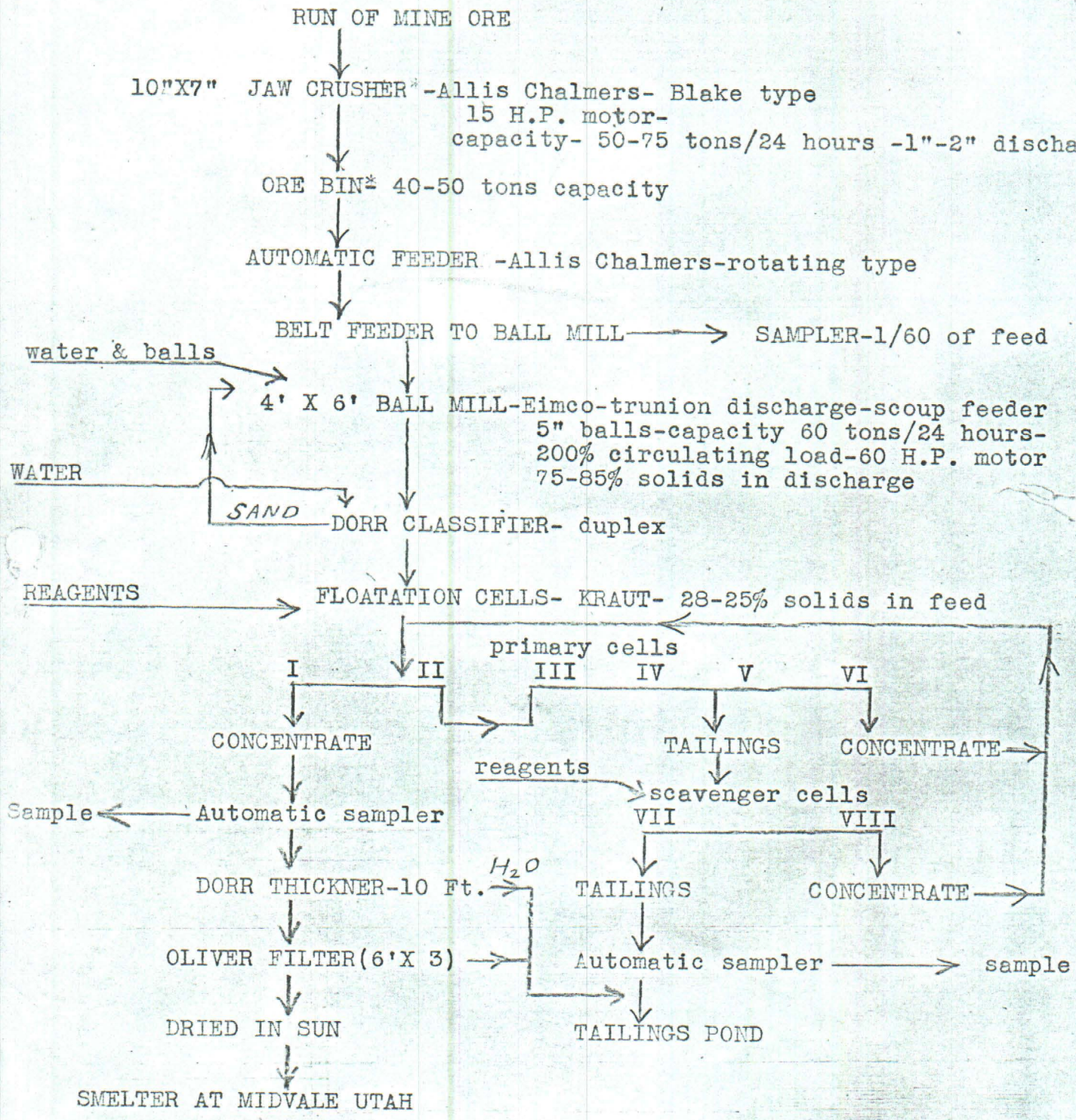
Subject: $600 loan for unwatering Bucheden Mine

3/6/43.

Tenney Project.

MARCH 14,1937 BUCKSKIN MINE L

FLOW SHEET FOR MILL



MARCH 14, 1936.

BUCKSKIN MINE LYON COUNTY, NEVADA

Under lease by The Ambassador Gold Mines Co.
Lackey-General Manager
Super.
Hume- Mine Foreman
Benson-Mill Foreman

Edward F. Schulz

Pumping Station In Mason Valley 2.3 miles south of mine.

Located at north end of valley.
Living Quarters for crew employed at pumping station
Assay equipment.
Office and records
Wells & pumps
Source of water.
2- artesian wells -water flows into large storage tank.
water contains minerals-corosive to pipes
sodium sulphite gives water odor of sulphur.
For domestic purposes water is allowed to stand in tanks before using.
Pumped 2.3 miles against 220 ft. static head to mine & mill.
United Iron Wks, 2 stage- 2½"-centrifugal pump.
4" intake pipe - 12" pipe to mine.
300 G.P.M.
85 % efficient.
Motor-50 H.P.- 3558 R.P.M.
Larger pumps & motors were used when placer was operated.
Turbin pump to pump water out of well
6" Byron Jackson - 3 stage centrif,. used to pump water to placer
1800 G.P.M.
1000 ft. static head
one 350 H.P. & one 200 H.P. motors.- 3550 R.P.M.
not in use now
Supplies are trucked in from Reno & Yerington.

MINE- 2.3 MILES SOUTH OF PUMP STATION

Vein outcrops on the surface and strikes east - west
Considerable development work has been done- Three shafts have been sunk and several tunnels have been driven near the vein
Several large stopes have been worked in the oxidized zone.
At the present time a sulphide ore(pyrite & chalcopyrite) is being mined on the 90 ft. level on the NO 1 shaft.
The ore is coming from a raise which ~~is~~ has been started about 100 ft. from the NO.1 shaft.
I.R.-S A R-40 stoper is used. 85 # air at drill.
Mucked in to 600# buckets and tramed to shaft.
Hoisted in bucket and dumped by automatic device into pocket. Keystone Drill hoist used.
Shute on pocket is drawn from underground and trammed out of tunnel to the crusher.
Compressors- two I.R. portable compressors
Small blower used to carry fresh air to 90 ft. level.
Production 60 tons in two shifts
Two shifts per day 7 to 4. & 6 to 2.
foreman 1 miner- 2 muckers-1 hoistman
1 trammer

MARCH 14.1937- Buckskin Mine Lyon Co. Nevada.

--MILL-

Flotation concentrater 440 volt -3 phase A.C. current used
Mill run 24 hours per day- three shifts
Crusher run two shifts (7 to 4 & 6 to 2)
1 mill man ,1 crusher operator.
Capacity
60 tons per 24 hours.
Heads- $8-$9
Tailings- $1.50
Feed rate 28.6# per half minute
Ratio of concentration-8.2 to 1.
Grade of concentrate 1.8 to 2.2 oz. of Au.
6% copper.
Recovery-77% to 90%
Cost of treatment- $1.50 per ton milled
Production- 30 tons of concentrates per 6 days
Concentrates are ~~h~~ trucked 10 miles to siding
Contract- $2.50 per ton @ 25¢ per ton mile
Shipped by rail to Midvale ,Utah.
Total cost for shipping- $10.50 per ton
Reagents--
(I) A.C.Co.-6% sol.of 301
Floatation Cell NO.1---20 c.c. per. min.
" " " 4---40 " " " "
" " " 7---10 " " " "
(II) 1 part pine oil to 4 parts Areofloat 50
To cell 5 & 7
(III) Na_2S- used to lighten froth
To cell NO.5- 50 to 70 c.c. of 6% sol.
Ball mill discharge 75-85% solids.
Dorr classifier discharge 25% solids-80 mesh grind(15% -200 mesh)
Feed to Kraut Flotation cells 25-28% solids.
Flow sheet on next page.