2900 0022

239
Item 22

October 1st, 1938.
(I.S.J.).

Nevada - Nye County.

LONGSTREET MINE
Or
GOLDEN LION MINE

TYPE: Gold Quartz Vein of Brecciated Rhyolite between well defined walls of Rhyolite, average width of vein, 5 ft.

LOCATION: Exactly 52 miles N.E. of Tonopah, Nev., 30 miles over Tonopah-Ely oiled highway (turn left at stone house -Stony Creek) 22 miles over fair desert road to mine. When work is being done at the mine, County Commissioners will run a blade over the road keeping it in good condition.

OWNERSHIP:

Owned by the Golden Lion Mine & Milling Co., 140 Third St., San Francisco, Calif. Principal owners of this Company are Mr. John O'Kane, Chairman (Occupation, saloon-keeper) a Mr. Allen (San Francisco brewer), Mrs. Burrows, (widow residing in Tonopah), a Mrs. Clark, also a widow and a sister of Mrs. Burrows. Mr. O'Kane and Mr. Allen control the property. Mr. Clark has been dead two or three years and was a mining promoter-operator. It seems that there has been more or less friction between the small interests of the Clark-Burrows and O'Kane-Allen. Mr. Noyes was the last superintendent in charge of the property, also watchman for a while and owns a small interest.

PROPERTY:

7 Lode Mining Claims
3 Placer Claims
Water Rights -(Whether this is a Mining Lode claim or Placer, Mr. Noyes did not know). It may be just Water Rights without specifying whether Placer or Lode Claim. He says the property consists of 11 claims, so it is to be presumed that the "Water Rights" is a claim.

DEVELOPMENT: (See Engineers' Reports).
It should be added to these reports that approximately 1000 tons of ore was stoped and mined from the upper level, just above the upper tunnel and approximately 300 ft. below the surface outlet. 500 tons of this was mined by one leasor and run over amalgam plates. According to Mr. Noyes, who was there at the time, this ore gave no results and just ran over the plates and down the tail race. The second 500 tons

was run later through the cyanide mill and a clean-up was obtained amounting to $2300.00. Still later a clean-up of classifier and tanks produced another $800.00. No royalty was ever paid on either of these clean-ups. No accurate measurement of tonnages, assays or extractions or ratio of concentration was kept or is now available.

EQUIPMENT:

(MINE)

Rails and pipe in lower level have been removed. 2 inch air pipe from lower level to upper level still in place. Ladders in good shape; chute from lower level to intermediate level in good condition; all stulls in good shape; mine ventilation fine.

(MILL)

Mill building in fair shape. Timbers, corrugated roofing and sides good. Ore bin above mill in good shape. About 15% repairs necessary to bring up to standard. Present building large enough for 200-ton flotation plant but not large enough for 200-ton cyanide plant.

EQUIPMENT IN MILL:

1 Pebble Mill - 4 ft. diam. by 20 ft. long.
1 Doerr Classifier (completely worn out)
1 Fairbanks-Morse 2-cyld. 75 H.P. semi-Diesel engine (All fittings and brass removed from above).
1 30 ft. Doerr Thickener Tank
Parts of several smaller tanks.
1 12 ft. old type Oliver Filter(in bad shape)
2 Zinc Precipitating Boxes-6 Compartment 4x4x4.

It would not be advisable to consider using any of this equipment except the tank and zinc boxes and of course the mill building. My understanding is that this does not belong to the Company but can be bought at a low figure. The main object is listing all this is the mill building, because in figuring the erection of an equipped mill, 40% of the cost is the building. This figure is from the Colorado Iron Works Co., as well as other Mill Builders in Denver.

CAMP:

Five frame houses: one three-room; one two-room; one one-room and one boarding house with large kitchen dining room and two bedrooms. There are also two cellars for provisions. Houses need about 20% repair, such as doors, windows etc. Mr.Noyes says that these buildings can be bought for $850.00 to $1,000.00 as they now stand. He is sending you pictures of the buildings as well as the property - as the camera I had with me was too small to give you a good idea of the lay-out. Mr.Noyes noted that part of these buildings as well as part of the tanks had been removed since his last visit there, so a watchman should really be placed on the property.

CAMP (Cont'd)

WATER: At the present time 20 Gals.per minute of warm water is running from a 3 in. pipe back of the boarding house. This amount can be approximately doubled by connecting to another spring of cold water near the Warm Springs. Pipe is already laid for this so the water supply is o.k.

HISTORY:

Property discovered and first development done by Mr.Longstreet; some say he was a brother of Longstreet of Civil War fame, others that he was an Indian. At any rate he married an Indian. During prohibition the mine was run as a blind for a large still which Longstreet operated for years, whiskey being sold as far West as San Francisco. The Government finally broke this up. It was probably ideal for the manufacture of whiskey on account of the Warm Springs water.

It is my guess that through this bootlegging a connection was made between Longstreet and O'Kane (a saloon-keeper) and that the latter, from time to time, put money into the mine; then O'Kane in turn contacted his friend Mr.Allen(a brewer) who also put money in, until they owned the control. I was informed that Mrs.Burrows sold this bootleg around Sacremento and was supposed to have realized a handsome profit therefrom but at the present time she is on relief. Now on top of all this, the mine was leased from time to time to various promoters of soubtful standing; the last being the ones that built the cyanide mill. No royalties were ever paid by any of these operators to the Company and they generally departed leaving debts in and around Tonopah. As a consequence, the present owners do not care to deal with promoters and, according to Mr.Noyes and from a letter which he showed me from Mr.O'kane, received while I was there, he would like very much to deal with Mr.Adams, in fact so much that Mr.Noyes offered me a cut-in of 2½% if I could swing the deal. Of course I refused, saying that I was employed by Mr.Adams but that it would help more to swing the deal if he would aid me in getting at the "rock-bottom" truth as I could not help thinking that, if this mine was so good, why had it remained idle and unworked all these years. From then on and for the following two days he helped me to the utmost of his ability.

DESCRIPTIVE GEOLOGY)
TOPOGRAPHY) (See Engineers' Reports).
ORE BODIES)

It is my impression, after going over the property with Mr.Noyes and going in the lower tunnel and all through the workings and coming out at the top, that undoubtedly Mr.Austin's report is the one to be followed accompanied by Mr.Gould's assays. I disagree with Mr.Austin's statement that the metallurgical problem "is not serious" and I am going into that, fully later. Mr.Austin also says -

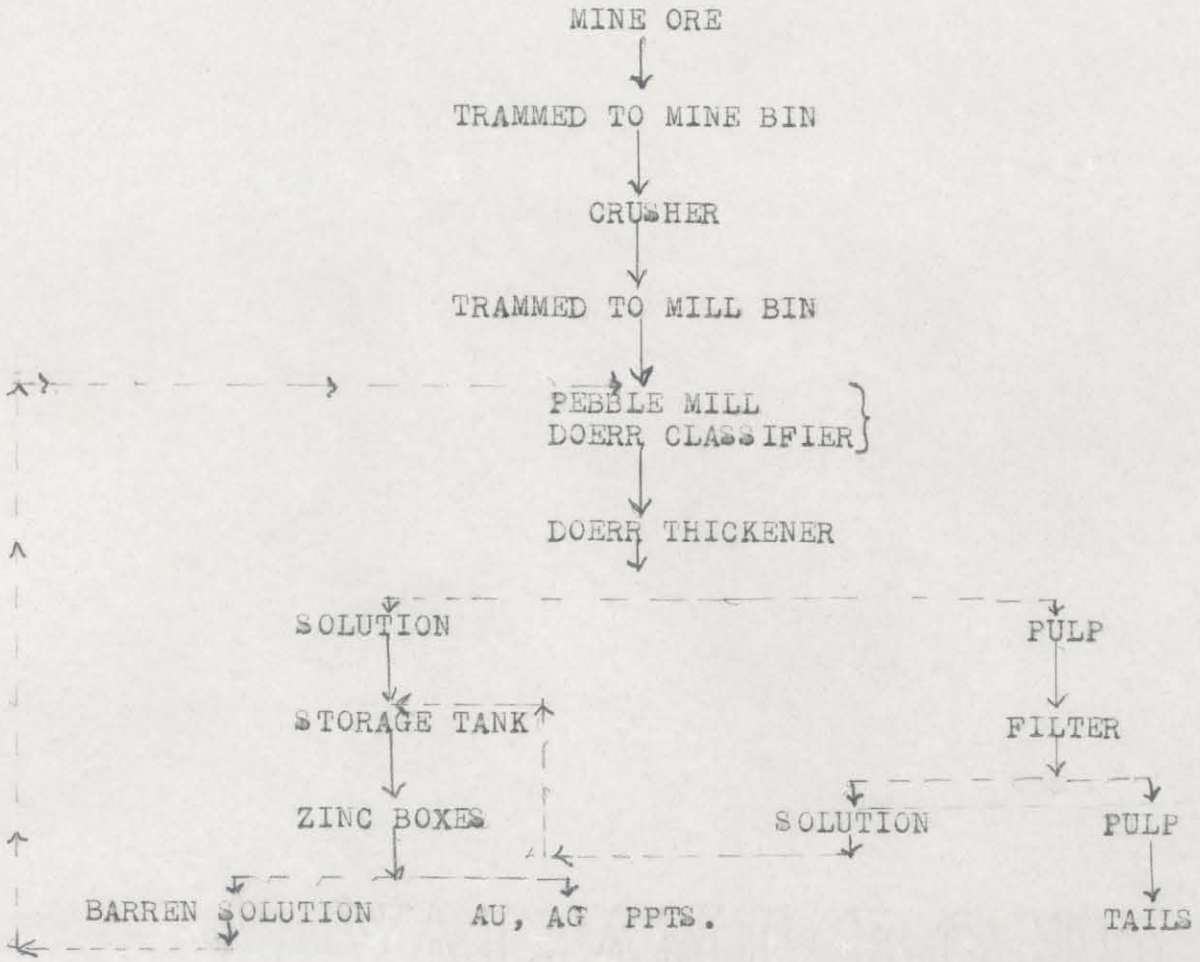
> "It is apparent that some of the early sampling was misleading and the results are far too high". He does not say why. My opinion is that the mine is very "spotty" (it bears this reputation all around Tonopah), and as a consequence the sampling might easily have been and no doubt was misleading.

So, consequently, if you take Messrs.Austin and Goulds' sampling and estimates, also their advice to re-sample the mine (in view of the fact that Gould took only twelve check samples in the first place), you cannot go wrong. There is no doubt in my mind that the 410,000 tons estimated by Butler and the 400,000 tons estimated by Hassell is high, both as to tonnage and value, but, on the other hand, Austin's 160,000 ton estimate and $6.00 value is conservative and seemingly correct. I do not mean that the sampling was in any way incorrectly taken or in any way salted except for the fact that it was incorrectly figured and perhaps too much high-grade taken. Each little block with its sample should have been figured separately rather than to have averaged the numerical values and applied them as a whole. The cuts show in the mine where the sampling was done and I believe the samples were correctly cut as they measure the width of your hand in width, two or three inches deep and an average of five feet in length.

METALLURGY:

It so happens that I learned cyaniding from the lowest job in the mill to foreman, with the Tonopah Mining Co., in their Mills at Millers,Nevada, just below Tonopah, and as a consequence, am not inexperienced when it comes to judging the Longstreet ores from a metallurgical angle. The Longstreet Cyanide Mill, as erected used the following flow-sheet:

Robert Hungerford
WW4 veteran
born abt 1895


MINE ORE
TRAMMED TO MINE BIN
CRUSHER
TRAMMED TO MILL BIN
PEBBLE MILL
DOERR CLASSIFIER
DOERR THICKENER
SOLUTION
PULP
STORAGE TANK
FILTER
ZINC BOXES
SOLUTION
PULP
BARREN SOLUTION
AU, AG PPTS.
TAILS

I consider this a very incomplete flow-sheet, leaving out, as it does, the principle step in the process viz., 48 or 72-hrs. of agitating with hot cyanide solution,the pulp to dissolve the values. The Tonopah Mining Company agitated in Pachucha tanks with live steam for periods of forty-eight to seventy-two hours before settling, decanting and filtering. After this agitation at 96 degrees Centigrade, the pulp in the Pachuchas was allowed to settle and all the clear solution was decanted off and stored in the gold storage tank; then the thickened pulp was run direct to the filter, where all the solution possible was drawn off, wash water added and the pulp washed on the filter. Then the filter cake was dried as much as possible on the filter and the cake was dropped and pumped to the dump. The bottle-neck of any cyanide operation is the filter; it is there that the water is added to the mill; it is there that the amount of cyanide used is regulated by the wash water and it is there also that the tonnage is determined, as you can get no more tonnage through the mill than your filters will discharge.

Now, you will note in all the geologists' reports that the ore from the Longstreet Mine is very "talcy". Talc does not filter very readily and makes a thin slimy, impervious cake on the filter; is hard to wash, and would naturally carry off much cyanide, consequently more dissolved values in this cyanide, thus making your cyanide loss high and your extraction low and at the same time decreasing your tonnage considerably. I distinctly remember that whenever the Tonopah Mining Company hit a small body of talc in the mine, it played hell in the mill and acted as described above. To overcome this, we added more lime in the Pachuchas to make the pulp floculent, thus adding to the settling qualities and making it more porous for filtration and thus making it easier to wash as well as a thicker cake. This, of course, added to the cost of operation.

At the Longstreet Mine you have three distinct ore zones:

Purely oxidized zone at the top, the transition zone and the sulphide zone. The ores of the sulphide zone no doubt will float and will probably give an extraction of 90% or more. The ores of the transition zone might float but I do not believe the extraction would be as high. The oxidized zone ores might float commercially but that will have to be proven by tests and it is natural to suppose that the extraction would not be as high as the other two. A somewhat similar case as this existed at the Summitville Mine here in Colorado; this flotation mill was designed for the sulphides but gave them extremely poor results when they tried to treat the ores from the oxidized and transition zones.

METALLURGY (Cont'd)

Our most modern up-to-date method, especially in the case of an isolated mine, as this is, is to make a flotation concentrate; then cyanide the concentrate and ship the bullion direct to the U.S.Mint. Studying the Longstreet Mine from a metallurgical standpoint, I have the following suggestion to make:
The mine should be re-sampled, keeping the three classes of ore separate - oxides, mixed oxides and sulphides and sulphides. Mine values should be figured according to each zone. Flotation, cyanide and combined flotation-cyanide tests made on all three classes of ore. I would suggest the American Cyanamid Company at Azuzu, Calif., to do the test work. They would make these tests for you in their laboratory on these three different classes of ore, giving you a dependable report, showing exactly what kind of a mill would be required to commercially treat these ores. I had some similar tests made for an Arizona Company at a cost of $150.00; the Cyanamid Company is naturally cheaper than anyone else as their main object is to, eventually, furnish you the cyanide and flotation reagents. They claim that their charge is to cover merely the cost of labor, reagents and assays; they also request that the mining company's metallurgist be present when these tests are made, if possible for the purpose of learning step by step, the reactions to the reagents and also for the purpose of designing the mill from the results of this work. Right here, I cannot too strongly emphasize the fact that you have a peculiar water condition at the Longstreet property and that in any class of mill that you build whether cyanide or flotation or both, you must use the Warm Spring water there. This may affect your milling operation one way or another in either cyanide or flotation. If the water has dissolved mineral salts in it detrimental to cyaniding, it could make your cyanide cost prohibitive and in a case of flotation it might be detrimental so that the zanthates and oils might not work effectively.
The milling costs as estimated by engineers' reports are placed at about $3.00 a ton. You can readily see that if a large quantity of lime had to be added to make the "talcy" ores ammenable to settling and filtration, your milling costs would immediately soar; or if the dissolved salts in the Warm Springs water, particularly magnesium salts, your cyanide consumption would increase. So what has to be done in this case is to take twenty or thirty gallons of this water to the testing plant and see that the tests are run with this water. I have known cases where mills have been built on properties where they had an abundance of ore only to find that their water contained impurities detrimental to their process and in some cases this absolutely ruined the whole operation and the property had to be dropped. You will note in all data pertaining to this property, there is no reliable metall-

urgical data, but a mill was built there, an incomplete one, I will grant, but when a company gets as far as as that, has a mill built and operating and runs 500 tons of ore through it, they generally do not close it down for lack of money, because at that stage of the game, if they have the ore(as they did in this case) they can easily borrow, if necessary, enough funds to keep it going another month or so, providing they can show a successful mill operation. That, to me, is the crux of this whole situation viz., the metallurgy which evidently did not work.
In your "E.J.W." report copied from Butler a supposed extraction of 94.5% is mentioned at a cost of about $3.00 a ton but nothing is given to substantiate this. Then he goes on to say: "However report states that flotation should be used", but nowhere is any flotation test data given, so how do we know that flotation should be used ?

REMARKS:

In your Engineers' Reports, the geology, the development and the topography are all agreed, also owing to the dip of the vein, 49 degrees, they agree that the ore can be mined cheaply. At $20.00 gold price and the low price of silver coupled with the grade of the ore, bootlegging and under-financed promoting, would account for the condition of the mine as found today and why it has been peddled for a number of years without finding a buyer.

As before mentioned, I suggest the American Cyanamid Company to make the tests, using ore from the three different zones with the Warm Spring water from the mine. An American Cyanamid Company test report is both authoritative and invaluable.

If these flotation tests prove commercially successful, then a flotation plant could be built, using the present mill building, large enough to treat 200 tons per day, for a total cost of approximately $75,000.00. This would include either bringing the power to the mine from the Nevada Electric Power Line which runs through that part of Nevada, a distance of five miles (from mine) or buying a 150 H.P. Diesel engine. This might also include the equipment for cyaniding the flotation concentrates providing the ratio of concentration is high. The higher the ratio of concentration, the less amount of concentrates there would be to cyanide.

FINANCE:

Am not sure that you care for my opinion regarding the financial deal, but looking at it from the standpoint of actual ore in sight, I would figure about as follows:

Assuming there are 160,000 tons of $6.00 ore and that it would cost $4.00 a ton to mine and mill this, this would leave $2.00 a ton profit or $320,000.00. Figuring at least $75,000.00 for mill and equipment,

and $1000.00 for re-sampling, metallurgical tests etc.,it would leave about $244,000.00 profit without counting ordinary taxes or State production taxes, nor interest on the money for a period of two and one-half years while milling this ore.

If concentrates are shipped to a Smelter, the Smelter pays you $31.80 per oz. of Gold. For silver they pay 64.64 per oz., but for only 90% of the silver content of the concentrates. If you ship direct to the U.S. Mint, they pay you at the rate of $35.00 per oz., depending upon the fineness of the gold, which in most cases is around 900 fine, so you never actually get $35.00 an ounce for your gold.

There is no doubt but that the potential value of of this mine is much greater than this, but that is where the gamble enters the picture.

Mr.Noyes informed me that Mr.O'Kane is very anxious to deal with Mr.Adams and that undoubtedly a reasonable deal can be worked out and by that I mean a few thousand cash and the balance out of royalties.

I believe that this mine is well worth re-sampling. I believe that the metallurgy can be worked out so that a successful commercial mill can be designed from the results of the tests.

From the above I believe that the price of $300,000.00 is too high considering the fact that the metallurgy is yet to be worked out. We are only presuming when we say that there is a $244,000.00 profit in sight; It maybe that; it may be higher and it might be lower all depending upon the cost of milling. It is pretty well agreed that the mining costs will be low.

Assuming that the mill test work proves that this ore can be commercially treated for around $3.00 a ton, then I should say that a maximum of $10,000.00 cash and a 10% royalty to apply on purchase price, (royalty to be paid from net Smelter liquidations or net Mint returns only,(would,I think, be a very reasonable and fair deal.

SIGNED:

J. S. James.

EXAMINATIONS AND REPORTS
REGISTERED ENGINEER

PLANS, SPECIFICATIONS
AND SURVEYS

(214)

Item

R. E. TILDEN

CIVIL AND HYDRAULIC ENGINEER
MINERAL SURVEYOR GENERAL LAND OFFICE

PHONE THORNWALL
4870

2306 WARD STREET
BERKELEY, CALIFORNIA

March,-11th,1939..

Mr. I. S. James.
Denver. Colo.

My Dear Mr, James:-

Sometime last year you went and made a partial examination of the Longstreet mine for Mr, O'Kane,evidently you were not entirely satisfied with it..

Since then, but just here of late,I have been given authority to effect a sale or get financed a fine gold property here in Calif, one that I have been after for 3 years.

Mine is located here in Tuolumne, County,out from Sonora,and I am mailing you a report,which tells about all there is to say,except,the men who were underground have said there is about 50,000 tons in the workings that will run around $10. to $15, per ton, free gold,there will also be some sulphides,this is all above the two or three lower levels that were developed by lessers who blasted the mine when they were refused a lease, so all those levels are supposed to be in place..

Then with the possibilities of this mine going on down to the great depths that others have gone to, 5,000 to 8,000 ft, makes it a mine worth going after,as it will be here for many years to come..

One can run a tunnel, (short one) in from the river side of the property and tap the shaft at about the 6th to 8th level,and still have a mill site below the tunnel, so most all the free milling ores will be stoping.

Mining and milling has heretofore cost about $2. a ton,so it is cheap work, and easy to mine.. Shaft makes very little water after it has been unwatered and dried out. The skip used to handle it all.

I have written several about the mine,but it seems like they are slow to reply,so I wont wait on any of them if I get a good offer.. One offer came from Baltimore,Md,but it was rejected,as the owners know what is in the mine, and they wont accept any old offer to work the mine on the ways some expect it to be jumped at..

Electric Power is close at hand, and so is timber,and water, also good roads, and a Ry not very far away..I have the mine signed up at $150.000. in my way of thinking,when it is rehabilitated and brushed up some,and may-be an other 100 ft sunk on the shaft incline,it can be sold for about $1.000.000. ie, if you dont take out the $50.000. tons of ore, as the drifts on this level will no doubt run over into the Consuelo veins where an entirely new property will be found, and on the same claims.

Have maps etc to send if wanted.. Let me hear from you at an early date.. I really think this mine should be sold for what I first had it at 3 years ago, $250.000. Terms will be given and good ones at that.

Yours truly,

R. E. Tilden

R.E.Tilden.