-4830 0017 — Hunt - Arnold Coll.

(25)

ITEM 24

LIFE PRESERVER PROPERTY
Summary of report by, L. B. Spencer, Mina, Nevada

Located in Tolicha Mining District, Nye County, Nevada.

About 32 miles north of Beatty and nearest railroad point, 50 miles to the south of Goldfield, there is a good road to within about 12 miles of the property.

There are three claims that are held by location, title good.

The country rock is a granite and schist, which has been intruded by rhyolite, the mineralization is wide zones of quartz, which show in widths of from 20 to 40 feet, and extend for hundreds of feet.

The values carried are mostly gold, which occurs both free and combined with iron sulphides, much of the ore is a medium grade mill ore while some is high enough to ship to a smelter.

There are two veins, the West has been developed by four shafts, all about 50 feet deep, and covering a length of about 600 feet of the vein, which outcrops for about 1,000 feet.

The East vein has been developed by a tunnel 140 feet in length.

Several of these shafts should be extended and connected to block out the ore.

There is no equipment on the property other than a couple of buildings.

There are a couple of small springs near the property, but a water supply would have to be pumped from the flats below where there is an ample supply.

It might be said that there is considerable ore developed in this mine, and a small pilot mill could be kept busy while development was carried on.

L. F. S. HOLLAND,
Mining Engineer.

1768 N. La Brea Avenue,
Hollywood, California.
June 1st, 1923.

SUMMARY OF PRELIMINARY REPORT ON MINING PROPERTIES NEAR TOLICHA PEAK, NYE CO., NEVADA.

Landmark Group.

Three unpatented claims with excellent showings of gold ore considering the small amount of development work done. The "veins" of which there are at least four, are rather ill-defined ore bodies, without definite walls, in Tertiary rhyolite-breccia. Their general strike, for the short distance is that of the major faulting of the locality, north-south (magnetic). The ore deposition may have had close connection with small cross fractures. Quartz and highly silicified contry rock are the most favorable gangue minerals, and the ore generally shows brecciation. In many instances the silification has the appearance of a segregation from the rhyolite.

The gold, associated with a little silver, occurs as residual free gold with iron oxide resulting from the weathering of marcasite and pyrite: and also in intimate association with finely disseminated iron sulphides showing little or no alteration. As the maximum depth attained in the workings is only about forty feet, with oxidation and the consequent concentration of gold still in evidence, the value in greater depth of the hypogene sulphides has yet to be demonstrated, but the probabilities appear to be that the iron sulphides will continue to be auriferous for a considering depth. A carload of ore containing 63 tons assaying 1.44 oz. gold and 1.77 oz. silver has been sent to the Tonopah Belmont custom mill for treatment, and some thirty odd tons shipped to the Selby Smelter returned 3.39 oz. gold and 8.10 oz. silver per ton. The property seems to be well worthy of more vigorous development. Recommended that the principal development shaft be sunk on the Herman vein on which there is now only a surface cut. On the surface, the Herman vein is about 49 feet east of the Badget vein, and 45 feet east of the West vein, to which crosscuts might be made from the Herman shaft.

Life Preserver Group.

Three unpatented claims, on which the principal workings, made for George Wingfield, on a while quartz vein in Rhyolite, are on the west side of a gulch following a normal fault on which there has been a considerable throw to the west. As the vein dips east, it was lost on faults in the two incline shafts, and the conditions seemed so discouraging to Wingfield that he dropped his option on the property. It appears to be plain, however, that these workings are on a dropped segment of the vein, and that if a profitable mine is to be developed, it must be on the opposite, or east, side of the gulch. The quartz in the vein shows very little mineral but it pans well. The ore is expected to be about 95% free milling.

It may cost $50,000.00 for development work to demonstrate the value of the ore on the east side sufficiently to warrant the building of a mill and providing water for it.

L. F. S. Holland,
Mining Engineer.

1768 N. La Brea Avenue,
Hollywood, California,
June 15th, 1923.

PRELIMINARY REPORT ON THE LANDMARK AND LIFE PRESERVER MINING PROPERTIES, NEAR TOLICHA PEAK, NYE COUNTY, NEVADA

Location. The properties are within a mile of each other, in an unorganized mining district, generally called Tolicha. The quartz Mountain camp is about a mile to the east, and Tolicha Peak two miles to the south-west. The Landmark camp is 16½ miles, by fair desert road, north-east of Tolicha Spur, which has been installed a short distance from Ancram on the Bullfrog Goldfield portion of the Tonapah and Tidewater Railroad. Ancram is 59 miles south of Goldfield; 90 miles south of Tonapah; 155 miles north-west of Crucero, on the Union Pacific Railroad; and 189 miles north-west of Ludlow, the connection with the Santa Fe Railroad. The total distance from the landmark mine to Los Angeles is approximately 400 miles. The best available general map of the district is that issued by the Tonapah and Tidwater R.R., a copy of which is attached to this report.

Topography. The topography of the locality is indicated in the south-west quarter of the Kawich Quadrangle of the U. S. Geological Survey topographic sheet which accompanies this report. The prevailing topography is that of a broad expanse of lowland, above which rise isolated hills and mountains. The accompanying photographs indicate this. My aneroid reading at the Landmark camp was 5775 feet above sea, and the mouth of the Landmark Tunnel 5910 feet.

Bibliography. Apparently nothing of importance has been published relating to the Tolicha district. Therehave been, however, many important publications relating to the various mining districts of Nye and adjoining counties, amongst which the following are notable:-

Nevada South of the Fortieth Parallet, Spurr,
USGS Bull. 208, South-western Nevada, Ball,USGS Bulletin 308
Tonopah, Spurr, USGS Professional paper 42
Goldfield, Ransome, USGS Professional paper 66
Bullfrog, Ransome, USGS Bulletin 407
Genesis of Tonopah Ores, Bastin, USGS Professional paper 104
Divide, Knopf, USGS Bulletin 715.

History and Production of Tolicha District. The more important claims in the Tolicha district, including the Landmark and Life Preserver groups, were located in 1917. A Mr. Harney and associates then did some development work and attempted to operate a Gobson mill on Landmark ore at Vignora's Spring, four miles south-west of the Landmark, but the capacity of the mill was so small that the attempt was abandoned. The spring is still the source of supply of domestic water for the Landmark camp. Mr. C.E. Knox and

associates have been prospecting the Landmark group since January 1923. They have recently shipped two carloads of ore as the result of their work. It is stated that previous to these shipments only three tons of ore were ever sent out for treatment. Mr. George Wingfield did some development work on the west side of the gulch traversing the Life Preserver group, but quit when the vein was cut off by faulting, as will be explained later in this report.

Geology. In the hills and mountains Tertiary rhyolites and rhyolite-breccias predominate. There are some exposures of andesite, and more recent tuffs, but they do not appear to be related to the Landmark and Life Preserver ore deposits. The plains are covered with "wash" to various depths. Trenching on the Landmark claims has generally exposed two or three feet of soil, underlain by a similar thickness of cemented debris. This cement does not show appreciable values. Adjoining the Landmark claims on the Northeast, Mr. David Llewellyn, of Round Mountain, Nevada, is sinking a shaft to locate the probable extension of the Landmark "Big Vein". At the time of my visit, this shaft was 70 feet deep, but had not yet reached bed-rock.

A major fault, with a north-south (magnetic) strike, filled with silicified breccia, crosses the Landmark No. 1 claim. It appears to continue southerly for a considerable distance and is probably responsible for the faulting on the Life Preserver vein, which will ve referred to in the description of the Life Preserver property.

Water. As above mentioned, domestic water is obtained for the camp from Vignola's Spring, four miles to the south-west. It is said to have a flow of two gallons per minute. No considerable amount of water, suitable for milling purposes, has been developed. It is by sinking wells in the plains immediately to the north of the Landmark. Failing this, water can certainly be obtained in quantity at Stonewall Mountain, 16 miles away, whence there would be a gravity flow of piping it to the mine.

THE LANDMARK PROPERTY.

This consists of three unpatented claims called Landmark, Landmark 1, and Tolicha. On them are four veins, named the "Big", the "Herman", the "Bdgett" (or "Middle"), and the "West". The veins where exposed are more or less parallel to the major north-south (magnetic) fault. Most of the mining has been done on the Badgett vein. All show slickensides along their strike. There is also some cross fracturing or faulting, but apparently with little or no through or slipping in this direction. These cross fractures, however, may possibly be closely associated with the ore deposition. Only sufficient trenching has been done to expose the veins for a short distance along their strike. The "Big" vein is opened for the greatest length - about 100 feet.

So far as present developments show, the veins are ill-defined are bodies, without definite walls, quartz and highly silicified breccia seem to be the most favorable gangue. Some of this is very hard and flinty, with the appearanceof chalcedony and opal.

Geodes and vugs, lined with small quartz crystals, are common. These, and the pits left by oxidation of small marcasite and pyrite crystals, often contain particles of free gold. More or less iron oxide, resulting from the weathering of the iron sulphides, showing little oxidation, are mixed with the oxides, even on the surface. The richness of the ore is said to be in direct proportion to the amount of sulphides showing. The sulphides are not heavy at any time, however, and probably do not average over three per cent by weight of the matrix.

The value of the deeper primary sulphides has yet to be demonstrated, but the probabilities appear to be that the sulphides will continue to be auriferous for a considerable depth.

Value of the Ore. As the gold is largely free, I have relied mainly on panning in this preliminary examination for an estimate of the value of the ore. Sixteen cut samples from various places on the Landmark property were also assayed for general information. The assay sheet is attached hereto and the samples are also described under the descriptions of the various veins. The assays do not indicate as high an average value as did either the pannings or the recent shipments of two carloads of ore. One carload of 45 tons from various places on the property, shipped to the tonopah Belmont mill for treatment, assays 1.44 oz. gold and 1.77 oz. silver per ton. The other carload, shipped ot the Selby Smelter, assats 3.39 oz. gold and 8.11 oz. silver to the ton. The operators informed me that to grade these shipments, only about 8 tons were sorted out from the total amount of ore broken.

LANDMARK VEINS.

Big Vein. This has a north-south (mag.) strike and is on, or parallel to, the major fault of the district. Three cuts expose silicified breccia for a length of 160 feet, and for a width of 8 to 10 feet. My single cut sample, 8 feet wide, (No. 16), assayed no gold or silver. Pannings indicated small values generally and high values on some narrow seams.

Herman vein. A surface cut, 5 feet deep, about 40 feet east of the Badget (or middle) vein, on which most of the mining has been done, shows hard brecciated quartz and rhyolite. The strike is north-south (magnetic) with a slight dip to the east. A cut sample, representing a width of 16 feet, assayed (No. 3) 0.20 oz. gold and 0.5 oz. silver. This sample showed some sulphides and panned well. The adjoining section, 3 feet wide, showing flinty quartz and breccia with sulphides, assayed (No. 5) 0.28 oz. gold and 0.5 oz. silver; this was a shovel sample of the material broken, which panned well. Samples 6 and 7, taken in the east breat of the Tunnell Level, may represent stringers from the Herman vein. They assayed (No. 6)0.56 oz. gold and 1.5 oz. silver for the west 5'6", and 0.26 oz. gold and 0.7 oz. silver for the east 5'6".

West Vein. A surface cut 10 ft. by 10 ft. and 4 ft. deep, 25 feet west of the Badgett workings, exposes hard silicified breccia and quartz 6 ft. to 10 ft. wide, which has a slight dip to the west. My cut sample, 6'6" wide, assayed (No. 7) 0.88 gold and 2.0 oz. silver. Eight tons of this material was included in the shipment to the Selby Smelter. The vein does not show in the tunnel below, perhaps because its west dip takes it beyond the workings. Several pannings from the surface cut showed good "colors".

Badgett (or Middle) Vein. On the surface a vein with a stride N 30 E and a dip 47 degrees west, is opened by two raises from the tunnel below. Between the two openings is an exposure of a few feet of silicified breccia which shows sulphides and pans well. The Badgett vein is reached by a shallow cross-cut tunnel, at a point 85 feet from the portal. The underground sampling is indicated on the accompanying sketch. Here the two raises have been made to connect with the surface cuts. The maximum depth below the surface is a little less than 40 feet, At the raises, the vein was sampled is sections. The west section, 4'6" wide, assayed (No. 10) 0.08 oz. gold and 1.60 oz. silver. The middle section, 4'6" wide, and 14' up from the track, assayed (No. 11) 0.10 oz. gold and 0.6 oz. sulver. The east section 5'6" wide, assayed (No. 12) 0.28 oz. gold and 0.7 oz. silver. This last section is 20 feet below the surface. It showed a little iron sulphide and quartz breccia, and it panned well. The face on the north side of the raise at a point 24 ft. below the surface, assayed (No. 13) 0.88 oz. gold and 1.2 oz. silver for a width of 8 ft.

Fifty feet along a drift, south-westerly, the vein is cut off by a fault, and no ore shows up again until the breast is reached in another fifty feet, where there are indications of ore. Opposite the south-west drift, where the vein ought to be, my sample (No. 9) showed no values. An unnamed vein in a little drift 20 ft. back from the face of the main East Drift assayed (No. 8) 0.36 oz. gold and 0.6 oz. silver for a width of 7 feet.

No R.R. now north of Beatty L.B.S

Cost of Treatment of the ore. The trucking of the two carloads from the mine to Tolicha Spur cost, on contract, $9.00 a ton, which it is hoped will be reduced for future shipments. The freight to Tonopah on ore between $30.00 and $40.00 a ton is $3.70 a ton, and the mill charge $4.50 a ton or $20.00 ore, plus 1% of the excess over $20.00, or $1.20; total $5.70. This makes the total cost excluding mining and overhead, $18.40 per ton for milling ore. The Tonopah Belmont Company pays for 91% @ 20.67 per oz. for the gold.

Trucking now done on about 10¢ a ton mi. basis L.B.S.

On the smelting ore the trucking is $9.00 per ton; Freight to Smelter is $10.70 a ton on $100.00 ore, down to $5.10 a ton on $20.00 ore; Selby treatment charges $11.00 aton on $50.00 ore, plus 10% of excess over amount, to a maximum of $17.00 a ton. This would make the total cost of $100.00 ore $34.70 without mining or overhead.

The cost of $18.40 per ton for milling ore, without mining or overhead, is especially burdensome. In the fortunate event of sufficient tonnage being developed and a suitable milling plant provided, the costs of the Landmark ore might approximate that of the Goldfield Consolidated Mines Co., whose total costs, including mining, varied from $7.00 to $13.00 per ton.

THE LIFE PRESERVER GROUP OF CLAIMS

This consists of three claims called the Life Preserve , Life Preserver No. 1, and Life Preserver No. 2. They are unpatented and they are owned by Mr. Abelman of Tonopah, and his associates.

The vein is 10 to 20 feet wide, of white quartz in rhyolite. It has a north-south (magnetic) strike, and a dip easterly of about 60 degrees. The vein has the appearance of a segregation from the rhyolite along a fault line.

The workings, made for Mr. George Wingfield while the property was under option to him, are nearly all on the west side of a gulch, and consist of two incline shafts 50 and 70 feet deep respectively, on a vein dipping east by faulted to the west. In each of the two shafts the vein was lost on faults, as is indicated in the sketch attached hereto. It seems to be plain that the west side workings are on a fallen segment containing part of the vein broken off through normal faulting, and that future development work should be on the east side of the gulch.

Mr. Abelman stated that sampling of the six cuts on the west side for Mr. Wingfield showed an average of $26.20 per ton for a width of 10 ft.; and that his own sampling of the same workings, but for a width of 20 feet, showed an average of $12.80 per ton. Samples taken by Mr. Robins, Supt. of the Tonopah Belmont mine, from the east side of the gulch, are said to have indicated a value of $9.00 per ton. My own two samples from the east side assayed, (Nos. 1 & 2) 0.20 oz. gold and 0.4 oz. silver; and 0.28 oz. gold and 1.1 oz. silver respectively for widths of 9 and 10 feet. My pannings showed fairly good colors. Very little mineral shows, and it should be about 95% free milling.

wide cuts on vein are not valiable 4 samples are safer

Recommendations. The Landmark group appears to be a good prospect worthy of more vigorous development, and the present showings to warrant the payment of the ten thousand dollar installment of purchase price dur under Mr. Know's option on 7th July next. If, after further examination, you decide to take over his option, it might be equitable to catty him for an interest in the property and charge pro rata against his interest his proportion of the expenditures; or some other equitable arrangement might be worked out agreeable to both parties. If, however, you are to put up all the money needed for development work, equipment, camp, etc. I think it would be fairer for Mr. Knox to provide for the payment of the $10,000.00 on July 7th. On this basis I feel able to recommend your venturing a reasonable sum to prove or disprove the commercial possibilities of the prospect.

While the Life Preserver group is not so attractive a prospect as the Landmark, if the terms, which are unknown to me, are sufficiently favorable, the development of the vein on the east side of the gulch may be worth consideration. In no case would I recommend more work on the west side of the Gulch, except possibly to take out ore already developed. It may cost $50,000.00 for development work and equipment to demonstrate the value of the ore on the east side sufficiently to warrant the building of a suitable mill and provide water for it.

Respectfully submitted,
L. F. S. HOLLAND
Consulting Mining Engineer.

(Note. The following are some of the qualifications of the writer of the above report:-Member of the American Institute of Mining and Metallurgical Engineers since 1900; Member of the Mining and Metallurgical Society of America; former Supt. of Mines, Smuggler Union Mining Co., Telluride, Colorado; former Field Engineer Rumboldt Smelter, Arizona; former Examining Engineer, New England Exploration Co., Boston; Consulting Engineer, Arizona Mines & Reduction Co., and Rare Metals Refining Co., etc.)

Certificate of Assay from Laboratory
of Atkin & McRae.
Assayers, Chemists & Metallurgists
518 Jewelers Exchange Building,
747 South Hill Street,
Los Angeles, Calif.

Mr. L.F.S. Holland. June 1st, 1923.

No.	Mark.	Gold per ton Ounces	Gold per ton Value	Silver per ton Ounces
1.	Life Preserver	0.20	4.00	0.4
2.	" "	0.28	5.60	1.1
3.	Herman	0.28	5.60	0.5
4.	"	0.42	8.40	0.6
5.	"	0.28	5.60	0.5
6.	Tl. Level, E. breast West Section	0.56	11.20	1.5
7.	Tl. Level, E. breast East section	0.26	5.20	0.7
8.	Tunnel Level	0.36	7.20	0.6
9.	" "	Trace		0.4
10.	" "	0.8	1.60	0.6
11.	Raise Stope	0.10	2.00	0.4
12.	" "	0.28	5.60	0.7
13.	North Raise	0.88	17.60	1.2
14.	Tunnel E. Fork	0.48	9.60	0.5
15.	Tunnel	Trace	----	none
16.	Big Vein	"	----	0.4
17.	West Vein	0.88	17.60	2.0
18.	Waste Dump	0.02	.40	0.6
19.		0.50	10.00	
20.		0.24	4.80	
21.		0.82	16.40	
22.		0.08	1.60	
23.		0.06	1.20	
24.		0.04	.80	
25.		0.02	.40	
26.		2.00	40.00	
27.		0.04	.80	
28.		0.24	4.80	

Toronto, Ontario, Canada.
July 10, 1933

Mr. L. R. Spencer,
Mina, Nevada.

My dear Spencer:

When you were in Los Angeles the last time you told me something about a partially developed prospect 1000 feet long, 600 feet proven by four 50 foot shafts. Width 5 to 18 feet, gold $7.00 to $20.00 per ton. Required for pilot mill working capital for commercial test, etc. about $10,000. Terms: Interest for this money.

The above is my recollection.

Talked this over with some parties in Chicago the other day and I believe if I can interest them in developing this along the following lines: They will put enough money into the Arnold Exploration Company, Ltd. to finance a preliminary check sampling of shafts, surface, etc. If this is satisfactory they will put in a commercial pilot mill, and if the latter proves satisfactory will increase the mill capacity to any size warranted by the operations of the pilot mill and development work.

The money put into the Exploration Company stays put - they get stock for this. For putting up the money for the pilot mill they have their money returned out of 75% of the net profit of the mill, if any, and receive a third interest in the enterprise; you and associates receive a third and Arnex one third.

For putting up additional money for a large plant they get money back out of 75% of net profits, and get a third interest, making a total of 50% for them; you and Arnex each contributing one-twelth to make up their additional one-sixth.

The final wind up of the financing of a fully equipped mine would leave:

Money 50%. You and associates 25%. Arnex 25%

An operating trust of three, each group to have one member. This would give you and I control for determination of

policy, etc. You to have a reasonable salary during construction and operation of pilot mill, and if you wanted to stay on and operate the larger mill I would use my best efforts to have you do so at a reasonable salary.

If this sounds at all interesting send me your comments and two copies of a report with map, assay chart, photos, etc. If I can get this crowd started right it will open up some good money for other things in your district.

Please air mail me this dope as I will be in New York only about ten days. Address 120 Broadway, New York.

Sincerely,

P. S. They have some great mines up in this country. I'd like to find one somewhere to match them. Maybe yours is it.