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Handing in - Hoyle

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REPORT ON THE  
SILVER PEAK GOLD MINES.

These properties are situated in the Red Mountains and Silver Peak Mining Districts, Esmeralda County, State of Nevada 45 miles south east of Candelaria, a station on the Carson and Colorado Railroad, and 482 miles by rail and stage from San Francisco.

At present there is a weekly mail between Silver Peak and the railroad station.

EXTENT OF PROPERTIES.

THE PLANT.

There is a 30 stamp gold mill, 850 pound stamps, with steam power, in good order, and a Cyanide Leaching plant of 70 tons capacity per 24 hours, and several small buildings.

The mines are located nine miles north of the mill site, and about 2,400 feet above same. Last year a wagon road was finished which connects most of the mines with the mill.

THE FOLLOWING ARE THE NAMES OF THE  
"GOLD QUARTZ CLAIMS".

NAMES OF PATENTED MINES	LOCATED IN THE MINING DISTRICT OF SILVER PEAK.
Sunrise Lode,	
Patented Feb. 8, 1878	" "
Last Chance Lode,	
Patented Feb. 8, 1878	" "
Western Soldier Lode,	
Patented Feb. 8, 1878	" "
Glory Lode,	
Patented Feb. 8, 1878	" "
Crowning Glory Lode,	
Patented Feb. 8, 1878	" "
Southern Extension of Crowning Glory Lode,	
Patented Feb. 8, 1878	" "
Drinkwater Lode,	
Patented Feb. 8, 1878	" "
Valient Lode,	
Patented Feb. 8, 1878	" "
New York Lode,	
Patented Feb. 8, 1878	" "
Chieftain Lode,	
Patented Feb. 8, 1878	" "

THE FOLLOWING ARE THE SILVER MINING CLAIMS, WHICH ARE

LOCATED 7 MILES SOUTH WEST OF THE GOLD MINES, AND IN THE SAME RANGE OF MOUNTAINS.

NAMES OF MINES	MINING DISTRICT.
Aster Lode,	Silver Peak.
Patented Feb. 8, 1878	
Homestake Lode,	
Patented Feb. 8, 1878	" "
Empire State Con. No. 1 Lode, Silver Peak & Red Mountains.	
Patented Oct. 18, 1883.	
Empire State Con. No. 3 Lode	" " " "
Patented Oct. 18, 1883.	
Empire State Con. No. 5 Lode	" " " "
Patented Oct. 18, 1883.	
Spanish Lode,	" " " "
Patented Oct. 18, 1883.	
Vulcan Lode,	" " " "
Patented Oct. 18, 1883.	
Richmond Lode,	" " " "
Patented Dec. 31, 1887.	
Defiance Lode,	" " " "
Patented Nov. 26, 1888.	"
Sentinal Lode,	" " " "
Patented Nov. 26, 1888.	
Golden Gate Lode,	" " " "
Patented Nov. 26, 1888.	
Mary Lode,	" " " "
Patented Dec. 31, 1888.	

RECEIVED A MINER'S EXAMINATION OF THE GOLD MINES\* AND IN THE STATE  
THE EXAMINING VICE MINER EXAMINER EXAMINER\* WHICH VICE

NAMES OF MINES.	MINING DISTRICT OF
	SILVER PEAK & RED MOUNTAIN.
Blair Lode,	" " " "
Patented Feb. 13, 1890.	
Crown Lode & Mill Site,	" " " "
Patented Feb. 13, 1890.	
Vanderbilt Lode,	" " " "
Patented Feb. 8, 1878.	
Silver Eagle Lode,	" " " "
Patented Feb. 8, 1878.	
Pocaticillo Lode,	" " " "
Patented Feb. 8, 1878.	
Black Warrior Lode,	" " " "
Patented Feb. 8, 1878.	

The Silver Mines were discovered by two prospectors in 1866, and were purchased by Messrs. Blair & Co., of New York in 1870. They formed a company to work the silver properties erected a milling plant etc.

At that time freight was hauled from Sacramento, California, by wagon. On account of the high price of labor etc. the company did not earn any profits.

In 1867 the Gold Mines were discovered and they were bought up by Messrs. Blair & Co., who worked them for several years, hauling the ore from the mines to Silver Peak mill site, a distance of nine miles to treat same.

We were not able to find any of the old books of the company, and could not get any reliable information as to the number of tons milled, or value of same. The company worked these mines and milled the ore for three years, then shut down the mill and did sufficient mining to perfect the titles and get United States Patent on several of them. Since that time, up to the last year the mines have been leased to outside parties on tribute, and these parties have for the last 14 years worked the several claims that contained the richest quartz.

At present there are thousands of tons of low grade quartz in sight, and practically "at grass".

#### DESCRIPTION OF THE LODES.

As shown by the croppings and the underground workings, there are two separate and distinct veins. they are known as the:

"CROWNING GLORY", and "DRINKWATER", LODES.

They lie almost parallel, and trend north west, and south east.

### THE CROWNING GLORY.

Dips to the east at an angle of 30 degrees. It has an average width of 20 feet.

### THE DRINKWATER.

Dips to the east at an angle of 35 degrees, and the underground workings show the vein to have an average width of 15 feet.

### THE DRINKWATER LODE.

At a point 100 feet from the mouth of the Drinkwater Tunnel, and about 90 feet south from it is the "Crowning Glory" Lode. The croppings of both lodes are heavy and cover the surface for several hundred feet, exposing several thousand tons of milling ore.

At first glance they appear to be one immense quartz zone, but the underground workings show two distinct veins, both having well defined foot and hanging walls, separated by a limestone stratum.

One-hundred feet south of the "Drinkwater" tunnel, the "Crowning Glory" vein trends more to the south. The matrix, or filling, of both lodes is a light grayish iron stained quartz, carrying free, or native gold, iron sulphurets, galena sulphurets, and in places arsenical sulphurets.

The gold is very finely distributed through the quartz, not only in the fractures, or seams, but in the hard quartz. No trace of copper was found in any of the tests, or assays.

The Cyanide Leaching Plant at the mill treated 70 tons of the old tailings per day, and it did close work. This was a practical working test, showing that the tailings can be successfully and economically treated by this process.

In my examination of these veins I noticed two peculiar features, first, that in both veins the fracture, or strata, of the quartz was at right angles with the trend of the lode, and in all the underground workings the vein from the hanging wall side for the first six to ten feet is the richest. It is this rich streak that the lessees have mined.

#### COUNTRY ROCK.

The general formation is limestone, limestone shale and porphyritic rock, and in places metamorphic limestone shale.

#### DRINKWATER MINE.

Located about centre of company's properties. It is 800 feet in length, by 100 feet in width.

#### DEVELOPMENTS.

There are two tunnels and several open cuts.

##### TUNNEL No. 1.

Located on south end of mine, has been driven in along the vein 356 feet. In this tunnel there are a number of up-rises, and three winzes connect it with a level below the tunnel.

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#### TUNNEL No. 2.

Located 300 feet north of tunnel No. 1, and 187 feet above same.

The tunnel, together with the middle unrise is 415 feet in length. Uprises Nos. 1, & 3, are 127 feet each, two incline winzes 50 feet each connecting with lower workings.

The vein in these workings is 20 feet in width.



AMOUNT OF ORE IN SIGHT IN THE  
DRINKWATER MINE.

Block of ore in tunnel No. 1,

300 x 50 x 14 - 10, 500 tons at \$10. - \$105,000.

Block of ore in winze No. 1,

200 x 20 x 14 - 2,800 tons, at \$15. - \$42,000.

Block of ore in two levels, winze No. 2,

300 x 12 x 60 - 10,800 tons, at \$11. - \$118,000.

Block of ore in winze No. 3,

70 x 12 x 50 - 2,100 tons, at \$9. - \$18,900.

Amount of ore in sight in first uprise, Block of ore,

115 x 14 x 93 - 7,488 tons, at \$10.50 - \$78,603.

Block of ore in sight in 2nd uprise,

97 x 14 x 85 - 5,771 tons, at \$8. - \$46,168.

Block of ore in Blacksmith winze,

127 x 15 x 95 - 9,043 tons, at \$8.50 - \$76,903.

Block of ore in upper workings, Tunnel No. 2,

300 x 295 x 15 - 66,375 tons, at \$7. - \$464,625.

Block of ore in 3rd uprise and level,

95 x 15 x 67 - 4,773 tons, at \$7.50 - \$35,797.

Block of ore in level, bottom of winze No. 3 north,

60 x 45 x 14 - 1,890 tons, at \$8.75 - \$16,537.

DIFFERENTIAL LINES  
VOLUME OF ORE IN SIGHT IN THE

TOTAL AMOUNT OF ORE IN SIGHT IN DRINKWATER MINE, AND  
VALUE OF SAME.

TONS.	VALUE.
121,543.	\$1,002,729.75

AMOUNT OF ORE IN DUMPS.

Dump No. 1,

3,000 tons, average \$4.00 per ton - \$12,000.

Dump No. 2,

3,500 tons, average \$3.50 per ton - \$12,250.

Dump No. 3,

4,000 tons, average \$3.00 per ton - \$12,000.

### CROWNING GLORY MINE.

Located abot centre of company's properties, and over the "Crown Claim". (see maps) They are practically one property, and in measuring on the workings and sampling the ore bodies we have treated these two claims as one. They are 800 feet in length, by 240 feet in width.

There are about 2,000 <sup>feet</sup> of underground workings in this property. The vein has an average width of 20 feet, it trends north west, and south east, and pitches, or dips, to the east at an angle of 35 degrees.

The hanging wall is limestone shale, foot wall, limestone

### DEVELOPMENT.

There are five tunnels.

#### TUNNEL No. 1,

Located 60 feet south of the "Drinkwater" tunnel and is 170 feet in length, run in the vein. A number of cross-outs and uprisers in the vein have been made. From five to eight feet of the vein, next to the hanging wall, has been mined out in these workings. The same peculiar feature of these two great lodes, see in all the other openings exist there. The richest ore is found next to the hanging wall, and everywhere possible the lessees have mined it out.

### ORE IN SIGHT.

In the tunnel proper there is a block of ore,

180 x 15 x 65 - 8,775 tons will average \$7. \$61,425.

Blocks of ore in the north cross-cut and uprise,

70 x 14 x 50 - 2,450 tons, will average \$6. - \$14,700.

South cross-cut and uprise No. 1,

Block of ore,

90 x 14 x 73 - 4,599 tons, at \$7. - \$32,193.

South cross-cut No. 2,

Block of ore,

83 x 12 x 67 - 3,336 tons, at \$8. - \$26,688.

Tunnel No. 2,

Located 97 feet south of tunnel No. 1, and 115 feet above same. It is 125 feet in length; three uprisings in the vein.

Block of ore in tunnel,

110 x 100 x 14 - 7,700 tons, at \$6.50 per ton, - \$50,050.

Block of ore in the uprise,

87 x 15 x 100 - 6,525 tons, at \$5. per ton, - \$32,625.

Tunnel No. 3,

Located 150 feet south of tunnel No. 2, and about 90 feet lower. It has been run in the vein 117 feet. Four cross-cuts, levels, and uprisings 70 and 60 feet in length. Six feet in width of the vein, next to the hanging wall, is stoped out from floor of tunnel up 65 feet. There is a block of ore in cross-cuts Nos. 1 & 2 and the uprisings.

70 x 14 x 58 - 2,842 tons, at \$7. per ton, - \$19,894.

Blocks of ore in cross-cuts Nos. 3, 4, & 5 of the uprisings,

70 x 12 x 67 - 2,814 tons, at \$7. - \$19,698.

Tunnel No. 4,

Located 200 feet south of tunnel No. 3. It is 161 feet in length. Cross-cut in face 25 feet, shows the vein to be 25 feet wide. Uprise 67 feet, and 6 feet of vein stoped out for 100 feet in length.

There is a block of ore here,

170 x 90 x 18 - 13,770 tons, at \$6. per ton - \$82,620.

Tunnel No. 5,

Located 197 feet south of tunnel No. 4, and on same level as tunnel No. 1. It is 197 feet in length run in on the vein. Several cross-cuts show the vein to be 25 feet in width. Six feet of the vein has been stoped out up 65 feet, and 125 feet in length.

There is a block of ore in these workings,

200 x 75 x 18 feet - 13,500 tons, at \$6.50 - \$87,750.

There is a large open out on south end of mine called "Bridge Workings". The vein has been quarried out here for 200 feet in length. At this point the vein is 40 feet in width. Several short cross-cut tunnels have been run in the face of these openings.

There is a block of ore here,

200 x 100 x 30 - 30,000 tons, at \$5.50 - \$165,000.

Total amount of ore in sight, and value of same,

Tons, 96,311.

Value, \$770,488.

PROPERTY NO. 4  
PROPERTY NO. 3  
PROPERTY NO. 2  
PROPERTY NO. 1

#### EXTENSION OF CROWNING GLORY.

Lies south of the "Crowning Glory" mine. It is 200 feet in length, by 175 in width. This claim is a part of the "Defiance", in fact, practically one property.

"The Defiance" location is about 1,500 feet in length, by 600 feet in width, (see maps) and covers a portion of the "Drinkwater" vein.

#### DEVELOPMENTS.

A tunnel located on north end of claim has been driven in and along the vein 95 feet. In the face of this tunnel there is a cross-cut showing the vein to be 8 feet wide.

Two one-hundred pound samples taken from this point gave an average assay of \$5. per ton. There is very little ore in sight here, but the vein is strong and well defined, showing foot and hanging walls with good indications.

FROM DEPOSIT OF THE "CROWNING GLORY" LODE. IF IT IS 300 FEET  
EXTENSION OF CROWNING GLORY.

#### BLAIR CLAIM.

Located south of "Crowning Glory", and parallel with same. It is about 1,500 feet in length, by 600 feet in width. It covers about 600 feet of the "Crowning Glory" lode.

#### DEVELOPMENTS.

One tunnel run in on the vein 117 feet. Several cross-cuts in tunnel show the vein to be 25 feet in width. There are a number of open cuts in the vein; samples from all of these crushed and panned show free gold.

There is a block of ore in this tunnel,

120 x 20 x 50 - 6,000 tons, at \$6. per ton - \$36,000.

#### GLORY CLAIM.

Is located Diagonally across the surface and about the centre of the "Difiance" and "Banger" claims. It is about 100 feet in width, and 800 feet in length, and covers about 500 feet of the "Drinkwater" lode.

#### DEVELOPMENTS.

Several open cuts have been run across the vein, and one tunnel 65 feet in length run in on the vein. This working shows the vein to be 15 feet in width, but irregular; no defined foot or hanging wall.

Three samples taken from this tunnel gave an average assay of \$7.50 per ton gold. There is not sufficient development on this claim to show any ore in sight worth mentioning.

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SHAFT No. 3.

Located about 300 feet from shaft No. 1. It is 75 feet in depth. Level driven to the south. The vein shows a width of 11 feet, well defined foot and hanging walls. Five samples of this ore gave an average assay of \$16.90.

There is a block of ore in these workings,

80 x 10 x 100 - 4,000 tons, at \$15.70 per ton - \$62,800.

Six tests made from 500 pounds of quartz, taken from the several open cuts, gave a result of \$12. per ton gold. This is the only claim belonging to the company where rich ore was found that has not been gouged out by the lessees during the last 15 years. The reason for that is, that there is no road up to the mine, and the ore must be sacked, and packed on mule-back to the road, and more than one-third of the value of the ore being in sulphurets, the tributers, or lessees, getting only a percentage of the free gold, or gold caught by amalgamation, they could not make it pay.

At present the "Western Soldier" contains more high grade ore in sight than any of the other properties, and the indications are, that the ore bodies will continue in depth.

TOTAL No. OF TONS, 12,000.

VALUE, \$272,760.

A wagon, or tram, road connecting this property with the others can be built for less than \$5,000.

IN 1911. TRACY SENT TO THE ROOF. TWO LOTS BUILT & ATGFP.  
LOCATED ABOUT 200 FEET FROM SURF. NO. 1. IS TO BE LOOF  
SHALL NO. 2.

#### LAST CHANCE CLAIM.

Located on south eastern part on company's property. It is 100 feet in width, and 1,000 feet in length. There are several open cuts on the vein, one 40 foot tunnel runs across the vein formation. These working show the vein filling to be quartz, stratified with lime shale. Width of vein matter 9 feet. Samples taken across the vein give an average of \$2.92 in free gold, and \$2.05 in sulphurets.

There is a streak of quartz next to hanging wall 9 inches in width, that assays \$25. in gold. We found two Mexicans working at this point taking out ore on lease, or tribute.

There are not sufficient openings, or developments, here to show up any ore worth mentioning.

#### APEX CLAIM.

Located on the south end of company's properties. It is 1,500 feet, by 600 feet. It covers a portion of both the "Western Soldier" and "Last Chance" ground.

Several surface cuts have been made across the vein formation, but no ore in sight.

The "Cannon" and "Sunrise" claims are 1,500 feet by 600 feet each.

These locations have only sufficient work done on them to hold title.

There is no ore in sight in any of them.

NEW YORK CLAIM.

Located north west of the "Crowning Glory" mine. It is 400 feet in length, and 100 feet in width. This claim is located over the south east portion of the "Sentinal" claim, and we treat these two as one property. They cover a portion of the "Crowning Glory" lode.

DEVELOPMENTS.

Are all on the "New York" claim. There are two short tunnels run in on the vein.

TUNNEL No. 1,

Is 75 feet in length, cross-cut in the face and uprise made 61 feet.

About 20 tons of ore stoped out. The vein is 10 feet wide in the openings.

TUNNEL No. 2,

Located 95 feet above tunnel No. 1, and 65 feet in length. Vein 10 feet wide. There is about 2,000 tons of ore here that assays \$10.15 per ton. The vein is strong and well defined, showing large outcroppings from the "Crowning Glory" ground to this property.

...of the "Crowning Glory" claim.  
...of the "Crowning Glory" claim. If it  
...of the "Crowning Glory" claim.

#### THE NEVADA AND GOLDEN GATE.

Locations lie north west of the "Crowning Glory". There are a number of open cuts on the surface. No ore in sight.

The "Duplex", "Brooklyn" and "Chieftain" locations join the "Sentinal" claim on the north west. A few open cuts have been made to trace the lode. No ore in sight.

#### GOLDEN GATE CLAIM.

This property lies north, and parallel with the "Drinkwater" mine. It is 1,500 feet in length, by 800 feet in width and about one-half of it covers the "Drinkwater" lode.

#### DEVELOPMENTS.

Consist of a tunnel 290 feet in length, known as the "Hickey Tunnel", and one shaft 106 feet in depth.

The shaft is located in the south end of the claim, 325 feet south east from the mouth of the "Drinkwater" tunnel, and about 100 feet below that tunnel. It is 106 feet in depth, and is the deepest working of any of the mines, cuts through the "Drinkwater" vein about 97 feet from the surface. A level in the bottom of the shaft has been run north and south 30 feet each way on the vein. The vein in this working is 12 feet in width, showing well defined foot and hanging wall. The shaft was sunk for the purpose of proving the vein at this depth, and for ventilation of the lower tunnel. Several one-hundred pound samples of ore taken from across the vein in the bottom of the shaft gave an average assay of \$6.28.

The tunnel is located about 500 feet north east of this shaft, and 112 feet lower. It is now 205 feet in length, and when finished will intersect this shaft, and cut the "Drinkwater" vein at a depth of 112 feet below the "Drinkwater Tunnel" and give about 400 feet of backs.

I advised the owners to continue driving this tunnel, connect with the shaft for ventilation, then on and along the vein and get under the old working in the "Drinkwater Tunnel" as soon as possible. This will give them from 400 to 450 feet of backs for stoping. It is the only work in any of the properties that has been done with a view of their systematic development, and it goes a long way in proving the continuation of the "Drinkwater" lode.

In the future this tunnel will be one of the main working tunnels of the mines.

At a point 100 feet in the "Drinkwater Tunnel", and from the mouth of same, the two veins, that is the "Crowning Glory" lode and the "Drinkwater" lode are only about 90 feet apart.

When this tunnel reaches that point a cross-cut can be run and intersect the "Crowning Glory" lode at a depth of about 450 feet, and a great portion of the "Crowning Glory" lode can be worked in this manner, and thousands of tons of ore stoped and handled through this tunnel.

# ESTIMATE.

## ORE IN SIGHT IN MINES AND VALUE.

	TONS OF ORE.	VALUE PER TON.	TOTAL VALUE.
New York	2,000	\$ 9.	\$ 18,000. -
Western Soldier	12,000	22.73	272,760.
Drinkwater	121,543	8.25	1,002,729.75
Crowning Glory	96,311	8.	770,488.
Blair	6,000	6.	36,000.
	237,854		\$ 2,099,977.75

Average value of all the ore in mines \$8.82.-15/16

Number of tons in place, and exposed on surface, from bridge workings, to Loco tunnel, a distance of 500 feet, by 1,000 feet; 100,000 tons, average value \$6.00 per ton, \$600,000.

# ESTIMATE.

## VALUE OF ORE IN DUMPS.

	TONS OF ORE.	VALUE PER TON.	TOTAL VALUE.
Dump No. 1,	3,000	\$4.	\$12,000.
" "	2, 3,500	3.50	12,250.
" "	3, 4,000	3.	12,000.
	10,500		\$36,250.

## TOTAL TONNAGE OF ORE AND VALUE OF SAME.

In sight in mines	237,854 tons	at \$8.82 per ton	- \$2,099,977.75
On surface	100,000	" " 6.00 "	600,000.
" Dumps	10,500	" "	36,250.
	348,354		\$2,736,227.75

## FACILITIES.

### THE FACILITIES FOR MINING AND MILLING THE ORE.

The climate both winter and summer is such that the properties can be worked all the year round. There is very little rain fall, and never more than six inches of snow at the mine.

The mines will require no pumping machinery for years to come. The history of deep mining in this part of Nevada, located as these mines are, 2,400 feet above the table lands is, that several mines have been sunk 1,100 feet in depth, and no water encountered.

## WATER.

The nearest water for milling purposes is nine miles from the mines, and 2,400 feet lower. This water comes from a salt marsh, and only a limited supply can be had.

There is a small fresh water spring carrying about 2 miner's inches eight miles from the mines. This water is at present carted to the mines for domestic purposes. If the mines are ever worked on a large scale, the water for mining and milling purposes will have to be brought from Indian creek, in the White Mountains, a distance of about 36 miles, by pipe line.

These Mountains are about 13,000 feet elevation, and covered with snow all the year round, which affords abundance of water at all times.

#### FUEL.

Wood, is scarce. There is a limited supply of wood for fuel within eight or nine miles of the mines. At present this wood costs, delivered at the mine, \$9. per cord, but if a large steam mill was erected and running, all the wood accessible within a radius of 20 miles would be consumed within two years and would cost not less than \$15. per cord.

#### TIMBER.

Timber, at the present time, for building and mining purposes, costs delivered at mine \$45. per thousand feet, board measure.

#### FREIGHT.

Freight from San Francisco, (the supply point) to "Silver Peak" mines, is \$50 per ton.

#### LABOR.

First-class miner's wages \$3. per day; top men \$2.50 per day.



#### EXPLANATION.

In reading this report and referring to the maps, it will be noticed that many of the claims overlap each other, or are located across one another.

The United States Mining Laws allow 1,500 feet in length by 300 feet in width; 300 feet on each side of centre of lode as a full mining claim. All claims must be same width at both ends. It often happens in locating claims that the out-crop is not well defined, or the contour would throw the apex of the lode off of a portion of the first location; then in order to prevent disputes, or loss of part of vein, other locations are made at once. The owner of a mine is allowed to follow his vein, or lode, from the apex down as deep as it is possible to mine. In this case the locations that overlap were to prevent future litigation.

In giving the value of the several ore bodies, we have omitted the fractional part of a Dollar, where it was under twenty (20) cents, for example, if an assay shows \$10.20 per ton, it is called \$10.00 per ton. My reason for estimating the value of ore to be mined and milled in the future, at \$8. per ton, is, that the ore now in sight will mill \$8.

Considering that practically all the high grade ore has been mined out in these workings, with the exception of the "Western Soldier", it is safe to believe that the same rich pay streak described in this report will continue in depth, but I always base my calculations on the value of ore actually in sight, and calculate 20 cubic feet of ore in place, to the ton of 2,000 lbs. A MINER'S INCH, is a flow of about  $1 \frac{1}{2}$  cubic feet of water per minute, or equivalent to 17,000 gal. per 24 hours.

SUGGESTIONS FOR THE FUTURE WORKING OF THE MINES, AND THE  
MILLING OF THE ORE.

For the development of the mines, would suggest continuing the driving of the "Hickey Tunnel" until it reaches the point mentioned above, would erect a hoist and continue sinking so as to prove the "Drinkwater" vein in depth at that point, start tunnel 200 feet below the present workings of the "Western Soldier" so as to cut the vein and stope out the ore from that level to the surface. This would give 800 feet of the vein in length, and over 300 feet of backs, would continue the "Drinkwater" Tunnels, Nos. 1, & 2, on and along the vein, and every 100 feet make an uprise from tunnel No. 1, to tunnel No. 2, and from tunnel No. 2 to the surface for stopping and ventilation. Would drive two tunnels in the "Crowning Glory" mine, locate tunnel No. 1, on a level with the "Bridge Workings" locate tunnel No. 2, one hundred feet above tunnel No. 1, drive them in and along the vein, and every 100 feet make uprisers as in the manner of the "Drinkwater" tunnels. When this work is fairly under way, and with the ore that is now practically "at grass" a 300 stamp mill, crushing 3 tons per stamp per day could be kept busy.

For the next two or three years would confine all the developments to the ground referred to above, and the "Western Soldier" mine.

On account of the great scarcity of fuel and water, there is but one practical way to work these mines, and economically treat the ores, and that is, to secure the Indian Creek water rights, in the White Mountains, build a pipeline from the White Mountains to the Mines that will deliver

at the mines 100 miners' inches. This will furnish abundance of water for all purposes.

This stream carries in the dryest season about 600 miners' inches of water, and has a fall, within a distance of 4 miles of 1,500 feet. Would use this pressure for generating electric power, and conveying same to the mine; would build a 300 (900 lbs.) stamp milling plant with double system of rock crushers, concentrators, leaching plant, machinery for power drills, machine shop, blacksmith shop, houses for miners and mill men, store rooms, etc. at the mines.

I estimate as per figures enclosed herewith, that this will cost about \$900,000.

If such a plant as suggested, is created, the ore could be mined and milled on the ground at a cost not to exceed \$4. per ton, and the properties can be made to pay an annual dividend of 20% on a capitalization of \$5,000,000.00 and leave \$80,000.00 for reserve fund..

COST OF MINING AND MILLING ORES WITH A PLANT AS  
SUGGESTED IN THIS REPORT.

COST OF MINING PER TON.

Labor-----	\$1.25 per ton
Timber-----	.65 " "
Powder, Steel, Lights, etc.-----	.55 " "
Superintendent-----	. 5 " "

Total \$2.50 per ton

900 tons per day, at \$2.50 per ton-----	\$ 2,250.	per day
270,000 tons per year (300 working days)	675,000.	" year

COST OF MILLING AND TREATING ORE PER TON.

Depreciation of Milling and Electric Plant-----	.25 per ton
" " " " " " " " Pipe line-----	. 3 " "
Insurance on Plant-----	.10 " "
Labor in mills and Leaching Plant-----	.42 " "
Supplies, Quicksilver, Oil, Cyanide, Zinc, Belting, etc..	.60 " "
Express on Bullion from mines to San Francisco---	. 4 " "
Superintendent, Foreman, Bookkeepers, Assayers---	. 8 " "

Total \$1.50 per ton

900 tons of ore per day, at \$1.50 per ton----	\$ 1,350.	per day
270,000 tons per year, at \$1.50 per ton-----	405,000.	" year

SUMMARY.

TOTAL COST MINING AND MILLING PER TON.

\$4.00 per ton-----	\$ 3,600.	per day
or per year-----	1,080,000.	

MADE UP AS FOLLOWS.

Cost Mining 270,000 tons per year-----	\$675,000.
" " Milling 270,000 " " "	405,000.
Total	\$1,080,000.

270,000 tons of ore, milling \$8. per ton-----	\$2,160,000.00
Deduct for Mining, Milling, etc-----	1,080,000.00
Leaves a profit per year of	\$1,080,000.00

In conclusion will say, I consider the "Silver Peak Gold Mines" very valuable properties; they fully justify the expenditure of the amount recommended for developing, opening out, erection of plant, etc.

The immense ore bodies uncovered in the present developments, great size of lodes and character of same, give every indication of continuing to great depths. In my judgment these mines will furnish ore to keep a 300 stamp mill busy for the next 20 years.

(Signed)

Alexander M. Womble, M. E.