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REPORT ON
THE AUBURN MINE

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Rose Creek

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AUBURN MINE

INTRODUCTION:

In the investigation of old mines a number of questions arise: Was this an operating mine or just a prospect or promotion? If it can be established that the mine actually operated, why was it closed down? What was the nature of the ore bodies mined, and might additional ones be found?

The purpose of this report is to answer these questions in regard to the Auburn Mine and in doing so give evidence to suggest there may be ore of sufficient tonnage and grade to support a mill of 150 to 250 tons per day.

PROPERTY AND LOCATION:

The Auburn property consists of 16¹/₂ claims. Five of these are patented with the taxes paid up. The others are nine located lode claims and two located placer claims with assessment done through August 31, 1969. These claims consist of the following and are shown on Map I:

PATENTED CLAIMS

Auburn Lode	#8098
Paine Lode	#8098
Silver State Lode	#8098
Sierra Lode	#6937
Auburn North Extension Lode	#6944

LOCATED UNPATENTED CLAIMS

Sierra	
Sierra	#2
Sierra	#3
Auburn	#2

LOCATED UNPATENTED CLAIMS: (continued)

Auburn #3

Auburn #4

Auburn #5

Last Chance

Last Chance #2

LOCATED UNPATENTED PLACER CLAIMS

Whispering Kid

Whispering Kid #2

These claims are located in Sec. 1, T34N-R36E, and in Sec. 6, T34N-R37E in Pershing Co., Nevada. The property can be reached from Winnemucca by going west on Highway 80 about 8 miles then south on a county road up Grass Valley about 8 miles and turning west up the Mountain road to the old radar station about 2 miles to the property. It can also be reached from Mill City on Highway 80 by turning off on the Dun Creek road and following this road up Dun Creek about 11 miles to the property. The property is in the East Range of mountains and is at an elevation of about 6,000 feet. (See map II)

In the past enough water was developed from the mine operations and a spring in the Valley on the east side hill to operate a 50 ton mill. Since this operation the B. L. M. drilled a well at about the south west corner of the property for stock watering that is currently producing. There seems little question but that enough water for a 150 to 250 ton per day mill can be developed in the area.

There is a Siding on the Southern Pacific Railroad about 12 miles toward Winnemucca. Small stores and equipment can be obtained at Winnemucca.

PAST HISTORY:

The Auburn was an operating mine. It was discovered in 1874. From 1874 through 1890, \$250,000 was recovered (Vanderburg). Since that time, and especially in the 1930's after the price of gold increased, it has been operated on a small scale. The early records are lost, but shipping records of the '30's are available and copies are included in the back of this report.

Clarence Basso of Lovelock, Nevada is the present underling owner. He acquired the property from the original owners for whom he had worked as a miner. Being a former miner, and presently operating a "Rock Shop", along with his wife, he knows mineral and can give first hand information regarding workings not presently accessible.

Work by John Heizer of Reno in the 1950's was done to develop some placer tungsten. Several small shipments were made. Some fifty test pits were dug at that time.

GEOLOGY - REGIONAL:

The regional geology is best shown on the Geologic Map of the Winnemucca Quadrangle, Nevada by Ferguson, Miller and Roberts, 1951.

The mine is located on both sides of what I have called the Auburn Fault. This fault separates the younger Grass Valley formation from the older Natchez Pass formation to the West.

The Natchez Pass formation is a dolomite and limestone series that regionally strikes east-west and dips north. The Grass Valley formation is a series of shale, phillite and some quartzite that regionally strikes nearly north-south and dips to the west.

Several other mines were found along this fault.

GEOLOGY - CLAIM AREA:

As stated above the mine is located on both sides of the Auburn Fault. The ore bodies are of three, possibly four types. These consist of 1) gold-silver-quartz veins in the Grass Valley formation that parallel the Auburn fault. 2) Silver-gold-lead-quartz veins in the Natchez Pass formation that generally strike in a northwesterly direction. 3) Quartz-^{Scheelite}schuete in the veins in the Natchez Pass formation, and 4) Disseminated ^{Scheelite}schuete in zones in the Natchez Pass formation that is probably the source of the placer tungsten.

Detailed work especially on the veins in the Natchez Pass formation may show the silver-gold-lead-quartz veins are in two sets both striking in a northwesterly direction, but one more northerly than the other. The intersection of these veins may be the reason for the highgrade ore bodies.

The ore bodies are wide lenses 2 to 4 feet wide along the vein. The old method of mining consisted of finding a vein and following it until it widened ^{or} out, then mining the ore body. As a result the ore bodies found were mined out. However no exploration work was done in advance of mining. The ore bodies mined were from 100 to 200 feet long and the Winnemucca Quadrangle map reports mining from the surface to a depth of 200 feet.

There is no reason why additional ore lenses will not be found along the strike and the limited work in depth leaves the possibilities of additional ore bodies to be found in depth as well as the extensions of the old ore bodies.

The deepest workings are now full of water, indicated values of 12' of \$113.00 ore in 1961. (Maps)

The silver-gold-lead-veins in the Natchez Pass formation were mined in essentially three ore bodies, the Rawland, Windless, and Old Timer. Samples of the Rawland vein indicate 2 feet .105 oz. gold, 21.0 oz. silver, and 3 feet of .045 oz. gold and 9.0 oz. silver. Samples of the dump from the Windless tunnel indicate 60.5 oz. silver, .40 oz. gold (picked) and general 4.8 oz. silver and .2 oz. gold. The Old Timers ore body was the most extensive operation of this group however, it was badly caved and did not permit resampling at this time. A possible extension of the Old Timers ore was uncovered in recent trench work and the ran 2' of 11.0 oz. silver and .1 oz. gold.

In 1968 the present holders of the property decided to do some trench work as indicated on map 5. A number of veins were uncovered. One such vein is mentioned above as being related to the Old Timers. Another found in the trench 3 as in a vein 3 feet wide running 26.8 oz. of silver and .1 oz. gold with 5.3 oz. lead. This may be related to Rawland.

Several wide calcite veins with dark inclusions that were thought to be silver were sampled but found to be without gold or silver. These are in trenches of 7 and 8. In the

Winnemucca Quadrangle Map it is stated that gold and silver in the Placier deposits that are found in Dun Glen, Rockhill, Willow, Spaulding, and other canyons in the East Range are from the Calcite and quartz veins. These veins in trenches 7 and 8 should be worth more exploration.

All of these trenches were chip sampled for geochemical results. These were run for gold, silver, lead and tungsten. Four samples taken at random in the area but away from known mineralization were used for background. These indicate the background should be in the order of -.1 ppm gold 1.5ppm silver, 60ppm lead, and 15ppm tungsten.

Using this information there appeared to be no obvious anomalous gold values. There is an area some 600 feet by 300 feet with silver values above 1.5ppm up to 11ppm^{and} higher if an obvious vein within this area is considered. This area not only includes the veins so far uncovered, but also includes a larger area and has some additional isolated but adjacent areas.

The gold-silver-quartz veins in the Grass Valley formation were worked in several ore shoots in veins parallel to the Auburn Fault. The Auburn Fault is exposed in the Blacksmith and Badger tunnel but is not mineralized. Practically all of the old workings where the rich ore was taken out are badly caved and are not accessible to resample. The analyses shown on map 4 are from C. G. Burton 1961 and Montgomery 1939, and include a few recent samples.

All of the geochemical chip samples in the workings showed above background values in gold and silver as might be expected.

The old stopes indicate a vein width where mined of 2 feet to 4 feet and 100 to 150 feet in length. There appears to be two parallel veins with a number of splits. The more easterly vein was mined out only about 60 feet vertically. The more westerly vein was mined for some 180 feet vertically. The lower 90 feet was done from a Winze in the Blacksmith Tunnel and is presently filled with water. The old maps indicate a vein 12 inches wide that runs 1.7 oz. gold and about .75 oz. silver.

A North - South basic altered dike cuts through the area of these workings and the story goes the ore was higher grade near this dike. A similar dike cuts the westside veins and my samples indicate the silver to be up to 11 oz. in this area. A third such dike was uncovered in trenches 7, 8, and 9.

TUNGSTON:

Except for some trial shipments there has been no actual mining ^{of} tungsten. Some of the quartz veins in the Natchez Pass formation contain large crystals of ^{scheelite} ~~schuete~~. In addition the black light examination and the geochemical samples indicate there possibly may be beds within the limestone that contain disseminated scheelits although much may be powlliete. This may be the source of the placer tungston found in the small valley to the west of the mine workings. Some 60 test pits where in this area and the results have been promised me by John Heizer who did the work. When the information is obtained it will be included in the appendix of this report.

The geochemical sampling did indicate several areas of above average tungsten and these areas, shown on the map, should be further investigated. None of the geochemical samples were of economic grade.

EXTENSIONS OF ORE VEINS:

Along the general strike of the Auburn and related structures there are several old mines to the south. These are the Lang Syne and the Chafey and a number of old prospects and pits. On the Auburn to the north of the described workings there are several adits not mapped. These indicate considerable mineralization along these structures that need further study. The old survey notes of 1881 state³ shafts A., B., and C were on the vein intersected by the tunnel.

CONCLUSIONS:

The questions brought up in the introduction can be favorably answered as follows: The Auburn Mine was an operating mine. Although the early records are lost, it has been stated in reliable literature that the mine produced \$250,000 in 1879-1890. The records of the small more recent shipments made in the 1930's are available and indicate about 138 tons were mined and had a value of 2.96 oz. gold and 7.26 oz. of silver for a value of about \$16,000 at today's price of \$35 and \$2.00 for gold and silver.

The early miners did little if any exploration ahead so when the ore in sight was mined out the mine closed down.

For this reason there is little if any ore in sight but good reason to believe additional ore bodies will be found along the strike. Although mining operation were carried on from the top of the hill down to a depth of 200 feet only a little over 150 feet on the vein was mined. There is good reason to believe the ore bodies mined in the past will continue in depth and that additional ore bodies will also be found.

There are no ore reserves proven and therefore not enough information to tell if the Auburn could support a 150 to 250 ton per day mill , but there is enough ground, either extensions along the strike or down dip of known veins, to contain enough tons to support a 200 ton per day mill if further exploration proves the grade is present.

RECOMMENDATIONS:

The present geochemical work and old working has given a target for future exploration work in the area west of the Auburn fault. I would recommend a similar survey in the area east of the fault. After the above is done then a diamond drilling program is recommended for both area some what as suggested on map 3, but subject to the influence of the above geochemical results.

I would map the old workings to the north and possibly run geochemical samples around these. A hole or two should be drilled in this area if warranted.

AUBURN MINE SHIPMENT

There is no record of the early shipments. In 1933 and '34 after the price of gold went up to \$35/oz. some high grade shipment of limited amount were shipped directly to U S S and R, Utah. These are tabulated below the value at todays prices is also noted.

<u>DATE</u>	<u>AMOUNT</u>	<u>OZ. GOLD/TON</u>	<u>OZ. SILVER/TON</u>
1933	1512#	25.20	58.75
	34,640#	2.77	7.15
	48,100#	.50	1.8
	13,128#	3.68	5.7
	<u>68,640#</u>	<u>.735</u>	<u>2.3</u>
	166,020	1.33	3.95
1934	41,716	2.50	2.85
	42,020	3.57	5.0
	493	13.13	260.67
	26,547	3.04	27.95
	<u>282.5</u>	<u>74.16</u>	<u>55.53</u>
	111,058.5	5.41	12.21
Total	217,078.5	2.96	7.26
	138.5 Tons		

at todays price - - \$16,497.00