

REPORT ON THE CORNUCOPIA GROUP OF MINES.
AND THE LEOPARD MINE.
by, Edward Peacock. E.M.

Claims.-

The Cornucopia group of mining claims comprises the following unpatented lode mining claims: Daisy, Boston, Montana, Ben Hur, Santa Rita, Mohawk, Sioux, Colorado, Batchelor, Mayflower, Yampa and Victor ~~xxx~~ claims. Each being practically 600 x 1500 ft, or having an area of about 240 acres.

Geography.

The claims are situated in the Cornucopia Mining District, Elko, County, Nevada, about 20 miles North of Tuscarora, and 65 miles North West of Elko, Nevada. The mines are also 6 miles S.E. of the "I.L. Ranch" on the Owyhee River, and 8 miles West of Deep Creek Stage Station on the road that runs between Tuscarora and Edgemont.

Accessibility.

The mines are accessible the year round. There are 3 good wagon roads from the south and west, one being from Elko, one from Red House, and the other from Winnemucca, via the Paradise Valley and the Little Humboldt River, then there are also good roads from the Idaho points that are North of the district.

Wagons can be driven anywhere on the claims. A telephone line crosses the claims from Tuscarora to the "I.L. Ranch, this line connects at Tuscarora, for Elko, and Winnemucca, Nevada.

Geology.

The mines lie in a group of small low hills on the extreme Northern or northeastern end of the Independence Range of mountains, and near the S.E. end of the Owyhee Desert, at an elevation of 6500 ft, ~~xxx~~ between Deep Creek Creek on the North and East and the Owyhee River on the South and West; the mines are two miles from Deep Creek, and about 4 miles from the Owyhee River.

They are located on the same mineral belt, having the same formation as those of Tuscarora, and its gold and silver output of over \$50,000,000. and the Silver City mines of Idaho with nearly the same output.

The Tuscarora mines are about 16 miles in a straight line to the South, and the Silver City mines about 60 miles in a straight line North.

The U.S. Geological survey of the Cornucopia Dist was made by Wm H. Emmons in the year 1908. The report of the survey was published in Bulletin No. 408 pages 62 to 65. In the report he treats very thoroughly of the geology of the district, but gives no information concerning the veins or workings of the mines, which were operated by vertical shafts. The following is a partial report of that published in Bulletin No. 408.

"The mines of Cornucopia, about 8 miles South West of the Stage Sta on Deep Creek, were operated actively in the Seventies, when they produced, it is said over a million dollars in gold and silver. The ore was treated by pan-amalgamation in a 20 stamp mill at Mill City, 2 miles below the town. The principal mines are the Leopard and the Panther, which were operated through shafts. The Leopard shaft is said to be 800 ft deep. When the camp was visited in 1908 all the deep workings ~~xx~~ were caved, and only some shallow pits and surface stopes were accessible.

"The country surrounding the Cornucopia Dist is a large area of low hills, which, in the main, are capped with rhyolite and obsidian. The rhyolite is cut by intrusive andesite, to which the accessible ore deposits are restricted. The exposure of the andesite shows white ore stained with yellowish iron oxides. Everywhere in the vicinity of the ore deposits the andesite is similarly decomposed showing the leachings of the country rock is extensive near some of the ore deposits. Masses of quartz porphyry occur in the area of the andesite, and are probably intruded into it."

"The ore deposits are sheeted zones in decomposed andesite. The ore is white quartz, which carries a very small proportion of dark sulphides, forming narrow ribbons on the quartz. Pyrite, argentite and gray copper are present, and ruby silver is said to have been an important ore mineral. On the surface the ore minerals are mainly horn silver, and a yellow mineral which is probably ~~xx~~ pyro-morphite.

"The proportions of sulphides present is very small, & but they must have been rich, for the ore is said to have carried 400 ounces of silver to the ton of mill-runs. The country rock along the vein is, however, silicified and otherwise altered by the vein forming solutions, and at some places carried workable values."

In addition to what the U. S. Geological report shows, there will be found on an examination three (3) separate veins, whose course is N.E. & S.W.'ly. The first or more Westerly in the district is the Hussy-Leopard Vein. This vein was formerly known as the "RUBY" Vein. It has a dip of about 45° to the N.W., This vein passes through the North end line of the Leopard claim, near the North West end center, and the West line of the Leopard near the N.W. Corner.

The 2nd N. E. & S.W. Vein lies South of the Hussy-Leopard, being about 400 ft, and is known as the Leopard N.W. & S.W. Vein.

The 3rd N.E. & S.W. Vein lies South of the Leopard N.E. & SW vein, and passes through Silver Peak about, 2000. ft South of the Leopard Vein. This vein can be traced on the surface by the quartz outcrop for a distance of over 4,000. ft, and shows it to have a depth of over 1500 ft. The surface quartz of the three veins all show values. They also show that they are not faulted by the North and South dykes which cross them, because the surface quartz on the line of the vein is unbroken. There are numerous veins having a Northerly and Southerly course crossing and starting from the N.E. & SW veins, and also easterly and westerly veins.

The East and West veins were the ones that were prospected and worked in the early days, no attention being paid to the 3 N.E. and S.W. veins which show surface quartz having good values/..

Mining Facilities.

In this mining district, good water for domestic purposes can be easily obtained by sinking wells. One well about 20 ft deep is now in use. It is within a few hundred feet of the mine. Water for milling purposes on Deep Creek is about 2 miles from the mine. At this place was located the 20 stamp mill which reduced the ore to bullion in the Seventies.

No water was in the mines. It was not necessary to have pumps in the early days; all the water was handled in those days in sinking shafts and drainage was done by using buckets. This accounts for the mill being located on Deep Creek.

Water for power can be secured within 12 miles of the mines. Here there is sufficient can be developed for all the mining and milling work. Timber for the mines in early days was hauled about 12 miles from the Centennial Range of mountains that lie N.E.'ly of the district.

The timbers now to be used for mining and building purposes can be secured from the same range.. ~~Xx~~ Freight from Elko to the mines is $3/4$ ¢ a lb.

Development.

The Leopard claim does not belong to the owner of the Cornucopia group. It is owned by an other party, but a description is necessary to show its relation to the Daisy and the other mines, or claims..

The Leopard was located in 1873 and patented in 1876 on the showing of the N & S. quartz outcrop, which is about 300 ft in length, and 40 ft in width, and dipping to the West. There are also two veins having a course of N.E. & S.W. crossing the Leopard in the North 400 ft, and also about 400 ft apart; also a N & S. vein parallel to the Main vein, about 200 ft to the East.

The surface shows a very large tonnage of quartz. The 1st shaft was sunk about 400 ft South of the North end line. The main working shaft was sunk North of this about 25 ft, South of the North of the Leopard shaft was opened, they drifted a little east of South to cut the bottom of the incline winze sunk on the dip of the vein, following this rich ore-shoot down from the tunnel level a distance of 127 ft. They then drifted North from the shaft at the 300 ft level and found a body of rich ore in the Hussy-Leopard vein, known at that time as the Ruby vein.

The Leopard has not been worked since 1879. A lease could never be secured to work it, which accounts for the large tonnage of ore on the surface., it being too low in value for the company to work at that time.

The vein which shows on the surface for 300 ft long and at least 40 ft wide gave an average of from four very large samples of \$4.40¢ in gold and \$14.54¢ in silver, or a total value of \$18.94¢ per ton. There was no ore milled from this mass of ore now showing in the surface workings. The ore that was mined in the deep Leopard shaft and thrown to one side as waste, has the same appearance. This ore sampled at the deep shaft as follows: 0.20 Oz gold and 35.80 Oz silver, and the surface workings about 200 ft N.E. of the deep shaft the foot wall sampled 0.22 Oz gold, and 45.48 Oz, silver, showing ore of this kind and value could ~~not~~ be mined and milled at a profit at that time.

The largest production from the Leopard of its 4½ years work was made in the 1st year and a half, (1875 and 1876.), producing 8,092 tons from which they recovered a value of \$804,960. as shown by the Assessors books at Elko, county tax purposes. In 1877 it produced 2,175 tons, recovering a value of \$103,037.; in 1878 it produced 2,614 tons, recovering a value of \$102,115.60¢; in 1879 it produced 947 tons, recovering a value of \$24,908.81¢ and to these values saved in milling the ore, should be added the value of the tailing lost in milling, to get the values per ton of the ore treated. The samplink of the tailings shows that they have a value of \$19. per ton.

There is a known ore body in the Leopard claim which could not be mined and milled in the Seventies, having a known length of 300 ft, and 40 ft wide, and found and mined on the 600 ft level of the Leopard deep shaft.

This ore sampled on the surface gave a value of \$18.94¢ per ton. According to the Bullion Tax Records of Elko, County, Nevada in the later Seventies there were 3,561 tons of ore mined from the Leopard shaft, giving an average mill value of \$36.64¢ per ton. This value per ton was not enough to pay the cost of mining, hauling and milling in those days.

The Daisy claim,, the North extension of the Leopard claim, formerly known as the Hussy claim, has a shaft about 500 ft deep. This shaft is caved at the collar, but can easily be opened. It was re-opened down to the 70 ft level about 20 years ago and some good ore shipped. At this depth on the Hussy-Leopard vein a good size vein of ore was found, having a value of \$60.00¢ per ton, which could not be profitably shipped at that time because there was no mill within 40 miles..

They made no effort to reach the 200 ft level, where in 1876, according to reports to the San Francisco stock exchange, they had from 20 to 30 ft of ore having a value of \$30 to \$40. per ton. The ore on this level is still there ready to be mined. In 1876 the cost of hauling this ore was equal to its value.

From the limited work done on the Hussy mine, there was shipped from the 200 ft level 1,574 tons from which was recovered \$84,519.16¢, as per the Bullion Tax Records of Elko County, Nev. The red quartz now on the Old Hussy dump, being ore taken out of the 200 ft level, sampled 0.10 Oz gold, and 22.7 Oz silver.

There is an other vein showing North of the Old Hussy shaft, near ~~the~~ the wagon road, that gave values of \$16. to \$17. per ton, (surface croppings). There was a vein found about 500 ft North of the old shaft, and East of the gulch, this was found in a drift driven West from a winze 90 ft deep, sunk in the Hussy cross-cut tunnel, about 150 ft from the portal. This ore had a value of \$50. to \$80. per ton.

The Boston Claim, located North and south. The North end was formerly a part of the Panther Companies "Chloride claim. The work done here is in a cut 65 ft long, and 65 ft deep. Here can be seen a vein, the course of which is Northwest, with a dip of about 65° to the West. To the South of the location monument about 800 ft is the Old Republic shaft, about 140 ft deep, showing a 3 ft vein. The dump of this shaft samples 0.20 Oz gold and 30. Oz silver, and the vein is 4 ft ~~wide~~ wide and 100 ft deep, sampled \$36. per ton.

About 250 ft east of this shaft can be seen the quartz on the surface of the Leopard N.E. & S.W. Vein, which crosses the Leopard and Boston claims. At a point East of the east side line of the Leopard, and on the Boston claim on the course of this vein, the surface quartz sampled 0.20 Oz gold, and 25.44 Oz silver.

The Montana Claim, located N & S, was formerly a part of the Panther Com's Chloride claim. Here was found an ore shoot that was 50 ft long, and from two to 4 ft wide, and which was mined to a depth of 240 ft, or 90 ft below the Mohawk Tunnel level. That the ore is still in the bottom of the 90 ft winze, is claimed by miners who worked there. It can be re-opened at a very small cost.

The ore from this shoot having a value of from \$3,000. to \$4,000. per ton was shipped to the Selby Smelter works in the early days. In a shaft 24 ft deep about 150 ft east of this ore shoot, there is now opened in the North side of the shaft 2. ft of ore that sampled 43.4 Oz silver per ton. This ore could not be mined at a profit in the early days, when it cost \$40. to handle a ton of ore.

At a point 300 ft South of the 24 ft shaft on the course of the Leopard N.E. & S.W. Vein, the surface quartz sampled 0.04 Oz gold and 17.04 Oz silver. This N.E. & S.W. Vein can be developed to a depth of 200 ft by driving ahead the East drift from the Mohawk Tunnel. This drift would intersect the ore shoot 300 ft from this point, crossing the vein at a depth of 150 ft vertically.

The East drift from this tunnel was driven only 100 ft East of this intersection, and it is now 150 ft West from the Leopard N.E. & S.W. Vein.

The Ben Hurr claim, located N & S, lies East of the Montana and parallel to it. There are several shafts on the East and West vein crossing the North end of the claim. These shafts show quartz from 4 to 6 ft wide, having a low value on the surface of from \$4. to \$5. per ton.

The Santa Rita Claim, located North and South, lies East of the Ben Hurr and Parallel to it. It was formerly known as the "Constitution". Here in early days were sunk quite a few shafts, shallow ones, but at no place was the ore then found to go down.

The vein has since been found, and in a cut 25 ft long and 15 ft deep near the location monument, a sample was taken from the North side of the cut that sampled 0.08 Oz gold, and 22.64 Oz silver. A drift was started North from the bottom of this cut, and the vein was found.

In this drift about 10 ft long, a sample was taken of 2. ft of ore from the center of the $4\frac{1}{2}$ ft vein, which sampled 0.08 Oz gold and 38.48 Oz silver; and the full width of the $4\frac{1}{2}$ ft vein sampled 0.08 Oz gold and 15.32 Oz silver.

I would judge that instead of a vein of $4\frac{1}{2}$ ft wide, there is a vein 15 ft wide, because the entire width has an average value of 0.08 Oz gold, and 12. Oz silver..

The quartz showing on the surface for a considerable area, there is no question but when this new find is developed there will be an other mine opened up which will equal or may surpass the Leopard in output. It is located on the highest hill Northeast of the Leopard mine, and all the indications on the surface, and character and value of the ore, show this to be one of the best prospects for a big mine in this district and section of Nevada for years, a section noted for its rich mines.

The Sioux, Xan Mohawk, Mayflower, Victor, Yampa, Batchelor and Colorado claims all have veins, and small amounts of work done, and surface values, except the Colorado claims which is crossed by the Hussey-Leopard vein, and has a part of the old mine dumps on it...

----- SUMMARY. -----

This is no prospecting proposition to find the ore, but one to re-open the old mines and develop the ore that was left in them in the Seventies, as it would not pay to work it in those days. It cost the Leopard mine \$20. to mine and mill a ton of ore, and the Hussey and the Panther \$40. to mine and mill a ton of ore at the Leopard Mill.

The dumps of the various shafts and tunnels show the following tonnage and values of the silicious ore. These values were secured by samplings; there are 1,000. tons of ore on the various dumps having a value of \$35. per ton, and upwards of ~~2500~~ 50,000. tons with an average value of \$7. per ton.

To determine the probable values per ton of ore on the dumps of the Leopard and the Daisy claims having an average value of the ore left

in the mines, the quartz on the dumps of the Boston, Montana, Ben Hurr, Santa Rita and Daisy claims was assayed to find out the average value of rejected ore that could not be worked in the early days. The assays showed them to have a value of between \$25. and \$30. per ton, and this value of ore should be found when the mines are re-opened.. These assays were confirmed when ore was found underground and in place. A profitable producing mine can be made by working the property in the following places and manner:

1st, You have the ore in the Ruby Vein in the Leopard claim, and this shows a value of over \$30. per ton. This can be opened and worked for a very small outlay by re-opening the Hussey shaft.

2nd, Use the Leopard tunnel to open up the N.E. and SW. vein. This vein on the surface shows 300 ft long and 40 ft wide, having a surface value of \$18.94¢ per ton. This will be developed on ore known to be there and never worked..

3rd, Re-open the Montana vein in the Montana Tunnel. This should show ore in place having a value of about \$50. per ton when vein is re-opened. There is 3. ft of ore in a 24 ft shaft 200 ft East of the point of the tunnel intersection of the vein, which has a value of \$50. per ton.. This ore was not taken out and milled, but left there.

4th, The Santa Rita will be a developing proposition to open up the large ore body of \$20. per ore, now showing in the 18 ft deep cut, and in a 150 ft cross-cut North from this cut and in a caved shaft to the West. All the places opened up show this quartz porphyry.

5th, Re-open the Old Hussey shaft down to the 200 ft level. There one will find ore having a value of \$60. per ton, found ready to be stoped..

In conclusion, I would state that the large body of ore itself between the Leopard Tunnel Level, and the surface (exclusive of the Ruby Vein) justifies the installation of a 100 ton mill, as well as the erection of the necessary buildings, quarters, etc..

The work of extending the tunnel and making the necessary upraises to the surface can be done in the meantime, so that when the mill is complete, this large tonnage of ore can be milled, thus putting the property on a paying basis.

Edward Peacock. E.M.

Winnemucca, Nevada.
November, 23rd, 1922.