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REPORT ON THE
KEYSTONE GROUP OF MINING CLAIMS.
PALMYRA AND INDIAN SPRINGS MINING DISTRICT.
COMO, LYON COUNTY, NEVADA.
November 3, 1930 By A. F. Carper,
Mining Engineer.

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CHANCELLOR

REPORT ON THE
KEYSTONE GROUP OF MINING CLAIMS.
PALMYRA and INDIAN SPRINGS MINING DISTRICT.
LYON COUNTY, NEVADA.

LOCATION:

The KEYSTONE GROUP of Mining Claims is located about one and one half miles north east of the old town of Como, Lyon County, Nevada. Further described as being about 12 miles by road south east of the town of Dayton, Nevada and eight miles by air line south of Virginia City. Dayton is the nearest rail point and post office on a branch line of the Southern Pacific Railway.

CLAIMS AND AREA:

There are seven claims in the KEYSTONE GROUP known as the Prosperous, Keystone, Mountain View, Mountain View Extension, Baby Jeane, Kennedy and Amazon Lode mining claims, covering an area of approximately 140 acres of mining land.

OWNERSHIP AND TITLE:

The ownership of the ground is possessory, being held by right of location and the assessment work performed each year thereafter.

HISTORY:

This property was located in 1926 by the present owners. It was originally located and most of the work now on the ground done in the late fifties and early sixties. This camp was discovered before Virginia City or the Comstock Lode, considerable work was done all over the camp, shafts, tunnels, and open cuts on the numerous large veins. Some production was made and the ore hauled by wagons to the early day stamp mills along the Carson River. When the Comstock Lode was discovered and proven to be enormously rich this camp was abandoned and with the exception of the Como property no further work was done in the camp since about 1864 until the present owners came in and relocated the ground.

ADJOINING AND NEARBY PROPERTIES:

Adjoining this group on the west is the Dayton and Tunnel Mining Claims belonging to the Interstate Mining and Development Company. They are at present sinking a new vertical shaft on a large vein at a point about 800 feet south of the Prosperous Claim end line and on a vein that goes into this claim.

Practically adjoining the KEYSTONE GROUP on the south west is the old Como property, now held and being developed by a subsidiary of the St. Joe Lead Co., where they have built a new camp, installed machinery and it is reported have expended over \$100,000.00 in opening up the old workings. This property is reported to have produced over one million dollars

ADJOINING AND NEARBY PROPERTIES: Cont'd.

worth of oxidized ores between the surface and the 200 level of the mine. This oxidized ore was treated in a cyanide mill on the property and all came from the Como Eureka vein. The extension of this vein crosses the southern section of the KEYSTONE GROUP. At a depth of 200 feet a heavy sulphide ore was encountered containing a gold silver bearing Tetrahedrite. It is said this sulphide ore will average from \$10.00 to \$20.00 in gold, 10 to 20 ounces silver and from 5% to 15% copper per ton. It was not possible to cyanide this ore, floatation had not been discovered, so when the oxidized ores were mined out the property was closed down. It is reported that between the 200 and 300 foot levels there is about \$1,000,000.00 worth of sulphide ores blocked out. This is the deepest work in the camp on the veins. The old Comstock miners state that this upper sulphide or secondary ore is very similar to the ore found in the same zone at Virginia City.

To the east about one half mile from the Amazon Claim of the KEYSTONE GROUP is the newly developed Pony Meadows Mine. At the Pony Meadows Mine during the past year they have completed building a camp, a 35 ton floatation mill and have partly developed a vein 200 feet wide. On the footwall side of the vein a width of from 50 to 60 feet will average from \$8.00 to \$12.00 per ton in gold. One streak about 4 feet wide is said to average from \$50.00 to \$100.00 per ton, with a streak from 1 to 3 inches wide that assays thousands of dollars per ton. Indications at this mine are that further development should make a very large gold min, as they all ready have a nice tonnage of fair grade ore near the surface developed.

FACILITIES:

Transportation:

There is a fair road from Dayton to the mine a distance of 12 $\frac{1}{2}$ miles. It is possible to build a road to the Yerington-Fernley Highway a distance of about five miles that would overcome the heavy grades as well as save crossing the summit that is sometimes snow covered in winter.

Power:

Electric power is available at a distance of about two miles and would cost about \$2,500.00 to bring the line to the lower tunnel on the Amazon Claim. The section of the group adjoining the Interstate Mining Companies ground will be within about 300 feet of power when they complete their line sometime during the next few days.

The only other power available is by the use of fuel oil engines.

Water:

Water from springs is available for camp and mill use.

FACILITIES: Cont'd.

Timber:

Timber for camp and mining purposes will have to be imported from outside sources.

Labor:

Labor is available from Reno and other Nevada mining camps at wages averaging \$5.00 per day of eight hours.

Climate:

The camp is located at an altitude of between 6,000 and 7,000 feet. Summers are warm but not oppressive. Winters have a little snow that may give trouble on the roads for a few days. Generally the ground is free of snow, though freezing temperatures are experienced at night for several months during the winter.

TOPOGRAPHY:

The topography is rolling to steep. In some sections shafts will be required to economically develop the veins, while in other sections tunnels will develop the ground to depths of 400 to 500 feet without being excessively long. On the KEYSTONE GROUP three of the veins can be easily reached by tunnel work. The westerly veins would probably be better developed by a shaft.

GEOLOGY:

General:

The rock formation in general consists of a coarse grained andesite, similar to that found in Virginia City, crossed by dikes of rhyolite and latite. Portions are capped by a later flow of fine grained andesite.

Local:

The formation on the KEYSTONE GROUP is entirely the coarse grained andesite. Capped in the north section of the Prosperous Claim with a later flow of fine grained andesite.

Ore Occurrence:

Ore occurs in fracture zones filled with quartz. There have been two and possibly several periods when quartz was deposited. The mineral solutions were depositing simultaneously with the quartz. Most of the veins are easily traced on the surface for long distance because of the hard quartz croppings. Some veins like the Como are soft and show great zones of alteration, these are not so easily traced.

The Como Vein at a depth of 200 feet is all quartz 10 to 15 feet wide showing heavy tetrahedrite, rich in gold, silver and copper; while from the surface to 200 feet in depth it was an oxidized gold silver vein with rarely a stain of copper.

The Pony Meadows vein is quartz heavily stained with iron oxides showing only gold silver values.

GEOLOGY: Cont'd.

Ore Occurrence: Cont'd.

The veins on the KEYSTONE GROUP are strong quartz veins from 5 to 25 feet wide striking nearly north and south and generally dipping from 50 degrees to 70 degrees to the east. These veins are crossed in the south section of the property by the Como Vein. This section should be very interesting with later development.

It appears that the oxidized zone exists to a depth of about 200 feet, where a secondary zone is found. No work in the camp has gone deep enough to reach the true primary ore zone.

DEVELOPMENT:

Development consists of a tunnel 337 feet long on the Amazon Claim. A series of shallow shafts and cuts on the Mountain View Claim. A long surface trench, a shorter trench and a shaft at least 50 feet deep (caved at the collar) on the Mountain View Extension Claim. There is a shaft probably over 100 feet deep (Collar caved), a small shaft 20 feet deep, a short tunnel and a cut on the Keystone Claim. A shaft about 50 feet deep and several cuts on the Baby Jeans Claim.

With the exception of about 50 feet of work done in the Amazon Tunnel and the location work, all of this work was done, and the property abandoned somewhere between the years 1861 and 1865 or during the boom days of the nearby Comstock Lode.

MINING METHODS AND COSTS:

Study
Preliminary development should consist of driving the Amazon Tunnel ahead a distance of about 200 feet to the Mountain View Vein where it will be encountered at a depth of about 400 feet. Drift south on this vein 500 feet to prove its value, making a total of 700 feet of work. This work should cost approximately \$10.00 per foot including all expense of equipment including camp. Further equipment including compressor, machine drills and blacksmith shop should cost approximately \$3,000.00. Making a total cost of approximately \$10,000.00. Further development will depend upon the findings in the above work.

PRODUCTION:

Some production it is reported by old timers was made in the early days. The ore was hauled to the Carson River Mills. The records of the value and the amount have long past been lost.

SAMPLING:

Eleven large samples were cut from the different veins on the property where they were exposed by cuts or tunnels. The sample places were picked at points where the most information relative to the value of each vein could be obtained.

ORE RESERVES:

There are no developed ore reserves.

COSTS OF FUTURE DEVELOPMENT AND EQUIPMENT:

Preliminary development and equipment will cost approximately \$10,000.00.

SUMMARY:

The Como property practically adjoins this property and has produced approximately \$1,000,000.00 and is reported to have about one million dollars worth of developed sulphide ores in sight between the 200 and 300 foot levels.

The Poney Meadows Mine about one half mile away is at present operating a 35 ton mill on good values from a large vein similar to the veins found on the KEYSTONE GROUP.

The preliminary development of this ground can be cheaply done by tunnel, and the information gained from this work will lead the way to further development of the other veins on the property.

The oxidized ores of the camp are easily treated by either cyanide or Floatation giving a high extraction of values. The deeper sulphide ores are ideal for floatation making the metallurgy of the ores quite a simple problem to handle. The concentrates are shipped to the smelter.

RECOMMENDATIONS:

It is recommended that the Amazon Tunnel be driven to the Mountain View Vein. After the vein is crossed drift south on the vein 500 feet. This should develop the vein enough to prove the value of the property and give enough information to lead to the development of the other veins parallel and crossing this vein. Further development of the easterly section of the group would be dependent upon the value developed by this work.

CONCLUSIONS:

Considering the physical conditions of the veins on the KEYSTONE GROUP as compared with those developed on the other properties, the possibility of developing other ore shoots as good as those that have been worked is excellent. It is quite possible to develop another camp similar to Virginia City as the formations here are quite similar and not far away but that the same source of mineralization could be deposited here at or near the same time the Comstock Lode was formed. The ease of treatment of the ores by the present methods is attractive.

I believe the property merits the expenditure of a large sum of money to develop the ground, as it would be possible to open large bodies of good grade ore. In fact, I further believe if this camp had been discovered at a later date instead of just before the discovery of the Comstock Lode it would have gotten the development work it merits instead of being abandoned when the larger and higher grade ore bodies were discovered so close at hand.

The KEYSTONE GROUP is fully recommended as meriting the preliminary development as mentioned above.

Examined October 24 to 27, '30. Respectfully submitted,
Reported November 3, 1930.

A. F. CARPER (Signed)

Mining Engineer.

SAMPLES:

| Number | Width | Ounces Gold | Ounces Silver | Value | Description. |
|--------|----------|-------------|---------------|--------|--|
| 1 | 5.5 ft. | .02 | .20 | \$.47 | Stained oxidized Andesite. Mostly quartz. Portal tunnel Mt. View vein. |
| 2 | 2.02 ft. | .01 | .30 | .30 | White quartz in shallow cut Mt. View Vein South of No. 1 Iron stained. |
| 3 | 5.5 ft. | .02 | 1.10 | .78 | Stained oxidized vein matter. Quartz. South side shallow shaft south of No. 2. Mountain View Vein. |
| 4 | 10.0 ft. | .04 | 1.00 | 1.20 | Hanging wall North side of vein open cut top of hill. Quartz and leached andesite. Keystone Vein. |
| 5 | 10.0 ft. | .04 | 1.00 | 1.20 | Center portion of vein mostly leached andesite. Keystone Vein. |
| 6 | 4.5 ft. | .05 | 1.90 | 1.71 | Footwall section of vein in cut. Extension of samples 4 & 5 on Keystone vein. |
| 7 | 7.0 ft. | .05 | 3.30 | 2.20 | Across shaft top of vein, shallow shaft, south of cut on Keystone vein. |
| 8 | 5.5 ft. | .02 | .60 | .61 | Across face of short tunnel south of #7. Oxidized and leached andesite mixed with quartz. Keystone Vein. |
| 9 | 5.0 ft. | .02 | .51 | .57 | Hard dark colored qtz. with pyrite. South end 10 ft. shaft. Baby Jeane Vein. |
| 10 | 4.5 ft. | --- | --- | --- | Across south end of hole at Helen S location. Red and yellow oxidized and leached andesite. |
| 11 | 5.0ft. | .02 | --- | .40 | Across cropping in long cut on Baby Jeane Vein. Near north end line. Mostly hard oxidized quartz. |

Note:

All of the above samples were taken from a very highly leached and oxidized section of the veins. They show values in gold and silver. Not in paying quantities, but show a condition that would lead to the expectation of a richer secondary zone as is shown by the deeper development on the Como mine where the vein is not mined to the surface.