

High Ore Group
NAME _____

_____ Old Names _____ Principal Ore _____ Minor Minerals

PUBLISHED REFERENCES

T _____ R _____ S _____

Wallowa COUNTY

..... AREA

..... ELEVATION

..... ROAD OR HIGHWAY

..... DISTANCE TO SHIPPING POINT

MISCELLANEOUS RECORDS

PRESENT LEGAL OWNER (S) Address

.....

.....

.....

.....

OPERATOR

Name of claims	Area	Pat.	Unpat.
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

EQUIPMENT ON PROPERTY

1 COPY OF

REPORT ON THE HIGH GRADE GROUP OF MINING CLAIMS, JOSEPH, OREGON,
By N. W. THURSTON, Mining Engineer.

Platts

Name and Description of Property:

The group of mining claims herein described is known as the High Grade Group and comprises seven full sized mining claims, each 600 x 1500 feet, as shown in the accompanying sketch.

This group is held by annual assessment work which has been duly performed and recorded to date.

Title to this property is guaranteed clear.

Location of Property:

The property is located on the east side of Tunnel Mountain in the Cornucopia mountain range, Wallowa County, Oregon, about 20 miles west of the Idaho line and four miles distant from the town of Joseph, Oregon (Pop. 600; elevation 4150 feet), and is also within the Wallowa National Forest Reserve. The mountains in this section are heavily forested.

Geology:

The geological formation of this property appears to be as follows: An underlying slate, overlain by birdseye porphyry which in turn is overlain by a strata of slate, quartzite and lime, in order. These strata have evidently been tilted to the west (into the mountain) to an angle of approximately 40° from the horizontal.

Veins:

Three distinct veins appear on this property, which will be hereinafter designated as Nos. 1, 2 and 3. These veins crop parallel or nearly so, to the side of the mountain. The distance between the two outside veins (Nos. 1 and 3) is approximately 1800 feet with vein No. 2 diagonally between. The mountain side being very steep, there is 600 or 800 feet vertical distance between the outcrops of vein No. 1 and vein No. 3.

Vein No. 1:

This vein is perhaps the largest of the three and is the lowest down the mountain side well toward the east boundary of the property. The strike of this vein is approximately N.W.--S.E. It dips to the west, into the mountain, at an angle of 40° and crops on the property for a distance of 4000 feet at widths varying from 18" to 4' 6".

At the N.W. extremity this vein appears in the contact between the underlying slate and the overlying porphyry. For a distance of approximately 1500 ft. S.W. the fissure extends diagonally upward through the porphyry until it reaches the contact between the porphyry and the overlying slate where it continues until it passes out of the property.

This is an exceptionally strong, well defined and well mineralized

vein of white and gray quartz and shows evidence of considerable action; there being 4" to 6" of gouge on the footwall.

The principal development work on this vein consists of two tunnels and a series of open cuts. No. 1 tunnel (see sketch) has been driven in a southwest direction on the vein at the contact between the underlying slate and the porphyry. The vein exposed at this point is 4' 6" wide. No timbers have been needed. A composite sample of the ore exposed in this tunnel gave the following results:

Gold ...	0.02 oz. per ton.
Silver	6.4 oz.
Lead	13.7%

(No copper or zinc)

No. 2 tunnel is approximately 300 feet distant from No. 1 in a southwesterly direction along the strike of the vein, and approximately 250 feet in vertical height above it. This tunnel has been driven southwest on the vein for a distance of 40 feet. No timbers have been used or needed. At this point the vein is 3 feet in width and a sample of the ore exposed showed values as follows:

Gold	0.015 oz. per ton.
Silver	5.00 oz.
Lead	18.1%

(No copper or zinc)

The analysis of a quantity of ore from this tunnel sent to the Bunker Hill Smelter at Kellogg, Idaho, was as follows:-

Gold ...	0.04 oz. per ton.
Silver	14.40 oz.
Lead	29.6%
Copper	Trace
Iron	3.5%
Insoluble	56.0%
Sulphur	4.0%
Lime	Nil
Zinc	Nil.

Between tunnels No. 1 and No. 2 and beyond No. 2 to the southwest end of the property there are a series of open cuts on the vein. These workings all show ore of good milling grade and in several places exceptionally rich milling ore is in evidence. So far as the writer could observe there was no barren portion of the vein in it's entire length.

At 125 ft. vertical depth below tunnel No. 1 a crosscut tunnel to serve as a working adit has been started. This tunnel is now in 148 feet.

The ore in No. 1 vein consists of a porous, iron stained, white and in some places gray, quartz through which galena is disseminated in more or less massive form, single crystals to solid blocks. No pyrite, zinc or copper are visible.

Vein No. 2.

This vein crops in the overlying slate, about 700 feet from the north end line of the property. It strikes N.-S. for a distance of approximately 1000 feet where it joins the No. 3 vein. It is nearly a uniform 2 feet in width at the surface and stands nearly vertical

The small departure from the vertical is toward the west or into the mountain.

Development on this vein consists of an open cut at the junction with No. 3 vein, in which high grade lead-silver milling ore is exposed; an open cut about 500 feet north which shows high grade milling ore also, and at the north end of the vein where it appears on the surface, a pit has been sunk and a drift driven 30 ft. south of this vein from the bottom of the pit. The ore exposed in this drift averages two feet in width and a composite sample rendered values as follows:

Gold	0.02 oz. per ton.
Silver	4.4 oz.
Lead	0.4%
Copper	13.25%

North of this point the vein is not visible as the surface is covered to a great depth by slide rock. Underground development or surface trenching would probably disclose the vein as continuing to the north as it would hardly be logical to expect such a strong well defined vein to pinch off abruptly unless faulted and no evidence of faulting is apparent. The character of the vein in the two open cuts differs very little, if any, from the ore in No. 1 vein. That from the drift in the extreme north end of the vein however is entirely different, it being highly oxidized with a scarcity of lead value and a high copper content.

Vein No. 3.

This vein crops the entire length of the property, paralleling No. 1 vein and lying in the contact between the overlying slates and the quartzite. This is a very strong vein of white quartz averaging two feet or more at the surface, striking N.W.-S.E. and standing nearly vertical. At one point, this vein appears to be ~~slightly~~ dipping slightly to the east or out of the mountain. This condition is probably due to a reverse fold in the formation (a local fold).

No development work has been done on this vein with the exception of a small pit at each end of the property. These pits are said to show high copper values.

Buildings and Equipment.

There are no permanent buildings on the property, neither is there any equipment. All work thus far has been done by hand.

Water.

Adequate water for domestic use is to be had from a mountain spring on the property. Water for plant use can be had by sinking a well in the basin of a gigantic snow slide into which all the drainage of the mountain comes. The mine workings also will ~~furnish abundant~~ undoubtedly furnish abundant water as soon as depth is attained.

Fuel, Timber and Building Material.

An abundance of dry wood for fuel for years to come is immediately at hand at the nominal cost of 25¢ per cord. Timber for mine use, buildings, tram and power lines is at hand in practically unlimited quantities at a cost of 1¢ per lineal foot of pole or log.

Power.

Hydro-electric power for operation and lighting can be obtained from the main line of the Wallowa Power Company by building a transmission line $2\frac{1}{2}$ miles to the property. The Forestry Supervisor for the district assures a permit for the line upon application, with a charge of 1¢ per lineal foot for such poles as shall be needed. This line should be installed under the existing conditions for not to exceed \$800 per mkle.

Roads and Transportation.

A good wagon road approaches the property within $1\frac{1}{2}$ miles. For the remaining distance there is a good trail which by the expenditure of from \$400 to \$500 could be made into a good wagon road. Rail transportation is afforded by the Union Pacific System through their branch track from the main line at La Grande, Oregon, to Joseph.

Tramway and Millsite.

A gravity aerial tram $1\frac{1}{2}$ miles in length, down a steep spur of the mountain would deliver the ore to an admirable mill site at the end of a County maintained road approximately 3 miles from the railroad station at Joseph. The topography of the mountain at this point is such that only the minimum number of towers would be required. Timber for towers is available at the tower sites.

Ore Treatment.

The absence of refractory elements in this ore should render in highly amenable to simple gravity concentration and oil flotation.

Conclusions.

Although this property can at present be regarded nearly as a prospect, upon careful consideration of the geology and physical conditions presented, i.e.:-

- 1- Geological conditions favorable to the formation of orebodies.
- 2- Well defined ore veins (3 in number) having an aggregate cropping on the property of upwards of $1\frac{1}{2}$ miles, at least two of which are known to be well mineralized.
- 3- The low cost of power for operation and the exceptionally low cost of timber, fuel, and building materials.
- 4- The amenability of the ore to treatment and the simple milling methods requisite to effect a satisfactory recovery of the value.
- 5- Accessibility to rail transportation.

I regard it as justifying the moderate expenditure necessary for further development.

Recommendations.

In this connection I would recommend:-

(c) The erection of simple accommodations for a small crew of men.

(d) The installation of an air compressor plant of sufficient capacity to operate 4 to 6 air drills.

This equipment should be adequate for the early requirements.

An ideal development plan would be through a main adit tunnel, as for example the present crosscut tunnel which is now in 148 feet. This tunnel to be driven forward until the No. 1 vein is reached, when development of this vein could be carried on simultaneously with the driving of the adit to No. 2 vein and No. 3 vein. Tapped at this horizon these veins should have nearly 1000 feet of backs.

Respectfully submitted

(Signed) N. W. Thurston,

Mining Engineer.

COPY by G.L.H.
March 21st., '29.

THIS COPY by J.B.Platts,
Feb. 9, 1937.

Notes on the above report, by J.B.P.:-

The rock called birdseye porphyry in that region is usually quartz latite porphyry.

According to Jim Gillett, the No. 1 tunnel is 250 feet long.

The "pit" with 30 foot drift is (?) feet deep.

The prices for wood and poles quoted in the report are those charged by the Forest Service and do not include cost of cutting and hauling.