

Mayflower Mining Claims See Ochoco Mine

NAME

OLD NAMES

Au  
PRINCIPAL ORE

Mn  
MINOR MINERALS

13 S

20 E

29 - 30

T

R

S

PUBLISHED REFERENCES

MISCELLANEOUS RECORDS

Crook

COUNTY

AREA

4300' portal

ELEVATION

On US 28

ROAD OR HIGHWAY

DISTANCE TO  
SHIPPING POINT

PRESENT LEGAL OWNER (S) .....

Address .....

OPERATOR .....

Name of claims            Area    Pat.    Unpat.

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EQUIPMENT ON PROPERTY

Mayflower Mining Claims

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State of Oregon  
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
702 Woodlark Building  
Portland, Oregon

History and Geologist's Report of The Mayflower Group of Mines.

H. B. Kimerlin, Geologist  
Berkeley, California

September 4, 1926.  
Prineville, Oregon

Errors in spelling and obvious omission of words are as per  
the photostatic copy of the report from which this copy was taken.

## History and Geologist's Report of The Mayflower Group of Mines.

H. B. Kimerlin, Geologist  
Berkeley, California

September 4, 1926  
Prineville, Oregon

### Summary

The Mayflower group of Mining Claims are situated in the Ochoco Mining District, Crook County, Oregon and have a recorded production of over \$2,000,000. in gold and silver bullion. The mines were actively worked over 40 years ago and a great part of the gold production was the result of placer mining.

The property consists of 6 placer claims and 11 lode claims.

In later years the mines to leasers, who have shipped over \$80,000, in high grade gold ore taken from very near the surface.

No attempt has ever been made to mill or mine the immense tonnage of medium grade ore which was developed as the result of the work necessary to uncover the high-grade shoots of ore.

The Mayflower property is developed at depth by a cross-cut tunnel 1400 feet long and by drifts each over 100 feet. All these workings are in ore of a milling grade, the tonnage blocked out being well over 3,000,000. tons. This ore is positively developed on three sides and is an auriferous pyrite, occurring in wide shattered zones in porphyry. The high-grade occurs along a dacite intrusion.

The values persist in depth and the mineralized area has even greater extent than near the surface.

Assays of the country rock out of the crosscut tunnel, for a distance of 1400 feet show good values in gold over the entire distance. The two drifts driven at right angles to this tunnel, cross-cut the mineralized area for over 250 feet, without a lessening of values.

The oxidized area of the surface covers an area practically 4,000 feet long by 3,000 feet wide, all of which, carries good gold values. At places primary sulphides out crop, but nearly all the ore is "free milling". Depth of oxidation averages 10 feet.

Ore, proved and developed on surface, but cuts, trenches, short adits and shallow shafts, is approximately 1,500,000, tons and will average better than \$5. per ton.

Total tonnage of ore developed, both on surface and at depth, will approximate 4,500,000 tons of better than \$3.00 grade. The sulphides averages 4 per cent in iron pyrites and contains no copper, zinc, antimony or arsenic, but does carry a small amount of galena. Oxidized ores contain some galena, pyrolusite, and rhodochrosite. Ratio of concentration of representative samples of sulphides ore is 20 to 1, with concentrates averaging \$55. per ton in gold and silver.

There is no doubt in my mind that there are rich pockets of ore that can be opened up with a carefully worked out plan of development. As the ore from the large pockets was all very high grade, the general tenor of the total ore values would be considerably enriched.

### Location and description of Properties.

The Ochoco mining district is located in approximately the geographical center of Oregon and the Mayflower group is 27.9 miles N.E. of Prineville, the county-seat of Crook county and is its nearest railroad and supply point.

Railroad surveys have been made recently and when built, will be but a few miles west of the mine. This road is to tap one of the heaviest timbered sections of the state.

The district is in the confines of the Ochocho National forest and is located on one of the spurs of the Blue Mountain, Ochocho Creek and Ochocho State Automobile highway. This highway passes through the property about 500 feet from the mill.

The elevation is about 4200 feet at the lowest mine workings and the topography is typical of a mountainous country. Elevation at highest point on the claims is close to 5000 feet.

Ochocho and Scissors creek have ample running water at all seasons of the year, for all mining and milling purposes. Ochocho reservoir, built by the early placer miners, cover 21 acres and is 4 miles from the mine. The high-line ditch from this reservoir runs in a southerly direction across the Mayflower property and over 500 feet head can be utilized for power purposes. The sole right to use this water is vested in the owners of the Mayflower mining property.

These claims contain 3,000,000 feet of very fine timber composed of tamarack, yellow pine and fir. Climate conditions are favorable for mining during the entire year, due to the very mild winters in this region.

#### History and production.

The first mining, about 1873 was all placer and over \$500,000, in gold was taken from this creek alone in a period lasting till 1883. In 1883 the high-graders and pocket-hunters started to work, as the placers had been largely depleted. Arrastras were installed and up to 1893 a production of record was made of over \$1,000,000. While the values persisted, the ore became pyrite at depth and practically all mining ceased. In the early days here it was necessary to have at least \$150, ore to make a profit.

Many years later a long cross-cut tunnel was started on the Ochocho creek side and the ore was shipped by wagon team to the The Dalles and from thence to Tacoma, Washington, a distance in all of over 350 miles.

At a point 330 feet from the mouth of this cross-cut tunnel, the Mayflower shoot of ore was found and \$222,000, in base ore was shipped by leasers in five years.

The only production in recent years was from 1915 to 1918 when leasers shipped \$80,000, of gold and silver ore from what is known as the Swank stope on the Mayflower claims. There is some placering done every year, but the production is small and variable.

Scissors creek was placered to Ochocho creek junction and paid \$1.50 per yard, average depth 20 feet. Width 150 to 200 feet.

Others placers on this property were worked and averaged \$2.00 to \$2.50 per yard. One gulch was placered clear to the top of the hill, (1800 feet) and yielded an average of from \$3. to \$4. per yard.

Many other draws and gulches yielded rich placer. Ochocho creek has never been placered as it was considered too deep to bedrock.

The Mayflower production has almost exclusively, been done by leasers and no systematic exploration or development has ever been attempted.

Only the highgrade ore was mined and shipped, as the very high cost of transportation, in the old days, precluded any shipment except that of highgrade ore.

#### Equipment.

The Mayflower property has a five stamp mill, plates and concentrating table. The mill is driven by water-power, derived from a 500 foot head, from the middle ditch.

The buildings are all in fair shape and consist of a blacksmith shop, timbered-shed, store building cook and bunk-house and two cottages.

The mine workings, although very old, have been left in good repair by the various leasers and practically all the deep workings are accessible, except the Swank stope and winze, which were allowed to cave. The Mayflower winze has 30 feet of water in it, but as this is all surface water, it can easily be dried out.

The track in the 1400 foot tunnel is in good shape, a gasoline hoist, complete with drum and good cable is installed on the Frazier winze.

The mill was built in 1905 and over 2000 tons were treated. An attempt was made to cyanide the concentrates, but owing to lack of fine grinding, it was not very successful. The concentrates, taken from the rejects of the old miners, were shipped and averaged \$150, per ton at the price of gold. (\$20.67 per ounce.)

The Mayflower property ore bodies, as a rule, occupy wide fractured zones. The degree of fracture is variable. In some places the wall-rock has merely been cut by an irregular network of fractures, without much displacement, while at other localities, the porphyries, which constitute the country rock, have been intruded by dacite dykes. It is along these dykes that the heaviest mineralization occurs. Both the dacite and the porphyry are strongly fissured, the stringers filling the vary from one inch or less to two and one-half feet. They pass without a break into the porphyry out of the dacite, and some of them can be traced for over 300 feet in width. At depth the fracturing is not so intense and the fault movement less discernible. The relations show conclusively that the mineralization was later than the system of the intrusion of the dacite dykes.

The mineralization is of two types; one showing pyrite exclusively, and the other showing galena, sphalerite, subordinate pyrite, pyrolusite and rhydo chrosite. There is little intermingling of the two types.

The depth of oxidization varies from 5 to 15 feet, although at many places, the primary sulphides outcrop at the surface. In the oxidized zones practically all the values are in gold. The gold is mostly in "free" state. The ore with depth, becomes pyritic and this auriferous pyrite that furnished most of the high-grade ore.

There is no oxide zone where the dykes outcrop, the sulphides appearing at the surface and almost without exception, the dykes are impregnated with pyrite, varying from two to thirty per cent in amount.

The disseminated mineralization in the porphyry, has no doubt been accomplished by metasomatic replacement, metallic sulphides being deposited, which was initiated along a network of irregular fractures, forming a stockworks.

The ore appears to have practically no gangue, but it is associated with tiny calcite stringers, at some places, which enclose scattered grains of pyrite. Gold bearing quartz is entirely absent.

The main shattered and sheared zone is approximately 3200 feet in width and 1500 feet in length, and the elevation, at the highest point is about 700 feet above Ochoco creek. The depth of the oxidized zone varies from 5 to 15 feet.

### Description of the Workings.

#### Mayflower stopes.

Practically the only working at depth, is the Mayflower, crosscut tunnel, which cuts the Mayflower vein at a distance of 335 feet, from the portal of this tunnel was driven in to tap the Mayflower shoot at a vertical depth of 210 feet. This shoot of ore has been stoped to the surface. Stoping ground averages 60 feet in length and about 5 feet in width. The highgrade ore occurs in a chimney, which is 30 feet from the Dacite contact. It was a very irregular mass of high-grade pyrite galena, some blende and pyrolusite. Ore stringers are found closely interwoven, in both walls, especially on the hanging side. No attempt was made to reach the true hanging wall, as the high-grade began to cut out when the formation became less fractured.

### Frazier Winze.

This winze was sunk on the Mayflower ore to total depth of 112 feet. A drift, on the 60 foot level, was driven north of a distance 112 feet and short intermediate drifts were driven on the ore at other points in the winze. A second winze 35 feet deep, was sunk from a short drift running south.

### Mayflower Winze.

This winze was sunk at a point on the cross-cut tunnel and 30 feet East of the Frazier winze. It has the dacite dyke for a hinging wall and is reported to be 30 feet deep, but owing to its being full of water, I could make no examination.

A car (30 tons) of high-grade, was mined from a 20 foot stope running north from this winze, and the high-grade ore averaged, according to reports, 4 feet in width. The walls are nearly vertical.

### North Drift.

This drift was driven North from 335 station for 150 feet and was the working tunnel for the Mayflower stope and the Frazier winze. A hoist station has been cut out on the drift and directly opposite the Frazier winze.

### South Drift.

This drift was driven southerly 180 feet from the dacite dyke. At a point 150 feet from the cross-cut tunnel, the Swank shoot of ore was found along the hanging wall of the dyke.

### Swank Stone and Winze.

The Swank high-grade was stoped to the surface, but on account of both the winze and stope being caved, due to the pulling of the timbers by leasers, no examination could be made. According to reports, the winze was sunk 90 feet on the ore-shoot and drift driven north 23 feet and south 100 feet. The stopes extended 32 feet below the drift level and the ore averaged (high-grade) 7 feet in width.

The vertical distance from the surface from the drift is 230 feet.

### Blue Bucket Tunnel.

This tunnel was driven into the Mayflower vein at a point 500 feet north-east and 360 feet above the Mayflower tunnel and is 40 feet in length. The tunnel was caved and no examination could be made. The country rock at this point is bird's eye porphory.

Numerous cuts and short tunnels have been driven at a great many points on the surface on both groups, but no extensive work has been done. This work was done mostly, by leasers in an attempt to locate shoots of high-grade ore. The result has been to develop, at least on the surface, and enormous quantity of milling grade ore.

### Description and results of sampling.

Underground sampling was started at the mouth of the Mayflower cross-cut tunnel. Samples were taken along the walls every 20 feet of the Mayflower tunnel, the north and south drifts, most of them cut with a maul. The assay maps show the following values.

Samples were taken in the old mine workings.  
 Values given were determined on gold at \$20.67 per ounce and silver at 62 per ounce.

<u>No. of Samples.</u>	<u>Value per ton, Gold and silver.</u>	<u>Remarks.</u>
1	\$ 3.40	Mayflower stope.
2	16.20	" "
3	8.40	" "
4	9.60	" along hanging wall
5	4.20	" " foot wall
6	114.20	" high grade seam
7	42.60	" stope along foot wall
8	34.40	" hanging wall
9	78.20	" 3" seam
10	74.40	" 2" stope
11	114.80	" over north drift
12	4.20	Frazier winze 60 level
13	2.10	" " " "
14	2.20	" " " "
15	4.40	" " " "
16	3.20	" " " "
17	2.40	" " 90 "
18	1.80	Frazier Winze 90 level
19	3.60	" " " "
20	4.20	" " " "
21	2.40	" " " "
22	2.80	Swank drift top of sump
23	14.40	" " " "
24	32.20	" " 20 inch seam

#### Surface Samples.

Samples were taken on the surface and were screened through one-half mesh before assaying, a practice which would be followed in milling. A large proportion of the samples taken were of much finer material.

The surface samples were taken over an area of 4,000 feet in length and 3000 feet in width. The area of the Mayflower is in along its entire length, as the assays show, is well mineralized. This mineralization extends south and east a distance of 2,000 feet, down Scissors creek. The samples were all representative ones and their general average is approximately \$2.30 per ton. The tonnage is enormous and there is approximately 1,500,000 tons of this grade of oxidized, free milling ore on the surface.

In calculating the above tonnage, an average of 10 feet was taken as the depth of oxidization. Only a few of the above samples showed sulphide and were present, an assay was made on both the oxidized portion and a representative sulphide sample. The assay showed no appreciable difference in value.

Underground, the samples taken and assayed along the Mayflower cross-cut tunnel, and the north and south drifts, showed a general average of \$1.90.

The samples represent and prove at least a tonnage of 3,200,000 tons, the slope of the hill being taken at 22 degrees. The oxidized ore is not included in this tonnage.

Attention is called to the persistent gold values in the deepest workings, showing that the values go down without a lessening of value.

The sulphide ore carries of 4 per cent iron pyrites and concentrates, made by panning, several representative samples of this ore, gave a recovery of about 85 per cent of the values (total).

Ratio of concentration was 20 to 1 and value of concentrate was \$20.40 to 32.00 and \$25.00 per ton gold and silver. The ore was crushed to 60 mesh. Fifty pound samples were taken, and the tailings were not repanned.

Ratio silver to gold, 1 to 3.3 by weight. Gold at 30.67 Silver at 62 cents



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