

THE MERCURY MINES OF THE OCHOCO DISTRICT,  
THEIR PRODUCTION AND FUTURE

By

Arthur Champion

Also, the Glass Butte District in Lake County  
Seventeen miles East of Hampden Buttes, Oregon.

Mines up the Johnson Creek Fault thirty-three miles east of Prineville, Oregon, are as follows: Blue Ridge, Number One, Johnson Creek, Independent and Mother Lode, owned by the R. F. C.

PRODUCTION

<u>Mine</u>	<u>Flasks</u>
Blue Ridge	300
Number One	70
Johnson Creek	310
Independent	none
Mother Lode	600
Taylor Ranch	130
Champion	100
Staley Barney	300
Byram-Oscar	150
Eickemeyer Bros.-Maurey Mountain	320
Towner Clain, Maurey Mountain	100
Dunham Bear Creek	12
Platner Bear Creek	20
	2,412
Flasks . . .	2,412

REMARKS:

The Blue Ridge, Number One and Johnson Creek mines if consolidated and worked under one management by deepening the Blue Ridge Shaft to the 300 level, 200 feet to sink at cost of \$50.00 per foot, a cost of \$10,000,

development work would be on ore along this level and could be charged to mining. After sufficient work would say install a Gould 30-ton or more furnace at a cost of \$20,000 as the writer treated 200 ton of Blue Ridge at Mother Lode mine in 1940 in a Gould rotary furnace and made a good recovery so at a cost of \$40,000 for development work and installation of recovery plant these three mines should yield during their life and should produce 30,000 or more flasks.

#### THE INDEPENDENT MINE

Their statement that they have 20,000 tons of five-pound ore blocked out by drill somewhat doubtful in regard to value or tonnage.

#### THE MOTHER LODE MINE

Historic mine of the region first produced in 1906. Has a production of 600 flasks or more and is well equipped with 15 ton furnace compressor and mining tools. The writer formed the Champion Mining Co. in July 1939 and took this mine over from R. F. C. under purchase agreement and did 300 feet of underground work and stripped 300,000 yards of surface dirt and produced 100 flasks of mercury but gave the mine back to R. F. C. due to the illness of the financial partner. This mine still has a future as several ore shoots were discovered by stripping that would warrant development at depth and as there is a long tunnel on this property and equipment, \$10,000 should prove or disprove a mine.

## MERCURY MINES ALONG THE OCHOCO FAULT

### BARNES BUTTE MINE

Commencing at Prineville this fault or valley runs east for thirty-two miles and has five producing mines and ten prospects along it. Two miles east of Prineville rising from flat plains is Barnes Butte, composed of andesitic lavas, the flank being covered by younger flows. This mass of andesite has been brecciated and highly silicified and cinnabar has been deposited in the breccia and along the slip planes. This mine is equipped two pipe retort and has produced six flasks of mercury. The owners are short of funds and are doing their own work and as the mine was discovered in the fall of 1940 and the amount of development work so small it would be hard to make a statement as to its merits; however, the geological conditions are favorable for the disposition of ore.

### BYRAM-OSCAR MINE

This property comprising 120 acres of patented land lying on the south side of the Ochoco fault eighteen miles from Prineville and is developed with a shaft 120 feet deep and four levels and has produced 140 flasks. The levels are all in ore and a strong downward extension of the ore, in places four feet wide of 100 pound ore with the lower grades running ten to twenty pound mercury per ton. This mine has the most favorable geological structure of any mine in the Ochoco District as it has a large fault gouge capping the ore at the surface, erosion being just enough to explore the ore under the cap. Recommended development:-sinking of shaft 100 feet deeper at a cost of \$40.00 per foot or \$4000.00, drifting 100 feet each way at the bottom, \$10.00 per foot

or \$2000.00. As future development would be on ore it could be charged to mining.

Within six miles of this mine there are three mines and two prospects and might be advisable to install forty-ton plant at a cost of \$30,000 and treat ore from the other adjacent mines and prospects, as at present there are no large treatment plants in the district.

#### STALEY AND BARNEY MINE

This mine is twenty-one miles east of Prineville and lying on the north side of the Ochoco fault comprising 400 acres of patent land, having produced over 300 flasks of mercury and at present is producing with a small retort. This mine has a fair chance to develop ore and if plant was installed on Byram-Oscar mine it could be carted and treated there.

#### TAYLOR RANCH MINE

This mine is 26 miles east of Prineville on the north side of the Ochoco fault, comprising 1400 acres of patent land with cinnabar showing over most of the acreage. There is a 130 foot shaft with drifts on the 42 and 82 levels at present. The 132 level drifts have not reached the ore. In July, 1940 a 3-ton rotary retort was installed to treat the high grade and up to the present has produced 130 flasks paying for the development work and leaving 300 flasks in reserve ore above the 82 foot level. The owners expect after completing the 130 foot level drifting to have sufficient ore to warrant the installation of a 30-ton reduction plant. Owners are Ray R. Whiting, Prineville, Oregon, and Lewis Mills, American Bank Building, Portland, Oregon.

CHAMPION MINE

The Champion Mine is located twenty-five miles east of Prineville and on the south side of the Ochoco fault. It is owned by the Johnson Brothers of Portland, Oregon. Production over 100 flasks of mercury. Incline shaft down 120 feet, drifting being carried on in the lower levels and retorting of the high grade ore.

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GLASS BUTTE MINE

This mine is owned by H. A. Miller, Bend, Oregon, situated in Lake County, Oregon, seventy-five miles southeast of Bend, Oregon, three miles south of highway No. 54.

Commencing at the east of Glass Butte is a large deposit of opalite comprising 48 claims. Here considerable work has been done in the form of short tunnels and shafts proving a large body of surface ore that will run from three to four pounds per ton that can be mined by open pit methods at a cost not to exceed \$.25 per ton. At present there is sufficient ore developed to warrant the installation of a 100-ton Ghould rotary furnace as their furnaces are very successful in treating this type of ore. Furnacing cost \$.75 per ton.

Cost to bring this property up to 100 ton operating capacity would be as follows:

Sampling and surface pits . . . . .	\$10,000.00
Equipment, compressor . . . . .	10,000.00
Caterpillar, tractor, bulldozer and scraper . . . . .	15,000.00
Ghould rotary furnace 100-T. capacity . .	40,000.00

This unit would be capable of producing 1300 to 1500 flasks per year. After operating this unit six months, thereby proving the ore by direct plant sampling on recovery and the extent of the ore, add four more units bringing treatment up to 500 ton per twenty-four hours. Mining costs could be lowered and the \$35,000.00 for mining machinery would be sufficient to mine 600 ton per day. This mine could produce 7,000 flasks a year or more and if under Government control could be closed down during the period of low price quicksilver as the mine would be an open pit and the machinery housed there. In this way there would be very little deterioration and this large ore body could be held in reserve for the time of shortage in quicksilver so would recommend this deposit for investigation. While it is low grade it is so situated that mining and furnacing would not exceed \$1.25 per ton, making it possible to mine two pound ore with mercury at \$1.00 per pound and show a net profit.

(Sent to Walter Pierce at his request. Also to USEM.)

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