

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

Report by N.S. Wagner
Date of Examination
May 17, 1943

Name of Property Johnson Mine (Gold), Baker District, Baker County.

Operator and lessee Mr. C. A. Phillips, 3/8 Scotts Cafe, Baker, Oregon.

Owner Mr. Elvie Haines, North Powder, Oregon.

Area, type of claim 200 acres representing mineral rights on farm land and now under bond and lease to Mr. C. A. Phillips until September 1947.

Location Approximately section 33; T. 6 S.; R. 40 E., or six miles east of North Powder on the Thief Valley reservoir road.

History The property was originally owned and operated by a Mr. Johnson who sank a shaft about 100 feet. Drifting developed some ore an unknown quantity of which was mined. This work was on a vein comparable to the one currently being mined, but paralleling it and occurring about 30 feet distant in the footwall.

The property was held by several different people after Mr. Johnson, but no particularly significant work was done on it until the present operator took over in September 1941. Then the new shaft was continued to a depth of 125 feet and five shipments of ore totalling nearly 500,000 lbs. dry weight was shipped to the Tacoma Smelter up until operations were suspended for the winter in December 1942. This work was done on a small scale and with prospecting equipment. At the present time there is practically a car of ore in the bin from the current seasons operation, although it is not planned to conduct more than incidental development for the

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duration. ^{the} The average tenor of the ore shipped is approximately 0.45 or \$15.75 per ton and 2.67 ounces per ton in silver.

Topography

The mine is situated on top of the gently rolling hills south of Thief Valley and east of North Powder. Sage brush is the only vegetation and all mine timber must be acquired elsewhere.

Likewise, there is no water available at present other than that pumped from the mine, but there is a spring about a half a mile from the shaft. The nearest electric power is five miles.

Development

The ^{original} shaft is accessible to a depth of about 80 feet at which place one can wlk laterally a short distance on the top of fill material as the stones apparently were carried right to the shaft. Two small surface pits are situated on the recently developed vein and these represent earlier exploratory work from which a small tonnage of ore was presumably taken. The present working shaft is down 125 feet and has encountered water. Two drifts run from the 100 foot level and there are stopes on each side of the shaft. This level was inaccessible due to water, but most of the upper reaches of the northern stope were available for inspection.

Geology

The vein is exceptionally uniform in width, averaging perhaps 18 inches. Where seen to change it thins gradually to a foot or so or thickens as the case may be. Associated crossings, shearing, and local faulting are conspicuously absent. This width was seen to hold thus, not only in the active workings, but in the old pits and various outcrops over a distance of several hundred feet.

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The vein is quartz in a zone of soft material often 6 to 8 feet thick. This material is highly altered wall rock of uncertain identity. In fact, petrographic study will be necessary to name the wall rock accurately. No accessible underground cross cuts penetrated fresh wall rock. In the surface it is to be seen as dense, greenish gray blocks with very fine texture somewhat spotted with phenocrysts. It is probably one of the highly altered volcanics of the Clover Creek Greenstone as described by Gilluly in U.S.G.S. Bull. 879., and his Geologic map of the Baker Quadrangle shows this formation to occur in these same rolling hills a very short distance south of the mine.

Free gold is reported to have been found occasionally. But few scattered crystals of sulphides, chiefly pyrite, were to be seen as the workings are well in the oxide zone. Smelter receipts show less than 0.1% Cu, about 5.0% Fe, about 1.0% As, and slightly less than 1.0% Sb with SiO_2 averaging around 78.0%. Although rarely observed in the vein, chunks of stibnite are found in the broken ore. These are usually egg sized, although several much larger chunks have been found.

Mining

mining has been carried on in small, but extremely efficient manner by Mr. Phillips working alone or with a partner. Equipment consists of a good prospect hoist which operates a bucket on skids. There is a small air driven pump which will hold the water level under present conditions, but which is not adequate to pump out the mine once flooded, so that bailing is sometimes necessary. Drilling is done with hand steel.

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Economics An assay map compiled by Mr. Phillips showed the rock in the mine to average about \$20.00, and this compares favorably with the smelter analyses of the shipments made to date. These range between \$15.05 and \$16.10 in Au. and are lower than the assay map average because the ore mined naturally includes a certain amount of dilution from waste rock as compared with the cut samples.

SHIPMENTS MADE BY C. A. PHILLIPS FROM THE JOHNSON MINE, NORTH POWDER
 Copied from receipts of the Tacoma Smelter by N. S. Wagner, Feb. 26, 1943.

Date	Wet Weight	H ₂ O	Dry Weight	Au	Ag	Cu	Fe	As	Sb	Zn	CaO	Al ₂ O ₃	SiO ₂
Dec. 16, 1941	99,720	2.85	96,878	0.46	1.60	.06	3.9	---	---	---	0.9	7.3	78.8
Mar. 5, 1942	104,500	3.28	101,072	0.45	2.35	.03	4.8	.94	---	---	---	---	80.8
Mar. 14, 1942	106,400	3.53	102,844	0.44	2.71	.06	5.3	.78	.88				78.8
Aug. 19, 1942	99,060	3.43	95,662	0.43	3.22	.12	5.2	1.05	.74	---	---	---	77.2
Oct. 30, 1942	101,940	3.60	98,174	0.42	3.47	---	5.7	1.09	1.01	.4	---	---	75.4

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