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State Department of Geology and Mineral Industries

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1069 State Office Building Portland 1, Oregon

LA BELLEVIEW MINE (Gold)

ducer the solid under Granite Area Grant County

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Owners: Bamberger Brothers, Salt Lake City, Utah; Western Holding Company, Salt Lake City, Utah; Mrs. C. A. Parker, Berkeley, California; A. C. Allen, Central Point, Oregon; Mrs. E. K. Eskridge, Los Angeles, California.

Operator: R. B. McGinnis, Granite, Oregon.

Location: Located in T. 8 S., R. 46 E.W.M. The claims are recorded as lot no. 41 in La Grande Land Office, U. S. Mineral Survey 258. Elevation is 7000 feet.

Area: Six patented claims, the Hope, Seminole, Mountain View, Southwest Extension La Belleview, La Belleview and Lolite. One unpatented claim and two mill sites. The claims trend northeasterly.

History: The claims were located by Cabell in 1878, who worked the ore from them with an arrastre for the free gold. In 1890 Bamberger and Keith acquired title to the property and worked it until 1892. The property was idle then until 1927, at which time Tom Kennerly took it over and built a mill. In 1928 and 1929 Mr. R. B. McGinnis operated the mine. The mine was idle from 1929 to the fall of 1939. At that time Mr. McGinnis leased the property, and in 1939 high grade ore was shipped. In early 1940 the old mill was reconditioned and by midsummer enough ore had been proven to justify building a 3-mile power line and converting mill power from steam to electricity. Production for 1940 was \$120,000. 行わる とうぶっと うちごう ふみんれい 素質した

Geology: The country rocks are quartz biotite gneiss and granodiorite. The vein strikes from N. 35° E. to N. 45° E. and dips 65° to 70° NW. According to microscopic work done by R. E. Head of the U. S. Bureau of Mines at the University of Utah. the vein quartz carries marcasite, pyrite, galena. sphalerite, arsenopyrite, and traces of tellurides.

There are two ore shoots. The first is called the Lawrence shoot and is almost parallel to the dip of the vain. It is about 80 feet in length and two feet wide. It carries higher values in silver than gold and has very few sulfides. The second or main ore shoot in the vein strikes N. 45° E. and dips 65° NW; it rakes 30° to the southwest. In this ore body the sulfides are coarser and the values are chiefly gold.

The intersection of these two ore shoots made a high grade stope, called the 500-dollar stope as most of the ore ran between \$500 and \$600 per ton.

Average ore in La Belleview at the present time will assay \$20. Value is divided nearly equally between gold and silver.

Development: The present workings consist of four levels totaling some 5,500 feet of drifts and crosscuts. These levels are connected by 7000 feet of raises. Air is furnished for the mine by one 350 cu. ft. Ingersoll-Rand compressor run by a 75 h.p. motor.

<u>Mill Flow Sheet</u>: Ore is trammed from the mine during the day shift and dumped over a $1\frac{1}{2}$ inch griszly. Oversize goes to a No. B. $7^{H} \times 14^{H}$ Fraser and Chalmers gyratory crusher and thence to a 200 ton fine ore bin. From the fine ore bin, the ore is fed by two disc feeders and a belt conveyer through a $7^{H} \times 14^{H}$ jaw crusher to a $27^{H} \times 14^{H}$ Dorr simplex classifier.

The Dorr classifier is in closed circuit with a $4^{\circ} \ge 4^{\circ}$ Colorade Iron Works ball mill. Minus $\frac{1}{4}^{\circ}$ from the ball mill discharge is fed to two $12^{\circ} \ge 12^{\circ}$ Pan-American jigs. Jig concentrate goes to storage. Jig tailing is returned to the classifier. Classifier overflow is fed to a series of six Denver 30" Sub A and three 30" Fagergren flotation cells. A finished concentrate is taken from the first three cells.

The concentrate is dried and shipped to the International Smelting and Refining Company, Utah.

The mill heads contain 15 to 20 percent sulfide and average about \$20. The value of the finished concentrate is from 80 to 100 dollars. Fifty tons are milled per day.

The flotation reagents used are xanthate Z-6, aerofloat 15, cresylic acid, and sodium sulfide.

"This mine is located within the area of highly metamorphosed argillite that lies along the prominent north spur from Bald Mountain, in sec. 8, T. 8 S., R. 36 E., at an elevation of about 7000 feet and about 12 miles north from Granite and 26 miles from Sumpter, the nearest railroad station. It is owned by David Keith and J. T. Bamberger of Salt Lake City, Utah.

"The mine workings extend from the top of the ridge southward, into the ravine forming the north fork of Onion Creek. Little work has been done since 1907, and the workings on the vein are not accessible. This description is based upon an examination of the surface and notes left by the owner, F. E. Cabell, after his death, in 1912. Mrs. Cabell permitted the examination of a collection of specimens taken during the operation of the mine.

"Quartz biotite schist, in which persistent laminae of biotite separate quartzose bands one-quarter to an inch wide, forms the walls of the vein. The vein trends N. 50° E. and dips northwest. Two types of ore are recognized. The commonest shows rudely alternating quartzose zones, rich and poor in sulphide minerals, with here and there a lenticular vug. In the richer sones the sulphide minerals, pyrite, arsenopyrite, blende, and galena, are coarsely crystalline and though dominantly intermixed, are locally in bands. Chalcopyrite and pyrrhotite are sparingly present. In the poorest zones the pyrite is dense and the other sulphides are only sporadically present. The second type of ore shows angular nuclei which may be recognized as mica-schist fragments, more or less replaced by quartz and pyrite, inclosed in masses of quartz crystals, radially arranged. The richer ore shows argentiferous tetrahedrite, probably in primary intergrowth with pyrite and quarts pyrargyrite, possible proustite, and native silver occur as films along fractures. "According to Mr. Cabell's data, 3 tunnels contain an aggregate of 6000 feet of work on the vein, over a vertical range of about 600 feet. The vein was opened for a distance of 1800 feet in addition to 600 feet explored in the Wild West claim, which adjoins the La Belleview on the southwest. Within this distance, 2 shoots were found, the larger of which attained a stope length of 280 feet. The lower portion of this shoot yielded material containing 0.40 ounce gold and 15 ounces silver to the ton.

"The total production up to 1911 including ore shipped elsewhere or milled in the mill on Onion Creek, amounted to 8000 tons, having a gross value of \$200,000. Concentrates averaged 1.20 ounces gold and 55 ounces silver to the ton, and shipping ore was worth \$60 to \$300 to the ton". 1/

Hewett 31:13, 14, states: "Development - 4 tunnels, 8500 feet of work; 500 feet below outcrop.

"Relationships: Vein in quartz-mica schist and gneiss. Strike N. 45° E., dips 63° NW. Quartz, arsenopyrite, pyrite, blende, galena, chalcopyrite, pyrrhotite, silver sulphides.

and

"Milling/Production: Not available; estimated ratio of sulphides to quartz 1:5 or 1:10. Little free gold. Estimated production \$300,000.

"La Belleview mine explores several veins, but by far the greater part of the work follows one vein. Where this vein is narrow, it consists largely of sheared chloritic gouge, but where it is 2 to 4 feet wide it is made up of two or more strands of quartz with sulphides. The quartz contains numerous phantom angular fragments of schist. A typical specimen of ore, sawed and polished, shows that early quartz and coarsely crystalline pyrite have been crushed; then arsenopyrite was deposited; this was followed by further crushing and finally by the deposition of more quartz with minor quantities of blende, chalcopyrite, and galena. Studies of the ores made by an engineer who examined the mine recently indicated that the massive pyrite and arsenopyrite rarely carried much gold but that the content was higher when galena, chalcopyrite, and antimony minerals were present." 2/

Informant: R. B. McGinnis, H.K.L. 12/13/40.

References: Lindgren, 01:685

Swartley, 14:138 Pardee & Hewett, 14:109 1/ Parks and Swartley, 16:137 2/ Hewett, 31:7, 8, 10, 13, 14, 32, 32 Lorain, 38:18

From: Oregon Metal Mines Handbook, Grant, Morrow, and Umatilla counties: Oregon Department of Geology and Mineral Industries Bulletin No. 14-B, p. 52-55, 1941.

BALD MT -ELKHORN R. SRANITE \mathcal{D}

La Belleview Mine.—La Belleview mine, about 2 miles northeast of the Blue Ribbon, is in argillite, but its location is such that during the time of the intrusion of the granodiorite into the argillite this particular locality was more intensely affected than elsewhere. Its situation is such that it is more than half surrounded by granodiorite and the nature of the reported mineralization indicates that granodiorite is but a comparatively short distance below the surface and the vein is probably in granodiorite in all but its upper part.

BELLEVIEW ANNE

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The vein has the same strike and dip as those just mentioned, although in the upper levels the dip is steeply to the northwest. The wall rock is highly metamorphosed. The ore minerals are pyrite, arsenopyrite, zinc blende, and galena, with small amounts of chalcopyrite and pyrrhotite. Specimens of the ore show that fragments of argillite in the vein have been considerably replaced by quartz and sulphides. Tetrahedrite and silver sulphide minerals are reported present.

The workings are inaccessible, but development work is said to aggregate about a mile and a half in drifts on the veins some 1,800 feet horizontally in a vertical distance of about 600 feet.

A production of \$200,000 from 8,000 tons is reported, part of which is from crude ore and the rest from concentrates.

There are other veins of the same general character upon this property and at other locations in the agillite farther northwest.

LA BELLEVIEW (gold)

Granite District

(1) This mine is located within the area of highly metamorphosed argillite that lies along the promiment north spur from Bald Mountain, in sec. 8, T. 8 S., R. 36 E., at an elevation of about 7000 feet and about 12 miles north from Granite and 26 miles from Sumpter, the nearest railroad station. It is owned by David Keith and J. T. Bamberger, of Salt Lake, Utah.

"The mine workings extend from the top of the ridge southwest, into the ravine forming the north fork of Onion Creek. Little work has been done since 1907, and the workings on the vein are now accessible. This description is based upon an examination of the surface and notes left by the owner, F. E. Cabell, after his death in 1912. Mrs. Cabell permitted the examination of a collection of specimens taken during the operation of the mine.

"Quartz biotite schist, in which persistent laminae of biotite separate quartzose bands one-quarter to an inch wide, forms the walls of the vein. The vein trends N. 50° E. and dips northwest. Two types of ore are recognized. The commonest shows rudely alternating quartzose zones, rich and poor in sulphide minerals, with hore and there a lenticular vug. In the richer zones the sulphide minerals, pyrite, arsenopyrite, blende, and galena are coarsely crystalline and though dominantly intermixed, are locally in bands. Chalcopyrite and pyrrhotite are sparingly present. In the poorest zones the pyrite is dense and the other sulphides are only sporadically present. The second type of ore shows angular nuclei which may be recognized as mica-schist fragments, more or less replaced by quartz and pyrite, inclosed in masses of quartz crystals, radially arranged. The richer ore shows argentiferous tetrahedrite, probably in primary intergrowth with pyrite and quartz pyrargyrite, possibly proustite, and native silver occur as films along fractures. ¹According to Mr. Cabell's data, 3 tunnels contain an aggregate of 6000 feet of work on the vein, over a vertical range of about 600 feet. The vein was opened for a distance of 1800 feet in addition to 600 feet explored in the Wide West claim, which adjoins the La Belleview on the southwest. Within this distance, 2 shoots were found, the larger of which attained a stope length of 280 feet. The lower portion of this shoot yielded material containing 0.40 ounce gold and 15 ounces silver to the ton.

(The total production up to 1911including ore shipped elsewhere or milled in the mill on Onion Creek, amounted to 8000 **ZHER** tons, having a gross value of §200,000. Concentrates averaged 1.20 ounces gold and 55 ounces silver to the ton, and shipping ore was worth §60 to §300 to the ton.⁽⁾ (Parks & Swartley, 16:137)

According to a press release in the <u>Eastern Oregon News</u>, Baker, of September 16, 1938:

((John Arthur had a small crew of men employed at the La Belleview mine north of Granite. They were at work cleaning up about the mill and working over dumps. The higher grade ore from the dumps was to be shipped to the smelter at Tacoma. Some development work was also done in 1929.

Hewett (31:13,14) states:

(Development: 4 tunnels, 8500 feet of work; 500 feet below outcrop. (Relationships: Vein in quartz-mica schist and gneiss. Strike N. 45^o L., dip 63^o NW. Quartz, arsenopyrite, pyrite, blende, galena, chalcopyrite, pyrrhotite, silver sulphides.

(Milling and Production: Not available; estimated raio of sulphides to quartz 1:5 or 1:10. Little free gold. Estimated production \$300,000.

(La Bellevue mine explores several veins, but by far the greater part of the work follows one vein. where this vein is narrow, it consists largely of sheared chloritic gouge., but where it is 2 to 4 feet wide it is made up of two or more strands of quartz with sulphides. The quartz contains numerous

-18-

phantom angular fragments of schist. A typical specimen of ore, sawed and polished, shows that early quartz and coarsely crystalline pyrite have been crushed; then arsenopyrite was deposited; this was followed by further crushing and finally by the deposition, of more quartz with minor quantities of blende, chalcopyrite, and galena. Studies of the ores made by an engineer who examined the mine recently indicated that the massive pyrite and arsenopyrite rarely carried much gold but that the content was higher when galena, chalcopyrite, and antimony minerals were present.

 References:
 Lindgren, 01:685
 Parks & Swartley, 16:137 (quoted)

 Swartley, 14:138
 Hewett, 31:7,8,10,13,14,32,32 (quoted)

 Pardee & Hewett, 14:109
 Lorain, 38:18

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#/39 Bel/4vue Le Belvieu Mine

Granite District Grant County

Owners: Bamberger Brothers, Salt Lake City, Utah David Kieth Estate, """"" Mrs. C. A. Parker, Berkeley, California

Lessee: Mr. R.B. McGinnis, Berkeley, California

Location: NE¹/₄ section 7, T 8 S, R 36 E.W.M. Elevation 7000'.

Area: 6 patented lode claims.

History: Worked by Cabble in the '80's, who is reported to have produced \$150,000, and by Bamberger and Kieth in the '90's, with a stamp mill, Hartz jigs and Wilfley tables.

A new mill was built in 1898 to concentrate, roast, and cyanide, but extraction was only 55% and the mill only ran for 3 weeks, and has never run since.

R.B.McGinnis spent \$75,000 in developement in 1928-9 and in the fall of 1939 put a small crew to work reopening and developeing the property.

Developement: A total of about 5000 feet of work has been done, opening the vein for 1800 feet on four levels.

Equipment: Numerous old buildings in rather suprisingly good shape, as is the old mill building. Track, cars, tools. Most of mill has been dismantled, only old roasters and a few other parts remain.

GeologyCountry rock granodiorite, gneiss, and schist, allamuch faulted. Main vein runs northeasterly, dipping about 65° to the NW, and averaging 3 feet in width. Minerals galena and sphalerite, carrying gold and silver.

Miscellaneous: Transportation 10 miles to Granite, 4 miles over rough forest road and steep grades. Weather moderate, weason from May to December.

Informant: R.B.McGinnis

Report by: J.E.1. 9/24/39 John Ehot allen

LA BELLEVIEW MINE (Gold)

Granite Area

Owners: Bamberger Brothers, Salt Lake City, Utah; Western Holding Company, Salt Lake City, Utah; Mrs. C. A. Parker, Berkeley, California; A.C.Allen, Central Point, Oregon; Mrs. E. K. Eskridge, Los Angeles, California.

Operator: R. B. McGinnis, Granite, Oregon

Location: Located in T.8 S., R.46 E.W.M. The claims are recorded as lot no.41 in La Grande Land Office, U.S.Mineral Survey 258. Elevation is 7000 feet.

Area: Six patented claims, the Hope. Seminole, Mountain View, Southwest Extension La Belleview, La Belleview and Lolite. One unpatented claim and two mill sites. The claims trend northeasterly.

History: The claims were located by Cabell in 1878, who worked the ore from them with an arrastre for the free gold. In 1890 Bamberger and Keith acquired title to the property and worked it until 1892. The property was idle then until 1927, at which time Tom Kennerly took it over and built a mill. In 1928 and 1929 Mr. R. B. McGinnis operated the mine. The mine was idle from 1929 to the fall of 1939. At that time Mr. McGinnis leased the property, and in 1939 high grade ore was shipped. In early 1940 the old mill was reconditioned, and by midsummer enough ore had been proven to justify building a 3-mile power line and converting mill power from steam to electricity. Production for 1940 was \$120,000.

Geology: The country rocks are quartz biotite gneiss and granodiorite. The vein strikes from N.35° E. to N.45° E. and dips 65° to 70° NW. According to microscopic work done by R. E. Head of the U.S.Bureau of Mines at the University of Utah, the vein quartz carries marcasite, pyrite, galena, sphalerite, arsenopyrite, and traces of tellurides.

There are two ore shoots. The first is called the Lawrence shoot and is almost parallel to the dip of the vein. It is about 80 feet in length and two feet wide. It carries higher values in silver than gold and has very few sulfides. The second or main ore shoot in the vein strikes $N.45^{\circ}$ E. and dips 65° NW; it rakes 30° to the southwest. In this ore body the sulfides are coarser and the values are chiefly gold.

The intersection of these two ore shoots made a high grade stope, called the 500-dollar stope as most of the ore ran between \$500 and \$600 per ton.

• Average ore in La Belleview at the present time will assay \$20. Value is divided nearly equally between gold and silver.

Development: The present workings consist of four levels totaling some 5,500 feet of drifts and crosscuts. These levels are connected by 7000 feet of raises. Air is furnished for the mine by one 350 cu.ft. Ingersol-Rand Compressor run by a 75 h.p. motor.

Mill Flow Sheet: Ore is trammed from the mine during the day shift and dumped over a $l_{\mathbb{R}}^{1}$ inch grizzly. Oversize goes to a No.B. 7"xl4" Frazer and Chalmers gyratory crusher and thence to a 200 ton fine ore bin. From the fine ore bin, the ore is fed by two disc feeders and a belt conveyor through a 7"xl4" jaw crusher to a 27"xl4" Dorr simplex classifier.

The Dorr classifier is in closed circuit with a 4'x4' Colorado Iron Works ball mill. Minus $\frac{1}{4}$ " from the ball mill discharge is fed to two 12"x12" Pan-American jigs. Jig concentrate goes to storage. Jig tailing is returned to the classifier. Classifier overflow is fed to a series of six Denver 30" Sub A and three 30" Fagergren flotation cells. A finished concentrate is taken from the first three cells.

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Informant: R. B. McGinnis, H.K.L. 12/13/40 References: Lindgren 01:685 Swartley 14:138 Pardee & Hewett 14:109 <u>1</u>/ Parks and Swartley 16:137 <u>2</u>/ Hewett 31:7.8,10,13,14,32,32 Lorain 38:18