

Directions to field man:

Who will accompany field man to property? *Mr. Hart*

Can we drive right to the property? *no* . . . What kind of road is it?

How far must we pack equipment, samples, etc., from the road? *2 miles*

During what months is the property not accessible? *Winter - open March 4*

Detailed road and trail directions for getting from nearest Postoffice to property; or to place where field man will meet you or the guide:

*From Melrose up little N. San Juan Highway . . .
past Elk Horn to Black Eagle C.C. sign past . . .
Hart lives just beyond*

Description of property to be examined:

What kind of property: .Gold lode?Placer? Other? *Zinc lode*

History: Is the property a prospect? . . . A past producing mine now idle?

Is it producing now? *no* . . . During what periods was it in production?

Development: Describe the surface workings (open-cuts, pits, trenches) that are cleaned out so that we can see the rock or ore in place.

Open cut and pits (not probably in good condition)

How many feet of underground workings (tunnels, cross-cuts, drifts, shafts, raises) approximately are open so that we can examine the rock or ore?

*200 feet of tunnel on ore on no. 2
15 " " " " " " " " " " on " 3*

How many dumps are there? *over* . Do you have a claim map of the property? *no*

Map of workings? *no* . Assay map? *no* . Mill flow sheet? *no* . Engineer's report? *no*

How many samples have been taken and assayed?

FOR OFFICE RECORDS ONLY

Date request received. 194 Date set for visit 194 .

Date property visited. 194 by:

Cost of inspection: Salary
Meals and Lodging
Car Mileage-cost at 4¢
Total

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

March 26, 1941

The only justification that I can see for further development on the Blende Ore is a very high price for zinc.

- Factors favorable are:
1. The mine is in the same metallurgical zone and on the same strike as the already well-proven Amalgamated.
 2. There are a number of undeveloped parallel veins on and near the property which might give even better results than the #2.
 3. Adequate sampling, which has not yet been done, might show gold or silver values in the disseminated sulphides.

- Unfavorable factors are:
1. The high-grade zinc-bearing lenses are small and discontinuous. Five tons from 210 feet of tunnel!
 2. Development has yet to prove ore in sufficient width or average grade to justify an operation
 3. In other properties in the area (except the Ogle Mountain 4 miles to the west) there is little gold or silver to help costs.
 4. Two miles of road necessary for operation (\$3000-6000)

I suggest that the upper tunnel be developed before any further work is done on the lower. This vein has better defined walls, wider zone of disseminated pyrite, and might be high enough in the zone so that some gold values would appear. Secondly, before abandoning the property, a thorough sampling job should be done by a licensed engineer; not only on the Blende Ore #2 but also on the upper tunnel and on the Gold Bug. Lagging in the #2 tunnel may have covered over some of the best high-grade lenses, so that they were not seen in the examination.

J.A.

State Department of Geology and Mineral Industries

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Portland, Oregon

~~March 26, 1941~~
~~Marion County~~

Blende Ore

North Fork Santiam District

Location:

Caps
To NE 1/4 Sec 9, T. 8S., R. 5E
The Blende Ore ~~is located~~ is located at an elevation of about 2700 feet, on the north branch of the east fork of Gold Creek, 2 miles by trail from the road at the mouth of Gold Creek, which is 25 miles east of the town of Mehama. The main (#2) tunnel is about 300 feet north of the Bimetallic Mine, ~~NE 1/4 Sec 9, T. 8S., R. 5E.~~

Owner:

~~John Hart, Mehama, is owner on the Blende Ore #2 claim and of several others in the district (Gold Bug and Black Eagle properties).~~

History:

The Blende Ore was located 40 years ago by Hart, who, with his brother, has done most of the development work. *John*

Geology

(38:90)
According to Buddington and Callaghan (U.S.G.S. Bulletin #899): "The country rock, probably originally a tuff, has been altered to a mass of sericite and cherty quartz with disseminated pyrite. The vertical vein consists of this altered country rock with sulphides either irregularly disseminated (pl. 12, 14), in bunches, or in bands. The material with considerable sulphides ranges from 12 to 65 inches in width and forms an ore shoot over 100 feet long. Sphalerite, pyrite, galena, and chalcocopyrite are present, with sphalerite—a light resinous variety—predominating. All the sulphides occur as well-defined crystals lining vugs; some of the sphalerite crystals are over an inch in diameter. In places there are lumps of nearly solid sphalerite over 6 inches thick. Galena is scattered through the more massive parts of the vein. Chalcocopyrite is disseminated in the massive parts of the vein or occurs in bunches or in well-formed sphenoids on the surfaces of quartz and sphalerite crystals. A very little calcite and pyrite occur on the surfaces of the other crystals."

~~A sketch of the Blende Ore #2 tunnel accompanies this report. It can be seen from this map that~~ The country rock is broken by the nearly vertical main-vein set of fractures, which strike about N. 10° E.; by a second set striking N. 30° W.; and by a third minor set of small and only slightly altered (sericitic) fractures striking N. 30° E. From the spacing of the fractures, it appears probable that the vein will make another jog to the N. 30° W. within a few feet of the face of the present tunnel.

Pyrite is widely disseminated along the main fractures in widths up to six feet. Sphalerite seems to be more or less restricted to irregular lenses, which appear widest near the bends in the main vein. These high-grade ore lenses vary up to tens of feet in length and up to 2 or 3 feet in width but average less. Visual inspection of the high grade suggests a grade of perhaps 20% ZnS, 10% FeS, 3% CuFeS₂, with a gangue of quartz (often vuggy), silicified and brecciated country rock (altered tuff) and sericite gouge. Only traces of galena were noted. About 5 tons of high-grade ore from the 200 odd feet of development lie on the dump.

discovered in the drift north of the
~~Seven hundred feet up the hill north of lower tunnel, a 40-foot drift has been driven due north along a 3 to 5-foot vein of sericite gouge containing disseminated sulfides.~~ The vein has well-defined walls, dipping 70° to the west. A large lens of quartz, bearing a high percentage of sphalerite, was encountered a few feet from the mouth of the tunnel, and is said to have been extracted from a winze, (now filled) and shipped. This vein is probably separate from that on the lower level, more or less paralleling it on the west.

~~In the North Santiam District there is a distinct series of deposits into three types, characterized from the center out, by predominating~~

Blende Ore, North Fork Santiam District, Marion County, Oregon, 1939, 1940

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chalcopyrite, pyrite, and complex sulfides. The Blende Oro, together with the Amalgamated (the largest and best developed mine in the district) belongs to the latter marginal type, which is probably either uppermost mesothermal or epithermal in origin. In the western United States the large base-metal epithermal deposits, according to the Lindgren Volume (Ore Deposits of the Western United States, p. 39) are usually in limestone, since "siliceous rocks, including volcanic flows, are only slowly attacked by these solutions....deposits in siliceous rocks, therefore, may be distributed over a relatively long distance and their lead and zinc minerals may be correspondingly scattered in shoots too small to be profitably mined...."

According to Buddington and Callaghan (~~op. cit.~~ ³⁸ p. 87) —
"Future development in the district should depend largely on high prices for the base metals. Small shoots of complex sulphide and chalcopyrite ores have been explored, but they contain almost no gold and very little silver, according to available assays. Possibly more shoots of base-metal ores will be found, as the district covers a large area, is heavily forested, and has not been thoroughly prospected. Further prospecting might reveal gold-ore shoots like that of the Ogle Mountain mine, in the outlying parts of the district. Only small ore shoots may be expected, and plant and development work should be planned accordingly."

March 26, 1941
John Eliot Allen, Geologist

Ref: Callahan & Budd, 38:90

Report by JCA, 1941

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