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ITEM
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40 CONTRIBUTIONS TO ECONOMIC GEOLOGY, 1908, PART I.

which the ore is said to consist of copper and lead sulphides carrying gold and silver. The ore occurs in veins that fill fault planes. The chief mines here are the Silver Cord, Lily, and Alice. The Alwilda tunnel (24) one-fourth of a mile north of White Pine, crosscuts the granite and opens the extension of the Silver Cord vein, which is here about 10 inches wide and contains gray copper, chalcopyrite, and galena in a quartz gangue.

On Tonichi Creek there are two small deposits of iron, both located north of White Pine, one half a mile and the other $1\frac{1}{2}$ miles up the creek. The latter is a flat-lying body from 1 to $1\frac{1}{2}$ feet thick, occupying a flat above an old beaver dam. The former deposit is exposed by an open cut and tunnel about 200 feet above the bottom of the valley on the east wall at the fault contact of the larger sedimentary area and the granite. Here there are two belts of magnetite separated by about 50 feet of altered limestone. The northern body lies against gray granite. It is 50 feet wide and not so rich as the southern one, which is 15 feet wide and lies on top of an unaltered gray limestone. This limestone contains white chert, which greatly resembles the Silurian(?) limestone of the Pitkin area. A small amount of this ore was mined for use as flux at the old smelter, 5 miles down the creek. Since that smelter has been out of use nothing has been done with the deposit, as it is too small to pay for the heavy transportation charges.

U. S. G. S. Bull. 380
1907

THE HORNSILVER DISTRICT, NEVADA.

By FREDERICK LESLIE RANSOME.

The town of Hornsilver, which came into existence in 1907, lies in Esmeralda County, Nev., 26 miles south-southwest of Goldfield, 14 miles southwest of Cuprite (a station on the Las Vegas and Tonopah and the Tonopah and Tidewater railroads), and 12 miles southeast of Lida. Mining in this vicinity is not wholly recent, and an earlier settlement on the site of Hornsilver was known as Lime Point. Prospecting in this region began about 1868, and over twenty years ago ore was hauled to a mill near Lida from the Grand Central and other claims near Lime Point; but most of these claims had long been abandoned when the growth of Tonopah and Goldfield called attention anew to this part of Nevada and provided better facilities than formerly existed for its economic development. Work on the Great Western vein began in 1905, and the Grand Central was re-located early in 1908, after the presence of rich ore in the Great Western had been established.

The following notes are based on a visit of a day's duration in June, 1908. At that time there were about 500 people in the district and considerable prospecting by lessees was in progress in the hills west and south of the town. Water was hauled from a spring 12 miles away and supplies were brought from Goldfield by wagons or partly by rail by way of Cuprite. One mine only, the Great Western, was shipping ore.

Hornsilver, at an altitude of 5,900 feet, lies on a gentle alluvial slope, which opens northward into one of the broad desert valleys common in the region and is inclosed on other sides by hills rising from 500 to 1,000 feet above the town.

The rocks of the district are limestones and calcareous shales, which are intruded and in places more or less metamorphosed by masses of granite. The stratified rocks are mapped by S. H. Ball^a on his reconnaissance map as the Prospect Mountain limestone,^b of Cambrian age. He described briefly^c the rocks of Slate Ridge, south of the

^aA geologic reconnaissance in southwestern Nevada and eastern California: Bull. U. S. Geol. Survey No. 308, 1907, Pl. I.

^bNow known as the Eldorado limestone.

^cOp. cit., pp. 182-185.

new town, and shows that these old stratified rocks are continuous with the more metamorphosed beds at Tokop and Gold Mountain, southeast of that ridge.

Near Hornsilver some shale is interbedded with the limestone, but a considerable thickness of shale with subordinate calcareous beds underlies fairly massive limestone, which is exposed in the hills south and east of town. The ores lie mainly in these shales.

The principal veins are southwest of town, within a distance of a mile. They constitute an approximately parallel system and cut across the bedding of the shales with a prevailing strike of N. 55° to 60° W. and with steep dips. Although the wall rock is generally shale, the veins are parallel to some fine-grained and rather obscurely exposed dioritic dikes. The two principal veins are the Great Western and Grand Central, which are about a quarter of a mile apart, the Grand Central being the farther from town. These have been traced by trenches and pits for distances of 3,000 to 4,000 feet along their not very conspicuous outcrops. There are also three or four other veins on which less work has been done.

All of the vein material that could be seen in 1908 was thoroughly oxidized and for the most part soft. The fissures after being filled with quartz and sulphides evidently had been crushed by later movement along the original dislocation and the vein was thereby rendered specially permeable to oxidizing solutions. The valuable constituents of the deposits are native gold and chloride of silver.

The Great Western mine at the time of visit was developed to a depth of 200 feet and equipped with a 15-horsepower gasoline hoist. The 100-foot level was about 600 feet long and the 200-foot level about 175 feet long. Since that time a 300-foot level has been opened. The gross product of the mine in June, 1908, was, according to the owners, between \$30,000 and \$40,000, the shipments ranging in assay value from \$75 to \$400 a ton.

The Great Western vein strikes N. 60° W. and near the shaft dips 50° NE. At the northwest end of the 100-foot level, however, the vein is nearly vertical. There is a very regular and persistent hanging wall with a thin skin of soft gouge separating ore from country rock. The vein is in some places about 20 feet wide and consists of the usual crushed rusty quartz found in the veins of this district. Much of this material is said to yield assays of about \$30 a ton, but only the higher-grade portions have been stoped. The ore from these portions shows abundant cerargyrite as sparkling olive-green crusts on the rusty quartz fragments and as small crystals in spongy limonitic material residual from the oxidation of the original sulphides. Minute quantities of a bluish-green mineral in thin crystalline rosettes associated with the cerargyrite are probably embolite or bromyrite but have not been chemically tested. The ore shipped in 1908 con-

tained relatively little gold—not more than 15 per cent of the total value of the precious metals present. Recent reports, however, indicate that ore with a much higher proportion of gold has been stoped in the northwestern part of the 200-foot level.

A second vein has been cut near the shaft on the 100-foot level, samples from which were said to contain more gold than silver. It had not been stoped at the time of visit. In January, 1909, the mine was reported to be shipping 12 tons of ore a day by way of Cuprite.

A short distance southeast of the Great Western mine the vein passes under alluvial material and little is known of its extent or value in that direction. It has been traced northwestward, however, for 3,000 feet or more and several sets of lessees were engaged in 1908 in exploring this vein or others in the same general zone of fissuring.

No work was in progress on the Grand Central vein in June, 1908, although some shipments have since been reported in the mining press.

About 1½ miles due south of Hornsilver, on the other side of the limestone ridge (Slate Ridge), which separates the town from a small arm of Death Valley, known as Oriental Wash, is the Redemption mine, worked superficially many years ago and recently reopened by lessees. There are two adjacent parallel veins in limestone, striking about N. 40° E. and standing nearly vertical. These veins are opened by small tunnels and shallow winzes. The ore is partly oxidized galena and contains massicot, cerusite, wulfenite, and probably some cerargyrite. The greatest width of ore observed is 1 foot. The lessees, who were concentrating this material by hand jigging, stated that the best of the concentrates carry 40 per cent of lead, 30 per cent of zinc, and 40 ounces of silver to the ton. No zinc minerals were observed in the ore, much of which is soft and earthy.

Hornsilver Dred Mine
Coldwater River

January 11, 1943.

B
185 3.3

Dear Burt,

I have some parties whom I believe would be interested in something like the Hornsilver, if not to operate at least to hold. I was able to give them some of the highlights that I remembered, but this was very sketchy and incomplete. I wonder if you could give me more details on workings, width, length of shoots, grade of ore milled, depth, character, owners, terms, etc.

Do not remember whether I wrote you or not since I had my assays on the Sorensen property. Here they are:

#1 S. End. 8' wide 40' N. of S. Side Center Amy No. 1.	0.06
#2. Cut on Top Mill. 15' wide. N. end Amy No.1.	0.100
#3. 25' wide. S. Continuation No. 2.	0.150
#4. 100' west No. 2. 10' winze. 3' wide. No walls	0.422
#5. Float between 2 and 4. 50' wide.	0.132

Sincerely,

1853.2

Copy of letter from Mr. Elmer Burt of Goldfield Cons. on Hornsilver Mine,
Goldpoint, Nev. Received 1/15/43.

In regard to your inquiry on the Ohio Mines Property at Hornsilver or Goldpoint (as it is now called) I will give you all the information that I can.

The property was worked for the past 30 years off and on. I expect it has worked possibly 30 years steadily during that time. The gross production has been in the neighborhood of \$1,500,000, principally gold but some silver.

The formation is lime and schist, and the ore, which has a high silicious content (averaging about 75%), forms in bunches of varied dimensions and is quite often cut off by local or step faults. The vein has about a 37 degree dip a little south of east, and is from a few feet wide up to over 100 feet. The ore shoots in the vein have a general dip east and strike to the south and range from a few feet wide to 40 feet. The longest continuous ore shoot in the mine is approximately 180 feet. This particular ore shoot is the last one opened and is on the 800 level. This shoot is said to be 3 to 40 feet wide and 180 feet long. There has been approximately 400 feet of work done consisting of drifts and cross cuts in this orebody on the 800 level, which was all milled, and averaged, according to their records, \$14.00 per ton in gold. There has been no stoping done on this orebody except a large raise put up at the north end from the 800 to the 700 level. The ore in this raise was said to be rather spotted. The average value from this raise is said to be \$9.00 per ton and was all milled.

The property consists of some 18 claims and fractions, and is opened by an incline shaft on the vein (dip 37 degrees) and I would say all the known ore above the 700 level has been taken out and the future possibilities of the property lie below the 800 level which is 300 feet vertically.

The shaft is 900 feet deep but very little work was done on the 900 level. The orebody on the 800 level is about 700 feet south of the shaft, the 900 being out only about 200 feet and is not far enough to cut this orebody, which seems to be the main attraction at this time. It will need some development on this ore shoot to see just what it will do. I might say that the prospects look good for larger bodies of ore at depth as this 200 foot body is larger than anything they have had above, but not as rich as some on the upper levels. There is no water in the mine or any prospects of water.

There is a sort of makeshift mill on the property which will handle about 33 or 40 tons a day and is powered by a couple of 250 HP Diesel Engines which are badly worn out. I might state that the ore is ideal for cyanidizing and an extraction of 98% was being made on the last ore treated.

I have never been able to get Dr. Otto Dieckmann, the president of the company, to commit himself as to a deal on the property. When I last looked at the property he said "you make a proposition and I will counter with one." So that was as far as we got. Dr. Dieckmann says he wishes to turn the property over to some reliable company as he no longer cares to accept the responsibility of the management. I think he is over 70 years of age. Dr. Dieckmann lives in Cincinnati, Ohio.

Ohio Mines Co. P.3.

The principal mineral zone in the Hornsilver or Cold Point District is about 2 miles square, and contains numerous veins, some of which have been productive in the past but few have been developed to any extent. I think that the larger percent of this whole district could be tied up on favorable terms and for a large company I believe it would be quite attractive for a big operation. After the proper amount of development, enough ore should be developed to feed a large mill for a long period.

The Hornsilver District was first thought to be a silver district and was, for that reason, called Hornsilver but as development work progressed it was found to be gold and the present ratio of production is about 85% gold and 15% silver. For this reason the name of the camp was changed to Cold Point.

I believe this district is worthy of further investigation and I trust you will be able to gather enough information from this letter to more familiarize yourself with this property, and if at any time you should want any further information I will gladly give it to you if it is in my possession.

With best wishes for your success, I am,

Sincerely yours,

Elmer Burt.

THE GOLDFIELD CONSOLIDATED MINES COMPANY

GEO. WINGFIELD, PRESIDENT
E. A. JULIAN, GENERAL MANAGER
J. J. MCCORMACK, SECRETARY AND TREASURER
A. H. LAWRY, GENERAL SUPERINTENDENT

GOLDFIELD, NEVADA
January 15, 1943

1853.2

Mr. A. H. Heller
650 South Grand Avenue
Los Angeles, Calif.

Dear Mr. Heller:

Your letter of January 11th received and the tungsten returns, from samples taken on the Sorensen property, noted. The samples are quite low and I guess about the only thing that can be said is that there is a presence of tungsten on the property.

In regard to the Ohio Mines property at Hornsilver or Goldpoint (as it is now called) I will give you all the information that I can.

The property has worked for the past 30 years, off and on. I expect it has worked possibly 20 years steadily during that time. The gross production is in the neighborhood of \$1,000,000.00, principally gold but some silver.

The formation is Lime and Shist and the ore, which has a very high silicious content (average about 75%), forms in bunches of varied dimensions and is quite often cut off by local or step faults. The vein has about a 37 degree dip, a little south of east and is from a few feet wide up to over 100 feet. The ore shoots in the vein have a general dip east and strike to the south and range from a few feet wide to 40 feet. The longest continuous ore shoot in the mine is approximately 180 feet. This particular ore shoot is the last ore opened and is on the 800 foot level. This ore shoot is said to be 5 to 40 feet wide and 180 feet long. There has been approximately 400 feet of work done consisting of drifts and crosscuts in this ore body on the 800 foot level which was all milled and averaged, according to their records, \$14.00 per ton gold. There has been no stoping done on this ore body except a large raise put up at the north end from the 800 to the 700 foot level. The ore in this raise was said to be rather spotted. The average value from this raise is said to be \$9.00 per ton and was all milled.

The property consists of some 16 claims and fractions and is opened by an incline shaft on the vein, dip about 37 degrees and I would say all the known ore above the 700 foot level has been taken out and the future possibilities of the property lay below the 800 foot level which is 560 feet vertical.

The shaft is 900 feet deep but very little work has been done on the 900 foot level. The ore body on the 800 foot level is about 700 feet south of the shaft, the 900 being out only about 200 feet and is not far enough to cut this ore body which seems to be the main attraction at this time. It will need some development work on this

Mr. A. H. Heller

Page 2

Jan. 16, 1943

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The principle mineral zone in the Hornsilver or Goldpoint district is about two miles square in which there are numerous veins, some of them have been productive in the past but very few have been developed to any extent. I think that the larger percent of this whole district could be tied up on favorable terms and for a large Company I think it would be quite attractive for a big operation. After the proper amount of development, enough ore should be developed to feed a large mill indefinitely.

The Hornsilver district was first thought to be a silver district and was, for that reason, called Hornsilver but as development work progressed it was found to be gold and the present ratio of ore production is 85% gold 15% silver. For that reason the name of the camp was changed to Goldpoint.

I believe this district is worthy of further investigation and I trust you will be able to gather enough information from this letter to more familiarize yourself with this property and if at any time you should want any further information I will gladly give it to you if it is in my possession.

With best wishes for your success, I am

Sincerely yours,

Elmer Beart