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Record Report,
No. 110. *H. B. Brown*

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REPORT⁶
ON THE - *Small*⁵⁴
SILVER CROWN MINING DISTRICT,²⁵
LARAMIE COUNTY,¹⁶
WYOMING.²
By¹²⁴
C. E. Jamison,¹⁶
State Geologist.

The State of Wyoming

Office of State Geologist

Cheyenne July 5th, 1911.

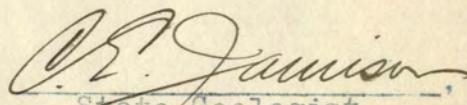
The Cheyenne Industrial Club,
Cheyenne, Wyoming.

Gentlemen:-

Complying with the request of your Committee on Mining, I have visited and inspected the various mines and prospects of the Silver Crown Mining District and herewith submit my report.

It is to be understood that this inspection was brief, that in no case was a thorough examination made, and that in no respect is this report to be considered final.

Very respectfully,


State Geologist,

THE SILVER CROWN MINING DISTRICT.

GENERAL DESCRIPTION AND HISTORY.

This district is situated about twenty-two miles north-^{WEST}~~east~~ of Cheyenne, nearly midway between the Union Pacific and the Colorado & Southern railways, ^{and} about five miles from each.

Mining in a small way has been carried on in the district for many years, but operations have been confined principally to prospect holes, and no work of any magnitude, intelligently directed, has been attempted. Some years ago a concentrating plant and a small smelter were erected, but as the supply of ore was not sufficient, the concentrator not adapted to the ores, and the smelter equipped with needless expensive apparatus, operations were not successful.

SUPPLIES.

The cost of supplies in this district will be the cost at Cheyenne plus freight charges to Silver Crown station on the Colorado & Southern Ry., or to Granite Canyon on the Union Pacific Ry., and the cost of hauling to the mines.

A small quantity of timber is found in the district but the trees are too scattering and their number too small to be considered as a possible source of supply.

The question of water supply will probably be a serious one and should be thoroughly investigated. The quantity of water in the several creeks and canyons in this district is, at the present time, insufficient for extensive operations. However, it is not improbable that the mines themselves will furnish sufficient water.

GEOLOGY.

The country rocks ~~in this district~~ consist of a dark gray hornblende granite, a more acid-ic pink granite, gneiss, and schists of pre-Cambrian age, all of which have been cut by dikes of diorite and diabase and extensively sheared and faulted. Mineralization has occurred along the fault planes and in the shear zones, forming the ore bodies which are the subject of this report.

A list of the properties visited with a short description of each is given below: —
the following pages! —

THE DAN-JOE PROSPECT.

Five claims owned by Horace E. Adams, Hecla, Wyoming. Consists of three veins occupying fault planes in granite and schist. Developed by several shallow shafts, the deepest of which is thirty feet. Vein exposed in this shaft four feet in width. Eighteen inches next the hanging wall stated by the owner to contain five per cent copper and a small amount of gold. Average value of entire vein reported to be \$10 per ton in gold, silver and copper. Shaft in the oxidized zone. Sulphide ores will probably be encountered within the next ten feet. Minerals, Azurite (copper carbonate, copper 46.3%), Malachite (copper carbonate, copper 40.3%) and Melacpnite (copper oxide, copper 79.9%).

THE COMSTOCK MINE.

Two claims owned by Ferguson Bros., Hecla, Wyoming. A vein occupying a fissure in granite, exposed for a length of 3000 feet. Developed by a shaft 126 feet deep, several shallow shafts, some surface trenches and a cross-cut tunnel which taps the main shaft at a depth of 124 feet. Average width of vein about two feet. Ore high grade copper sulphide in quartz gangue. Minerals are Azurite, Malachite, Chalcocite, (copper glance, copper 78.8%), Bornite, (copper-iron sulphide, copper 61.8%) and native copper. A very promising prospect, but on account of small width of vein cost of mining would be high and tonnage small. Price prohibitive.

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THE COPPER KING MINE.

Owned by Horace E. Adams, Hecla, Wyoming. A large low grade mine, occupying a shear zone in granite. Reported to contain about 1 per cent copper and from \$3.00 to \$4.00 in gold. Minerals are Malachite, Chalcopyrite (copper-iron sulphide, copper 34.6%) and native copper. Would probably be ^{m n}amenable to fine grinding and concentration, followed by an acid wash and cyanidation. Price prohibitive.

THE FAIRVIEW MINE.

Owned by Grand Rapids, Michigan, *company.*

Mine filled with water to the surface so no inspection could be made. Reported to be one of the best mines in the district. Price probably high.

THE LOUISE MINE.

Developed by three shafts, one of which is 160 feet in depth. Several hundred tons of ore have been shipped from this mine. Ore consists of Chalcopyrite and Bornite in quartz gangue. The vein varies from a few inches to five feet in width. Mine equipped with boiler and small hoist. A very promising prospect. Could probably be secured upon reasonable terms.

THE LITTLE LONDON MINE.

Owned by F. Bon, Cheyenne, Wyoming,
and others.
~~etc.~~ Developed by a thirty foot shaft on the
ore and a vertical shaft sixty feet in depth.
Work being carried on at the present time.
Vein, where exposed in the inclined shaft,
eleven feet in width. Ore stated to contain
11 per cent copper, about \$1.00 in gold and
about 1 per cent nickel. Minerals are Azur-
ite, Malachite, Chalcopyrite and Bornite.
A very promising prospect.

THE BULL DOMINGO ^{Prospect.} ~~MINE.~~

and others,
~~etc.~~ Owned by F. Bon, Cheyenne, Wyoming,
Developed by two shafts, each about
thirty feet in depth. Sulphide zone not yet
reached. Minerals Azurite and Malachite.

Aside from those mentioned in the foregoing pages several other prospects were inspected, which are not considered in this report as they do not meet the requirements of your Committee on Mining. Of the properties mentioned the Copper King would require a ~~large~~^{great} outlay in order to put it in condition to become a producer, so it also may be thrown out of consideration, although it will in all probability, when properly developed, become a large producer.

The Louise and the Little London Mines would seem to be, from a superficial examination, prospects of exceptional promise and can probably be secured on reasonable terms.

The Fairview may be placed in the same class in regard to value but the price asked will probably prohibit its purchase.

The Comstock is also a very promising prospect, although the vein is narrow. The terms offered, however, will probably be such that it cannot be considered.

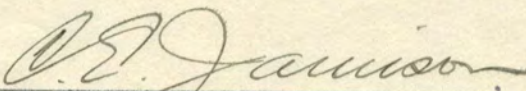
RECOMMENDATIONS.

It is recommended that, if possible, options be secured upon the Louise, the Little London, the Fairview and the Comstock, the terms to be such that if the option is taken up the Industrial Club may work the property selected for a period of two or three years, with the option to purchase at the end of that time at a stated price. The option or bond should also give to the Industrial Club the right to ship or mill all ore taken out during the period covered by the bond, paying to the owners a percentage of the net proceeds, such payments to apply on the purchase price of the mine.

After securing the options the mines mentioned should be unwatered, and a thorough examination made by a competent engineer. Upon the results of this examination the Industrial Club should base any further action in this district.

The matter of fuel, timber, freight rates and water should be looked in to, and preliminary figures in regard to working under the contract system should be obtained.

In conclusion I wish to state, that while it is not probable that large mines will be developed in this district, it is my belief, based on a preliminary examination, that several small mines can be developed ~~in this district~~ which will, with capable and economic management, pay handsome dividends.



State Geologist,

Cheyenne, Wyo.

July 5th, 1911.