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REPORT

ON

STATELINE MINING DISTRICT.

Iron Co., Utah; Lincoln Co., Nevada.

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LOCATION: The STATELINE MINING DISTRICT lies about 18 miles westerly from Modena, Utah, a small station on the Salt Lake Railroad, and is partially in Iron County, Utah and partially in Lincoln County, Nevada. Wagon roads, now badly in need of repair, lead directly to all the properties. The elevation above sea level is about 6000 feet, and while there is considerable snow during the winter, there is not enough to prevent mining operations being carried on throughout the year.

HISTORY: This is an old district and showed considerable activity up to the time of the Goldfield boom in 1906 at which time it became practically deserted when most of the inhabitants moved to Goldfield to try their fortunes in a new field. At the present time there are but half a dozen people left in the camp of Stateline, and only one property is operating, and that only on a small scale. It is claimed that none of the old mines are worked out, but were forced to cease operations because of the low price of silver and high mining costs, due in part to the large amount of water encountered.

ORE OCCURRENCE: The mineral values occur as silver and gold in quartz veins in rhyolite, or in the vicinity of rhyolite- andesite contacts. A large number of these veins are in evi-

dence throughout the district, some having very prominent outcrops as on the Utah Spur and Ophir properties, and others being not so well defined, as on the Johnnie. The gold occurs free and the silver in the form of sulphides, with a quartz gangue, and the ore should be readily amenable to treatment with cyanide. In character it is very similar to the sulphide ores of Tonopah.

The following properties were given a brief examination as no underground workings were accessible, and with one or two exceptions there was very little of interest to be seen on the surface:

UTAH SPUR.

This property lies in the northwestern part of the district, two or three miles from the town of Stateline, and consists of two patented claims, the Utah Spur and the Rhode Island Queen, which are owned or controlled by Mrs. Jesse Knight of Los Angeles, Calif.

The vein has a bold, strong outcrop and can be easily traced for a distance of about 1000 feet. It has a northwest-southeast strike and dips to the northeast at an angle of 70-80 degrees, and lies partially on a contact with rhyolite and andesite, and partially within the rhyolite. The andesite is on the hanging-wall side of the vein, but the contact is not well defined except in some places where there is evidence of faulting. While the vein may be said to be about 50 feet wide, it is not all quartz across this width, a great part

of it being merely highly silicified rhyolite, or andesite with bands of quartz lying parallel to the walls, although in some places it is composed of solid quartz for almost the entire width. The greater part of the vein is absolutely barren of mineral values, there being only two places where there is evidence of mineralization. At one of these places an open cut exposed a small body of high-grade silver ore, the silver occurring as specks and bands of black sulphides (argentite) in the white quartz.

This ore was all removed, so that none of it remains in place in the vein, but a few small piles were left on the dumps- enough to give an idea of the character and value of the ore, and a picked sample from this ran 0.44 oz Au and 82.40 pz Ag per ton. The second place at which ore was found was in a vertical shaft several hundred feet southeast of the open cut, but the bottom was inaccessible and could not be examined. The ore on the dump, however, was of the same character as that showing near the open cut, though not so high grade, a sample of it running 0.06 oz Au, and 13.34 oz Ag per ton. This ore was all shipped by leasers to the smelters at Salt Lake, but shipping and smelting charges were so excessive that very little profit was derived from it.

Development work on these claims consists only of an open cut and two vertical shafts each about 75 feet in depth, (neither of which was accessible, and showed nothing of value near the surface), together with a cross-cut tunnel perhaps 200 feet in length, but also inaccessible. This tunnel was started to intersect the vein below the ore showing on the

outcrop on top of the hill, and would give a depth of only 140 feet at that point, but 150 feet more depth would be gained if the vein were followed to the northwest, making a maximum of about 300 feet.

This property is purely a prospect. While there is a strong outcrop and a wide vein, there is evidence of values at only two places, which might be either the tops of ore-shoots or merely bunches of high-grade in the barren quartz, not enough work having been done to determine the manner of occurrence of the mineral values. The records of ore shipped and the few samples taken show that when ore is encountered it is of good grade, and there seems to be no reason why further prospecting would not disclose other bodies or shoots of ore. The vein and the geologic conditions on this property are very similar to those on the Ophir property to the southeast, but the surface showing is much better than that on the latter property, on which were developed large bodies of medium grade ore.

The Utah Spur property could be prospected economically to a depth of 150 feet by continuing the cross-cut tunnel to intersect the vein and then drifting in both directions from the point of intersection. This work should prove or disprove the value of the property, but to operate it, it would be necessary to eventually sink a vertical shaft as too little depth would be gained by tunnel work, and in working through a shaft it would be necessary to arrange to handle a considerable amount of water, judging from the history of nearby properties. This water, however, could be

utilized for milling purposes, as there is not a very abundant supply of water in the district except during the spring months, and it would be necessary to develop a water supply to operate a mill.

Conditions for operating this property are only fair. It is 20 miles from the railroad, there is no electric power line nearer than 35 miles, and practically no timber for mining purposes. On the other hand it is easily accessible by wagon or automobile, enough water can be developed to operate a mill, and the vein is of such a size and character that it can be mined cheaply.

Since economic and geologic conditions at this property and at the Ophir are practically identical it will be possible to make a comparison of the two, and to consider the history of results at the latter property when judging upon the merits of the Utah Spur property as a prospect. The Character of the vein at both properties is the same, the surface showing on the Utah Spur being much superior to that on the Ophir, and the underground work on the Ophir resulted in the development of a considerable amount of ore, which is a point in favor of doing further development work on the Utah Spur. The Ophir, however, is at present idle and dismantled, and was evidently not a success financially. This was due in part to the construction of a mill much too large for the property (150 tons per day), and to the use of a milling process not entirely suited to the character of the ore, and partly to mismanagement. These objectionable features could be eliminated in the operation of the Utah Spur. The prin-

cipal reason, however, for the failure of the Ophir seems to have been the low value of the ore which was milled, and which is reported to have been about \$12.50 per ton. Whether ore of a better value could be developed in the Utah Spur could be determined only by prospecting the vein, but if ore of the same value as that shipped from the surface should be encountered it would be almost certain to be of better value than \$12.50 per ton.

Regarding the Stateline District as a whole, the principal reason for the failure of the mines seems to have been the inability to produce ore of high enough value to be mined at a profit with silver valued at 50-60 cents per ounce, and in order to operate at a profit the Utah Spur would have to show ore of a better value than the average for the district.

OPHIR MINE.

The Ophir Mine lies about one-half mile to the south-east of the Utah Spur, and consists of a group of six patented claims. The vein outcrops but a short distance, and is about ten feet in width at the widest part, which is near the collar of the shaft. The strike of this vein is more nearly east and west than the one on the Utah Spur, but it is identical in character, and the enclosing rocks are also similar.

There is an incline shaft 450 feet in depth on the vein, and levels at regular intervals, but as the underground workings are inaccessible, no definite information regarding them is available. Parts of the upper level may still be

open but no attempt was made to get into them during this examination.

There was at one time a 150 ton mill a short distance from the shaft, but it is now dismantled and only part of the wooden framework remains. The mill was much too large for the mine, and the milling process unsuited to the ore, so that it operated but a short time. It is claimed that there is still a large tonnage of ore in sight in the mine, and leasers recently made some small shipments, but derived very little profit from their work. The property is said to have been operated uneconomically, and the ore mined in such a way as to make it too low grade to mill at a profit.

The property originally belonged to the Carhart estate, and was recently sold for taxes, and is now idle.

JOHNNIE MINE.

The Johnnie Mine is about one-half mile nearer to the town of Stateline than the Ophir, and is also idle and being dismantled.

This was a gold property, and there is no surface indication of any vein, the outcrop being buried under the wash. The mine is not considered as worked out, but the large amount of water which it was necessary to handle, with the resulting high operating costs, and disagreements among partners, caused the property to be closed down several years ago. It is reported that some very high grade gold ore was

encountered. There are two vertical shafts on the property, the working shaft being about 400 feet in depth. A mill was erected and operated for a short time, but it is now entirely dismantled.

BIG 14.

This is another gold property, and the only mine in the district now operating. A vertical shaft has been sunk to a depth of 180 feet and a cross-cut is being driven to intersect a gold vein or fissure which produced some very high grade ore at the surface. The surface showings are poor, and the only work, except the shaft, is a shallow cut on a seam in the rhyolite which produced the gold ore mentioned above.

TRYON PROPERTY.

This property lies just above the town of Stateline. There is a tunnel about 500 feet in length which follows a fissur showing a little quartz. A sample taken from a pile of quartz on the dump ran 0.34 oz Au, and 1.9 oz Ag, but there is very little of this quartz showing in the tunnel.

917 S. New Hampshire St.,
Los Angeles, Calif.
November 18, 1921.

H. M. Stilesbury.