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STATE OF NEVADA

238

Items

# Bureau of Mines

JAY A. CARPENTER, DIRECTOR

BOX C, UNIVERSITY STATION

MACKAY SCHOOL OF MINES
RENO, NEVADA

SHOULD BE IN ELLSWORTH DISTRICT

April 26, 1945

## A REPORT ON THE LIME DYKE CLAIMS NEAR LODI TANKS, NEVADA

The two Lime Dyke claims, situated on the west slope of the northern part of the Paradise Range, are about two miles southeast of Lodi Tanks, and eight miles north of Gabbs, Nevada.

The property was visited by me on March 30, 1945, at the request of Director Jay A. Carpenter, of the Nevada State Bureau of Mines.

Homer France, Barney O'dell, and Manford Minick, all of Gabbs, Nevada, are working on a partnership basis, on the two claims which are owned by Manford Minick.

The claims are near the western edge of the range, on a steep slope about 500 feet above the level of Lodi Valley. The range is cut by several deep, east-west gulches, one of which gives access, by a road now being built, to the edge of the claims. This gulch is about one mile south of Marble Canyon, from which water was formerly piped to the Illinois mine about five miles distant to the west, across Lodi Valley.

The rocks exposed in the vicinity of the claims consist of metamorphosed volcanics, overlain by probable Triassic dolomites and shales whose beds strike about northwest, dipping steeply to the northeast. These rocks have been cut by dikes of andesite porphyry. There are indications of bedding in the meta-volcanics, and they might be mistaken for metamorphosed

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shales, or hornfels, except for the presence of numerous small feldspar phenocrysts, which can be readily seen under a microscope. These volcanic rocks might correlate with Permian meta-volcanics found by Dr. Harry E. Wheeler, Associate Professor of Geology, University of Nevada, in the Desotoya Range about 20 miles north of Eastgate. The dolomite and shale may, in general, overlie unconformably the meta-volcanics, but in the vicinity of the present mine workings an andesite porphyry dike has intruded along the contact striking northwesterly. Further reconnaissance, farther from the mine workings, might easily reveal the nature of the sediment and meta-volcanic contact.

About 2,000 feet east of the claims is a bed of carbonaceous chiastolite schist, and graphitic anthracite, which from a distance appeared to be about 50 feet in width, and trending about parallel with the range. Samples of the rock were given to me by Mr. Minick. Similar graphitic anthracite, said to have come from Marble Canyon, one mile to the north, had previously been tested by Mr. Walter S. Palmer, Director of the Nevada State Analytical Laboratory, and found to be unsuitable as a fuel, because of the graphitic character, and high ash content.

The ore fissure that is now being worked is in the dolomite to the east of the above mentioned andesite dike, and strikes about 25 degrees west of north and dips steeply to the west. It is not a vein, but is a

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mineralized fissure with variable widths of replacement mineralization from one or two inches to one foot. Galena and cerussite are the dominant ore minerals, but both gold and silver are present in sufficient quantitkes to materially enhance the value of the ore. One small lens of high-grade galena ore was said to have been extracted which measured about five feet high, four feet long, and four feet wide. The ore, as a whole, is considerably oxidized so that usually only small particles of residual galena remain in the iron stained gangue, and the lead values are largely cerussite.

The fissure on its north 25 degrees west course outcrops diagonally across an east-west ridge. On the brow of the ridge a shaft at 25 foot depth encounters the fissure and at this point there is a short 15 foot drift to the southeast on the fissure.

At 100 feet northwest of the shaft and about 30 feet below its collar a tunnel on the north slope has been driven back on the fissure toward the shaft for a distance of 50 feet.

At the present time the leasers are driving ahead in the tunnel and on the drift in the shaft. Drilling is done by hand work with careful blasting and sorting of waste and ore.

The ore from the tunnel will have to be raised to the collar of the shaft over surface track in order to be dropped down the shute along with the shaft ore to the ore bin on the south slope of the ridge.

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The assay results from my grab samples of broken ore were as follows:

| | | % Lead | Oz. Silver | Oz. Gold |
|---|---|---|---|---|
| Sample 3: | 10 ton muck pile on the 25 foot level of the shaft | 10.9 | 11.5 | 0.90 |
| Sample 4: | 5 ton muck pile in the tunnel, 50 feet from portal | 12.0 | 11.8 | 0.58 |
| Sample 6: | 30 ton ore pile at portal of tunnel: (All visible galena removed from this sample) | 10.7 | 9.5 | 0.34 |

There are about 10 tons of ore piled near the shaft that should correspond in value to Sample No. 3. In addition I estimate about 5 ton of galena ore in the ore pile from which Sample 6 was taken, stated to average over 40.0 percent lead, 20.0 ounces silver, and 0.5 ounces of gold per ton.

The assay results from other samples taken outside of the area now being mined were as follows:

| | | % Lead | Oz. Silver | Oz. Gold |
|---|---|---|---|---|
| Sample 2: | Three foot cut on east side of raise 20 feet over adit which is 1000 feet southeast of working shaft | 3.4 | 1.8 | 0.02 |
| Sample 5: | From a blast in side of cut which is 300 feet northwest of working shaft | 3.0 | 5.1 | 0.03 |
| Sample 7: | Across a 2 foot quartz vein, which is 100 feet northeast of working shaft | trace | 2.7 | 0.29 |

The assays were made by Wm. I. Smyth, Analyst for the Nevada State Analytical Laboratory.

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The amount of manual labor accomplished by the three leasers in the last four months is remarkable. A 40 ton ore bin was constructed at a point in the canyon to where a road could be built, and a 400 foot wooden ore chute was built up the side of the hill on an average 35 degree slope and lined with galvanized iron. A tool shed and small hoist house have been built, and a small 20 H. P. gasoline hoist was dragged manually up the 400 foot slope, to the workings near the top of the ridge. A small wooden head frame and bin were built over the old caved shaft. The shaft was mucked out to a depth of 60 feet, however, it is dipping to the northeast and while intersecting the westdipping ore fissure at 25 feet, it bottoms in the footwall. The hoist is now used also to drag supplies up the hill.

As the width of the ore is narrow and the length of the outcrop of the fissure that can be traced on the surface to the south is only about 100 feet before encountering the andesite dyke and the meta-volcanics and to the north only about 300 feet until covered by float, the property in my opinion is best suited for a small scale operation such as is now in progress.

As there is probably only about 150 tons of ore above the tunnel level, the question of opening up ore at greater depth arises. It would appear to be good exploration work to clean out the shaft to its bottom

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and drive back to intersect the fissure. If development work proves profitable ore at this depth, the advantage of a cross-cut tunnel from the level of the top of the ore bin should be considered in order to reduce mining costs.

/Humphreys

Mining Engineer
Nevada State Bureau of Mines

Reno, Nevada
April 28, 1945