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Item 1

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MINING ENGINEER
1708 FLETCHER AVENUE
SOUTH PASADENA, CALIFORNIA

See 1 Map in Map File

July 28, 1945

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To the Board of Directors
Reorganized Silver King Divide Mining Co.
Tonopah, Nevada

Gentlemen:

The following is a report on your Harmill, New York and Eva mining properties in the Montezuma Mining District, Esmeralda County, Nevada.

Very truly yours,

Harry H Hughes

Harry H. Hughes, E.M.

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LOCATION:

The Monitor No. 1 claim of the old Harmill Divide Company, which is one of the group under option from Fay Hill, the New York and the Eva are located in the Montezuma Mining District, Esmeralda County, Nevada. Montezuma is 9 miles east of Goldfield, the terminus of the Tonopah & Goldfield railroad. Transportation between Goldfield and the mines is over a fair gravelled road.

HISTORY:

The Montezuma district was discovered in 1867, and a ten-stamp mill was installed in 1870. Later a small lead smelter was built which was successful until the panic of 1873 caused the shut-down of all the silver mines of the West. During this time about $500,000 were produced, principally in lead and silver.

The district was dormant for a number of years but in 1905 there was a renewal of activity for a time; and intermittent shipments of ore have been made since that time. In the late 1920's the Harmill Divide Mining Co., sank a shaft 300 feet on the Monitor No. 1 and did some lateral development work on two ore shoots. The Harmill Divide Company, and later Mr. E. S. Giles, as lessee, shipped about 1500 tons of ore with a metal content of approximately 50% lead and 35 ounces silver. At today's prices of metals this would have a value of $117 per ton or a total of $175,500 for the 1500 tons.

According to Mr. E. S. Giles, a mining engineer of Goldfield, who has known the Montezuma area intimately for many years, the No. 1 shaft on the New York claim was sunk about 1870 and high-grade lead carbonate ore was shipped from it, the ore being transported on burros. The shaft is about ~~said to be over 100~~ 160 feet deep, and goes through ~~but in any event it is possible~~ to see down into a large open stope, with widths up to ~~at least 8 ft.;~~ in width; and the original hand-hewed headframe was standing over the ~~still stands over the~~ shaft. at the time the present operations started

GEOLOGY AND ORE DEPOSITS:

Cambrian limestones, shales, and quartzites make the principal mass of the Montezuma Hills. They have been intruded by granite, quartz - monzonite and diorite; and are capped in places by tertiary volcanic rocks.

The orebodies consist of veins in limestone and shale and of replacements in limestone which are sometimes at quartz-monzonite contacts. The principal values are in lead and silver, the lead near the surface being cerussite, the carbonate, which gives place to galena at depth.

On the Harmill both types of the ore deposits mentioned above have been productive. However, the quartz vein type has been mined at only one place, and no prospecting in depth has been done on it. Furthermore no junction of it with the replacement type of orebody has been noted. It seems quite likely that any such junctions will make good ore.

Structurally, the quartz vein type is probably a fault fissure into which has been injected the mineralizing

solutions. The replacement type orebodies occur in definite fracture systems and usually dip at very steep angles, cutting across the bedding planes of the limestone. In one instance, however, an orebody made out along a bedding plane.

With the present-day knowledge of the behavior of limestone replacement ore deposits more of these bedding-plane offshoots will undoubtedly be found in prospecting the Harmill, New York and Eva ground.

DEVELOPMENT:

Early-day operations at Montezuma were of such a nature that they serve today to show that there are undoubtedly mines in the district; and indicate how the orebodies can be opened up to best advantage. For example, in the Harmill cross cut where your work is being done at present, from the bottom of the 300 ft. shaft, on one side a sample with a width of 12 inches assayed $67.70 in value; while on the opposite side of the crosscut 16 inches assayed $86.33. Experience in mining the oreshoots has shown that undoubtedly a pipe of good ore will make off in either direction; so that drifting should be done from both sides of the crosscut, and the ore mined both up and down along the dip. In other words, as the old-time miners say, the best way to develop ore is to follow it.

On the Eva claim former work opened two large orebodies. One of these was opened through a tunnel about 150 ft. long, and an open stope about 100 ft. long and eight to ten feet wide can be seen today.

About 350 ft. southwesterly from this tunnel, and also

on the Eva vein is an open cut which Mr. E. S. Giles describes by quoting the following excerpt from the Goldfield Tribune under date of April 18, 1925:

> "A vein 21½ feet in width, having neither wall exposed and containing as it has been stripped to date, two widths of ore of a total of nine feet, is a condition disclosed on the surface, on the EVA claim, in the Montezuma District."
>
> "As the vein is stripped to greater depth and across the 21½ foot width, there are indications that the entire width of 21½ feet, will make ore."
>
> "The ore is heavy in lead sulphide and oxide and as usual in Montezuma ore, the value in silver is between $15.00 and $20.00 per ton. It is estimated that the two widths (of ore) is breaking $75.00 to $100.00 per ton."
>
> "The vein for 12½ feet between two shallow holes in which the ore is exposed, is almost entirely covered by earth and chips of limestone; but where ever the quartz of the vein shows through the overburden, there is a glitter of the chunks of lead, rich in silver. That there is not less than fifteen feet of ore, virtually has been proven."

Mr. Giles goes on to state:

> "On the Eva claim, adjoining and to the south of the New York claim, a tunnel near the easterly end of the claim, was driven 150' westerly, on the Eva vein, and considerable stoping is in evidence. The ore from this tunnel, was mined at the same time that the New York was working and abandonment of the work was due to the same cause."

In the same communication from Mr. Giles he says the following about the New York:

> "About 1870, a shaft was sunk near the center of the New York claim, on what is now known as the Harmill vein, but in reality, the Harmill vein is the northeasterly extension of the original New York vein, for at that time, the claim now known as the Monitor No. 1, was mining and shipping ore from the Dry Silver Vein, the Harmill vein being undeveloped."

"The depth of this shaft on the New York claim, is not known, but is presumed to be one hundred or more feet in depth. It is surmounted by a square or four post, hand hewed, native timber head frame and the remains of an old style Common Sense whim, with hemp cable are still in evidence. A stope some four feet in width can be seen on the easterly side of the shaft, extending through to the surface."

"There is a old newspaper report of some 1700 tons of ore, averaging $100.00 per ton, having been mined and shipped from this shaft, this ore was packed out on burros, there being no road to the shaft, and on account of its inaccessability, no further work was done since those early days."

However, in regard to the stope width Mr. Giles refers to, it is actually eight to ten feet wide.

From what has been said above it is quite apparent that the mineralization at the New York end of the area is probably stronger than at the Marmill end. Development was not carried out as extensively on the New York end, formerly, because the ground is more inaccessible.

It might be stated here that the district as a whole has never been developed more thoroughly for two reasons: (1) The early-day miners did not recognize the possibilities of the replacement type orebodies in limestone; and (2) there has never been such a sustained demand for lead as there is today. This combination of circumstances makes the possibilities of the Montezuma district very bright indeed. It is this writer's opinion after an examination of the district that the $300,000 which was produced in the first years after the district was discovered came almost entirely from the New York and Eva stopes.

RECOMMENDATIONS:

In order to get your properties on a production basis

in the shortest time possible and at the lowest cost, the following recommendations are made:

1. Continue the drive on the 300 foot level of the Marmill workings, as you are doing now, toward the New York. This is better than driving long crosscut tunnels to get depth under the New York because by continuing the present drive you are not only getting depth in relation to the New York but are actually opening new ground in the ore zone with the drifting. And several orebodies should be encountered in the distance between the Marmill and the New York No. 1 shaft.

It is also recommended that at more or less regular intervals crosscuts be driven from the drift mentioned above to open the downward extension of the Eva ore zone. No fixed spacing of these crosscuts can be made, as the location of them will be determined by conditions in the drift. That is to say, crosscuts should be driven on any crossfractures or veins, since these will not only have ore possibilities of their own, but will no doubt be the most favorable locations for orebodies at their junctions with the Eva ore zone.

2. It is also recommended that a road be built to the New York No. 1. shaft and that this shaft be opened to develop the important ore zone in this area. When this shaft is opened a crosscut should be driven from it to the Eva, to get under the orebody mentioned in the Goldfield newspaper.

In conclusion, this writer can unhesitatingly recommend the program outlined above, in the belief that if it is carried out you will find a number of large orebodies similar

to the ores already mined. This work should be prosecuted as rapidly as possible in order to take advantage of the present high prices of lead, which will undoubtedly obtain for several years after the war.