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REPORT ON THE PROPERTY

OF THE

ELKORO MINES OPERATING COMPANY

AT

JARBIDGE, NEVADA

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By J. J. Beeson
Salt Lake City, Utah

September 10, 1936

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INTRODUCTION

The property of the Elkoro Mines Operating Company is of special interest at this time because of the activity in the development of gold mines generally and even more so because of its location in the gold producing Jarbidge Mining District of northeastern Nevada.

It is of particular economic significance that the ore deposits of the Jarbidge District have been found in fissure veins cutting through lava flows in a region of comparatively recent volcanic activity. From ore deposits of this type a large part of the world production of gold and silver has been mined. Some of the more important districts of the west with geologic conditions similar to Jarbidge are: Virginia City, Goldfield, Tonopah, and Tuscarora, in Nevada; Silver City and Delamar in Idaho; Oatman and Gold Roads in Arizona; Dalico, Gran Steadman, and Soledad Mountain, (the latter where the Silver Queen Mine was recently discovered) in California.

The property now owned by the Elkoro Mines Operating Company was formerly operated by the Elkoro Mines Company. From 1916 to October, 1930, the latter company milled 658,730 tons of ore, averaging .477 ounces gold and 3.145 ounces silver, or $9.86 gold and $1.14 silver, which gave a gross return of $7,188,248., or $11.00 per ton. At the present price of gold and silver this production would have a gross value of $18.35 per ton, or a total value of 12,085,300. With the exception of a small production from the Mamie, Starlight, and U. K. mines, this tonnage came from the Long Mike vein as shown on the maps and sections accompanying this report.

Insofar as the future of the mine is concerned the production of the past is of importance in that the tonnage and value is sufficient to establish the fact that a major ore deposit was formed. By examination,- based on personal observations at the mine and a study of available data,- indicates that the ore deposits already mined were formed under certain geologic conditions and that those same conditions exist in unexplored parts of the property. Thus it is my opinion that the great Long Mike vein continues not only west of the Grey Rock Fault but also west of the Jarbidge River and there is good reason to believe that it will continue to carry ore similar to that which has been mined in the past.

In view of the fact that the Long Mike vein has been cut by three different major faults and the solution

of each fault successfully worked out, I see no reason why the fourth or Grey Rock fault should cause any great difficulty. With the information at present available, a well directed campaign of diamond drilling should be successful in locating the faulted segment of the Long Mike vein west of the Grey Rock fault. If this is done, it will give a new life to the mine and probably to the Jarbidge District.

The work of the present Elkoro Mines Operating Company to date has been largely one of construction, rehabilitation of the mine, and the milling of old dumps and stope fills. A new mill was completed in the latter part of 1935. From January 1, to September 1, 1936, a total of 39,443 tons was milled, with a recovery of 3,232 ounces of gold and 50,554 ounces silver, or an average of about $3.70 recoverable value per ton. The dumps were delivered to the mill at a contract price of 50 cents per ton, while underground costs have been about $2.00 per ton. In the future more new development work will be necessary, which will increase the mining cost to about $5.00 per ton. The ore from the underground workings milled in July and August totaled 8,515 tons; with a recoverable value of $4.66 per ton.

It now appears that the mine can continue to operate for some time on the above basis, showing a profit of 35 to 50 cents per ton. However, the future insofar as substantial returns are concerned, will depend largely upon the results of the diamond drill work recommended in this report.

The following report is based upon an examination of the property of the Elkoro Mines Operating Company at Jarbidge, Nevada, between July 28th and August 19th, 1936. It was made at the request of the Rosenblatt Brothers, who own a large interest in the Company and have financed the construction of the mill and the operations of the Company to date. My examination was in the capacity of an independent engineer, not in the employ of the company, and without a financial interest in the property.

2. ORGANIZATION

THE ELKORO MINES OPERATING COMPANY is a Nevada corporation, capitalized for 1,000,000 shares, with a par value of ten cents per share. At present there are 600,000 shares issued, and 400,000 shares remaining in the treasury. The Main Office of the Company is located at No. 634 So. Fourth West Street, Salt Lake City, and

the Mine Office is at Jarbidge, Nevada.

The Officers and Directors of the Company are as follows:

Earl B. Young, Jarbidge, Nevada, President and Director.
Morris Rosenblatt, Salt Lake City, Vice-pres. & Director.
Joseph Rosenblatt, Salt Lake City, Sec'y., Treas,, and Director.
Wm. J. Franklin, Salt Lake City, Director.
Herbert Vom Dam, Jr., Salt Lake City, Director.

To date the shares of the Company are not listed on any securities exchange, as no public offering of the stock has been made.

3. LOCATION

THE JARBIDGE MINING DISTRICT is located in Elko County, Nevada, in the extreme northeastern part of the State, close to the Idaho line. It can be reached throughout the year from Salt Lake City over a paved highway to Twin Falls, Idaho, thence over a desert road some 85 miles to Jarbidge. The nearest railroad terminal is Rogerson, Idaho, 67 miles from the mine. During the summer months, a shorter route is to Deeth, Nevada, near Elko, over a paved highway, and thence north 71 miles over the summit between Charleston and Jarbidge. The latter road is impassable in winter, due to heavy snowfall.

The district is about 14 miles square, but the area of intense mineralization, where the more important mines have been found, is about five miles in length, in a north-south direction, and two miles in width. The town of Jarbidge, in the canyon bottom. is near the north end of this mineralized zone, while the southern end includes some of the highest mountain peaks of the Crater range. The Topography is so well illustrated in the accompanying photographs that little need be said except that the district is largely on the slopes of the mountain range forming the divide between the Snake River Valley and the Great Basin to the south.

Transportation has not been a serious handicap to the continuous operation of the mines, because the road leading to Rogerson and Twin Falls is in the bottom of the canyon and more or less protected from snows. Thus there is usually only a few days during the winter when roads become impassable.

The Town of Jarbidge, as well as the mill and lower mine workings of the Elkoro Mines Operating Company

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PHOTOGRAPH NO. 3

VIEW LOOKING DUE NORTH DOWN JARBIDGE CANYON

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1. New Mill of Elkhorn Mines Operating Company.

2. Ore Bin.

3. Office.

4. Machine Shop.

5. Warehouse.

6. 61 Level Dump, on which is located the Blacksmith Shop, Compressor Plant, and Miners' Change Room.

7. Portal of 61 Level tunnel.

8. Portal of 63 Level tunnel, just off of photograph.

9. Main Street of the town of Jarbidge.

10. Jarbidge River.

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is located in the bottom of the canyon along the Jarbidge River, as shown in photograph No. 2. The town is at an elevation of about 6,200 feet above sea level, while at the head of Jarbidge Canyon the peaks of the Crater Range rise to an elevation of close to 11,000 feet. Due to snow and rain-fall at high altitudes, the town and general surroundings present a striking contrast to the average desert mining districts found elsewhere in Nevada. Timber covers many of the slopes at higher elevations, and along the canyon bottom the stream is lined with Cottonwood and other trees. Many of the streams run the year round, thus furnishing an abundance of water for the town and all milling and mining operations.

4. HISTORY

THE HISTORY OF THE JARBIDGE MINING DISTRICT dates back to 1880, when prospectors from Silver City, Idaho, did some work. Little is known of their results, except that in about 1904 a sheep herder came across some old workings and found a piece of quartz that assayed over $1,200. in gold. For unknown reasons this discovery was not followed by any effort to develop the ground. In 1907, C. H. Howard, a stockman, prospected the present Bourne Ledge on Jarbidge River, but found only low grade ore, so no claims were staked. The discovery that lead to the founding of the district was made by D. L. Bourne, on August 19th, 1909, when he discovered the Bourne vein, close to the present North Star vein. (See Location C on photograph No. 1.) The Pick and Shovel ledge and other discoveries were made soon after, and on December 18, 1909, the Jarbidge Mining District was organized.

Early in 1910 certain newspapers printed a statement that the Bourne Mine had over $27,000,000. worth of gold ore in sight. This grossly exaggerated announcement caused a rush to the district and by the middle of April over 500 claims had been staked. A full account of the history and early development of the district appears in the U. S. Geological Survey Bulletins No. 497 and 741 published in 1912 and 1923 respectively.

The Production from the District by the end of 1931 amounted to about $1,500,000. in gold and silver. Of this amount about $1,250,000. was produced by the Elkoro Mines Company, largely from the Long Mike vein. By the end of 1932 the latter figure had been increased to $7,186,242. Added to this is $141,000. produced this year by the Elkoro Mines Operating Company, which brings the total production close to $8,000,000. from the district.

5. CLAIMS, AREA, OWNERSHIP, TITLE

THE ELKORO MINES OPERATING COMPANY OWNS the following lode mining claims in the Jarbidge Mining District:

(a) Patented Claims - 36 in number:

Survey No. 4303: Long Mike No. 1, Long Mike No. 5, Riverside, Laurel, Long Mike No. 3, Log Cabin No. 1, Log Cabin No. 2, Cabin, Lane Fraction, Long Mike Fraction, Elkoro Fraction, Midnight M, Morning Glory No. 1, 18 K, Yellow Jacket No. 5, Yellow Jacket No. 6, Mike, Spook Fraction, Morning Glory Fraction, Morning Glory, Clipper, Winkley and Log Cabin.

Survey No. 4378: North Star, North Star No. 1, North Star No. 2, North Star No. 3, North Star No. 4, Reliance, Reliance No. 1, Reliance No. 2, Minnie B, Minnie B No. 1, Minnie B No. 2 and Minnie B No. 3.

Survey No. 4312: Red Warrior.

(b) Unpatented Claims - 32 in number:

Anna, Ethel, Mary F, Mary, Zephr, Ida, Overlook, Ora A, Reva, Alice, Miss Mc, all located in 1909 or 1910; Keystone No. 1 and Keystone No. 2 located in 1911, Leonard Fraction and Gray Rock located in 1918, Minnie B No. 4 Fraction in 1918, and O. K. No. 3 Fraction located in 1922.

The present Company has recently acquired the following unpatented claims:

Red Top No. 1, Red Top No. 2, Red Top Fraction, Independence, Independence Extension, Dyke Lode, Dyke No. 1 Lode, City Lode, City No. 1 Lode, City No. 2 Lode, Bid Lode, Sunday, Sun, June, July, and August.

(c) THE AREA covered by the above claims amounts to about 1,000 acres in the most productive part of the district. It includes the major part of the property formerly owned by the Elkoro Mines Company and its two subsidiaries, the Jarbidge Gold Mining Company, and the North Star Mining and Milling Company. In addition, the claims recently purchased as above indicated have added to the present Company's holdings.

(d) TITLE to most of the area was secured through outright purchase from the Trustees in the dissolution of

Elkoro Mines Company and its two subsidiaries. The Elkoro Mines Operating Company was incorporated in April, 1934, to take over the property. Title was passed on by Herbert Van Dam, Jr.,-Attorney for the new Company,- of Salt Lake City, Utah. Mr. Van Dam has informed me that he considers the title passed from the old companies to the new company is exceptionally good, but he has not made a thorough examination of the abstract and record to determine minor conflicts or clouds on the title. Furthermore, he has not examined the title to recent purchases. These matters should be attended to as soon as the developments at the mine make it advisable.

Additional Claims may be purchased or located from time to time. However, in view of the large area of promising undeveloped territory now owned by the Company, I can see no reason for additional property purchases involving large commitments. The claims recently acquired cost but little more than the expense of locatin g new claims.

6. MINING FACILITIES

POWER has been greatly improved with the development of the mines. In 1917 the Elkoro Mines Company constructed a 73 mile, 44,000 volt, power line from the hydroelectric plant of the Nevada Power Co., at Thousand Springs, Idaho. The cost of this line is reported at a quarter of a million dollars. This same line is now in good condition to Jarbidge, and has recently been extended some forty miles to the mine of the Mountain City Copper Company. On the present operating basis of the Elkoro Mines Operating Company, the power cost averages one cent per kilowat hour?

Water Rights held by the new company are the same as those formerly owned by the Elkoro Mines Company and its subsidiaries. They are believed to be ample for all needs.

Labor is plentiful and good miners may be secured at the prevailing wages in other western mining districts. Miners are now paid $4.50 per day for the first ten to fifteen days employment. After this, if their work is satisfactory, the pay is advanced to $5.00. A similar arrangement is made by starting muckers at $4.00. The mine and mill are now operated by a crew of from 60 to 70 men.

Living Conditions are exceptionally good for the miners with families, who live in private homes.

Others live in hotels and rooming houses, some of which are not entirely satisfactory. In order to improve the latter, the Company has recently purchased the Club House of the former Company and are remodeling it to accommodate about 20 men.

At present single men are boarded by private parties, thus saving the Company the trouble and expense of operating a Boarding House.

7. EQUIPMENT Below, probably sold and removed

Little equipment of value remained in the property when the Eldoro Mines Operating Company began surface and underground operations. Thus it has been necessary to construct a new mill to replace the dismantled 100 ton cyanide plant of the Eldoro Mines Company. The new mill is a flotation plant, described more fully under the title of Milling.

The Mine and Mill are now served by an excellent Machine Shop, which is equipped with a 24 inch lathe, drill presses, pipe cutters and threaders, grinding machines, electric-arc and ox-acetelene welding outfits, and other machinery to facilitate operations.

The Mine has a well equipped Blacksmith Shop, including an Ingersoll-Rand 50 drill Sharpener, and many small tools.

The Compressor Plant now consists of an Ingersoll Rand, Type 10, 500 Cubic Foot, electrically driven compressor. Another compressor of the same type, with 1,000 cubic foot capacity will be installed within the next few weeks.

Underground the mine has sufficient rock drills for the present operations.

Transportation on the 61 Level is by Storage Battery Motor, hauling up to ten tons per trip. On the upper levels hand tramming is used.

With the installation of an additional compressor, the equipment should be ample for present production of 140 tons daily. With minor additions it will take care of a substantial increase in both ore produtction and development work.

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PHOTOGRAPH NO. 3

VIEW OF NEW FLOTATION MILL OF ELKORO MINES OPERATING COMPANY AND MINE BUILDINGS

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all moved

1. New Mill.
2. Ore Bin.
3. Office.
4. Machine Shops.
5. Warehouse. Removed ?
6. Main Street of Jarbidge.
7. Jarbidge River.
8. Bear Gulch.

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8. THE NEW MILL

The new mill of the Elkoro Mines Operating Company is shown in Photograph No. 3. This is a strictly modern well constructed flotation mill. The accompanying "Flow Sheet of Mill" shows the equipment used in the mill. Also the course that the ore takes,- from the time it goes into the mill until it is separated into concentrates and tailing,- is shown and described hereafter.

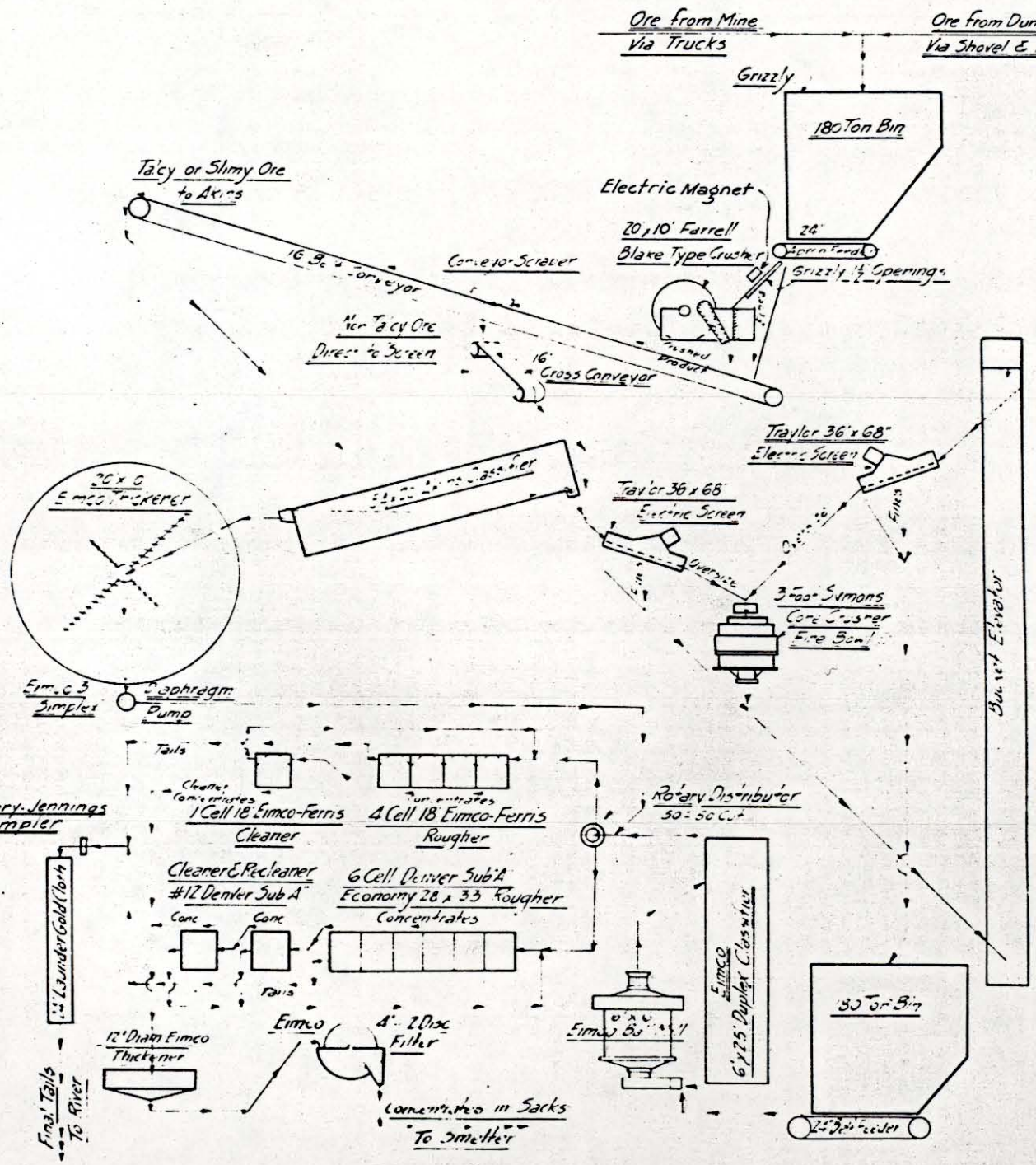
The mill is designed to handle from 200 to 250 tons per day.

The ratio of concentration is about 200 to 1; that is, 200 tons of ore ordinarily produces 1 ton of concentrates.

The concentrates average about 20 ounces gold and 250 to 300 ounces silver per ton. The milling operations to date show that the mill recovers from 75 to 80 percent of the gold and 55 to 60 percent of the silver, from the crude ore. With additional improvements it is likely that the recovery can be substantially improved.

During the first six months of this year, a total of 10,978 tons from the underground workings, and 10939 tons of dump ore from the surface, were put through the mill. The average milling cost on this ore amounted to $1.33 per ton, as determined by the Elkoro Mines Operating Company, as shown on the accompanying Tabulation Sheet, No. 1. This sheet also shows the Production and Expense totals, 1918 to 1932 of the former Elkoro Mines Company and those of the new Company. The old Company operated a 100 ton cyanide mill, which handled from 100 to 150 tons per day, with a reported recovery of 83 to 94% of the total value of gold and silver in the ore.

The ore from the mine is especially well suited for either flotation or cyanide mills, because the vein material is a rather soft white quartz, with very little pyrite, galena, sphalerite, or other base metal sulphides. While the ore minerals are largely native gold, argentite, or silver sulphide, and probably a small amount of more complex silver-gold minerals. From a study of the vein, it appears that the pyrite in the concentrate comes largely as a dissemination in the rhyolite in the walls of the vein, and from inclusions of rhyolite within the vein. It is only occasionally that the values are found in silicified rhyolite that requires fine grinding with a slight additional cost to release the values.



FLOW SHEET

200-250 Ton FLOTATION PLANT

ELKORO MINES OPERATING CO.

ELKRIDGE, NEVADA.

9. DESCRIPTION OF MILL FLOW SHEET

Crude ore is delivered from the mine to the mill by truck. The truck dumps over an eight inch grizzly through which the ore passes to a 180 ton receiving bin. From the bin, a thirty inch pan feeder with ratchet drive feeds the ore to a 30 x 10 Blake Type crusher.

The crusher product drops to an eighteen inch conveyor belt and is conveyed to a Jeffery vibrating screen.

Arrangements are made at this point to pass the crusher discharge through an Akens classifier. The classifier overflow going to a thickener and thence directly to the main flotation circuit while the discharge returns to the vibrating screen of the original circuit. This operation is carried out only in the event that the ore might contain such an excess of talcy material as to interfere with the efficient operation of the vibrating screen and Symons Crusher.

The undersize of the above mentioned vibrating screen goes by way of a hopper to a bucket elevator. The oversize passes by way of a chute to a three foot Symons crusher. The crusher product goes directly to the bucket elevator where it joins the undersize from the screen. The discharge from the elevator passes to an additional screen located above a 180 ton Fine Bin. The undersize passes directly to the bin while the oversize is returned to the Symons crusher.

From the fine ore bin, a 24 inch ratchet driven belt feeder delivers the three-eighth inch product to a 6 x 6 foot Hinco ball mill. The ore being ground in closed circuit with a 6 x 24 foot Dorr type classifier.

The reagents are fed at the classifier overflow.

The overflow from the classifier passes through an automatic pulp splitter. Half the pulp goes to a six cell bank of Denver Equipment Company's flotation cells. The balance goes to a four cell bank of Hinco-Norris flotation cells. The rougher concentrates produced by these machines are delivered to a one-cell Hinco-Norris flotation machine. The cleaner tails being returned to the circuit. The cleaned concentrates are delivered to a small Denver Equipment flotation cell for recleaning, the recleaner tails being returned to the first cleaner cell.

Cleaned concentrates are pumped to a 10 x 4 foot Dorr type thickener. The thickened product is then pumped by a two inch diaphragm pump to a two disc four foot Hinco filter. The filtered concentrates are sacked and delivered by truck to Salt Lake Valley smelters.

Mill samples are taken by automatic samplers of the Gearrly type.

The mill is equipped with an up to date assay office, laboratory, and machine shop.

10. MINING METHODS AND COSTS

(c) Past Production.

A complete description of mining methods and costs will be found in Department of Commerce, United States Bureau of Mines, Information Circular 6543, entitled "Mining Practices, Methods, and Costs at Elkoro Mines, Jarbidge, Nev."

The circular just mentioned describes the veins and methods used as follows:

"The gold and silver is found in quartz veins having average dips of 60 to 80° from the horizontal. The strike is roughly southeast and northwest but is subject to local changes due to extensive ground movement.

The veins vary greatly in length and width. The principal vein,- the Long Mike Vein,- which has been developed in the district has been followed in ore for a distance of over a mile and no doubt extends in some form for several times that distance. Other veins, principally of a grade too low for mining, can be traced on the surface as far as four or five miles. The width of the main vein averages about six feet, ranging from narrow stringers up to 20 feet in rare instances.

The vein is enriched by small leads usually entering and crossing the main ledge at about a 60° angle. At those places it is often possible to widen the stopes slightly. Experience has shown that those branching or intersecting veins do not carry commercial values away from the main ore body.

An operating difficulty is usually experienced in mining the ore of split-off shoots extending into the hanging wall. The values may extend 3 or 4 feet along the diverging vein. In stoping out this ore, a shelf is formed in the hanging wall that requires a large amount of timbering and blocking.

Except at the crossings the walls of the veins are clearly defined. At these points some of the wall rock usually is broken to make sure that all the commercially valuable material is obtained. Fault zones roughly paralling the vein and located six to eight feet in the hanging wall occur at a few places in the mine.

The economic metals of the deposits are gold and silver. They occur in the form of native gold, gold-silver alloy, or electrum, and the silver-bearing minerals argentite, ceraargyrite, and naumannite. The primary metallization produced mainly sulphides, chiefly argentite and pyrite, but from the oxidized portions of the veins pyrite has practically disappeared.

The chief gangue minerals are quartz and adularia, and a common feature is their microcrystalline to cryptocrystalline character. The quartz is the more important, as its dominance or abundance favors the occurance of the ore minerals, especially gold.

No ore of very high value is found, a period of years yielding a mill feed of slightly over $10.00. The values occur fairly regularly through the vein; that is, there are no pockets of ore, although here and there along the vein lean spots occur which, in stoping, are usually left as pillars.

During the early years of mining at Jarbidge the amounts of gold and silver recovered were about equal, by weight. As operation continued into veins further to the west, however, the proportion of silver has increased, until at present there is about ten times as much silver as gold in the finished bullion. These workings are still in the oxidized zone."

The above quotation is taken from Information Circular above referred to, dated November, 1931.

In the operations described Shrinkage Stoping was employed, at a cost of $2.01 per ton,- not including development and some other costs. Cut and Fill stoping was used where walls were shattered. Development costs for the old Company were, $11.35 per foot for drifting, crosscutting, and raising; and $23.19 per foot for sinking, which compare favorable with other western mining districts. Details of mining costs are shown on Tabulation Sheet No. 1, for 633,700 tons mined by the old Company.

The stopes of the old Company are shown in the Longitudinal Section and Projection accompanying this report.

The production costs of the past are important because in the new development work outlined there is good reason to believe that similar ore deposits will be mined, under similar conditions, except that the price of gold and silver are much improved.

Insofar as I can learn, the stopes between the Grey Rock and Hoffman faults showed an increase in silver, due to less oxidation than in stopes further east, but without a decrease in the gold value. This is shown on the accompanying Tabulation Sheet No. 2. N/3

10 MINING METHODS AND COSTS (Continued)

(b) Present Production. 1971 and 2 years

In the production of the present Company this year, from January to June inclusive, a total of 19,939 tons of ore from old dumps was put through the mill. This was mined by steam shovel and trucked to the mill at an overall cost of 50 cents per ton on the larger part and 30 cents per ton on the smaller part of the total tonnage. The record shows that with the cost of milling at $1.33 per ton, the ore from the dumps showed little or no profit.

Underground, in the same period, the North Mike vein produced 5,235 tons of ore averaging .164 ounces gold and 3.22 ounces silver per ton. This was mined from ore in place, using the Shrinkage Stoping method. The Long Mike vein produced 5,537 tons, averaging .237 ounces gold, and 4.19 ounces silver, per ton. This was mined largely from old fills in the workings shown in black,- between the Grey Rock and Hoffman faults,- on the accompanying Longitudinal Section and Projection. Other workings furnished 156 tons, averaging .084 ounces gold and 1.02 ounces silver per ton. The total underground tonnage amounted to 10,978 tons, which averaged .1988 ounces gold and 3.68 ounces silver per ton. Based on an extraction of 80% of the gold at $34. per ounce, and 60% of the silver at 75 cents per ounce, the total value of this ore amounts to $77,856., or $7.09 per ton. With a mining cost of $3.10 per ton and milling at $1.35, it shows a net profit of $2.66 per ton, or a total profit of $29,201.

Details of production and mining costs from January to July inclusive are shown on the accompanying Tabulation Sheet No. 1.

From the mine records it is evident that the profit this year has come from underground operations. With a minimum amount of new development, close supervision, plenty of sampling, and clean mining, the mine may continue with a mining cost of about $3.00 per ton. If development work is increased, the cost per ton will be higher. With reasonable success, the work in progress at the mine may return the larger part of the new capital now invested. However, the diamond drilling recommended, if successful, will give a most promising future to the mine.

SUMMARY OF PRODUCTION FOR THE FORMER ELKORO MINES COMPANY

(Data taken from monthly production reports - July 1, 1925 to Dec. 1, 1928)

Place	Period	Tons	Assay Ag.Oz.	Total Oz. Ag.	Total Val. Silver @ 50¢ per oz. in dollars	Total Oz. Au.	Total Val. Gold @$20.67 per oz. in dollars	Assay Au. Oz.
E-22-21	7/25	1167	.64	748.32	$ 374.16	854.24	$ 17,657.12	.7320
G-22	7/25 to 6/26 inc.	291	.54	156.90	78.45	47.3885	979.52	.1629
E-29	7/25 to 10/25	2759	.77	2116.7	1,058.35	1818.635	37,797.89	.6628
G-27	7/25 to 4/26	4131	.86	3559.9	1,779.95	2008.4088	41,513.81	.4862
G-28	7/25 to 8/26	8607	1.25	10793.26	5,396.63	6749.957	139,521.62	.7842
G-31	7/25 to 8/26	4568	.82	3757.76	1,878.88	1689.51	34,922.15	.3619
G-30	7/25 to 11/25	2064	.81	1671.22	835.61	174.97	3,616.62	.0348
G-16	7/25 to 6/26	686	.79	541.46	270.73	207.3745	4,286.43	.3023
E-20	7/25 to 4/26	2678	.45	1192.40	596.20	685.2036	14,163.16	.2559
E-26	8/25 to 11/25	2802	.77	2159.60	1,079.80	2706.678	55,947.03	.9874
G-29	9/25 to 3/26	6559	.65	4234.18	2,117.09	2106.327	43,537.78	.3211
G-24	10/25 to 5/27	2546	.58	1483.86	741.93	1077.88	22,279.73	.4234
E-27	11/25 to 2/26	4408	.97	4251.86	2,125.93	4097.32	84,691.78	.9295
G-11	4/26	290	.54	157.00	78.50	47.23	976.30	.12
E-23	4/26	153	.66	101.20	50.60	31.9603	660.62	.2089
69 Dump	4/26 to 10/26	4926	.80	3924.40	1,962.20	1526.6149	31,555.13	.3099
G-32	4/26 to 6/26	192	.64	123.28	61.64	40.1974	830.88	.2094
H-32	4/26 to 5/26	508	.52	265.74	132.87	51.2395	1,059.12	.1008
E-28	5/26	213	.75	158.58	79.29	75.007	1,550.40	.3521
68 Dump	6/26 to 10/26	4142	.90	3712.36	1,856.18	1937.769	40,053.68	.4678
I-7	8/26	27	.12	3.22	1.61	3.521	72.78	.1304
G-8	8/26 to 10/26	430	.09	39.24	19.62	389.9448	8,060.16	.9069
I-8	9/26 to 3/27	1387	.86	1187.82	593.91	894.086	18,480.76	.6446
E-9	10/26 to 11/26	86	2.76	238.06	119.03	55.6236	1,149.74	.6468
G-9	11/26 to 12/26	345	1.15	398.08	199.04	146.77	3,033.65	.4254
M.T. #4	11/26 to 6/28	14221	4.42	62909.82	31,454.91	7977.71	164,899.33	.5610
M.T. #6	11/26 to 11/28	9989	4.32	43197.12	21,598.56	5155.127	106,556.49	.5161
H-31	12/26 to 1/27	488	1.12	546.68	273.34	178.78	3,695.41	.3664
Ida Wz.	12/26 to 3/27	1188	5.11	6064.36	3,032.18	664.406	13,733.27	.5593
M.T. #2	12/26	66	1.0	66.04	33.02	9.6188	198.82	.1457
H-27	4/27	229	1.53	349.40	174.70	56.8568	1,175.23	.2483
H-28	4/27 to 3/28	5641	4.50	25409.50	12,704.75	3131.9309	64,737.68	.5552
G-4	12/27 to 12/28	2183	.87	1913.82	956.91	658.61	13,613.47	.3017
M.T. So.X-Cut	1/28	20	4.72	94.36	47.18	4.7015	97.18	.2351
M-6	6/27 to 12/27	3826	4.26	16281.70	8,140.85	2466.281	50,978.04	.6446
N.H. Dev.	11/27 to 1/28	610	.92	559.08	279.54	295.355	6,104.98	.4842

(Tabulation Sheet No. 2)

Place	Period	Tons	Assay Ag.Oz.	Total Oz. Ag.	Total Val. Silver @ 50¢ per oz. in dollars	Total Oz. Au.	Total Val. Gold @ $20.67 per oz. in dollars	Assay Au.Oz.
N-5	11/28	293	1.75	514.32	$ 257.16	36.841	$ 740.83	.1223
N-6	5/28 to 12/28	8478	8.24	69870.94	34,935.47	4288.9695	88,653.00	.5059
N-2	5/28 to 11/28	1878	5.49	10230.80	5,115.40	572.135	11,826.04	.3047
N-4	6/28 to 12/28	2785	1.4	38840.08	19,420.04	1965.228	40,621.26	.7057
M.T. Dev.	9/28 to 11/28	224	1.1	235.04	117.52	31.429	649.64	.1403
G95	1/28 to 10/28	6412	.76	4897.88	2,448.94	1578.898	32,635.83	.2462
61 Dev.	3/28 to 10/28	3493	5.83	20353.64	10,176.82	1461.475	30,208.69	.4183
N-7	4/28	502	5.53	2779.60	1,389.80	222.722	4,603.67	.4436
N-8	4/28 to 12/28	8255	6.31	52123.00	26,061.50	3191.16	65,960.44	.3866

Note: 7/25 to 6/26 means July, 1925 to June, 1926, both months included and so on down the list.

Note: These were the only detailed production sheets found at the mine. While not covering the last production, they do show the values between the Grey Rock and Hoffman faults, which are of special interest because ores found west of the Grey Rock fault should be similar.

The letters and numbers refer to stopes, most of which are shown by corresponding letters and numbers on the Longitudinal Section and Projection.

M. T. is Mill Tunnel.

M. T. 4 and 6 would be above Stopes N-4 and 6 only above the Mill Tunnel Level.

11 ORE RESERVES

Ore reserves at present amount to about 1,500 tons of broken ore in the stope on the North Mike vein between the Hoffman and Grey Rock faults. East of the Hoffman fault the assay maps of the old Company, together with recent sampling, suggest the possibility of a moderate tonage from this area. At the time of my examination it was not possible to re-sample the fills, so a definite opinion of the values cannot be given. From my own observations, I believe that short crosscuts on the 68 and 66 Levels may add to the tonnage of ore in place.

As already stated and described in greater detail further on in this report, I believe the most promising outlook for future production is in the finding of large ore deposits in the continuation of the Long Mike vein west of the Grey Rock fault.

12 GENERAL GEOLOGY

As heretofore stated in the introduction to this report, the ore deposits of the Jarbidge Mining District occur in fissure veins cutting through recent lava flows. In this respect they belong to a particular well known type often referred to as Bonanza Deposits, formed near the surface in Tertiary lava flows. As a class, deposits of this type in widely scattered areas have produced a large part of the world's gold and silver. In years, as we think of time, the volcanic activity in this district, is very old, but in geologic time it is comparatively recent, as the first flows probably came during the middle Miocene and successive flows continued into the Pliocene. Near Jarbidge the flows were entirely Rhyolites, but of slightly different composition. These flows are occasionally separated by several feet of carbonaceous shale, indicating a time interval between flows of sufficient length to allow cooling, soil accumulation, and the growth of plant life.

Miocene
Pliocene
Roc
carbonaceous contacts

The bottom of individual flows is often glassy and thin bedded, due to rapid cooling. This, and other characteristics of certain flows, makes it possible to identify and subdivide them into certain groups for use in the practical application of ore finding in the district. Mr. F. C. Schrader* the government geologist who examined

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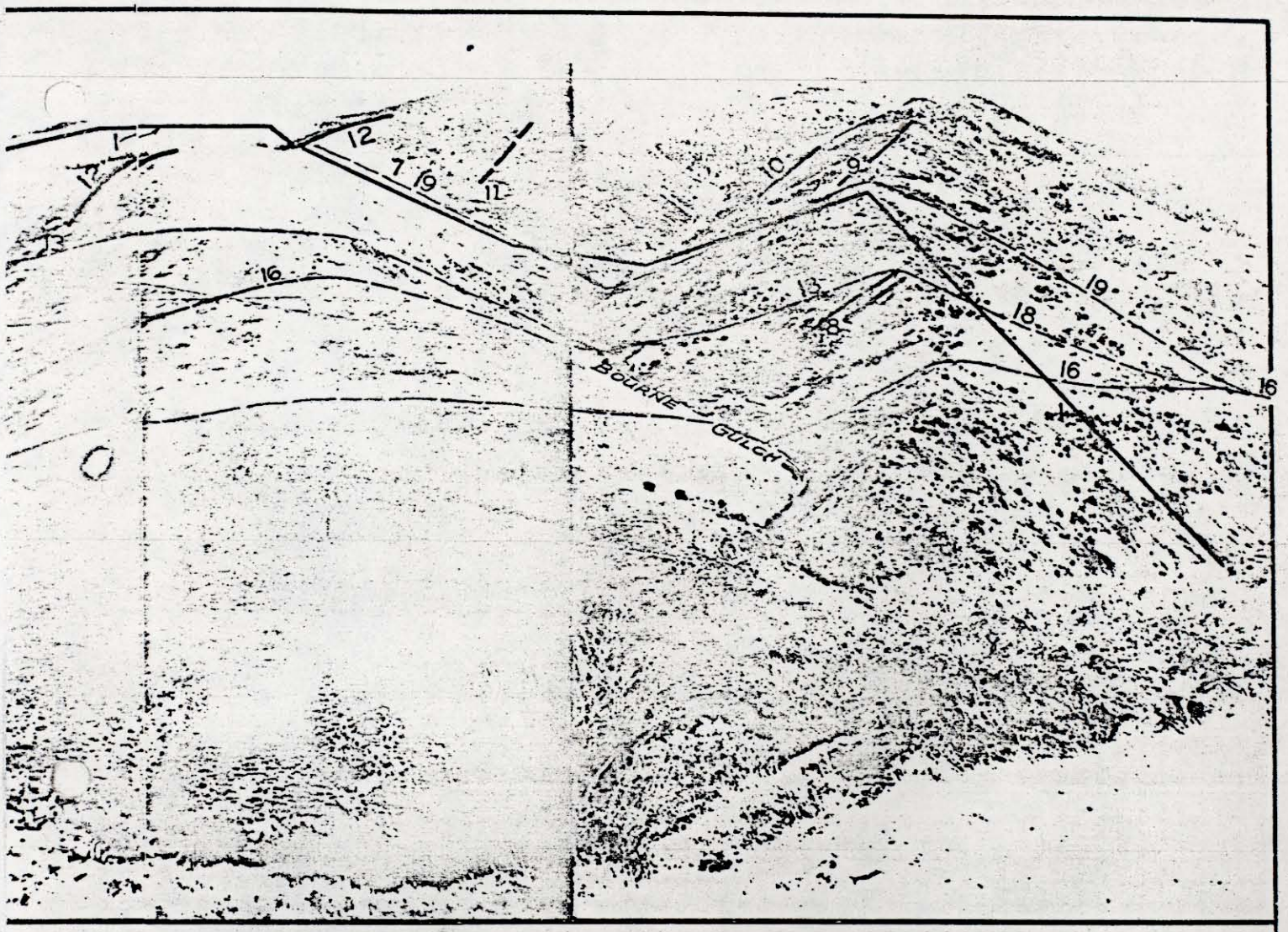
*U. S. Geological Survey Bulletins 497 and 741.



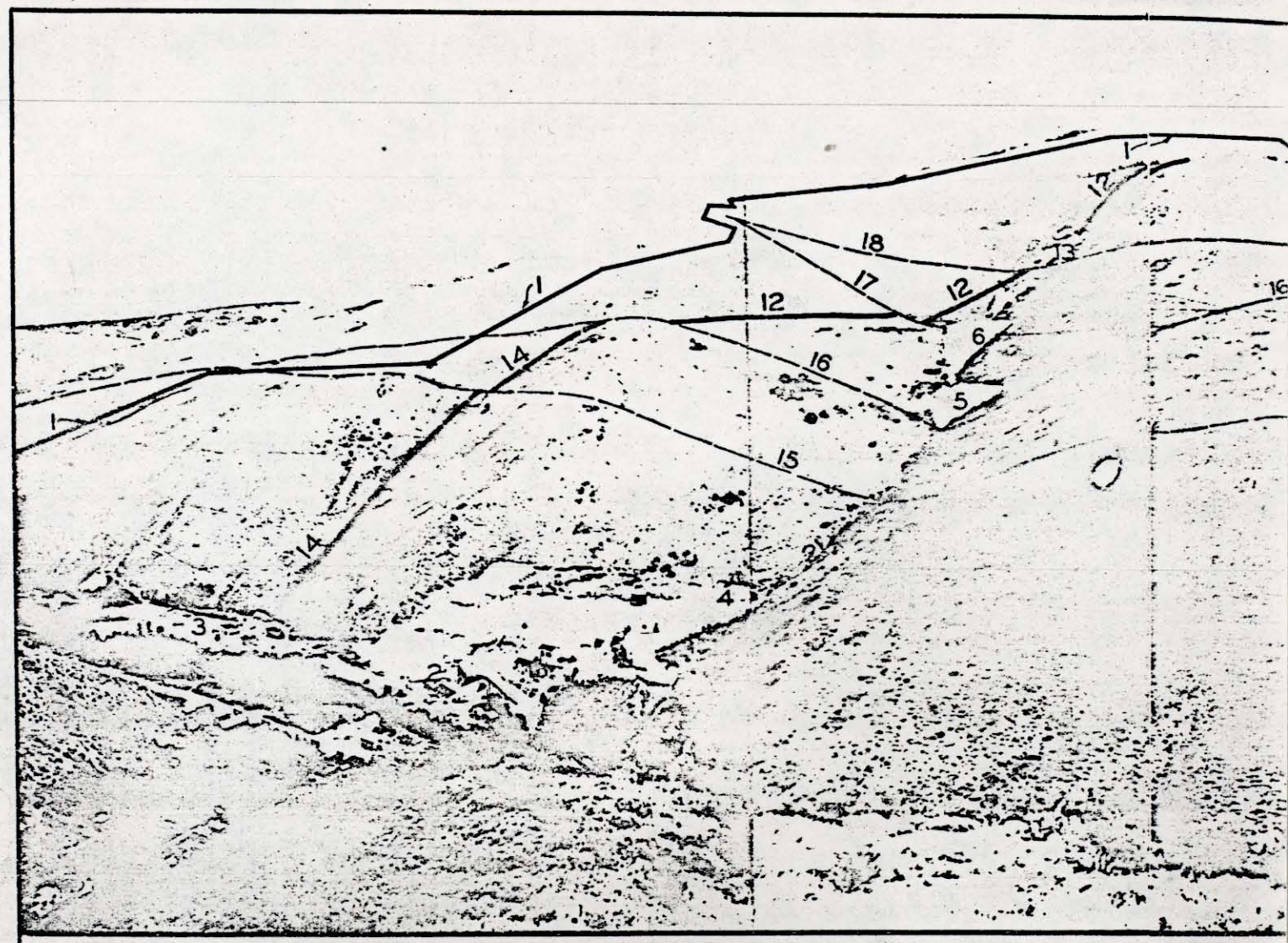
EAST ACROSS JARBIDGE CANYON
ing Part Of Property Of
ES·OPERATING·COMPANY

RY.
G Co.

e Vein

12. LONG HIKE VEIN – Known Position.
13. Cave into LONG HIKE Stopes.
14. LONG HIKE VEIN – Probable Position.
15. Elmore Fault.
16. Grey Rock Fault.
17. Hoffman Fault.
18. Yellow Jacket Fault.
19. Flaxie Fault.
20. Jarbidge River, Flowing North.
21. Long Hike Gulch.
22. Bear Creek Canyon.

PHOTOGRAPH No.



VIEW LOOKING EAST ACROSS JA
Showing Part Of Prop
ELKORO · MINES · OPERAT

1. Approximate Position Of Boundary.
2. New Mill Of Elkoro Mines Operating Co.
3. 61 - Level Dump
4. 63 - Level Dump
5. 66 - Level Dump
6. 68 - Level Dump
7. Flaxie No. 1 Tunnel
8. North Star Mine & Vein, also Bourne Vein
9. O.K. Mine and Vein
10. Alpha Mine and Vein
11. Starlight Mine and Vein

the Jarbidge district in 1910 and 1920, divided the rhyolites into Younger Rim Rock Rhyolites (See photographs No's. 3 and 4) and Older Rhyolites, and recognized the fact that the ore deposits are confined to the Older flows. O. H. Hershey, geologist for the old Elkoro Mines Company, subdivided the Older Rhyolites, and proved that the commercially valuable ore deposits were confined largely to one or two of the several Older Rhyolite flows.

Fissuring and Mineralization probably came toward the end of the period of volcanic activity. In general, the fissures are faults without large displacement. The fissures usually have a northwest strike, with a steep dip to the northeast or southwest. Ore deposits are restricted to certain flows where vein quartz and ore minerals fill the fissure between walls of silicified or altered rhyolite. In other flows above or below the fissure may show only the fault-plane and alteration of the wall rock. Thus the surface exposure of the veins may be represented by vein quartz with values in favorable rhyolite or silicified ledges or depressions depending on the alterations in unfavorable formations.

Probably, about the middle of the Pliocene, when volcanic activity ceased and the early fissures had been mineralized, another major geologic event began. The District was cut by great North-South faults. Undoubtedly this occurance was simultaneous with regional uplift and similar faulting in the Great Basin region to the south, which began in the latter part of the Pliocene and has continued intermittently to the present. This comparative recent faulting near Jarbidge is shown in the topography of the country. Jarbidge Canyon marks the line of a large fault. Near the head of this canyon the major fault of the District (the Yellow Jacket fault) has a downward movement to the west of about 2,000 feet. Just above the town of Jarbidge this fault splits into at least four major faults, namely, the Flavio, Yellow Jacket, Hoffman, and Grey Rock, as shown on Photograph No. 1. The movement on this great fault was likewise distributed between the faults just mentioned and shown on the Longitudinal Section and Projection. These faults are not known to contain any ore deposits, and where evidence of mineralization is present, it is due to the fault following an older fissure. Thus, it is my opinion that the major North-South faults are post-mineral, and have faulted the ore deposits.

In general the faulting above described increases costs for exploration and development. At the same time, when the correct solution to the faults has been determined, many new possibilities are shown for the extension of ore deposits in the mineralized area. I am convinced that this will be the case in the immediate future of the Elkoro Mines Operating Company. Thus the future holds much promise. N/B

13 DETAILS OF GEOLOGY

Some of the more important details of the geology are shown in Photograph No. 1, where the major veins and faults are clearly indicated in their relation to the property of the Elkoro Mines Operating Company. In addition to the large area on the east side of Jarbidge Canyon, this Company also has extensive holdings on the west side. On the west side of the canyon the geology is shown in part of photograph No. 4. Within the property of the Elkoro Mines Operating Company the formations are composed entirely of the Older Rhyolites. The several different flows usually dip from 15° to 30° in a northerly direction. The Older Rhyolites have been subdivided into Lower, Middle, and Upper flows. The Upper Flows are divided into 1st, 2d, and 3d, sheets. Occasionally the 3d is divided into a lower and upper sheet, and the latter is called the 4th sheet of Upper Rhyolite. In this report the 4th Upper will be considered as a part of the 3d sheet.

The major ore bodies of the district are in the Long Mike vein within the Elkoro property, and here the ore occurs where one or both walls of the vein are the 1st or 2nd Upper flows. Usually the ore terminates near the top of the 3d Upper and is not known to extend upward in the vein to the place where both walls are 3d Upper. Separating the Upper and Middle flows is a dark glassy rhyolite tuff or flow breccia underlain by 3 to 6 feet of black carbonaceous shale. Commercial ore does not extend far below the black shale in the hanging wall of the vein. In view of the conditions mentioned, the 1st and 2d Upper flows are of special interest and altered zones along veins in the 3d Upper are of great importance because they may represent veins that will be ore bearing in the underlying flows. N/B

The Ore Bearing Veins of the district in favorable rhyolites have a white, finely crystalline quartz-adularia vein filling, through which high value gold and gold-silver ore minerals occur in thin seams and disseminations. The minerals in the vein represent more than one period of mineralization. Thus quartz appears as a

replacement of thin tabular crystals as a pseudomorphic replacement of calcite or barite of the first period of mineralization. This is interesting in that it is characteristic of this type of deposit, and I have seen almost identical occurances in the mines of Silver City, Idaho, and specimens from Tonopah, Goldfield Mountain, (Silver Queen Mine) and other important gold-silver districts in Tertiary lavas show the same association of minerals. In the Elkoro property several veins have been mined and doubtless others will be found, but the most important in the present consideration is the Long Mike vein.

The Long Mike Vein has been the largest ore producer in the district. This great vein has produced principally gold, with a minor amount of silver, to the extent of approximately $6,500,000. in a length of 5,300 feet, from stopes shown on the accompanying Longitudinal Section and Projection. The average strike of the Long Mike vein is North 82° West, as shown on the Plan Map of this vein accompanying the report. The dip varies between 55° and 65° to the Southwest. The ore has a vertical range of about 500 feet or 600 feet in the plane of the vein. The ore in the vein as mined is from a few inches up to 20 feet in thickness, but averages 6 feet. N/B

The Long Mike Vein has been cut and displaced by four major faults, the Flanzie, Yellow Jacket, Hoffman, and Grey Rock. The vertical displacement is shown in the Longitudinal Section and Projection, while the horizontal displacement is shown on the Plan Map of this vein. I consider that the Section and Plan show that three of these faults have been successfully solved, and thus the fourth, or Grey Rock, should present little difficulty. This is particularly true because the Grey Rock is nothing more than a branch of the major Yellow Jacket fault going up Jarbidge Canyon to the south, as are the other three faults. The vertical displacement I have determined within reasonable limits, and the horizontal displacement should not be large because it was not so in the case of the Flanzie, Yellow Jacket and Hoffman faults. N/B

Note well

The next question is, does the ore in the Long Mike vein continue west of the Grey Rock fault? Every effort was made by me to determine this matter at the mine. I examined the Long Mike vein on the G1 Level, and there found the ore continuing to a minor fault in the foot-wall of the main Grey Rock fault, showing some silification and vein quartz. A similar condition was found in the Hoffman fault on the G5 Level.

PHOTOGRAPH NO. 4

No exploration or development work done by Newmont on this side of Canyon

VIEW LOOKING WEST ACROSS JARBIDGE CANYON

SHOWING PROBABLE NORTHWEST CONTINUATION OF THE LONG HIKE VEIN

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1. Zone of alteration in older rhyolites along outcrop of fissured zone believed to be the Long Hike Vein.

2. Spur vein showing much alteration of rhyolite along walls.

3. Minor fault.

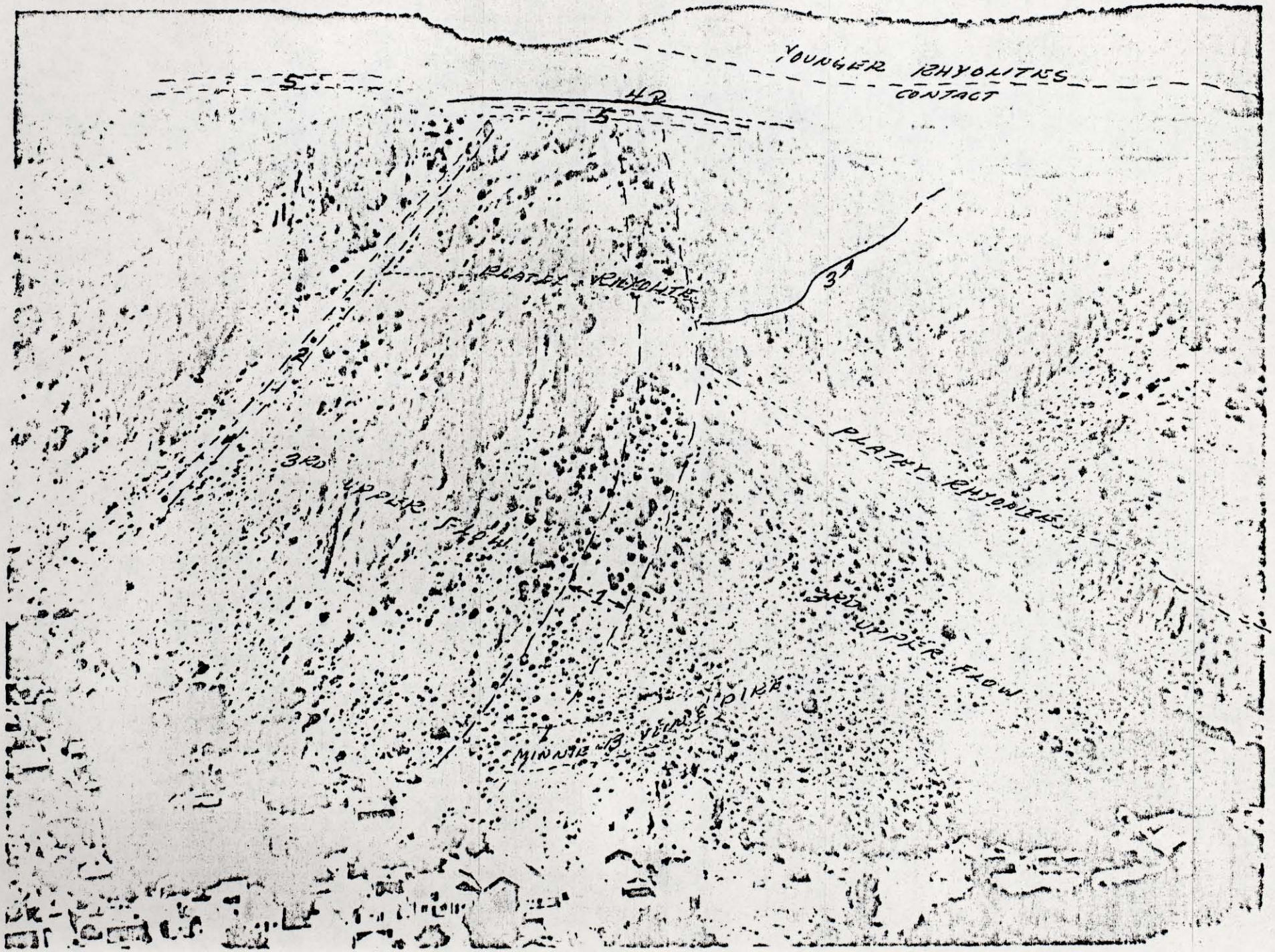
4. Bear Creek Canyon Fault. Displacement estimated at 250 feet down on east side.

5. Thin flow of glassy white rhyolite overlain by thin flow of black obsidian.

6. Main Street of Jarbidge

7. Bear Creek Canyon.

The above veins are shown as entirely in the Third Upper Rhyolite, not known to be ore bearing. The Second Upper Rhyolite and ore zone is below the bottom of the canyon. See Map and Section.


YOUNGER RHYOLITES
CONTACT
5
4R
5
PLATEY RHYOLITE
3
2
3RD UPPER FLOW
PLATEY RHYOLITE
1
3RD UPPER FLOW
PIKE
MINNIE
B VEIN

Wherever the Long Hike vein can be seen close to a major fault, it is shattered and broken. Thus I consider the major faults as post mineral, and arrive at the conclusion that the Long Hike vein will continue to be productive west of the Grey Rock fault. Of course, this can only be proven by penetrating this vein with a diamond drill or underground workings.

The continuation of the Long Hike vein west of Jarbidge is strongly indicated by a zone of alteration in the 3d Upper rhyolite flow as shown in Photograph No. 4. This zone has the proper strike and dip to be the Long Hike vein. The zone shows zone slips representing fissuring, but is largely one of alteration in the rhyolite. On the same photograph I have also shown a spur vein which also shows strong alteration in the rhyolite. The alteration is largely kaolinization but with some chalcedonic white quartz. The kaolinization probably represents surface alteration of sericite or pyrite of hydrothermal origin. And the quartz is also from hot solutions. Thus I believe that hot solutions have risen along the fissures described, and this being the case, there is a good possibility that these fissures may be ore bearing in the 2d Upper rhyolite at depth.

14. NEW DEVELOPMENT WORK PROPOSED, Diamond Drilling.

I have prepared the Plan Map showing the Long Hike vein and the Longitudinal Section and Projection of this vein, and shown the probable position of the Ore Zone in the 2d Upper rhyolite. Inasmuch as this entire zone is in virgin ground, not penetrated by underground workings, I believe it presents an ideal prospect for the diamond drill. I have, therefore, indicated the locations where diamond drilling can be done to the best advantage. It is within a reasonable possibility that ore may be discovered in the first drill hole, but the work should not be undertaken with the idea that this is a certainty. Other holes may be necessary, hence I am recommending that the drilling be carried on as follows:

Diamond Drill Hole No. 1 should be started at the location shown on the Plan Map and Section. The course and inclination of this hole as shown is such that it can be drilled to great depth without intersecting the Grey Rock fault. Thus giving a complete log of the formation and the information necessary to determine the vertical movement on the Grey Rock fault. The hole is also directed to intersect the Ore Zone in the 2d Upper about 450 feet below the 01 Level.

Diamond Drill Hole No. 2 is shown on the Plan Map and Section. The position is tentative only, as the exact location will be determined by the results of the No. 1 hole. As shown, the No. 2 hole will penetrate the Ore Zone at greater depth, or farther to the southwest.

Diamond Drill Hole No. 3 is directed to prove the Ore Zone in the vivinity of the New Mill, so that a shaft can be sunk close to the mill if sufficient ore is found to justify it.

Diamond Drill Hole No. 4 is directed to prospect the intersection of the Long Mike vein and the spur vein in the Ore Zone west of the Jarbidge River and below Bear Creek Canyon.

Diamond Drill Hole No. 5 may be advisable at the location indicated in order to prove the Ore Zone at this location before underground workings are driven.

Additional diamond drilling may be advisable in determining the depth of commercial ore below the Zero level in the ground between the Grey Rock and Hoffman faults. Also, it may be used on other parts of the property if found satisfactory in the work as above outlined. For the present, the drilling should be concentrated upon the main objective.

15. COST OF DIAMOND DRILLING

In undertaking the above work, a minimum core of 1-1/2 inches should be secured. On the first hole at least, the core should be pulled every 5 feet. Also the sludge should be saved and assayed for each five feet so that the value of the material ground up in drilling can be determined. The drilling should be contracted at from $2.00 to $3.00 per foot, and a minimum of $10,000. should be available for the work proposed.

16. COST OF ADDITIONAL DEVELOPMENT WORK

In the event that the diamond drill work is successful, approximately $100,000. should be available to pay for the sinking of a new shaft near the mill and doing the development work necessary to open up the vein for stoping. The present water level is now the 61 Level of the mine, and Jarbidge River is little lower than the portal of the 61 Tunnel. Thus the shaft will be s unk below the water level and pumping will be necessary.

The diamond drill will determine the depth of the shaft, but the present indications are that a depth of 550 feet will be desirable, with levels at 400 and 500 feet.
Present shaft 1200 ft. water flowing out of collar

17 SUMMARY AND CONCLUSIONS

1. The 1,000 acre property owned by the Elkoro Mines Operating Company is in the center of the most intensely mineralized area of the Jarbidge Mining District of Northeastern Nevada.

2. This property has a past production of about $6,000,000. in gold, and $1,000,000. in silver, based on metal prices from 1918 to 1932.

3. The mine has a new 200 to 250 ton flotation mill and is well equipped with machine shops, blacksmith shop, compressor plant, etc., for present operations.

4. The mine and mill are now operating on a 140 ton daily production basis. Ore comes from surface dumps, fills in old stopes, and from ore in place in the underground workings. From January 1 to August 1, 1936, a total of 25,213 tons was milled, the average daily tonage being 136 tons. The total revenue derived from the sale of gold and silver concentrates amounted to $123,306. during this period. The profit was 89 cents per ton, or $31,392., not including depletion, interest on capital amortization, or cost of new equipment.

5. Mining and milling costs in the past and at present have been reasonable, due to excellent facilities, and major cost of installation has been paid for by former operators.

6. Operations as conducted at present, with close supervision, may return the cost of purchase and rehabilitation of the property.

7. Geologic conditions are not only favorable for the finding of minor ore bodies, but I believe there is an excellent chance of finding the continuation of the great Long Hike vein west of the Grey Rock fault.

8. The Long Hike vein as shown on Photograph No. 1, and the accompanying Plan Maps and Section, has produced in the neighborhood of $6,500,000. in gold and silver, in a distance of 5,300 feet. Surface indications strongly suggest the continuation of this vein for over 3,000 feet to the northwest into new and undeveloped territory. NB

R. O. Canozzi Lease-grown

9. Diamond drilling will be suitable for prospecting this new territory at a reasonable cost.

10. The further development of this property presents the best speculation that has come to my attention in the past eight years. The possible outcome of this venture fully justifies a thorough and extensive campaign of exploration work.

Respectfully submitted,

Joseph Chilson

Power and Water conditions should be studied if property is explored. Preliminary determination can be made by drilling on west side of the canyon. If that is undertaken claims on both sides of canyon should be optioned, for tied up.

Joseph Chilson
June 25 1971

RETYPED PAGES

REPORT ON THE PROPERTY

OF THE

ELKORO MINES OPERATING COMPANY

AT

JARBIDGE, NEVADA

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By J. J. Beeson
Salt Lake City, Utah

September 10, 1936

TABLE OF CONTENTS

1. INTRODUCTION

The property of the Elkoro Mines Operating Company is of special interest at this time because of the activity in the development of gold mines generally and even more so because of its location in the gold producing Jarbidge Mining District of northeastern Nevada.

...

The property now owned by the Elkoro Mines Operating Company was formerly operated by the Elkoro Mines Company. From 1918 to October, 1932, the latter company milled...

...

The work of the present Elkoro Mines Operating Company to date has been largely one of construction, rehabilitation of the mine, and the milling of old dumps and stope fills. A new mill was completed in the latter part of 1935. From January 1, to September 1, 1936 a total of 39,448 tons was milled...

...

The following report is based upon an examination of the property of the Elkoro Mines Operating Company at Jarbidge, Nevada, between July 28th and August 19th, 1936. It was made at the request of the Rosenblatt Brothers, who own a large interest in the Company and have financed the construction of the mill and the operations of the Company to date. My examination was in the capacity of an independent engineer, not in the employ of the company, and without a financial interest in the property.

2. ORGANIZATION

THE ELKORO MINES OPERATING COMPANY is a Nevada corporation, capitalized for 1,000,000 shares, with a par value of ten cents per share. At present there are 600,000 shares issued, and 400,000 shares remaining in the treasury. The Main Office of the Company is located at No. 634 So. Fourth West Street, Salt Lake City, and the Mine Office is at Jarbidge, Nevada.

The Officers and Directors of the Company are as follows:

Earl B. Young, Jarbidge, Nevada, President and Director.
Morris Rosenblatt, Salt Lake City, Vice-pres. & Director.
Joseph Rosenblatt, salt Lake City, Sec'y, Treas., and Director
Wm. J. Franklin, Salt Lake City, Director
Herbert Van Dam, Jr., Salt Lake City, Director.

To date the shares of the Company are not listed on any securities exchange, as no public offering of the stock has been made.

...

4. HISTORY

THE HISTORY OF THE JARBIDGE MINING DISTRICT dates back to 1880, when prospectors from Silver City, Idaho, did some work. Little is known of their results, except that in about 1904 a sheep herder came across some old workings and found a piece of quartz that asseyed over $1,200 in gold. ... The discovery that lead to the founding of the district was made by B. A. Bourne, on August 19th, 1909, when he discovered the Bourne vein, close to the present North Star vein. ... The Pick and Shovel ledge and other discoveries were made soon after, and on December 10, 1909, the Jarbidge Mining District was organized.

Early in 1910 certain newspapers printed a statement that the Bourne Mine had over $27,000,000. worth of gold ore in sight. This grossly exaggerated announcement caused a rush to the district and by the middle of April over 500 claims had been staked. A full account of the history and early development of the district appears in the U. S. Geological Survey Bulletins No. 497 and 741 published in 1912 and 1933 respectively.

The Production from the District by the end of 1921 amounted to about $1,500,000. in gold and silver. Of this amount about $1,250,000. was produced by the Elkoro Mines Company, largely from the Long Hike vein. By the end of 1932 the latter figure had been increased to $7,196,242. Added to this is $141,000. produced this year by the Elkoro Mines Operating Company, which brings the total production close to $8,000,000. from the district.

5. CLAIMS, AREA, OWNERSHIP, TITLE

THE ELKORO MINING OPERATING COMPANY OWNS the following lode mining claims in the Jarbidge Mining District;

(a) Patented Claims - 36 in number:

Survey No. 4309: Long Hike No. 1, Long Hike No. 2, Riverside, Laurel, Long Hike No. 3, Log Cabin No. 1, Log Cabin No. 2, Cabin, Lane Fraction, Long Hike Fraction, Elmore Fraction, Midnight M, Morning Glory No. 1, 18 K, Yellow Jacket No. 5, Yellow Jacket No. 6, Mike, Speck Fraction, Morning Glory Fraction, Morning Glory, Clipper, Winkler and Log Cabin.

Survey No. 4378: North Star, North Star No. 1, North Star No. 2, North Star No. 3, North Star No. 4, Reliance, Reliance No. 1, Reliance No. 2, Minnie B, Minnie B No. 1, Minnie B No. 2 and Minnie B No. 3.

Survey No. 4312: Red Warrior.

(b) Unpatented Claims - 32 in number:

Anne, Ethel, Mary T, Mary, Zephr, Ida, Overlook, Ora A, Reva, Alice, Miss Mc, all located in 1909 or 1918; Keystone No. 1 and Keystone No. 2 located in 1911, Leonard Fraction and Gray Rock located in 1918, Minnie B No. 4 Fraction in 1918, and O. K. No. 3 Fraction located in 1922.

The present company has recently acquired the following unpatented claims:

Red Top No. 1, Red Top No. 2, Red Top Fraction, Independence, Independence Extension, Dyke Lode, Dyke No. 1 Lode, City Lode, City No. 1 Lode, City No. 2 Lode, Bid Lode, Sunday, Sun, June, July, and August.

(c) THE AREA covered by the above claims amounts to about 1,000 acres in the most productive part of the district. It includes the major part of the property formerly owned by the Elkoro Mines Company and its two subsidiaries, the Jarbidge Gold Mining Company, and the North Star Mining and Milling Company. In addition, the claims recently purchased as above indicated have added to the present Company's holdings.

(d) TITLE to most of the area was secured through outright purchase from the Trustees in the dissolution of

Elkoro Mines Company and its two subsidiaries. The Elkoro Mines Operating Company was incorporated in April, 1934, to take over the property. Title was passed on by Herbert Van Dam, Jr., Attorney for the new Company, of Salt Lake City, Utah. Mr. Van Dam has informed me that he considers the title passed from the old companies to the new company is exceptionally good, but he has not made a thorough examination of the abstract and record to determine minor conflicts or clouds on the title. Furthermore, he has not examined the title to recent purchases. These matters should be attended to as soon as the developments at the mine make it advisable.

. . . .

6. MINING FACILITIES

. . . . In 1917 the Elkoro Mines Company constructed a 73 mile, 44,000 volt, power line from the hydroelectric plant of the Nevada Power Co., at Thousand Springs, Idaho. . . . . .

Water Rights held by the new company are the same as those formerly owned by the Elkoro Mines Company and its subsidiaries. . . . .

. . . . . .

. . . . . .

7. EQUIPMENT

Little equipment of value remained in the property when the Elkoro Mines Operating Company began surface and underground operations. Thus it has been necessary to construct a new mill to replace the dismantled 100 ton cyanide plant of the Elkoro Mines Company. ...

17 SUMMARY AND CONCLUSIONS

1. The 1,000 acre property owned by the Elkoro Mines Operating Company is in the center of the most intensely mineralized area of the Jarbidge Mining District of Northeastern Nevada.

2. This property has a past production of about $6,000,000. in gold, and $1,000,000. in silver, based on metal prices from 1918 to 1932.

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EUC

J. J. BEESON
MINING GEOLOGIST
POST OFFICE BOX 2082
SALT LAKE CITY

BEESON EXPLORATION
875 DONNER WAY

March 4, 1971

Mr. Neil O'Donnel

Utah Oil Building
10 West Third South
Salt Lake City, Utah

Dear Neil,

A few days ago you asked me to write a letter containing my opinion as to whether the ELKORO or Grey Rock Mine at Jarbidge is worthy of an examination. This because you may have heard of my connection with the property before and during the explorationwork done by Newmont Mining Company. This opinion has been delayed not because of lack of information but because of too much to consider.

To begin with I had Desdemona phone Joe Rosenblatt to find the status of the ELKORO MINES OPERATING COMPANY and we were told that among the assets of EIMCO CORPORA_ TION this Jarbidge property was included. The EIMCO CORPORATION sold to the ENVIROTECH CORPORATION and he suggested that we contact the latter corporation officers and secure the desired information.

This contact was made and we secured the following copy of the DEED, dated May 29, 1969. The claims checked in red are those listed in the DEED above mentioned. Desdemona believes there are town lots deeded to Elkoro that are not checked on the enclosed official map of

of the Townsite of Jarbidge - this is indicated by the following notation in the southeast corner of the enclosed Map of Jarbidge, which reads as follows:

"COPIED FROM ORIGINAL March 18, 1931 WITHOUT REVISION OR CHECKING OF SURVEY OR MAPPING"

"ELKORO MINES CO. J.P."

This matter can be checked in the Recorders office at Elko, Nevada.

Desdemona personally secured title to the Mineral Rights to the ground lying under the Townsite lots (with the exception of two lots) and conveyed them to Grey Rock. They should be checked out in the Recorders office at Elko.

An additional plat of the Jarbidge Townsite is included which is dated April 3, 1918. However the map that has been used is indicated as OFFICIAL MAP OF JARBIDGE, Surveyed under an order issued Marah 20, 1930, it is this latter one that has been used by the EIMCO CORPORATION and by NEWMONT when mineral Rights on lots were being acquired. I understand that the patented claims overlapping the Townsite from the west never went to patent, however this too should be checked in the Elko County Recorders office.

It will be noted on MAP1 that a large area of contiguous patented claims are colored gray and two separate areas of unpatented claims are colored yellow. Boththe gray and the yellow areas were formerly owned by the EIMCO CORPORATION. At present the patented gray areas

shown in the attached deed. It is not known whetherthe necessary yearly assessment work, amounting to $100.00 per claim, as required by the Government, has been carried on since operations were discontinued by NEWMONT. If the work has not been done, it is probable some of these claims have been relocated by others. This is the first thing to be checked by new capital, if extensive exploration is to be undertaken.

If the unpatented claims have not been located these should be located at once. It is possible that the more desirable ones can be optioned at a reasonable figure by your client. This I consider as very important because if the entire area of patented and unpatented claims can be secured then the exploration presents a reasonable specu - lation

This conclusion, on my part, is based: On the last day of NEWMONTS exploration on the 1000 Foot Level of the Gray Rock Shaft, it is probable (I was there) that the West Drift was in the LONG HIKE VEIN. For about three rounds (15 feet) the gold values were begining to increase, but with the full knowledge of the increasing volume of water, in the North Crosscut, the round was shot. The water door near the shaft was closed and has never been opened since. This because of the large flow of water encountered was more thann the pumps would handle.

In view of the above Newmont decided to abandon the project and the pumps were pulled. At present I understand that a large volume of water is flowing out of the sub level 40 feet plus or minus below the collar of the Grey Rock Shaft.

It is my opinion that the Long Hike Vein, which produced most of the ore mined, in the district, extends westerly across the Jarbidge River into the mountains on the other side. This should be further checked by surface geology and by several carefully planned Diamond Drill Holes _ preferably cased- to insure accurate samples of veins at depth. If the drilling should indicate strong well mineralized gold veins, then eventually the veins to the west of the Grey Rock Shaft can be explored and mined from a new SHAFT.

In view of the gold production and Geology of the Jarbidge District a further examination, including diamond drilling, is recommended if the property can be secured at an extremely low figure.

Respectfully submitted

J. J. Beeson

PRODUCTION AND EXPENSE TOTALS · 1918-1932 · ELKORO MINES COMPANY
AND
ELKORO MINES OPERATING COMPANY — 1936

YEAR	PRODUCTION FINE OUNCES GOLD	PRODUCTION FINE OUNCES SILVER	TONS MILLED	OPERATING ~ EXPENSES MINING	ORE SORTING	AERIAL TRAMMING	MILLING	REFINING	SMELTING	INSURANCE	TAXES	BULLION TAX	NEW INSTALLATION	TOTAL COST	OPERATING AND TOTAL PROFIT REVENUE	OPERATING PROFIT	MISCL. INCOME	TOTAL PROFIT	DEDUCTIONS FLAXIE CREDIT ACCOUNT	J.G. ROYALTY To NEW YORK	MISC'L. DEDUCTIONS	DEPRETIATION	DEVELOPMENT	NET PROFIT & LOSS ACCOUNT
1918	17,073,804	15,010.04	28,778	86,516.25		3,950.07	77,238.52	1,216.00	1,057.52	3,992.80	3,500.47	1,668.94		179,140.57	367,755.60	188,615.03	1,844.48	190,459.51			1,770.77	47,361.01	61,121.03	80,206.70
1919	24,336,650	22,362.74	41,071	115,848.37		4,641.13	81,416.18	3,476.75	3,721.82	4,950.00	2,674.36	1,707.04		218,435.65	528,292.03	309,856.38	4,996.72	314,853.10			506.96	60,795.48	76,644.67	176,905.99
1920	15,884,665	24,837.41	41,248	119,937.33		6,428.59	87,148.43	2,974.02	3,534.92	3,700.42	3,278.60	1,007.11		228,009.42	354,360.72	126,351.30	1,939.40	128,290.70			891.68	89,605.08	102,715.48	- 64,921.54
1921	23,202,622	88,951.85	38,129	130,618.05		12,845.63	93,151.75	3,226.55	5,647.39	1,237.44	3,380.81	3,070.88		253,178.50	568,488.02	315,309.52	1,757.47	317,066.99				89,605.08	310,988.82	- 83,526.91
1922	23,811,115	60,772.01	42,421	135,977.93		11,373.03	88,457.92	1,818.45	5,077.41	1,125.00	2,142.15	3,662.41	3,869.24	253,503.54	552,905.27	299,401.73	1,886.05	301,287.78	15,592.68		3,061.87	89,493.60	98,639.88	94,499.75
1923	16,395,459	34,230.94	40,229	100,045.89		17,790.60	86,077.59	1,880.23	3,616.31	1,125.00	2,385.49	841.39	13,343.76	227,106.26	366,517.17	139,410.91	- 887.19	138,528.72	33,089.72		6,797.86	89,493.60	82,473.13	- 73,325.55
1924	25,984,549	26,145.23	49,827	119,017.34		7,464.79	104,392.38	2,712.38	4,670.02	1,131.43	1,962.34	3,690.55		245,141.23	554,662.93	309,521.70	511.92	310,033.62	6,767.24	87,383.94	13,106.65	55,366.57	70,845.33	76,563.89
1925	25,905,265	29,908.33	53,592	170,031.90	4,145.55	6,337.13	89,429.97	1,976.37	4,412.00	1,500.00	1,853.69	3,770.39		283,457.00	556,065.79	272,608.79	- 672.10	271,936.69		119,787.26			44,165.97	107,983.46
1926	15,677,288	32,621.63	32,233	84,240.54	2,276.57	4,444.84	68,500.37	1,831.80	3,279.85	1,500.00	1,715.22	1,403.99	10,877.67	180,070.85	343,225.29	163,154.44	1,038.61	164,193.05	5,421.85	44,384.35	949.26		74,059.12	39,378.47
1927	14,722,434	95,638.73	27,720	78,126.79	2,340.61	2,040.40	93,000.05	2,897.87	3,927.26	1,500.00	1,665.45	1,248.19		186,746.62	358,033.64	171,287.02	593.97	171,880.99	34,688.05		1,712.43		72,832.67	62,647.84
1928	19,722,887	207,194.84	46,381	116,334.36	2,001.85	2,588.87	98,162.07	5,035.81	5,822.55	1,500.00	2,113.62	4,094.26		237,653.39	527,762.75	290,109.36	1,185.94	291,295.30	4,761.29	2,771.29	1,068.53		54,144.23	228,549.96
1929	27,737,987	170,031.96	50,458	126,396.75	1,931.35	1,870.92	101,333.93	3,055.96	5,898.43	1,500.00	1,917.73	4,755.99		248,661.06	661,043.78	412,382.72	- 625.10	411,757.62					98,004.93	313,752.69
1930	21,963,124	225,125.64	57,539	140,929.35	3,016.64	2,141.06	102,150.62	3,285.94	5,971.98	1,500.00	1,766.19	2,797.71		263,559.49	536,578.18	273,018.69	- 658.29	272,360.40			369.42		94,695.25	177,295.73
1931	22,806,823	210,051.40	63,617	196,722.13	4,380.02	283.66	99,244.15	2,667.52	5,492.66	1,500.00	1,799.44	2,302.75		314,392.33	531,328.95	216,936.62	- 559.82	216,376.80			30.86		75,110.39	141,235.55
1932	16,675,915	159,038.15	40,517	86,651.10	3,176.57	22.10	72,913.76	2,899.19	4,434.61	1,250.60	1,494.70	2,439.83		175,281.86	389,222.50	213,940.64	5,898.65	219,893.17			4,998.56		69,577.96	145,262.75
TOTAL	311,877,610	1,402,061.19	653,760	1,807,394.08	23,268.15	84,222.32	1,342,617.69	40,954.84	66,564.73	29,112.69	33,650.26	38,461.43	28,090.67	3,494,337.67	7,196,242.62	3,701,904.85	18,255.71	3,720,214.44	100,320.83	254,326.84	35,264.85	521,720.42	1,386,018.86	1,422,508.74
* 1936	2,476,066	40,204.62	35,213	44,072.37			46,980.90			949.70				92,002.97	123,395.94			31,392.97						

$10,915,716. $451,442.
Stocks. rev
11,862,154.
Mill new production on $2,000,000.00

cw 1,386,018.80
#2,344,146. Old price of gold
6,000,000 Spot, profit on new price of gold

PRODUCTION AND EXPENSE · PER TON

YEAR	PRODUCTION FINE OUNCES GOLD	PRODUCTION FINE OUNCES SILVER	TONS MILLED	OPERATING ~ EXPENSES MINING	ORE SORTING	AERIAL TRAMMING	MILLING	REFINING	SMELTING	INSURANCE	TAXES	BULLION TAX	NEW INSTALLATION	TOTAL COST	OPERATING AND TOTAL PROFIT REVENUE	OPERATING PROFIT	MISCL. INCOME	TOTAL PROFIT	DEDUCTIONS FLAXIE CREDIT ACCOUNT	J.G. ROYALTY To NEW-YORK	MISC'L. DEDUCTIONS	DEPRETIATION	DEVELOPMENT	NET PROFIT & LOSS ACCOUNT
1918	.593	.521	28,778	3.006		.135	2.686	.042	.037	.139	.122	.058		6.225	12.779	6.554	.064	6.618			.061	1.646	2.124	2.787
1919	.593	.545	41,071	2.821		.113	1.982	.085	.091	.120	.065	.041		5.318	12.863	7.545	.121	7.666			.012	1.481	1.866	4.307
1920	.385	.602	41,248	2.908		.153	2.112	.072	.086	.090	.079	.024		5.524	8.585	3.061	.047	3.108			.020	2.171	2.490	-1.573
1921	.608	2.333	38,129	3.426		.337	2.443	.084	.148	.032	.089	.081		6.640	14.910	8.270	.045	8.315				2.350	8.156	-2.191
1922	.561	1.433	42,421	3.604		.268	2.085	.043	.120	.027	.050	.086	7.087	5.976	13.034	7.058	.044	7.102	3.436		.072	2.110	2.325	2.228
1923	.407	.851	40,229	3.032		.442	2.140	.047	.090	.028	.059	.021	6.928	5.643	9.107	3.464	-.022	3.442	3.034		.166	2.224	2.050	-1.822
1924	.521	.525	49,827	2.658		.150	2.095	.054	.094	.025	.039	.074		5.189	11.132	6.212	.010	6.222	4.725	2.210	.263	1.111	1.543	1.536
1925	.483	.558	53,592	3.211	.077	.118	1.669	.037	.082	.028	.035	.070		5.327	10.376	5.087	-.013	5.074		2.235			.824	2.015
1926	.486	1.012	32,233	2.814	.071	.156	2.125	.057	.102	.047	.053	.043	.337	5.586	10.648	5.062	.032	5.094	9.221	2.846	.003		2.182	1.222
1927	.531	3.450	27,720	3.348	.084	.263	3.355	.105	.142	.054	.060	.045		6.736	12.916	6.180	.021	6.201	7.251		.062		2.628	2.260
1928	.425	4.467	46,381	2.508	.043	.238	2.116	.109	.126	.032	.046	.088		5.124	11.379	6.255	.025	6.280	.126	.060	.023		1.166	4.928
1929	.550	3.370	50,458	2.505	.038	.137	2.008	.061	.117	.030	.038	.094		4.928	13.101	8.173	-.012	8.161					1.943	6.218
1930	.382	3.913	57,539	2.449	.052	.135	1.775	.057	.104	.026	.031	.049		4.580	9.325	4.745	-.012	4.733			.006		1.646	3.081
1931	.359	3.318	63,617	3.092	.069	.153	1.560	.042	.086	.024	.028	.036		4.942	8.352	3.410	-.009	3.401					1.181	2.220
1932	.412	3.925	40,517	2.139	.078		1.799	.071	.109	.031	.037	.060		4.330	9.606	5.280	.146	5.426					1.717	3.585
TOTAL	.477	2.145	653,760	2.765	.063	.129	2.054	.063	.102	.045	.052	.059	.043	5.35	11.01	5.66	.028	5.61					2.120	2.176
* 1936	.070	1.142	35,213	1.25			1.33			.027				2.61	3.50			.89						

* Shows Production and costs of ELKORO MINES OPERATING COMPANY January 1st. to August 1st 1936. These figures for 1936 do not include Depletion, Interest on Capital, Amortization, Bullion Tax, or Cost of New Equipment. Mining & Milling cost includes Smelting charges and Taxes.

25200024 (after 16/45)

Tabulation Sheet No. 1