REPORT
ON
THE ELECTRA GOLD
MINING & MILLING CO'S.
PROPERTY.
FULFORD
MINING DISTRICT
EAGLE COUNTY,
COLORADO.

by
E. L. Miller.
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To Mr. L. H. Pearson,  
Marion, Iowa.  

Dear Sir;—

We submit herewith our report on the  
Elmotta Gold Mining and Milling Company's property,  
located in Eagle County, Colorado.  

In compiling this report particular attention has been given to the surface indications, formation and source of gold supply to the placers and the district in which the property is located.  

Owing to the caved-in condition of the different workings on the lode claims we were unable to obtain but few samples, the company having prosecuted their main work through their different tunnels and neglected to keep the surface workings cleared.  

Respectfully,  
The Western Engineering and Finance Company.  

By E. L. Mills
CLASON'S RAILROAD MAP OF COLORADO.
SHOWS IN MILES ON THE MAP THE DISTANCE BETWEEN ALL RAILROAD STATIONS.
GEOGRAPHY.

LOCATION. The property is located in Eagle County, Colorado, about nine and one half miles in a southwesterly direction from Edwards, a small town on the D. & R. G. R. R., which is the nearest railway point, and three hundred and twenty five miles from Denver, Salida being the nearest smelter point.

ALTITUDE. The camp is 9222 feet above sea level, and about 1200 feet above the town of Edwards, while the highest point on the property that is cut by any of the tunnels is 10420 feet above sea level. The elevation at the portal of the placer tunnel is 9180 feet and the portal of the Gold Basin tunnel is 9297 feet, (see map #2.)

CLIMATE. From the last of May until the first of October, the property is practically free from snow, the days being mild and balmy while the nights are cool. The first frost appears about the first of September and during the rest of the season snow lays on the ground, ranging from six inches in the open to six and eight feet in the timber, but the property, with the exception of the placer, can be worked the entire year while the working time on the placer beds will range from seven to nine months.

ACCESSIBILITY. Transportation to and from the mine can be carried on any time of the year, as there is a fair wagon road from the mine to the town of Edwards, and a sleigh is used in the winter. A good mountain trail leads from the property over New York Mountain to the town of Fulford, a distance of six miles. Fulford is not a railroad town.

RAILROAD FARE & TRANSPORTATION. The railroad fare from Denver and return, is ten dollars and it requires about thirteen hours to make the trip. Freight rates on all perishable goods from Denver to Edwards is 68¢ per 100 lbs., and 40¢ per 100 lbs.
on all other goods. The rate from Edwards to Salida (the nearest smelter point) on all ores up to $20.00 value per ton, is $2.25 per ton, and as the value of the ore increases the rate increases proportionally.

WAGON FREIGHT. The rates from Edwards to the mine are as follows: on all supplies other than heavy machinery, 90¢ per 100 lbs., on heavy machinery, $1.00 per 100 lbs.

WAGON ROAD. The wagon road is in fair condition now and a very little work would put it in first class shape.

GENERAL DESCRIPTION.

CLAIMS AND AREA. The group comprises forty claims crossed by two tunnel sites, i.e. the Gold Basin and the Oxford, while the Pittsburg tunnel site cuts the Ajax, Trail and Elk claims on the Gold Basin group at a shallow depth. The names of lode claims in the Gold Basin Tunnel site are as follows: Lucky Strike, Last Chance, Last Dollar, Ophir, Molly Gibson, Mulberry, Wolfston, Portland, Gold Coin, Champion, Kaiser, Logan, New Haven, Wilhelmina, Camp Bird, Emmett, Fox, Ajax, Trail and Elk.

The Oxford Tunnel Site comprises the following claims: Dolly B., Mamouth, Elephant, Coyote, Dead Pine, Mr. Guale, Independence, Emerald, Pay Dirt, Copper King, Maid of Erin, Wild Irish Rose, Log Cabin, Little Annie, Black Bear, Wichita, Oliver, Little Johnnie, Gold Floor, and Gold King. These claims cover an area of 424 acres. There are three placer claims which are located for two and one half miles along West Creek and are known as the Gold Basin, Hermit No. 1 and Hermit No. 2, having an area of sixty and one third acres, also a mill site covering an area of five acres located north of the portal of the placer tunnel. There are four water rights, two of them known as the
New Haven and London are located on West Creek, and one located on Brook Stream and known as Brook Stream water right number three, and the fourth is located on a branch of West Creek and is known as the New York water right taking in a small lake known as Basin Lake. (See map No. 1).

**ABSTRACT.** The property was located by E. J. O'Flaherty and transferred by him to the Electra Gold Mining and Milling Co., who are the present owners.

**SURFACE PROPERTY & IMPROVEMENTS.** One bunk house with accommodations for twelve men, also three other cabins with sleeping quarters for from four to six men; one boarding house with kitchen attached, the dining room will seat about thirty-two men at one time. One machine shop, one stable for four head of stock with hay loft with a capacity of ten tons of baled hay, one large wood shed, one saw mill-5000 feet capacity, one compressor building, one blacksmith shop and receiver shed. Company also owns two good horses and a spring wagon and sleigh. On the placer tunnel there is 225 feet of tunnel driven, while on the other tunnel sites there has been about 500 feet of development work done in the form of tunneling and cuts. Work on wagon road $1147.00.

**MINING AND MILL.** One Bury Air Compressor-14 x 14 x 14, which will supply 345 cubic feet per minute of free air, one undershot water wheel driving the compressor, 1250 feet of 12 inch, 16 gauge steel double riveted pipe, one crib diversion dam supplying 225 feet head to the water wheel, one complete blacksmith outfit, two 3½ Excelsior air drills complete including hose, columns etc., one, one ton mine car and track, one 16' x 4' air receiver, 2500 feet of 2½ inch air line, one 5000 foot capacity saw mill driven by a 26 H. P. gas engine.
the equipment for one dredging machine.

HISTORY.

OUTPUT OF DISTRICT. The output of the district is approximately $2,000,000.00. This was produced from the Polar Star group, Cricket, King Solomon, Aster, New York, Josie, Hettie and others which join the Electra property on the south, (see map §1). This amount was produced from a very shallow depth and owing to the cost of transportation at the time the properties were being worked, ore running less than $40.00 per ton could not be made to pay, consequently, there is a large amount of ore running from $5.00 to $40.00 on the dumps. This ore can be made to pay a handsome profit by amalgamation as the gold contained in the ore is in a free state, and with proper equipment and management this grade of ore can be mined and milled at a cost not to exceed $1.00 per ton. The information regarding the production of the district was obtained by personal interview with operators in this locality who have made it their home for years.

GEOLOGY.

FORMATION OF DISTRICT. The formation of the district is Granite as a base, over-layered by quartzite, and blue lime and brown lime stone, running with the quartzite are several contact veins composed of soft decomposed quartz which have a strike of north 20 degrees east and a dip of 27 degrees to the west. Crossing this formation on a strike of north 85 degrees west with a dip of 85 degrees to the south are fissure veins averaging in width from a few inches to several feet. These fissure veins occur every 200 to 300 feet, the formation being strongly defined on the break-off along West Creek. To the west of the break-off, about 500 feet, another contact vein appears running north
and south. The action of the elements on the face of the break-off, causes it to erode, freeing the vein matter, which in turn rolls down into the gulches or is carried down by snow slides, the moving and grinding of the rock matter against the harder substances frees the gold from the vein, then in the spring when the freshets occur the freed gold is carried by the rush of water and deposited in the basins along the creek bed. This process has been going on for ages until what were formerly lakes or ponds are completely filled with eroded material. The hanging wall of the contact vein is of lime and quartzite, while the foot wall is of quartzite and granite and the higher values occur where the fissure veins cross the contact veins continuing for several feet on either side of the intersection along both the contact and fissure veins.

TINcER. The surface of the property is covered by a thick growth of fine timber of spruce, pine and balsam, containing an abundance of saw logs and suitable mine timber, which will insure a supply for years to come. Figuring this timber at $2.00 stumpage, approximate value of this size, $30,000.00.

WATER POWER. The water rights contained in this group are held by filings for power, domestic, mining and irrigation purposes. West Creek has about 100 cubic feet per second of time with 1500 feet head and Brook stream has about 50 cubic feet per second of time, with a 2000 foot head, which from a conservative estimate will supply power enough to generate 25000 H. P. the year around. The present equipment will generate about 100 H. P. for the whole twelve months and leaves abundance of water for placer mining purposes.

GOLD BASIN TUNNEL. The portal of the Gold Basin Tunnel is situated on the north slope of New York Mt. and has a course
of south 20 degrees west, and has been driven a distance of
50 feet into the hill. An additional 180 feet should inter-
sect the Lucky Strike Vein, the first of the group, at a
depth of about 200 feet. By driving the tunnel to the south
end line a depth of 1037 feet will have been gained and this
tunnel when completed will be the key to the whole district
and will cut all the fissure veins at a depth ranging from
200 to 1000 feet.

Oxford Tunnel. The portal of this tunnel is located on the
west bank of West Creek and has a course of south 60 degrees
west, and will cut the extent of the fissure veins of the
Polar Star Group, Astor, Cricket and King Solomon, gaining a
depth of approximately 800 feet.

Pittsburg Tunnel. The portal is situated on the east slope
of the break-off on New York Mt. and has a course of south 30
degrees west and should be driven for two purposes, first; be-
cause, by connecting, by means of a raise from the Gold Basin
tunnel, it will assure good ventilation for both tunnels.
Second; as a transportation tunnel, it will open up at a greater
depth the known veins of the district.

Placer Tunnel. The portal is located on the east bank of West
Creek and has a course of south 10 degrees west, and will tap
the Gold Basin Placer lake bed at a depth of 87 feet. The tun-
nel is being driven along the contact vein and is in a distance
of 325 feet. It should be driven an additional 525 feet, to tap
the lake bed. This tunnel will cross several fissure veins
which, at this depth are apt to show good values. The tunnel
will be used to transport the placer sands from the lake bed.
Breast of Placer Tunnel.

Gold Basin Placer.
LOCATION AND FORMATION. The Gold Basin Placer is located at the north end of the property and takes in a basin that at one time was a lake, which has completely filled with sand and was formed by a dyke cutting across West Creek to the foot of a high cliff to the north of the Basin. The total depth of this basin in the center is unknown. A shaft was sunk 60 feet in the center and failed to find bed-rock.

PLACER MATERIAL. In the area of 60 and one third acres with an average depth of 48 feet, we find 4,672,977 cubic yards of available material.

VALUES. From tests taken from different places on the surface of the placer, both from pan and fire tests show the values ranging from $0.25 to $1.50 per cubic yard. From these tests we base the average value at $0.50 per cubic yard, which is a very conservative estimate and this would give a gross value of $2,753,428.00.

LIST OF ASSAYS. Sample number one, 16.72 oz. gold and 18.20 oz. silver, value per ton, $542.27 (this sample was taken from the surface and run over the Arnold Concentrator and concentrated down, an assay the concentrates gave the above results).

Sample number two, was taken from the surface in lake bed and gave the following: the placer sand as it comes from the bed assayed, 0.02 oz. gold or 40¢ per ton. The concentrates from the Arnold Concentrator on this sample gave an assay value of 0.24 oz. in gold or a value of $4.50 per ton.

Sample number three, was taken from excavation for compressor room and gave the following: the placer sand assayed 0.01 oz. gold and 0.01 oz. silver or 21¢ per ton, this was screened through a 3⁄8 inch mesh screen, the over-size assaying 0.01 oz. gold or
20¢ per ton. The screenings were then run over the Burnhart Concentrating table and the concentrates assayed 6.07 oz. in gold and 1.42 oz. silver or $122.22 value per ton, the tailings or rejects from this sample showing no values.

Sample number four, was taken from different places around the compressor room and gave an average of .0648 oz. in gold or $1.73 per ton.

Sample number five, was taken from the lake-bed, two samples taken fifty feet apart; and averaged. These samples were taken from a depth of four feet to surface, giving an average of 0.02 oz. in gold or 40¢ per ton.

Sample number six, was taken from the surface at the south end of the placer and showed a trace in gold. Samples taken six feet from this point and panned, show good values, (see map number two).

DEVELOPMENT AND OPERATING COSTS. With the present equipment installed, there remains but a small amount of work to begin sluicing the ground. There is 525 feet of tunnel yet to be driven, fluming West Creek around the lake-bed, building sluice boxes and installing giants. The approximate cost of these developments are as follows:

- Driving 525 feet of tunnel @ $10.00 per foot......$5,250.00
- Building sluice boxes.......................... 500.00
- Diverting Creek around the lake-bed............... 750.00
- Installing giants and pipe-line................... 1,000.00
- Total....................... 7,500.00

By this method two operators per shift of eight hours each should handle 4000 cubic yards of material in 24 hours at a cost as follows:
Six Operators @ $4.00 per day,  -  -  -  -  -  -  -  - $ 24.00
One Superintendent @ $10.00 per day,  -  -  -  -  -  -  -  - $ 10.00
Nine Helpers @ $2.00 per day,  -  -  -  -  -  -  -  - $ 27.00
$ 61.00

CONCLUSION. We recommend that the placer tunnel be driven to completion, sluice boxes and giants be installed and everything put in condition this winter so as to begin operations in the early spring, to be able to work the full placer season next year. We further recommend that an air line be laid at once from the compressor to the Gold Basin tunnel, and work be prosecuted on this tunnel this winter at the same time as the placer tunnel is being driven, so as to open up the Lucky Strike vein which should be cut by an additional 150 feet of tunnel, thence drifting to the west along this vein about 200 feet to the intersection of the contact vein in Bowman Gulch, where ore in paying quantities can be expected for the reason that in every instance where these intersections occur, pan tests show good values, which is a perfectly logical condition and conforms to similar occurrences in ore deposits in other and more extensively developed camps throughout Colorado and elsewhere.