

2050 0003

REPORT ONTHE MAGNA MINING COMPANY'S PROPERTY

The property owned and controlled by the Magna Mining Company is situated 44 miles southwest from Austin, Nevada, a station on the Battle Mountain and Austin Railway, a narrow gauge branch of the Western Pacific, being 90 miles northwest from Tonopah, and in what is known as the Gold Basin Mining District.

PROPERTY

The property consists of 15 lode mining claims as follows:

Gold Hill No. 1	Gold Eagle	Gold Dollar
Gold Hill No. 2	Gold Eagle No. 1	Gold Dollar No. 1
Gold Hill No. 3	Gold Eagle No. 2	Gold Dollar No. 2
Gold Hill No. 4	Grey Eagle	Gold Dollar No. 3
Gold Hill Extension	Grey Eagle No. 1	Gold Dollar No. 4
	North Star	

GEOLOGY

The Country rock in the immediate vicinity is igneous and of Tertiary Age.

ORE OCCURRENCE

The ore occurs as an intrusive dike or vein of porphyritic material which comes up along the contact of the older and larger igneous intrusions. So far as can be traced on the surface easterly and westerly for the length of ten claims or 15,000 feet and varies from 5 to 20 feet in width dipping northerly about 70 degrees. The vein filling is quartz porphyry and quartz breccia and is easily distinguished from the country surrounding by its rich yellow coloring and separated from the country rock by smooth hard walls.

The foot wall of dacite and the hanging wall, so far as determined, probably a dacite porphyry.

The values are gold and silver concentrated principally in the quartz breccia but disseminated throughout the mass.

The gold and silver apparently are combined as a sulphide the gold predominating in weight and occasionally free.

The values are easily recovered by the CYANIDE PROCESS, there being no rebellious elements to contend with.

QUANTITY OF ORE AVAILABLE & IN SIGHT

The quantity of ore available but undeveloped, judging from the many openings along the entire length of 15,000 feet, would seem inexhaustible. The proven ore around the main shaft showing a shoot 600 feet in length for 150 feet in depth would amount to probably 50,000 tons. The ore technically in sight is 6,000 tons for only 40 feet of the vein as shown in the 100 and 150 foot levels of the main workings.

ORE VALUES

The value of the ore as shown by my sampling was exceptionally uniform averaging about \$11.00 per ton. These samples were taken by breaking down large quantities of material and quartering in the usual manner.

NATURAL RESOURCES

There is sufficient timber for mine purposes on the property. Also for the making of steam for some time and sufficient water from springs that can be piped in by gravity to supply a first unit of 100 tons daily capacity. Power must be supplied by some type of oil combustion engines.

COST OF PRODUCTION

In view of the favorable physical conditions involved including timber, water, good roads, climate, simple method of recovery, without going into details of cost, calculating that this ore can be mined and 95% of the gold and silver values recovered for \$5.45 per ton, leaves a net profit of \$5.00 per ton or \$180,000.00 per annum with the first 100-ton unit, and represents an earning of 18% on the entire capitalization. As development progresses the capacity of the mill would be increased accordingly.

CONCLUSIONS

From my experience as a Mining Engineer and Mine Manager covering a period of 37 years of actual mining operations, I am fully convinced that the property of the Magna Gold Mines has exceptional merit and if properly financed and managed intellectually that a very profitable and large enterprise can be built up and maintained.

Respectfully submitted,

J. H. Trerise, E. M.
Consulting Engineer of Mines.

April 27 1927.

MAGNA MINE

PROPERTY: The property which is the subject of this report embraces 15 mining claims. They are named as follows:

GOLD HILL EXTENSION	GOLD EAGLE	GOLD DOLLAR
GOLD HILL NO. 2	GOLD EAGLE NO. 1	GOLD DOLLAR NO. 1
GOLD HILL NO. 3	GOLD EAGLE NO. 2	GOLD DOLLAR NO. 2
GOLD HILL NO. 4	GREY EAGLE	GOLD DOLLAR NO. 3
NORTH STAR	GREY EAGLE NO. 1	GOLD DOLLAR NO. 4

Three mill sites unpatented; also 480 acres of Agricultural land is surveyed with the property. 160 acres patented ranch land.

LOCATION: The property is located in the Gold Basin Mining District, Lander County, Nevada, approximately 44 miles SW from Austin, the county seat of Lander County and a terminal station of the Battle Mountain & Austin Railway - a narrow gauge branch of the Western Pacific Railroad. The location of the area covered by this property as regards the proximity to other mining properties and the boundaries of Counties and State are shown by an insert map.

TITLES: Fifteen of the mining claims are unpatented and are held under the provisions of the Mining Laws of the United States and the State of Nevada governing the location of mining claims; the Gold Hill Extension, a very valuable claim adjoining the Gold Hill No. 2, upon which the 150' shaft is located, is owned outright by the company; the balance of the claims are held under a very favorable Bond & Lease. Titles were not examined but are guaranteed by the owners, who are prepared to furnish abstracts, etc.

CLIMATE: Climatic conditions are very favorable, no hindrance due to weather conditions for continuous operations throughout the year, very little snow to hinder operations or travel.

MAIL: Mail is delivered to camp by rural mail box on Lincoln Highway daily by stage which operates between Austin, Fallon and Reno.

WATER: The State of Nevada has been very much hampered because of its lack of water. The question of water supply is always important in connection with any mining operation and very often the deciding factor in operating a mine profitably. Here we find some different springs of water, not only sufficient for the camp requirements, but the flow is large enough to accommodate the operations of a 100 to 200 ton mill. The flow is supplied from what is known as "Never Failing Springs". The supply may be augmented if necessary by adding the flow of two additional springs, for which the company holds a permit from the State of Nevada. Other nearby water supply is less than 1½ miles from the proposed mill site and will be delivered to this point by gravity flow.

TIMBER: Very little saw timber is found on the property but an abundance of mine timber covers the hillsides of the mining claims.

BUILDINGS: A very good 5 room house, storage building for meats, groceries, etc., large garage, engine room and blacksmith shop comprise the different buildings.

POWER: No electric power now available. Power will have to be furnished by oil burning engines. Many Nevada mines are now being operated successfully and profitably by the use of such power.

ROADS & TRANSPORTATION: The Lincoln Highway is a smoothly graded Federal Aid road which passes within 3 miles of the Magna Gold Mines. Austin, the county seat of Lander County and the railroad shipping point for the mine is 44 miles NW from the property. The grades from the mine to Austin are in most instances level, only one or two short grades which would exceed 5%. The road from Lincoln Highway to camp (8 miles) rises gently for its entire distance and is the old Lincoln Highway;

now a direct road traversing the Magna Mines property to Quartz Mountain, Goldfield and Tonopah, the great gold producing camps to the south.

EQUIPMENT: 25 H.P. boiler and hoist, blacksmith shop, shaft equipment, drills and the usual small mining tools, etc., Ford truck, wagen, etc. comprise the equipment.

HISTORY: Ores in this district were first discovered by John P. Buzanes, a pioneer and former owner of Cripple Creek, Colo. mines; at one time a partner of the well known but eccentric millionaire, William Stratton, who amassed a fortune of \$50,000,000. in mining.

Mr. Buzanes sold his interests in Cripple Creek and in 1907 first prospected the area embraced within the Gold Basin District, the district being named by him. In July 1907 while looking for some stray horses he found float rock containing gold in Buffalo Canyon, some of which ran over \$2,000.00 per ton in gold and 300 oz. in silver. The location of this canyon is immediately NE of the present North Star Mining Claim.

The first commercial ore found in place (a wide fissure on what is now known as the North Star Claim) was found later and traced easterly 15,000 feet. The fissure is easily observable upon the surface and considerable development along the extent of this area has been done.

ASSAYS: Twenty one samples were taken by the writer during his examination of the property from shafts, drifts, open cuts and surface showings of the area. Samples 14 to 19 were practically surface showings and were taken to determine if such exposures and croppings carried any values. The following assays in values of gold and silver were found:

CERTIFICATE OF ASSAY - R. H. OFFICER & CO., SALT LAKE CITY, UTAH.
Sept. 1 1927.

NO.	GOLD OZ.	SILVER OZ.	VALUE PER TON	LOCATION
1	0.23	1.40	\$5.30	Main Shaft 100 Level
2	0.30	0.50	6.25	" " " "
3	0.68	1.00	13.10	" " " "
4	0.50	0.70	10.35	" " " "
4A	0.37	0.90	7.30	" " " "
5	0.34	0.80	7.00	" " " "
6	0.40	0.50	8.25	" " " "
6A	6.63	4.80	135.00	" " " "
7	1.00	1.00	20.50	" " " "
7A	2.18	1.60	44.50	" " " "
8	6.18	4.20	125.70	Cut 300' W Main Shaft
10	0.42	0.80	8.75	Gold Dellar Claim
11	0.50	1.70	10.35	" " " "
12	1.00	1.00	20.50	" " " "
13	0.55	0.70	11.35	50' shaft G. Dellar #3
14	0.14	0.20	3.05	Cut W end " " "
15	0.14	0.20	3.05	Gold Dellar No. 3
16	0.06	0.20	1.30	Open Cut North Star
17	0.05	0.10	1.05	" " " "
18	0.05	0.10	1.05	Croppings Country Rock
19	Tr.	0.60	.40	Gold Dellar No. 4

The above samples were taken by the writer on his first visit to the property during the week of Aug. 27 1927. Upon a return visit to the property to complete the examination eight additional samples were taken which gave the following assay values:

CERTIFICATE OF ASSAY - BLACK AND DEASON, SALT LAKE CITY, UTAH.
Sept. 15 1927.

NO.	GOLD OZ.	SILVER OZ.	VALUE PER TON	LOCATION
20	3.01	2.00	\$60.20	Cut 300' W Main Shaft
21	1.30	0.80	26.00	1500' SW Main Shaft
22	2.22	1.40	44.40	20' Face 100 Level
23	0.68	0.50	13.60	5' Porphyry 100 Level
24	1.97	1.20	30.40	14' Face S Wall 100 "
25	0.86	0.70	17.20	20' Vein Matter 150 "
26	0.41	0.10	8.20	North Star E cut
27	0.36	0.30	7.20	North Star W cut

In the case of the first sampling the average value of the ore totals \$21.31 which is exceptional in view of the fact that same represents intermittent areas covering ore in place and cropping for a distance of 15,000'.

We would be well satisfied if the higher assays, nos. 6A-7-7A-8 and 12 were no more than general average of the balance of the assay values, which would make an average or combined value of the ore of \$10.00 to \$12.00.

TOPOGRAPHY: The Magna Gold Mines property is located upon the easterly side of the mountain range about one half mile from the floor of Spring Valley. The ground covered by the easterly end of the property is open rolling territory which lies at the base of comparatively low lying hills sloping to the east in broad shallow draws, easily accessible to all points by team and auto. The elevation at camp is 7000' and at the collar of the shaft 6800' above sea level and upon the last claim of the property, the North Star, in excess of 9000' providing favorable tunnel sites for the mining of ore at great depths.

GEOLOGY: Covering the area where the crest of the property under consideration is found, the country rock is practically all of the igneous origin and very probably belongs to the earlier of the two geologic periods "tertiary" comprised in the Cenozoic Era.

The vein filling and associate material consists mainly of quartz (probably secondary), quartzose and some fine material which no doubt is of a porphyritic character. The chief mineral association has cemented in during the formation of the secondary quartz. Some sulphides are in evidence, both the iron oxide and the sulphide being in this case rock structure prior to alteration in the vein was in the form of a chert. Some free gold is shown in the quartz of the vein which is the predominant vein filling.

DEVELOPMENT & ORE OCCURRENCE: Apparently the ore occurs as an intrusion or vein along a favorable contact of the older igneous formations. The apparent length of the main ore body here is in excess of 15,000 feet. The outcrops of the vein are plainly observed upon the surface for practically its entire length and at many places is boldly exposed and covers a width from six to twenty four feet with a strike easterly and westerly. The prevailing dip is approximately 70 degrees to the north.

GOLD HILL EXTENSION CLAIM: Beginning at the easterly end of the property upon the Gold Hill Extension claim and proceeding westerly a distance of 1000', a drift cutting the fissure to a depth of 6 or 8 feet has been made, exposing approximately 8 feet of probably secondary quartz, quartzose and porphyritic material not assayed. Continuing on over a small rise westerly for a distance of 800', two small cuts across the 20' fissure expose a white porphyry with quartz or quartzose material in evidence. We consider the Gold Hill Extension claim very promising ground for large development.

MAIN SHAFT NO. 1: Approximately 250 feet from the point just described is found the main workings of the property - a vertical shaft 4' x 7' sunk to a depth of 150 feet. The collar of the shaft is entirely in ore, which dips approximately 70 degrees to the north.

The shaft is vertical and soon passes out of the main ore body because of its dip, the ore shoots or lenses from the main ore body appear at different horizons in the first hundred feet of the shaft. At the 100' level a cross cut has been driven to the north, intersecting the vein upon its NW-SE course. The actual width of the "AURIFEROUS GOLD" bearing ore body here is 27', cut by two porphyry dikes. The porphyry to the south severs the ore body - the porphyry to the north lies against the hanging wall. Both porphyry dikes, according to assays made, carry excellent values - \$10.35 to \$13.60 per ton. The north wall is probably a rhyolite or dacite porphyry. The south wall is apparently a silicified rhyolite.

A drift for a distance of 38' driven westerly upon the course of the fissure on the 100' level of this shaft is entirely in gold bearing material and exposed 12' in width. Assays were taken from the different faces exposed in this 38' drift, including 5' porphyry dike, which gave the following values from the first sampling here:- The second samples taken (Nos. 22, 23 and 24) gave a much higher average per ton.

West end of ore body	- \$5.30 Gold per ton
Center of face 9' from end of drift	- 6.25 " " "
East end of ore body	- 13.10 " " "
Porphyry approximately 5'	- 13.60 " " "

The next level of this shaft is the 150' level, which is similar to the 100' level, except as depth is attained the ore increases in values and slightly in width. The ore body of 20' is practically all of quartz character.

The same sort of development was pursued here as was employed on the 100' level, a X cut to the north cut the gold bearing material for a width of 20'; a drift 40' in length driven westerly upon the course of the fissure is entirely in ore. Assays Nos. 4, 5, 6, 6A, 7, & 7A from the face of the drift gave an average value of gold of \$37.21 combined with small amounts of silver. Assays running as high as \$4,408.00 and \$4,912.00 are reported to have been taken from the 150' level of this shaft, no doubt from rich stringers and while the writer welcomes enrichments of this nature, his greater confidence lies in the fact that the mine appears to have a large reserve of ore of excellent milling grade.

NO. 2 OPEN CUT: Three hundred feet to the west of the 150' shaft, a surface drift cuts what we believe is the extension of the main fissure or vein exposed in the main shaft. The width of the vein matter here is 30'. A shaft sunk to a depth of 12' exposes a fine body of quartz and assays of the hanging wall ore gave a value of \$120. in gold and \$4.20 in silver per ton. Continuing westerly for a distance of 3850' the fissure is intermittently exposed upon the surface with many small surface cuts and drifts, making the trend of this fissure easily observed over this distance.

At a point on the Gold Dollar No. 1 claim 200' westerly of the road, the development consists of a shaft tunnel driven westerly into the hill. This development is important since this is to be driven upon the course of the fissure finally to the terminal of the property, nearly 6000', which should develop ore bodies at great depths.

Continuing up the hill 600' and open cut exposes the fissure with quartz and quartz porphyry to a width of 12'. Further up the hill to the west a distance of 550', a sample taken from an open cut 14' in the fissure gave an assay of \$7.95 gold per ton.

Approximately 450' further up the hill westerly upon the course of the fissure, sample No. 11 was taken from a fine exposure of gold bearing material, 20' wide. This gave \$9.65 gold per ton.

Continuing west up the hill 500' on the course of the fissure, a very substantial working is found, exposing a 20' face of quartz, probably quartz porphyry and quartzose material which assayed (No. 12) \$20. gold per ton.

The values here, assays No. 10, 11 & 12 are exceptional, since none of the samples were taken from a depth that would exceed eight feet.

200 feet westerly at an elevation of 7800 feet on the crest of the hill we have just traversed, a shaft to a depth of 50 feet has been sunk on the fissure on eastern end of Gold Dollar No. 3 claim. No means of entrance to the shaft being available, no examination was made, but parties responsible for the development here assure us that the fissure is 20 feet wide at the 50' level of this shaft. A composite sample (No. 13) of the quartz and porphyry ore on this dump, gave a net value of \$11.35 in gold per ton.

Over the crest and down the hill 400 feet a shallow 30 foot out exposes porphyritic material and quartz porphyry for its entire length, assay value \$3.05 gold per ton with a little silver, sample No. 14.

Continuing westerly down the hill across a small gully and up the hill 1500 feet, a 50 foot shaft has been sunk upon the fissure, two surface samples were taken here to determine if surface cropping carried any values. Some material from the dump was mixed with the sample No. 15, value \$0.90--- No. 16, entirely surface cropping, value \$1.30, the fissure here is fully 30 feet wide.

NORTH STAR CLAIM: Westerly up the hill 1000 feet, the fissure is exposed for the entire distance. Croppings 15 feet in height, are seen to protrude from the surface. Four assays, sampling country rock, gave return of \$1.05 to \$8.20 net values.

GRAY EAGLE CLAIMS: The Gray Eagle Claims extend 3000 feet to the south, the end of Gray Eagle No. 1, joining the south side of the North Star Claim. These claims were not examined by the writer, but are reported to carry cross fissure which would find an intersection with the main fissure upon the North Star claim.

GOLD EAGLE CLAIMS: Returning to the eastern end of the property near main shaft, our place of beginning, thence southeasterly for a distance of 2000 feet, near center of Gold Eagle Claim No. 2, we find a short drift cross fissure with a strike north 40 degrees west with a pitch of 70 degrees to the northeast. The fissure is readily traced by its cropping upon a direct course towards the main No. 1, shaft. An assay after more development, show values in proportion to the \$26.00 gold assay here, we would then regard this fissure here as one of the main and prominent factors in connection with the mine.

ORE RESERVES: It is very difficult to estimate, except as an approximation, the extent of the ore reserves of this mine. The tonnage of ore actually in sight or which can be properly estimated, is the ore developed by the two levels of the 150 foot shaft upon the Gold Hill Claim No. 2. This ore body we estimate at 10,000 tons. The ore taken from this shaft, according to assays should average not less than \$15.00 gold per ton. This value we feel confident could easily be increased to \$18.00 per ton gold.

We believe that the ore sheet at the point where the 150 foot shaft is sunk, may be 600 to 800 feet in length, maintaining its width as shown in the shaft (approximately 20 feet). We feel that a conservative approximate estimate of this ore sheet 150 foot depth would safely be 75,000 tons, with no apparent reason for the values to be less than \$18.00 in gold per ton.

If the plan of development as recommended in this report be carried out, by sinking two shafts to the 350' level and drifting upon the course of the fissure, a distance not less than 400 feet easterly and westerly the same distance, we would then estimate (for the reason that geologically this ore would go to great depth) at this point of development, at such a horizon and area, approximately 400,000 tons of ore, carrying values of excellent milling grades.

Since the total length of the gold bearing fissures of this property are in excess of 15,000 feet, with a width of 6 to 24 feet apparently over its entire distance, it would be next to impossible at this time, without more

development work, such as we find at the main shaft, to estimate an ore reserve of such magnitude; since examination and assay values seem to determine that the gold bearing materials are ores of practically twenty four shafts, drifts and open cuts over this extended area carry profitable milling gold values.

RECOMMENDATIONS: A rigorous plan of development, particularly at the workings of the Main Shaft, is urgently recommended.

The present 150' vertical shaft No.1. should be continued for at least an additional depth of 200 feet, making a total depth at bottom of 350 feet.

We would advise levels every 50 feet with cross cuts and drifts be run in order to develop the ore, when the 350' level is reached, a drift upon the line of the main fissure should be driven a distance of 400 feet to the west and an equal distance to the east. Under no conditions would we recommend the changing of the present single compartment shaft to a double compartment shaft as the work of widening same would be very difficult and next to prohibitive in time and expense. We would advise the sinking of a double compartment shaft at a point about 150 feet west of the present 150 foot shaft. This character of development would permit both shafts to be equipped for hoisting, cover the air regulating requirements, and would accommodate exceptional economic underground development.

The present 150 shaft should be retimbered, using 6x6 pieces of seasoned timber. The walls of the shaft should be carefully lagged or covered to prevent accidents from falling rocks, etc.

Unless the work of the shaft is done by contract, the company should immediately install air power and hoisting facilities, also the regular shaft equipment, including cage, guides etc. The Nevada Laws regarding shaft equipment and installation of same are very strict and must be carefully complied with. A water supply should be piped to this main point of development.

Recommend the building of a large water collection or storage tank for the present time at the course of the water supply, $1\frac{1}{2}$ miles from the mill site, instead of reconstructing a small reservoir as has been suggested; first, for the reason that same would be much cheaper, and second, the character of the ground at the proposed reservoir site is not conducive or suited for storage water. Concrete for water could be constructed later.

A small bunk house should be built sufficiently large to accommodate 12 or 14 men, furnished with cots, etc. A small boarding house should also be constructed, both buildings to be located near the Main Shaft. Mill construction to be considered later as to the character of the ore, as when water levels are reached the ore generally changes to that of sulphides, and this must be considered when building a mill.

TREATMENT: The question of treatment or metallurgical route used for the recovery of the ores of the mine, is receiving careful study by the writer, can be dealt with later.

The different methods of treatment available for the ores such as obtained at this mine, are amalgamation, gravity concentration, flotation and cyanidation. We are of the opinion that cyanidation will be the treatment because of its lack of contaminating agents such as copper, sulphur or arsenic. A sample of the ore submitted for assay for both gold and copper by B.Y. Hardy, gave the following results.

CRISMON & NICHOLS, Salt Lake City, Utah
Certificate of Assay, Sept. 1927

We have assayed your one sample and find it to contain as follows:

6.44 Ozs Gold per ton----4.20 Ozs Silver per ton----0.17% Copper.

The copper contained is 0.17%. If this amount of copper were to be found in all the ore, it would increase the cost of reduction of the ore considerably. Note the high gold value here, \$128.80 which is high grade ore and ready for shipping, and would not be treated at the mine, but shipped direct to the smelter.

We suspected the copper content came along with the metals, silver and gold, of high values;- for this reason we had a composite made of the rejects of all assays which has been made from the samples of ore taken from the mine by the writer, excluding only the \$135.00 and \$125.00 gold assays, and we are pleased to note that our opinion was confirmed, as the following assay returns show only a trace of copper contained in the ores of this mine, permitting uncontaminated cyanide treatment.

R. H. OFFICER & COMPANY, Salt Lake City, Utah.
Certificate of Assay, Sept, 1927.

Composite samples of rejects: 1, 2, 3, 3A, 4, 5, 6, 6A, 10, 11, 12, 13.

Gold 0.51 Oms. Silver 0.70 Oms. Copper Traces, Insoluble 94.94%, Iron 1.70%, Sulphur 0.30%, Lime 1.40%, Arsenic 0.19%.
The average gold established in the original assay is maintained in the assay of the rejects.

PRODUCTION & TREATMENT COSTS: The many natural resources afforded this mine are reflected favorably in the cost of production and treatment. Ore of this character may be mined, treated and prepared for shipment to the mint or refinery for less than \$6.00 per ton, including a reasonable overhead. The cost may be reduced if the caving system of mining be employed and we feel confident future development will prove this can be done.

RECAPITULATION: In the writing of this report upon the property described herein, the paramount thought has been to as clearly and briefly as possible outline the natural resources, the general geology, ore occurrences, vein system and to determine of possible whether or not the property could be developed into a profitable producing mine.

The property is located in what is described as the "Hanging Wall" side of the great precious metal mineral belt extending north from Goldfield, thru Tonopah and many gold mining camps, to Quartz Creek Valley in the foothills of the Desatoya Mountain Range, which parallels the Valley and is the north-south boundary line separating Lander & Churchill Counties to the west.

The Nye County line is less than ten miles to the South, one of the richest gold producing counties in Nevada. To the northern end of Lander County we find the Tenabo Consolidated Mines, probably destined to be one of Nevada's large Gold Producers. Twelve miles SE of Tenabo is the US Kennicott Copper group, which carries gold with the copper content; and joining this group is the Cortez Mine, with a production record in excess of \$20,000,000.00. Therefore we find the Magna Gold in the midst of a line of great producing mines.

The Titles include the assignment of fifteen mining claims to Magna Gold Mines under the conditions of a very favorable bond and lease. The actual outlay in cash is only a nominal amount as first payment, the balance of the purchase price is paid by a reasonable royalty upon actual production until same is entirely paid; a fair contract to buyer and seller. The climate is exceptionally healthy, dry and warm for eight months of the year, no snow or zero weather to hinder operations at any time.

The water situation is very favorable, contrary to the rule in Nevada, we find here an ample water supply to accommodate the operations of a 100 to 200 ton mill, most of which will be gravity flow to the mill.

Timber ample for mine purposes, also fuel, is found on the property.

The transportation situation is no serious drawback to this operation, since the metal recovered from this mine is gold, which necessitates no haulage by

truck, except when the ore is of a grade sufficiently high to ship.

Equipment on the ground is only adaptable for prospecting work and will have to be replaced with larger and more modern type as the work of the development of the mine progresses.

The assay returns from samples procured from the ores of this mine show exceptionally milling and shipping grades values in gold. Samples were taken over the extended areas of the property.

The geology and ore occurrence of this group of claims is favorable, especially as to the indication of prolific ore bodies seen in many places exposed boldly upon the surface, over a distance in excess of two and a half miles, mostly upon the main fissure as it is seen true in course and persistent with great brecciation, resolidification and cementation of the brecciated material, and rendered more prolific because of the large porphyritic intrusions which flank the fissure.

There is no reason geologically why these large ore bodies should not extend to great depth, carrying good values.

RECOMMENDATIONS CONTINUED: Recommendations include an extensive course of development, especially at the point where the main shaft is sunk upon the fissure. This shaft should be sunk to the 350 level and drifts run east and west to develop the ore. A 100 ton daily capacity mill should be installed, which if operated steadily, should produce an annual net revenue of not less than \$250,000.00 to \$300,000.00 per annum, additional mill units to be installed as rapidly as development of the ores warrant such installation.

CONCLUSION: We believe the mining property of the Magna Gold Mines presents a peculiarly inviting opportunity for highly profitable gold mining operations. No obstacle in the way of profitable operation has been found which could not be overcome by a reasonable financial outlay; as this property indicates the presence of what must be considered potentially great ore deposits in a country of large gold production, located as it is on the Hanging Wall of the great precious metals mineral belt of Central Nevada. Its possibilities are such that large expenditures may safely be entailed, to the end that the ores of this mine may be most economically and profitably mined and treated.

Respectfully Submitted,

W. F. Hayden, E.M.
Consulting Mining Engineer

Sept, 1927

ADDENDUM

Since the report of Mr. Hayden has been made the shaft has been sunk to the 200 foot level, and drifting has been done upon the vein, on this level 550 feet all of which is in ore.

Upon the basis of this exploration work, which he figures that there is today developed, which is ready to be mined, and which ore body, taking all the samples and assay values of all three levels into consideration, has a gross value of, \$1,071,000.00 (ONE MILLION & SEVENTY ONE THOUSAND DOLLARS)

**SOME INTERESTING FACTS ABOUT THE PROPERTIES OF THE
MAGNA GOLD MINES COMPANY**

The Magna Gold Mines Company of Salt Lake City, Utah, was formed or better incorporated under the laws of the State of Nevada on Oct. 9 1926, and also qualified to do business in the State of Utah on Dec. 6 1927. The object of the corporation was to purchase and operate a group of gold mining claims in Lander County, Nevada.

LOCATION: The location of the property is in the Gold Basin Mining District Lander County, Nevada, approximately 44 miles southwest from Austin, the county seat of Lander County and a terminal station of the main line of the Western & Southern Pacific Railroads, and Austin, Nevada.

TITLES: The property of the company consists of 34 mining claims, each claim containing approximately 20 acres, making a total of 680 acres. These claims are unpatented but are held under the provisions of the mining laws of the United States and of the State of Nevada governing the location of mining claims. They are all properly recorded in the office of the County Clerk of Lander County, at Austin, Nevada.

Of the 34 claims the Company owns 20 outright, including Gold Hill No. 2 claims on which the 200' shaft and all the underground development work is located. The other 14 claims are held by the Company on a Bond and lease under very favorable terms. The company also owns 160 acres of patented ranch land on which the living quarters and gardens are located. Water is obtained from nine springs on the patented land.

In addition the Company has filed on 480 acres of grazing land which is located a short distance west of the ranch land and adjoins the mining claims on the north. This protects water rights to some valuable springs.

ROADS AND TRANSPORTATION: The Lincoln Highway, a smoothly graded Federal road, passes within three miles of the property and is the main highway between Reno and Ely, Nevada. A good road some 3 miles in length, joins the property of the Magna Gold Mines Company with the main highway.

HISTORY: The immediate district in which the properties are located has not so far produced ore in quantities. It is, however, centrally located in a well known ore bearing horizon and the geological conditions are favorable for ore deposition.

The property was discovered by J. P. Buzanes, a pioneer mining man from Cripple Creek, Colorado in 1907, who first prospected the area now embraced within the Gold Basin Mining District. Mr. Buzanes located the claims and kept them intact for about twenty years, until they were purchased by the present Company.

ORE DEPOSITS: The ore deposits of the Magna Gold Mines are principally located in one long continuous true fissure. This fissure vein has been traced and opened up at various points for a distance of 15,000 feet. The Company's claims run parallel with this principal vein. There are also many cross fissures passing thru this principal vein which have been uncovered and which are ore bearing.

The continuity of the vein in its general direction and also its uniformity in width, which varies from eight to twenty feet, is one of the outstanding features of the property. The vein has been sampled over the entire distance by surface trenching, shafts and short tunnels, and it has been found to maintain values ranging from \$8.00 to several hundred dollars per ton. By close analysis of the many assays which have been taken over the entire distance of the property, the average values prove to be around \$20.00 per ton gold.

PRINCIPAL WORKINGS: The principal workings of the property consists of a shaft 200 feet deep on which stations have been cut at the 100, 150 and 200 foot levels. The dip of the vein is approximately 70 degrees to the north, and drifts in from the shaft have been done to intersect the vein on each of these levels. The vein has been encountered and found to maintain its uniform width of 20 feet or more and thorough sampling indicates that the values are consistently the same on all 3 levels.

EQUIPMENT AT MINE: The present equipment at the mine consists of a shaft house, blacksmith shop, steam boiler and hoist, air compressor with sufficient capacity to operate two drills, a Gardner-Denver rock drill sharpener, a complete assay outfit together with boarding and bunk houses and the Straub experimental mill.

TONNAGE OF ORE DEVELOPED: The development work on the three levels has uncovered ore which can readily be calculated by dip on the depth of the vein, the width of the vein, and the lengths of the drifts on the various levels. On the 200 level, a drift to the north was run some 50 feet which intersected the principal vein. On this level, one drift was driven straight west along the vein and at the present time is in a distance of 375 feet.

ORE DEVELOPED AT SHAFT: Vertical distance 200 feet makes distance on 70 degree dip 210 feet. 210' x 375' along the vein x 10' wide gives 63,000 tons of ore blocked out.

63,000 tons @ \$17.00	-	Value	\$1,071,000.00
Recovering 90% of values			963,900.00
Mining Costs \$3.00			
Milling 3.00			
Miscellaneous			
& Development 2.00			
	\$8.00		
		Profit	504,000.00
			\$459,900.00

63,000 tons of ore would run a 200 ton mill 315 days.

Development work along the vein as is now in progress would develop ore at the rate of 400 tons per day, so that in a year's time an additional tonnage of 146,000 tons of ore would be blocked out.

It is the intentions to prosecute development work by extending present drifts on the 200 level as well as sink the shaft to greater depths for exploration of the ore bodies.

ASSAYS FROM SHAFT LEVELS: General average samples of the various levels are shown herewith and are not simply grab samples but each assay represents from 5 to 30 feet of ore which was taken in comparatively large quantities and properly quartered down for assay.

No.	100' Level		150' Level		200' Level	
	Gold ozs.	Silver ozs.	Gold ozs.	Silver ozs.	Gold ozs.	Silver ozs.
1	0.42	0.80	1.76	1.70	0.22	0.25
2	0.23	1.40	0.80	0.80	0.63	0.60
3	0.30	0.50	0.96	1.30	0.42	0.05
4	0.68	1.00	0.96	0.90	1.74	0.80
5	0.50	0.70	0.86	0.90	1.75	0.80
6	2.22	1.40	0.37	0.80	1.08	0.40
7	0.68	0.50	0.34	0.50	0.80	0.90
8	1.97	1.20	0.40	1.00	0.57	0.20
9	0.92	1.08	1.00	1.80	0.80	0.40
10	1.25	1.10	2.18	0.70	1.04	0.50
11	0.35	0.10	0.86	0.60	1.07	0.85
12	1.20	0.75	0.61	0.20	0.68	0.70
13	0.65	0.50	0.40	0.80	0.60	0.60
14	0.62	0.80	0.88	0.30	0.63	0.10
15	1.44	1.00	0.43	0.12	0.51	0.40
16	0.29	3.00	0.14	Tr.		

Averages - Level	No. of Assays.	Gold ozs.	Silver ozs.	Gold Value	Silver Value	Total Value
100'	16	0.845	0.99	\$16.90	\$0.50	\$17.40
150'	16	0.810	0.77	16.20	0.39	16.59
200'	15	0.835	0.55	16.70	0.25	16.95

Total	No. of	Gold	Silver	Gold	Silver	Total
Average	Assays.	ozs.	ozs.	Value	Value	Value
3 levels	47	0.838	0.48	\$16.76	\$0.24	\$17.00

NOTE - These samples were taken by four different mining engineers and are their composite average.

EXPERIMENTAL WORK ON ORES: The principal value in the ore is gold with small amounts of silver, usually about 0.50 oz. silver to 1.0 oz. gold. By close examination of the ore it was discovered that the gold was present in the native state and is therefore amenable to the amalgamation process.

LABORATORY TESTS: Complete laboratory tests were made by amalgamation followed by cyanidation of the tailings. These experiments indicated that 90% of the gold values could be recovered by amalgamation.

EXPERIMENTAL WORK AT THE MINE: In April, 1928, a small ten stamp Straub Mill was installed to experiment on a large scale and determine the actual recoveries that could be made in practice. This mill operated until the middle of August and during that time treated 350 tons of ore from various parts of the property. This ore included material from dumps and also much low grade ore which was encountered on the 200 level, when this station was first cut.

Daily assays were kept of the head samples treated and of the tailings discarded during this entire time. The daily average assay of the head sample was \$9.10 and the tailings sample was \$0.80 which gave an indicated recovery of 90% of the gold.

NOTE - See Engineering & Mining Journal, August 4th 1928. Vol. 125, No. 5, page 191 for complete description.

RESULTS OF DEVELOPMENT & EXPERIMENTAL WORK: As a result of the development work which the Company has consistently done and as shown in another part of this report, 63,000 tons of milling ore has been developed and the company has definitely proven that the values can be recovered, both by laboratory experiments and those conducted on the property.

PROGRAM OF FUTURE DEVELOPMENT: The property has been thoroughly examined by several prominent and competent engineers and the Company therefore feels that they are ready to expand the operations and install a 200 ton mill upon the property to treat the ore already developed. It being understood also that the future development work will proceed as has been done in the past.

Thomas Varley, Met. Eng.