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Item 10

The Austin Silver Mining Company's property is located at Austin, Reese River Mining District, Lander County, Nevada. The elevation of the mines is between 6,500 feet and 7,000 feet. Austin is on the west slope of the Toiyabe Range, on the Lincoln Highway, in the geographical center of the State.

Via the Lincoln Highway it is 114 miles east from Fallon, 179 miles east from Reno, 148 miles west from Ely. The 97-mile Nevada Central Railroad runs north, connecting Austin with Battle Mountain, on the Southern Pacific Railroad.

Modern highways and trucks have revolutionized the hauling problem. Austin is a typical Nevada mining community of some 500 people. There is a good supply of local experienced mining labor. The operating conditions are unusually favorable. There is abundant water.

The property held by the Austin Silver Mining Company is as follows:

Owned in fee - 84 patented claims	-	789 acres
Owned by location - 10 unpatented claims	-	114 acres
Lease & Bond) Austin Dakota) - 53 unpatented claims	-	570 acres
Total	-	1473 acres

Note - For list of patented claims owned see tax bill locations listed in Austin office. Austin Dakota, see Assessment Affidavit lists or Newman deed.

The main asset naturally consists of the patented area which has produced $20,000,000 from an area 2,000 feet square and which contains the virgin area that promises to revive the district.

The production from the Dakota group amounts to and there are several areas in this property which give promise of substantial production.

The chances of restoring Austin to the position of a prominent silver producer are excellent. The district has undeveloped resources due to several reasons; the past low price of silver; the inaccessible caved workings; snap judgments of visiting engineers, unable to study the conditions; a local population devoid of resources; absentee ownership of the whole camp represented by managements either totally incompetent or notoriously dishonest.

Nothing has been overlooked by Fate to deprive Austin of its legitimate rights as a camp entitled to consideration.

In order to appraise the undeveloped possibilities of Austin under present-day conditions, it will be necessary to lay the ground work of its past history.

The camp was discovered in May, 1862, becoming the County Seat of Lander County on September 2, 1863. Buell's mill of five stamps started operating in August, 1863. In 1867 there were 6,000 mining claims located, 500 by 2,000 feet each with many conflicts. By 1883 there were 29 mills, with 444 stamps in operation.

Immigration reached its height in 1863, in which year 360 houses were built, together with innumerable squatter tents. The population was 10,000. There were three banks, twelve physicians, five clergymen, thirty-three lawyers, several private schools, in addition to the public schools.

In July, 1865, the Manhattan Silver Mining Company of Nevada commenced work on a consolidation of several mines. Purchases of adjoining property were made from time to time out of earnings. By 1871 this Company was making the major part of the production, having acquired practical control of Lander Hill and Union Hill, and was treating the ore of the camp in its custom mill. This consolidation was necessitated by the endless litigation over apex rights aggravated by the constant faulting of the veins. In 1873 the Company owned 68 claims, one mill of twenty stamps, a Stetefeld chlorination furnace-pan-amalgamation plant, retort and smelting furnace.

In 1875 the Manhattan Silver Mining Company of Nevada was absorbed by the Manhattan Silver Mining Company which in 1886 acquired the Pacific Company which owned the Buell North Star claim.

Between 1867 and 1887 these properties had produced $20,000,000 of ore averaging 200 oz. silver per ton; the complete records of which, month by month, are one of the interesting inheritances of this present Austin Silver Mining Company. Several million dollars additional production was undoubtedly made by these properties between 1862 and 1867, prior to these records. A total of $40,000,000 had been produced by the entire district.

The conditions under which these properties had been worked were nothing short of desperate. It cost $30 per ton to mill the ore. Local forests were denuded to supply fuel for primitive steam plants. Supplies were hauled by horse and oxen teams from Battle Mountain, a distance of 97 miles. Individual mines had their own Cornish pumps. There was no drain tunnel. There were no power drills. To economize,

the workings were made so small that the miners were continually in cramped positions, and ventilation was poor until connections were made. Strap iron on wooden runs served for track rail. Such cars as can still be found in recovered workings are mechanically pathetic. There was black powder and hand steel. Ore averaging less than 60 oz. silver was left unmined or in the stopes as fill. All ore was hoisted and hauled by wagon to the mills, over impossible roads. There was selective mining by "stripping". The ore was caught on canvas or plank and hand sorted in the stopes and again hand sorted at the mill. The waste was again hand sorted by boys after school hours.

There appears to have been only one advantage in operating a silver mine at that period compared with the present and that is the price of silver was then $1.29 per oz.

In addition to the physical difficulties, there was the lack of geological data. The science of geology which in recent years has made itself such an indispensable adjunct to the management of mines was more or less in its infancy in those days.

The maps of this Austin Silver Mining Company going back to this generation illustrate this point by ignoring all the structural features that played such a prominent part in determining the location of their ore bodies. Ore was easily discovered because there was so much of it. That is, for a time. But the day of reckoning came. The scandalous waste of lower grade ore was in adjustment to the economic requirements of that time. It is only proper that the present day operator with his own problems and shortcomings should view all this with proper respect for his forebears.

This closes the first period of Austin's history. It was magnificent and sensational. It was one of the epic chapters in the winning of the West. It stands on its record of $40,000,000 worth of $200 ore. A record exceeded only by the Comstock at Virginia City.

A new period begins in 1886 when the company is reorganized and capital stock increased from 1,000,000 to 5,000,000 shares. There is a new management. The cream has been skimmed. Development work has not been kept up. There is more pumping with greater depth. Values are decreasing with depth. The new crowd has no new metallurgical contribution to make or new angle of attack. In 1887 they suffered an attachment by unpaid employees.

In 1888 the property is acquired by Beveridge, who transfers it to the Manhattan Mining and Reduction Company, who confined their work to the Union Mine above the 200 foot level, and the dumps.

The dumps were worked in Huntington mills without amalgamation, followed by concentration with Frue vanners. It is an interesting commentary on the operations previously conducted to learn that these waste dumps ran 20 oz. silver, making a concentrate of 300 to 400 oz. silver. This "scalping" operation came to an end in the latter part of 1890 without having made any constructive contribution.

In 1891 the property passed into the hands of the Austin Mining Company, known as the J. G. Phelps Stokes interests, who drove the 6,000 foot Austin haulage and drainage tunnel and the 2,900 foot northeast crosscut which branches off at the 3,855 foot point in the main tunnel. They also operated the Union Mine and built a concentrating mill at the portal of the tunnel. They had vision and courage and money, but had a management so dishonest that court proceedings were necessary to recover some of the loot amounting to hundreds of thousands of dollars.

Silver was demonetized during this period, imposing an insuperable handicap on these mines and disrupting the entire silver mining industry of the West. Modern machinery and metallurgy had not been developed to offset this catastrophe.

Several transfers of the property took place between 1904 and January, 1908, when the Austin Manhattan Consolidated Mining Company obtained possession. This Company cleaned out and retimbered the Austin Tunnel and the Frost shaft which it sunk 250 feet below the tunnel level. It also opened the Jackpot Mine, in an entirely different part of the district. It is instructive to note that during all of these years with all their activity the Jackpot Mine had never been developed before, and it is also typical of Austin history that it should have produced $82,600 worth of high grade milling ore from one convenient shoot, ideal for concentration from which a recovery of only 50% was made.

From this brief history it would appear that the old Austin mines, with their 15 miles of undergroundworkings, which had made such a sensational production, were closed down under successive managements because they were exhausted. It is not the purpose of this report to deny this inference, nor is it the purpose of this project to attempt the development of these old mines except as an incidental leasing operation.

The possibilities for future production of this property can be listed as follows:

First The silver sulphide ores that made the past production.

The Union Mine with a production of $3,500,000 was closed down in 1912 while producing 50 oz. silver milling ore. The shutdown by the Stokes interests at that time involved the entire district and the decision was not influenced by the fact that this

Union Mine was being operated profitably on a small scale at that time. With the recovery of the Union shaft these operations can be resumed.

Since it was necessary to produce a grade of 60 oz. silver ore in the pioneer days it is logical to assume that lower grade ores were left in place or left in the mine after being broken. The recovery of these ores belongs particularly to the field of the leaser.

Second The base ores undeveloped in the past.

The Jackpot Mine which produced $82,600 of high grade mill ore was shut down in 1912 because a recovery of only 50% was made in the concentrating mill. An extraction of 95% can be made today and a somewhat similar one could have been made at that time, had the mill been properly designed. "Flotation" is particularly adapted to all these base ores. This process has been developed and perfected since the days of these earlier attempts. The development of this property had just begun when it was shut down. The 400 foot shaft can be reclaimed and with modernized methods be again converted into a producer.

The area containing the N.W. extension of the Lander Hill (Austin) veins immediately adjoining the old productive mines gives promise of containing a large tonnage of base ores, conveniently located for development, having the main Austin tunnel 450 feet below for drainage and haulage to the mill site at the portal. As this area constitutes the greatest individual asset known on the property at present it will be treated in greater detail in the following.

This project contemplates development of certain virgin ore-bearing areas known to the pioneers as refractory low-grade ores. No credit for the discovery of these ores is claimed by the present company. Underground workings of the pioneers exposed them and indicated a substantial area on the N.W. extension of the veins mineralized by these ores. They were exposed, left undeveloped and unmined. With present metallurgy, notably the flotation process, these ores are ideal for concentration and they therefore constitute an undeveloped resource of unknown magnitude.

The present plans of this Austin Silver Mining Company therefore contemplate the development of 15 to 25 of the classic veins of Austin on the N. W. extension into adjoining territory, heretofore undeveloped.

The veins are 2 feet wide, mineralized with silver-bearing lead, zinc, copper, and iron sulphides. The ore bodies extend 500 feet in depth and average 2,000 feet in length within property lines. These figures indicate 1,000,000 tons of possible ore, having an estimated value per ton of

25	oz.	Ag @	64½
50	lbs.	Pb	3.5
50	"	Cu	8.5
30	"	Zn	3.5

giving an approximate smelter value of $20.00 per ton. With costs for mining, milling, development, etc., of $12 per ton, it would leave $8.00 per ton profit.

There is fortunately an old working in this area, the Belle Wilder 160 foot shaft and 300 foot crosscut, which already intersects 5 veins on their N. W. extension. These veins were not developed, but their exposures indicate a type and grade of ore which justify development. These showings naturally do not block out ore, nor has the exposure taken place at a selected favorable location. They are random exposures but they indicate values similar to the ore figured in the foregoing.

Ore in these veins will occur in shoots due to occasional favorable geological conditions, well recognized by geologists as "crossings". The profits will be found in the shoots just as other mines and in accordance with the experience on these same veins in their past productive area. There is nothing mysterious about the reason for these shoots nor concerning their location. They have followed laws well known to geologists for the entire history of the camp.

There is no criterion for determining the percentage of vein area that will be profitable. If that data were available this project would be of an entirely different nature. There would then be left no last element of speculation. Under such circumstances with a given price of silver the ultimate profit could be calculated with accuracy.

This is not a project for "cashing in" a pre-determined mass of ore. It is a plan of developing a series of veins, some of which have had stopes 1200 feet long and which have made a record production immediately adjacent to the area to be developed. The element of hazard has not been eliminated, neither have the full potentialities been delimited.

Notes on the geology of
Austin

(Reese River Mining District)

The country rock is granite. The remarkable productivity of the district is due to the profusion of veins, having a N.W. and S.E. strike with N.E. dip closely spaced, intersected by a series of N.S. cross faults so closely spaced as to create a continual excitation of the mineralization of the veins. The original crossings of the past are the faults of today, varying from a few inches to 70 feet displacement.

Lander Hill (Austin) probably has more veins and more cross-fissurings than any similar area known to geological literature.

The shoots are found at the intersections of veins and faults. The shoots rake N.W. on the vein because that is the axis of the trough of intersection of N.W. striking vein having N.E. dip with N.S. fault having vertical dip. The faults are not quite frequent enough to be classed as sheeting, but they approximate that condition in the productive area.

There are two kinds of dikes, diorite and quartz porphyry, but they are of no significance as such. Quartz veins frequently accompany them on one wall, and the intersection of quartz veins is important. Therefore the dikes are worthy of mention only insofar as they are associated with veins.

The veins are from one inch to three feet wide, averaging ten inches in the old productive area and two feet in the new basic area. They are typical fissure veins. The granite and the mineralization are Tertiary and therefore shallow (supergene). There is no ground for assuming commercial mineralization at greater depth than 700 feet on the incline of the veins. The main Austin tunnel indicates that the strongest vein in the district, namely, the Panamint, with $7,000,000 production, is bottomed at about this depth.

The high grade of the ore is largely due to secondary enrichment, the descending solutions being somewhat confined to the shoot by the daming action of the cross-faults. The original cross-fracturing influences favorably the primary mineralization of the shoot, then influences the course of descending solutions, keeping them from migrating and concentrating and reconcentrating the leached values within the confines of the original shoot. That this does not prevail with infallible regularity does not

detract from the importance of this general principle.

Had these concentrating conditions not existed, the same amount of mineral would have been too sparsely disseminated to be commercial.

The geological conditions that govern ore occurrence in Austin are structural and in common with other Nevada Tertiary deposits. Ore is confined to comparatively shallow depth due to shallow primary deposition and naturally shallow secondary enrichment but the values are concentrated to exceptionally high grade ore in their proper horizons and the lack of width of the veins is compensated by their frequency.

The Tertiary granite is intrusive in pre-Carboniferous sedimentaries. A negligible percentage of the production has been made from the veins extending beyond the granite into the quartzites shales and limestones.

The granite has sometimes been classified as a quartz monzonite porphyry.

A rhyolite flow on the summit of the mountain above Austin, Mt. Prometheus, does not appear in connection with any of the mines.

There are two distinct types of ore, first, the silver sulphide ore in which the following base sulphides, given herewith in the order of their deposition, are of very minor importance: pyrite, arseno-pyrite, chalcopyrite, galena, sphalerite, tetrahedrite. The silver in these ores is in the form of native silver, argentite, proustite, pyrargyrite and stephanite, and as a component of the galena sphalerite and tetrahedrite (Freiburgite). These ores may contain only a few percent of base metals with 400 oz. silver per ton. They therefore lend themselves to hand sorting.

Secondly, the base ores in which these sulphides are in much greater proportion with accompanying decrease in the amount of silver. These ores cannot be sorted to any degree of concentration. They are readily amenable to selective flotation as per tests.

Analyses of these types of ores are appended hereto.

Gold values are almost negligible as a rule, but there is one notable exception in the case of the Jackpot Mine in the S.W. part of the district. It is likely that this area when developed will show consistently higher gold values than the rest of the camp. This is demonstrated in the workings of neighboring properties.

Mill City
IMLAY
Humboldt
Barbers Canyon
Bonnie Briar
Floyds Canyon
Star Mtn.
Ruby
Unionville
Goldbanks
Kyle Hot Sprs.
Fitting
Kennedy
Pierce Ranch
Rileyville
LOWER ROCHESTER
ROCHESTER
Relief
BUENA VISTA VALLEY
PLEASANT VALLEY
PERSHING
EAST RANGE
North Pk.
BATTLE MOUNTAIN
EL. 4513'
N. Battle Mtn.
Kampos
Argenta
Rosny
Mozel
Ladoga
Beowawe
Summit
Primeaux
PALISADE
Gerald
Harney
Bullion
Raines
Evans
Stonehouse
Galena
Copper Canyon
Lewis Jct.
Lewis
Dillon
Baileys
Dean
HILLTOP
Havingdon Pk.
Lander
Betty O'Neil
Tanabo
Hay Ranch
Blackburn
Mill Canyon
Mineral
Union
Mt. Tenabo
Buckhorn
Cortez
CORTEZ MTNS.
CRESCENT VALLEY
Watts
Hot Spr. Ranch
Winzell
Nevin
Alpha
Bridges
Bobtown
Canyon
Walters
Tonkin
ROBERTS
Siri
Sadler
Eccles
Bailey
Birch
Romano
Sulphur
Maggini
Clemons
Coppereid
Egbert
Hot Spr.
Shady Run
HUMBOLDT SALT MARSH
Nickle
NEW PASS RANGE
Walti Hot Spr.
Roberts Cr. Mtn.
Twin Spr.
Ravaun
Mt. Callahan
Grass Valley
GRASS VALLEY
Bernice
Silver Hill
Morgan
Dixie Valley
50 mile Radius
Silver Creek
Silver Crk.
Diamond
Lone Mtn.
Catons
Italian
CLAN ALPINE
CHURCHILL
LANDER
MT. AIRY
SIMPSON PARK
LANDER EUREKA
Victor
Alpine
Ledlie
AUSTIN
US 50
Hay Ranch
EUREKA
Hercules
Wonder
Westgate
Middlegate
Eastgate
CARROLL SUMMIT
DRY LAKE
Antelope Pk.
EL. 10,207'
Summit Mtn.
EL. 10,466'
FISH CREEK RANGE
ANTELOPE VALLEY
Fairview
TOYABE
Campbells Ranch
Mud Spr.
DESATOYA
SMITH
Kingston
Clear C.
Gold Park
Chalk Wells
Stratfords
Burnt Cabin
Broken Hills
SHOSHONE
LANDER
NYE
Minium
Daniels Rch.
Potts Ranch
Potts
MONITOR
EUREKA CO.
Horse Heaven Mtn.
EL. 9004'
White Rock Mtn.
EL. 10,177
Wildcat Pk.
EL. 10,534'
Savory Mtn.
EL. 9550'
Diana's Punchbowl
Phonolite
Quartz Mountain
Bald Mtn.
MILLETT
ALKALI FLAT
NATIONAL
Lodi
Tanks
Ellsworth
Ione
Mt. Berlin
Berlin
Bells
Sherman Pk.
PARADISE
LODI VALLEY
Northumberland Cave
Monitor
EL. 10,856'
Paradise Pk.
EL. 8668'
Grantsville
Toyabe Dome
EL. 11,775'
Darrough Hot Springs
Mt. Jefferson
Pine Crk. Rch.
Antelope
Atwood
Jefferson
Mahogany Mtn.
EL. 11,012'
ROUND MOUNTAIN
EL. 6313'
Goldyke
NYE MINERAL
Golden
FOREST
TOQUIMA
Cloverdale Crk.
Peavine Crk.
FISH LAKE
LITTLE SMOKY VALLEY
PANCAKE
Seyler Pk.
Bald Mtn.
EL. 9275'
Belmont
Simon
Cloverdale
LUNING
EL. 4480'
MANHATTAN
EL. 6905'
Spanish Spr.
Hot Creek
Keystone
Rattlesnake
HOT CREEK
CEDAR
ESMERALDA CO.
Baxter Spr.
Big Ten Pk.
MINA
EL. 4552'
Sodaville
Pilot Pk.
Summit Spr.
Tybo
Rhodes
Tonopah Jct.
Rocky Pk.
SAN ANTONIO
Crow Spr.
Peavine
SMOKY
HOT CREEK
US 40