

(179)

ITEM 49

3890 0036

PRINTED FOR PRIVATE DISTRIBUTION

LIBRARY OF  
MINING ENGINEERS  
& GEOLOGISTS

UNITED

REESE RIVER

Silver Mining Company.

MINES LOCATED IN

AUSTIN, LANDER COUNTY,

NEVADA.

REPORT BY B. SILLIMAN, M.A., M.D.,

OF YALE COLLEGE.

ALSO,

PROSPECTUS OF COMPANY.

BOSTON:

WRIGHT & POTTER, PRINTERS, 4 SPRING LANE.

1865.

PRINTED FOR PRIVATE DISTRIBUTION.

---

UNITED

REESE RIVER

Silver Mining Company,

MINES LOCATED IN

AUSTIN, LANDER COUNTY,

NEVADA.

---

REPORT BY B. SILLIMAN, M.A., M.D.,

OF YALE COLLEGE.

---

ALSO,

PROSPECTUS OF COMPANY.

---

BOSTON:

WRIGHT & POTTER, PRINTERS, 4 SPRING LANE.

1865.

TO THE TRUSTEES OF THE

*United Reese River Silver Mining Company.*

GENTLEMEN :

Herewith I submit, for your consideration, my Report  
on the UNITED REESE RIVER MINES.

Yours respectfully,

B. SILLIMAN.

SAN FRANCISCO, CAL., }  
December 23, 1864. }

## REPORT ON THE MINES

OF THE

### *United Reese River Mining Company.*

---

The mining property owned by your Company in the State of Nevada, is situated in or near the town of Austin, 190 miles east of Virginia City, and on the main line of travel by the overland stages between California and the Mississippi River. There is consequently a daily mail both east and west from Austin, as also a telegraphic communication with all parts of the United States. The railroads now building across the sierras, and those extending from the east, are calculated to open up the mining regions of this part of Nevada, and have a constant tendency to diminish the cost of transportation and labor, and with it to increase the facilities of living. At present machinery and supplies for Austin are hauled by team, chiefly by way of Virginia City, from Sacramento, and at a cost of from 8 to 10 cents per pound. This high rate of freights will, by the construction of railroads, and the introduction of competition, become constantly less. The time of passenger travel from Virginia is about thirty-six hours.

The general character and physical aspect of the country about Austin is the same which prevails over most of that great area known as the "Great American Desert." Running water and fuel are quite scarce, and arable land is found only in limited areas along the margin of small streams. The elevation of the general surface of the land along the Reese and Humboldt is over 4,000 feet above the sea, giving a cool climate at night even in summer; and yet it is seldom that the country is encumbered with snow, while severe frosts are said to be almost unknown.

The hills about Austin are of moderate elevation. The town is approached through a canon, called "Pony Canon," passing by the town of Clifton along the course of a small stream, upon which are at present several quartz mills. On the right of this line of approach rises the highest land in the hills, called by the general term of "High Ridge." On the left, or to the north of the town is Lander Hill, in which are the principal metallic veins, including in this general designation Buel and Austin Hills, which form subordinate but very important sub-divisions of Lander Hill. It is upon Austin Hill, on the south-western slope of which the town of Upper Austin is built, that the greater number of the most valuable silver lodes have been opened.

Upon Lander Hill proper there is a different class of lodes from those found in Austin Hill. The geological character of the Austin district is peculiar and well marked. It is a granitic basin or nucleus, of about nine miles in diameter. The granite is at surface much disintegrated, owing to the decomposition of some of its constituent minerals, especially the magnetic iron pyrites, which are disseminated in it in minute crystals, the decomposition of which, by atmospheric agencies, has softened and decayed the whole mass to a considerable depth.

There is also evidence of the action of saline waters upon this region, changing the chemical character of the surface ores, and aiding no doubt also in the superficial decomposition of the granite. These causes have given to the hills a softened and rounded aspect quite unlike the rugged aspect usual in a granitic region, where cliffs and bold rocky faces are common. For this reason also the outcrops of the mineral veins are to a great extent obscured.

The general absence of "croppings" is also in great part accounted for by the fact that most of the lodes contain but little hard quartz, while the nature of the superficial ore is such (being largely chloride of silver and sulphurets mixed with cellular quartz,) as to favor their breaking down and mingling with the soil. In some cases, that the course of the lodes can be traced by a slight furrow or depression at the surface, due to the wearing away of the filling of the ore channel. This characteristic is completely the reverse of what is observed in many other parts of Nevada, *e. g.*, in Virginia City and Esmeralda, where the hard quartz croppings of veins form a striking feature in the

outline of the region, visible sometimes for miles. In the Austin district it requires a sharp eye to detect in the soil the small fragments of vein stuff, "float," which have guided the explorers to the discovery of some of the richest veins.

The mineral veins in the Austin granite are clearly fissure veins. Their course is about N. 25° W. (magnetic,) often N. E. and S. W., and again nearly N. and S. especially if we deduct the local variation of the needle, which is nearly 17° 30' E. The veins dip at various angles into the southerly face of the hill, to the N. and N. W.

At the outcrop the veins are often quite flat; at a certain distance down they are in many (perhaps a majority of cases,) broken and irregular, becoming beyond the point of disturbance more regular, and usually inclined at a much higher angle. It would seem that from some cause there has been a break or slip of the face of the hill, occasioning a fault in all the veins at a certain depth. This fault or heave sometimes completely obscures the vein, leaving only a brown streak or stain in the granite, following which for a certain distance, usually at a small angle of inclination, the miner again discovers the lode within a regular walls, or casings, and pitching usually at a much higher angle of inclination. This fault seems to limit also the extent in depth of the superficial ores (chlorides, &c.,) as beneath the point where the vein becomes regular again (*viz*: at 30 or 40 feet from the surface, on the incline, in most cases,) the sulphurets of silver, &c., take the place of the ores seen at surface. The same causes, chemical and mechanical, which have produced the dislocation of the veins, and the chloride ores, seem also to have acted to remove from the veins the lines of division, which separate the vein from its walls in depth, glueing the contents hard to the sides of the country. In depth this peculiarity disappears, and the veins are in general well defined, and separated by clay partings from the country rock.

The ores characterizing the veins in the Austin district of Reese River, are chiefly:

Chloride of silver, or horn silver.

Chloride-bromid of silver, or embolite.

Native silver (distributed in minute particles chiefly in a reddish earthy gangue of oxyd of iron, and oozing out in globules when this material is "burned" or heated.

Vitreous silver, containing about 87 per cent. of metallic silver, is the richest ore.

Copper silver glance, an ore with a variable proportion of silver, replacing a part of the copper in copper glance.

This is a very common ore, of the Reese River Mines.

Dark-red silver ore, an antimonial sulphuret, containing 59 per cent. of silver.

Light-red silver ore, or ruby silver, an arsenical sulphuret of silver with  $65\frac{1}{2}$  per cent. of silver.

Brittle silver ore (sthephanite) an antimonial sulphuret of silver with  $68\frac{1}{2}$  per cent. of silver,—this is a common ore in the Comstock lode.

Tetrahedrite or Fahlerz. This is an ore, frequently called "gray copper," in which a part of the copper is replaced by silver; as much as 30 per cent. of silver, is sometimes found in it, associated with sulphur, antimony and arsenic. In some of the Reese River mines this is the prevailing ore.

These are the principal silver ores found in the veins at Austin. A careful study of these ores, accompanied with minute chemical analyses, would be required to decide if there are not other species. But silver also occurs in some of the lodes in connection with lead, as argentiferous galena, while the metal is also associated with zinc blende and yellow copper (cuprite.) This is especially true of the lodes on Lander Hill.

From this recital of the mineralogical character of the Reese River lodes, it will be seen that they carry the richest and best ores of silver which are known. With the exception of the chloride of silver, silver glance, and native silver, all the ores of Reese River require metallurgic treatment, before successful amalgamation is possible. The process which experience shows to be the best, is that of roasting with salt, by which all the compounds of silver are reduced to the condition of chlorides, which are then amalgamated either by iron, as in the barrel process, or in the iron "pans," whichever may be most convenient. Some employ vertical tubs of wood with copper agitators and steam, a system which gives very clean bars of silver, but at a much higher cost, and not without danger to the health of those employed. The size of the veins in Austin district is generally small. They range from a few inches to five or six feet,

but a majority of them are from twelve to eighteen inches in thickness. This may seem a small size for productive veins—it is to be remembered, however, that such veins require no timbering, a fortunate circumstance in a country where timber is so scarce; while the remarkable concentration and richness of the contained ores, render the mining costs as small in proportion to the value of the product as in larger veins.

There is an evident tendency in the best veins in Austin district to a symmetrical arrangement of the metallic contents of the lode in bands on the two walls, with quartz between, and crystallized in combs. This ribbon-like character is a distinguishing mark of the best veins. Below the water-level the veins in Austin district have usually well marked walls with clay partings and polished surfaces,—features of permanent veins. If there are some exceptions to this statement, it is believed that they are few, and probably superficial.

The cost of salt in Reese River is \$60 per ton, and the abundant sources of supply in the immediate neighborhood justify the expectation that it can be furnished at a less price, when the roads are improved, and competition has its legitimate effect.

Wood now costs from \$6 to \$8 per cord. It will be seen that the elements of cost here named are less than they are in Virginia City, while the labor market must soon equalize itself.

#### LIST OF MINES FROM WHICH THE UNITED REESE RIVER SILVER MINING COMPANY IS FORMED.

Apollo.	Madison.
Beard and Seaver.	Monitor.
Blue Ledge.	North Star.
Black Ledge.	Nevada.
Camargo.	Oregon.
Independent.	Peerless.
Chicago.	Pride of the East.
Diana.	Silver Cloud.
Governor Seymour.	Southern Light.
Harker.	Union, No. 2.
Honest Miner.	Whitlatch.

Hornet.  
Erie.  
Jefferson.  
Joe Lane.

Yo Semite.  
Yankee Blade.  
North Star, No. 2.  
San Miguel.

I will not undertake to describe each of these veins separately. The general character of the whole, as a group, has been already presented with care and sufficient detail in the foregoing pages.

An inspection of the rich collection of silver ores from the lodes here enumerated, which are designed to illustrate this Report, will be more satisfactory to those accustomed to judge of ores, than the most detailed description. These samples are large enough in quantity, in each case, to convey a correct notion of the general run of the ores, but they are as a collection undoubtedly above the general average of the veins as a whole. But in some cases they also fall below average, as for example, from the "Oregon," the assay of which (given herewith as \$149.25 to the ton,) is below the actual value of the ore in mill.

The assays of these samples were made under my instructions by Mr. Gideon E. Moore, of San Francisco, an excellent chemist, who received his education in science at the "Sheffield Laboratory," in Yale College, and for whose accuracy I am willing to vouch.

We will, however, describe several of the veins in your list specifically, as examples for all, selecting in general those upon which most work has been done, as giving the fairest criterion of what may be expected from the others.

*The Diana Mine*—located January 20th, 1863, was the first mine located on what is now known as "Reservoir Hill." This lode has been explored by a shaft sunk vertically 110 feet to cut the lode, which slopes east from the croppings, and has been sunk on by an incline to the point of intersection of the shaft. The dip is first 48°, then for a short distance 58° 40', and then becoming more gentle, it slopes away to the shaft 22° 47'. The vertical shaft is sunk 166—8 feet distant from the incline E. 15° N.—all in granite. This mine has been explored by the returns of ores taken from the upper portions of the vein.

Twenty-eight tons of ore taken out above water-level, chiefly chloride with sulphurets, produced the sum, (viz., \$8,747,) when worked in mill, required to explore the mine to the depth of 215 feet on the incline—the depth at the time of my visit in September. Since that time the shaft has been sunk, and the incline completed, also by the returns of the ore, which has averaged \$300 in mill, netting, over all expenses of mining, hauling, and milling, \$200 (and rising) per ton.

The vein averages about 20 inches wide, but is at times 5 or 6 feet, and now at the lowest level is over two feet of ores, the vein itself exceeding these limits. It carries the richest ores of silver, chiefly chloride of silver, (near the surface,) tetrahedrite of fahlerz, dark-red silver ore, and ruby silver. The latter ore has become more abundant in depth, and now replaces to some extent the tetrahedrite, which was the prevailing ore in the incline at 200 feet depth on the slope.

The vein mass shows polished "slickensides" on the faces of motion or contact surfaces, as may be seen on the samples sent forward. It is well encased in solid granite walls, and has been subject to no faults or troubles since passing the line of superficial disturbance, already described in the introduction as common to all the Austin Hill veins. The quartz is of good quality, and the vein continues in the deepest workings. The two upper drifts, running westerly a distance of 115 feet from the incline, exposed the lode as a rich body of ore, at places 20 inches wide, and then narrower, yielding about 4 tons daily of rich ore. It is calculated that from the vertical shaft 8 or 10 tons of ores can be taken daily, and the present appearance of the lode seems to justify that promise.

The assay of the average sample selected by Mr. Moore, as seen in his report appended, shows the Diana ore to yield to the ton—

Silver, 855.45 oz.—worth \$1,106.04.

*Whittlatch Union*.—This mine claims 600 feet on their lode, but in reality owns 1,400 feet, having bought in adjacent ground. It is situated north of Marshal Canon on Union Hill, looking N. E., and is thus out of sight from Austin, though still in the granite of Austin Hill. The course of the lode is N. 10° W. magnetic, or nearly true north and south—its dip is north-

erly. It is explored by two shafts, one vertical for 30 feet, cutting the ore body, and continued 50 feet further on an incline cutting the granite. The vein is strong, being at times 5 or 6 feet, but it is broken or heaved, by a dislocation which has occasioned some inconvenience in mining. The lode in the south (No. 1) shaft I found with a dip of 20° N. E., and not less than 4 feet thick of good ore, in a reddish quartz, stained green with carbonate of copper, and well charged with sulphuret ores, of which brittle silver ore was the most important. Lower down, below the incline in granite, the vein was wider, owing to a swell and irregularity, reaching 6 to 7 feet, with a shut or closure of granite in it. The two walls were beautifully striated and polished over broad surfaces, showing a true vein.

In the second shaft, the stopes have averaged 4 feet from the end of the vertical shaft to surface, between beautifully defined and polished walls, with a dip E. of 60° to 65°. All the ore from these stopes was sent to mill almost without selection.

The vein at the depth of 80 feet south is 4½ to 6 feet wide, yielding 4½ feet of good ore in the stopes. On the whole, the vein explored to this depth is one of the best in the whole district. Its yield in ores has averaged, for the 450 tons worked, from \$150 to \$175 per ton. Near the surface very rich chloride ores have been found in limited quantity, worth \$5,000 to \$7,000 per ton. The first class ores range from \$350 to \$400 per ton. The second class from \$100 to \$150.

One of the slips or disturbances alluded to as occurring in this vein, has been met at a vertical depth of 100 feet, where a clay seam has cut off the vein, which is heaved either above or below its former course, which will be soon decided by the explorations now in progress, (Dec. 15th.) That it is continuous, in the main, can hardly be doubted. Indeed in the so-called Camargo Mine, which is located in the same lode, but higher up the hill, the vein which at that point runs nearly N. W. and S. E., is quite regular, and has been so for over 120 feet of its course.

The bullion produced from the Whitlatch amounts to a little over,	\$60,000 00
The assessments have been	15,600 00
Present obligation,	3,400 00

Making the total cost of the mine to date, \$79,000 00

The ores on hand are equal to the indebtedness. Most of this exploration and income has been since June 15th, when the mines passed into the hands of its present superintendent, Mr. J. F. Bartholomew. The price paid for the treatment of ores was for some months \$100 per ton, then \$80, and now \$60, in addition to the cost of hauling.

I made a careful average sample of all parts of the vein in September—the assay of which gave me per ton of 2,000 pounds—

Silver, \$314.21.

Mr. Moore's assay of sample from the ore sack sent to New York (select ore,) gives—

Gold, a trace.

Silver, 2,080.45 oz. = \$2,690.08 per ton.

The mine is fitted with tram tracks and cars, both on the surface and in depth—the hoisting is done by a horse whim.

#### CONSOLIDATED UNION TUNNEL COMPANY.

There are several of the lodes incorporated in your Company, which are so situated that they are cut by a tunnel called the "Consolidated Union Tunnel Company"—the several claims being consolidated only for the greater convenience of working by a common adit, and drain, which the tunnel of this name affords.

This tunnel, when driven in to cut the "Joe Lane"—the farthest in of the included lodes, will be about 2,000 feet in length. Its present length is somewhat over 400 feet, having cut the "Governor Seymour" lode at a depth of about 100 feet from surface.

At its farthest point it will cut the "Lane" at about 350 feet from surface, and will average for the other lodes, about 250 feet. The lodes included in your organization, which the tunnel cuts, are as follows, in the order of their occurrence:—

Gov'r Seymour,	distance 400 feet—depth 100 feet.
Southern Light,	" 600 " " 126 "
North Star,	" 777 " " 143 "
Blue,	" 908 " " 160 "
Oregon,	" 1,306 " " 232 "
Black,	" 1,660 " " 289 "



Apollo, distance . . . 1,765 feet—depth 310 feet.  
 Joe Lane, " . . . 1,958 " " 358 "

This tunnel has been driven so far at a cost of \$20.80 per foot. It will, undoubtedly, expose the existence of some "blind lodes," and has indeed cut three such already, before reaching the Governor Seymour. We will briefly consider some of the lodes drained and to be opened by this tunnel.

*The Governor Seymour Lode* has now been cut, not only in the tunnel, but has been followed down on its course from the surface for the purpose of ventilation. The ore has paid in mill above \$150 per ton. It contains a good show of ruby silver and fahlerz.

This vein has been traced in quartz horizontally, perhaps farther than any other lode on Austin Hill, having been followed by the croppings, or by inclines and levels, all the way in quartz to the Savage incline, about 430 feet.

The lode averages about 16 inches in thickness, and is sometimes 30 inches. It is well enclosed in granite walls.

Mr. Moore's assay of sample, from the sack sent to New York, gives to the ton of 2,000 pounds—

Silver 1,553 ounces = \$2,008.08.

*North Star.*—This lode was extremely rich in chloride ores at surface, more than \$6,000 in value being obtained from the superficial working of a limited portion.

At a depth of 85 feet on the incline, this lode entirely disappeared, cut off by a cross seam or slide. But a side drift to the west proved its existence in that direction. It now appears, by continuing down on the incline, that the lode has gone over the slope, and has been cut again at its present bottom (December 22d,) as I learn by a communication from the superintendent, a strong vein of three feet in thickness.

The water is very quick, the rock soft, and ore of good quality. A steam whim and pump will now be required to carry on the work.

In the "Orgeon North Star," on the same lode, and immediately adjacent to this claim, they are also now taking out very good ore.

The North Star was about 20 inches wide in the upper slope, when undisturbed; its increase to a vein of three feet, after a serious interruption, is most encouraging for its future.

At the time of my visit one man was taking from a side drift ore enough, of from \$500 to \$1,000 per ton, to pay all the costs of exploration by twelve men in sinking on the incline. The ore sent to New York, assayed by Mr. Moore, gave per ton of 2,000 pounds—

Gold, a trace.

Silver, 2,053.62 oz. = \$2,655.19.

*The North Star, No. 2*, an adjoining claim, also furnishes extremely rich ore, yielding on the samples sent to New York, per ton of 2,000 pounds—

Silver, 3,896.08 oz. = \$5,037.36.

The experience had in the exploration of the North Star, as well as the Diana, I esteem of the highest value and interest, in the encouragement it offers for exploration in depth upon all the Reese River lodes, and especially upon those of Austin Hill. It is reasonable to believe that others may expect a similar enlargement and steadiness of veins in depth, and it shows clearly there is no just ground for discouragement arising from occasional irregularities or interruptions in the lode. Such may even happen again.

*The Black Lode.*—This is a strong outcropping vein of quartz, blackened by the presence of iron and manganese at surface, a circumstance expressed in its name. It is about four feet in width, well encased, and so far as explored—about seventy feet on the incline—regular and well characterized. The chief silver ore observed in it, so far, is the black sulphuret, with which it is well sprinkled, as appears not only to the eye, but is more clearly shown by Mr. Moore's assay, which gives to the ton of 2,000 pounds—

Silver, 1,774.20 oz. = \$2,293.93.

It would be easy to extend these descriptions, but nothing new of importance could be presented. The veins are all very similar in general character, and these characters have been set forth with sufficient fulness of detail in the introduction to this

Report. It might be inferred, from what has been said, that the veins are all small—such is not, however, true in all cases. The “Joe Lane” is a steady, strong lode of five or six feet in thickness. It was, when I saw it, opened by an incline down about sixty feet. Its outcrop carries a considerable amount of the black oxide of iron and manganese. Its chief ore is brittle silver, and in its general characters, at surface, it resembles the Black Ledge. The Lane carries, however, in its croppings, more gold than is found in any one of the Reese River veins which have fallen under my observation.

By Mr. Moore's assay its value in the ton of 2,000 pounds (at surface,) is as follows:

Gold, 2.49 oz.	=	\$50 03
Silver, 381.49 oz.	=	493 25
		<hr/> \$543 28

It is evident, from the examination of all the facts presented in the Reese River District, that there are assembled, especially about Austin, where your Company has its location, a remarkable number of well characterized mineral veins carrying the richest silver ores. Most of these have been taken up and worked by poor men without other resources than the veins themselves have furnished. For the amount of ground opened and the capital employed, there is no mining region comparable with it in Nevada for promise for the future, and for the judicious use of capital. Experience shows here precisely what it teaches everywhere in mining, that the works of exploration must be pushed on well in advance of the demands on the mine for the extraction of ore; poor or barren places will always be found, and these must be discovered in advance, as the only means of avoiding disappointment—to do this requires capital for the erection of hoisting and pumping machinery to work the mines to advantage, and mills for the economical working of the ores. If your ores are to be worked at “Custom Mills,” you should be careful that you know the average value of the dry stamped ore before the roasting, and also the value of the tailings, as the only mode of holding any control over the operations of the mill. The price of milling has already fallen from \$100 per

ton to \$60, and it will probably fall to \$45 or \$50, its actual cost, with wood, salt and labor, at the rates you pay, being in the vicinity of \$35 per ton.

#### OF THE PROBABLE YIELD OF YOUR MINES.

Much is left for hope and conjecture under this head, but we are not altogether without reasonable data for an approximate estimate of values. Of the 5,000 feet representing your entire property in the various mines on your list, it is not, perhaps, unreasonable to expect, within a twelvemonth after you apply to them the requisite capital, and economical management (the two essential elements of success,) that two-fifths, or 2,000 feet of the whole should be made productive, or dividend paying.

In view of the great richness of the ores, and the consequent small quantity of them requisite to pay a dividend, *ten* dollars a foot, monthly, is by no means a large sum to look forward to, as income from the productive mines. But,

2,000 feet at \$10 is . . . . .	\$20,000 monthly.
Equal in gold to . . . . .	240,000 annually.
Or in currency, at 200, to . . . . .	480,000 “
Which is 6 per cent. on . . . . .	8,000,000

If even one-half these values are realized, you have a splendid speculation; and there are good reasons for hoping that you may do even better than this estimate.

#### OF THE GENERAL MANAGEMENT.

Permit me to offer a suggestion, under this head, which may be of some value, and will most certainly be so, if it is practicable to carry it out.

Your interests will demand the presence, in Austin, of an active, intelligent, and experienced general superintendent, to hold a constant and active supervision over all the mines in which you are owners. He should obtain and forward, weekly, to the central office, detailed statements, in a compact tabular form, of all the items of cost, exploration, product, and discovery, pertaining to all the mines. This system would be productive of the very best effects upon the whole property, and would meet with no opposition from any, unless from those whose unwillingness would be the best reason for insisting upon a scrutiny of their affairs. You would thus be apprised, at all

times, of the condition of your property; of the use being made of your capital; and of all other matters essential to the proper management and control of your estate.

Each individual organization in the consolidation will derive as much benefit from such a scrutiny as will flow to you. This system will do much to realize, in a practical and economical manner, a hope which has always existed in the minds of the most intelligent owners in the Washoe region, but which, from the want of any principle of association, has never been made fruitful.

You would thus, also, soon amass a body of mining statistics of the highest value to the whole of the wonderful country where you are located, whose future development is destined, in my opinion, to astonish the world.

All which is respectfully submitted, by,  
Gentlemen,  
Your obedient servant,

B. SILLIMAN.

SAN FRANCISCO, CALIFORNIA, }  
December 23d, 1864.

SAN FRANCISCO, December 5th, 1864.

UNITED REESE R. MG. Co.:

Gentlemen,—I have assayed the samples of ore deposited by you, with the following result:—They contain—

1. "North Star," Gold, trace.  
Silver, 2,053.62 oz.=\$2,655.19.  
To the ton of 2,000 lbs.
2. "North Star, No. 2," Gold, none.  
Silver, 3,896.08 oz.=\$5,037.36.  
To the ton of 2,000 lbs.
3. "Oregon," Gold, none.  
Silver, 115.44 oz.=\$149.25.  
To the ton of 2,000 lbs.
4. "Honest Miner," Gold, none.  
Silver, 1,421.87 oz.=\$1,838.38.  
To the ton of 2,000 lbs.
5. "Southern Light," Gold, none.  
Silver, 1,244 oz.=\$1,608.95.  
To the ton of 2,000 lbs.
6. "Nevada," Gold, trace.  
Silver, 196.29 oz.=\$253.79.  
To the ton of 2,000 lbs.
7. "Camargo," Gold, none.  
Silver, 1,006.25 oz.=\$1,301.01.  
To the ton of 2,000 lbs.
8. "Madison and Jefferson," Gold, none.  
Silver, 709.62 oz.=\$917.50.  
To the ton of 2,000 lbs.

9. "Hornet," Gold, trace.  
Silver, 277.08 oz.=\$358.25.  
To the ton of 2,000 lbs.
10. "Erie," Gold, trace.  
Silver, 515.24 oz.=\$666.19.  
To the ton of 2,000 lbs.
11. "Apollo," Gold, none.  
Silver, 425.25 oz.=\$549.81.  
To the ton of 2,000 lbs.
12. "Silver Cloud," Gold, none.  
Silver, 561.45 oz.=\$725.92.  
To the ton of 2,000 lbs.
13. "San Miguel," Gold, 0.14 oz.=\$3.01.  
Silver, 111.70 oz.=\$144.43.  
To the ton of 2,000 lbs.
14. "Whitlatch," Gold, trace.  
Silver, 2,080.45 oz.=\$2,690.08.  
To the ton of 2,000 lbs.
15. "Union," Gold, none.  
Silver, 541.91 oz.=\$700.66.  
To the ton of 2,000 lbs.
16. "Yankee Blade," Gold, 0.46 oz.=\$9.63.  
Silver, 2,490.83 oz.=\$3,220.47.  
To the ton of 2,000 lbs.
17. "Peerless," Gold, none.  
Silver, 775.25 oz.=\$1,002.34.  
To the ton of 2,000 lbs.
18. "Pride of the East," Gold, 0.24 oz.=\$5.00.  
Silver, 631.92 oz.=\$817.03.  
To the ton of 2,000 lbs.

19. "Yosemite," Gold, 1.19 oz.=\$24.72.  
Silver, 586.83 oz.=\$758.73.  
To the ton of 2,000 lbs.
20. "Monitor," Gold, none.  
Silver, 89.83 oz.=\$116.14.  
To the ton of 2,000 lbs.
21. "Diana," Gold, trace.  
Silver, 855.45 oz.=\$1,106.04.  
To the ton of 2,000 lbs.
22. "Gov. Seymour," Gold, none.  
Silver, 1,553 oz.=\$2,008.08.  
To the ton of 2,000 lbs.
23. "Blue Ledge," Gold, 0.96 oz.=\$19.89.  
Silver, 984.37 oz.=\$1,272.72.  
To the ton of 2,000 lbs.
24. "Independent Co.," Gold, trace.  
"Congress Lode," Silver, 956.37 oz.=\$1,236.5.  
To the ton of 2,000 lbs.
25. "Beard and Seaver Gold, trace.  
and Harker," Silver, 393.75 oz.=\$509.  
To the ton of 2,000 lbs.
26. "Black," Gold, trace.  
Silver, 1,774.20 oz.=\$2,293.93.  
To the ton of 2,000 lbs.
27. "Joe Lane," Gold, 2.42 oz.=\$50.03.  
Silver, 381.49 oz.=\$493.25.  
To the ton of 2,000 lbs.
28. "Chicago," Gold, none.  
Silver, 513.33 oz.=\$663.70.  
To the ton of 2,000 lbs.

Yours, etc.,

GIDEON E. MOORE.

## APPENDIX.

Testimony might be multiplied *ad infinitum*. The daily and weekly journals, on the Pacific and Atlantic sides, are constantly elaborating on the richness of the Reese River Mines, their inexhaustibility and promising future; private letters from able and faithful pens have been written by multiplied thousands, and pamphlets and crude books can be seen in every city, which if collected and well digested would fill volumes; and the united evidence all tells the same story.

Who ever visited these mines that does not endorse all reasonable narrations given of them? Who condemns them? He who now doubts cannot be convinced. During the winter past millions of dollars have been contracted, and are embarking in the development of these mines.

It is no longer problematical or hazardous, when cautious, responsible bankers are reaching into their vaults, taking out their gold by the hundreds of thousands, in building mills and working some of these mines, and thereby make this investment earn them a *mint of money*.

The large banking houses of Parrot & Co., San Francisco, Duncan, Sherman & Co., New York, and Trainer W. Park, of Vermont, are jointly now engaged in building the best mill in Reese at Austin, and in making improvements on their mines here, which, it is said, in the aggregate will cost them this year over \$300,000 in gold coin. Instances can be multiplied. The mill capacity at Austin will be trebled this year, and more beneficial competition for the miners will then exist.

This company calls special attention to the following points:—

### I.

That the thirty mines mentioned in Prof. Silliman's report, are amongst the best, and a majority of them *the very best mines* in and about the city of Austin opened yet. Col. D. E. Buel,

who was the discoverer of the Reese River Mines, being himself a practical miner and judge of mines, having the choice of first locations, located for himself and had his friends locate the most of these mines, knowing what they were. The result thus far has proved his good judgment—for the North Star, Oregon, Whitlatch, Diana, Yankee Blade, Governor Seymour, Blue Ledge, Black Ledge, Honest Miner, Southern Light, with several others, stand at the head of the list of good, first class mines here. Look at the written or printed statements of the mines in Austin, and in them these, or some of these, are always referred to as the best. These, with some few others, in a more advanced state of development, have given the reputation for merit that the Austin mines now have; and it is upon their character and merits that so many of the mines in Austin, and all over the Reese River country, have been sold. He who says there are better mines than these in Nevada, is not honest or reliable.

Look at the assays made by Mr. Moore. Keep in mind the fact that the ores of Austin, working average, are over \$220 per ton in silver, while those in the celebrated Comstock and Washoe, generally only average between \$40 and \$50 per ton; that the average yield of *all* ores working in Reese River, are 130 per cent. more than any other mining county or district, and that these veins are true fissures and inexhaustible, and then you get some idea of their value.

### II.

#### DEVELOPMENT AND YIELDS TO FEBRUARY 14, 1865.

Over \$220,000 in gold coin has been expended in developing and opening these mines; and \$119,000 silver bullion has been taken out during that development.

Ten of the mines are now vigorously worked, and with steam hoisting engines a much more rapid and profitable development can be made; while by steam power an average saving to each mine can be made of \$60 each day.

The lodes grow wider and richer as the work progresses downwards.

The mines are under the management of the most experienced old miners of California and Washoe, and are being opened

with a view to permanency, economy, and profit; which will insure to those who invest, a sure and reliable income from the mines.

### III.

#### TITLES AND LOCATIONS.

This property is the first locations made in Reese River; *no prior claims* can be made. The lodes have all been worked in conformity to the laws of the mining district, to the extent that they are now held as real estate. Hence the titles are perfect, and free, and unincumbered, thus obviating the large sums of money which have been expended in Washoe in litigation. Another curious fact, history and experience have proven, that first locations usually turn out the best.

### IV.

#### MILLS AND OTHER IMPROVEMENTS.

A good quartz mill at Austin is a fortune itself. Besides the profit in milling, every company which has good silver ores plenty, should have its own mill and reduction works, for reasons too apparent.

There should be at least two good mills erected this year for these mines.

The tunnel mentioned in Professor Silliman's Report, run over 400 feet, should be completed; its benefits would be—

1. To drain the mines.
2. To use it to convey the ores to the surface by railroad track, from the eight mines it will cut.
3. The flow of water will be sufficient to run two forty-stamp mills, for steam and amalgamating purposes; and will give mill sites right upon the mines. Either of these objects will pay the cost of this tunnel soon. The mines need sundry hoisting engines (they have two now,) and other improvements which ought to be made without delay. For the purposes of working these mines more efficiently (the members of this company being largely interested in these mines,) and money being very scarce in the Pacific country, owing to the high premium on gold and silver here, which draws away the money from that country, this company proposes to sell a controlling interest in this company to eastern capitalists.

#### INCORPORATION.

This Company was incorporated in the city of San Francisco on the 6th day of September, 1864.

Capital Stock, . . . . .	\$2,000,000 00
Number of shares, . . . . .	20,000
Each share, . . . . .	\$100 00
Number of aggregate feet, . . . . .	5,000

The objects of incorporating in San Francisco are apparent for many reasons.

1. Nearly all the best developed and paying mines of gold and silver in all the vast Pacific country are incorporated there. San Francisco is the great emporium of that country, is nearer to the mines than any other city, manufactures the best mining machinery, and is the *mining school* for companies, where they can acquire from each other the best practical knowledge of working their mines, coming in contact more directly with American and foreign skill.

2. The laws of that country are better adapted to mining corporations, and in protecting and guarding the interests of stockholders, being founded upon the wants and experience of this mighty interest of that country; while the laws in some, if not all the Atlantic States are restricted and not adapted to mining enterprises.

3. The stockholders are just as safe as if the company existed in their place of residence. The stockholders in those fine paying mines of Washoe and California live in Europe and all over this nation, and they get their dividends and control their interests just as certainly as if they owned bank stocks in New York, Boston or Philadelphia. Many companies are incorporated in New York and the majority of its stock is owned in Boston and Philadelphia.

4. These mines must be worked during the period of this negotiation, and there must be a power somewhere to do it.

5. A majority of the stock is for sale and that majority can carry the corporation where it pleases.

6. The board of trustees and officers of this company are a guarantee to stockholders that their interests would be thoroughly protected, being men of high standing and responsibility,

and experienced in the history and practice of silver mining, and an election takes place every year.

#### OFFICERS OF COMPANY.

ASAPH GRAY, President, an owner in the best producing silver mines of Nevada, is largely interested in the silver mines of *this Company*, has much experience in silver mines in Mexico and Nevada, and makes a most efficient, energetic president. The following is one of his many endorsements:—

"SAN FRANCISCO, January 3, 1864.

"To Whom it may Concern:—

"We take pleasure in certifying that we have known Mr. Asaph Gray for a number of years in this city, and have a high opinion of his character and standing as a gentleman and a business man.

"We have the fullest confidence that any business under his care and management would receive proper attention, and any statements made by him would be entitled to confidence and belief.

"FLINT, PEABODY & Co."

N. C. FASSETT, Secretary, is a merchant and good business man.

L. C. DODGE, Treasurer, is the leading partner in the large wholesale mercantile house of Dodge Brothers, San Francisco. Every banking-house and commercial firm of San Francisco will endorse him as a first-class and responsible business man.

Col. D. E. BUEL is the discoverer of the Reese River Mines, locator and large owner of the city of Austin, located the first and best mines in Austin and is large owner in them, built the first quartz mill in Austin, owns and runs a mill there now, has large experience in reducing silver ores, comes endorsed from Austin and San Francisco to some of the most influential banking houses and business men in New York, has filled positions of public trust with ability and fidelity, is a man of sterling worth, extensively known and respected in California and Nevada.

JOHN W. HARKER is the duly authorized agent of this Company; is a large owner in the Reese River Silver Mines; has the same personal endorsements as Colonel Buel, with many others in addition.

WILLIAM H. SHARP is an attorney-at-law in San Francisco, in high standing; has large practice, and heretofore has faithfully filled the office of United States District Attorney for California, under appointment of President Lincoln.

H. F. CUTTER is a merchant and large owner in mines.

H. H. ALLEN is a retired member of the mercantile firm of Green, Heath, and Allen, San Francisco.

Col. P. C. LANDER is a capitalist and large owner in productive silver mines.

A. B. GALE, formerly a wholesale liquor merchant.

WILLIAM C. HARRINGTON, general superintendent at Austin, has large mining experience, and has the entire confidence of this Company.

Many of these officers have acquaintances in the eastern cities. All reside in San Francisco, except two; are the largest owners in these mines, and for efficiency could not well be equalled.

THE BY-LAWS AND ORGANIZATION are as perfect and complete as skill and experience could make them.

Col. BUEL and Mr. HARKER are now here to dispose of a portion of the stock of this Company. They have with them here over two tons of the ores from these thirty mines; also silver bars, showing the fineness of the silver. They will be pleased to exhibit these ores. Mr. Harker being the duly authorized and empowered agent to transfer stock upon sale, has with him certified copies of the records of this Company, certificates of incorporation, by-laws, copies of location, complete abstracts of titles, records showing the extent of work on each mine, and the amount of bullion taken from each mine, certificates of stock, and everything complete, to show all about this Company, —which are all for inspection by purchasers. The fullest scrutiny is invited before a dollar is paid.

TERMS OF SALE.—11,000 shares of stock will be sold at fifty cents on the dollar, in currency,—the purchaser to retain 20 per cent. of the purchase money, which is to be placed in some safe banking-house, subject to be drawn on by the corporation, as part of the working capital. (This per cent. would amount

to \$110,000.) This plan will secure to these mines a working capital of over \$600,000—capital enough to build all the mills, secure an engine and hoisting works to every mine, with all other necessary improvements, and will carry on the development, and make this vast mining property dividend-paying within the first year.

Ten of these mines will pay monthly dividends within the next six months, by placing on each of them a donkey engine. It is declared with great confidence, that one year's development on this plan, will make this one of the largest if not the very largest, monthly dividend-paying properties in Nevada; and no opened mines in the nation pay larger dividends per month (in gold, of course,) than the Nevada silver mines.

We believe the calculation made by Professor Silliman, on page 17, to be much below what it is reasonable to expect. The foregoing plan will also make this stock sold, unassessable and free.

#### TO CAPITALISTS.

The present "panic," as it is called sometimes, is to your advantage. It has *appreciated* your currency just that much nearer to gold value. You are therefore just that much the richer, and your money will buy more and do more for you. Multiplied millions of dollars are idle. Where shall this money go? Survey the field calmly.

Shall it go into merchandizing? The history and statistics of the world show that less than seven merchants in every hundred have succeeded, and yet nobody is afraid to go into this laudable enterprise.

Shall it go into the great coal or iron companies? The present high tax will almost close up our vast iron interests, and iron and coal are governed by the laws of supply and demand, sometimes not paying the expenses of working them, at other times yielding handsome profits.

Shall it go into manufacture? The present and frequent crises answer this question.

Shall it go into petroleum? This is a mighty, but a new enterprise. It has a real and a speculative side. The real consists in getting out the oil and selling it, thereby giving value for the money received. Now it is asserted that over

\$50,000,000 in currency was realized in petroleum last year, but the facts from the most reliable sources fix it at about \$19,000,000 yield. Now compare the Gould and Curry Silver Mining Company at Virginia, owning 1,200 feet on the Comstock Lode. Last year it extracted from this single mine alone over \$5,000,000 in silver, which, at the average price of currency last year, would be over \$11,000,000 currency—*more than half the value of the whole petroleum interests* at the data given. Silver mines have been worked for hundreds of years, and still they yield as bountifully as ever. Remember that the yield of the precious metals never appreciates or depreciates, as *every other interest does*, that a dollar of gold or silver is always worth a dollar; and remember, too, that the capital embarked in the petroleum enterprise is larger than all the capital embarked in the silver mines of the whole State of Nevada, doubled again—and that the *single Comstock Ledge at Virginia City*, with all its mills and improvements, is intrinsically worth more than the whole productive honest oil wells of the nation.

#### CONCLUSIONS.

The property we now offer you is not *speculative*. The mines are opened and *demonstrated to be of great merit and value*. Exhaust *every source of information*, and we will tell you in advance, that your answer will make these mines *better than we represent them*. Develop these mines to the extent of the Comstock Lode at Virginia, and these 5,000 feet will be worth indefinite millions.

If you invest money in United States bonds, which is laudable, you lock up your capital by getting a small annual interest, while in a good productive silver mine it will net you from 2 to 12 per cent. interest in gold per month.

The nominal price we offer this stock at we know is a good and safe investment—will become dividend-paying in six months after sale, and your stock will approximate to par or even a premium within less than one year.

APRIL 1, 1865.