

Compliments to
Fort Fillmore Silver Mining Co

NEW MEXICO.

Capital Stock \$1,000,000; or 50,000 Shares at \$20

A MEMOIR

UPON

STEPHENSON'S SILVER MINE,

NEAR FORT FILLMORE, N. M.,

IN THE

ORGAN RANGE OF MOUNTAINS, N. M.,

BY J. T. SPRAGUE,

BREVET MAJOR AND CAPTAIN U. S. ARMY.

WITH AN APPENDIX.

ALBANY:

C. VAN BENTHUYSEN, PRINTER, 407 BROADWAY.

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P R E F A C E.

Statement of expenses in working Stephenson's Silver Mine one month, or 26 working days, from data as at present known, supported by reliable testimony in the following pages, viz :

1 Man called a miner or overseer at the mine, . . .	\$30 00
3 Drillers or blasters at \$15 per month,	45 00
10 Laborers at \$10 per month,	100 00
1 Smelter or refiner at the furnace, per month, . .	40 00
1 Boy and mule,	6 00
3 Boys to break ore at \$4 per month,	12 00
— Fuel for furnace,	26 00
19	
Cost of one month's labor,	<u>\$259 00</u>

The above workmen will produce as follows :

Ten Laborers at work 26 days will bring to the mouth of the mine 600 lbs. per day, each man, which amounts to 156,000 pounds of ore per month; this at \$17 for each 300 lbs. is worth	\$8,840 00
Transportation of this to the furnace at \$3 per ton, amounts to	\$234 00
Add to this the cost of labor per month, as above,	<u>259 00</u>
Deduct this—total cost,	\$493 00
Thus giving this amount as profit for one month, . .	<u>\$8,347 00</u>
Deduct 5 per cent. for accidents, delays, &c.,	417 35
This gives a clear gain of so much per month, . . .	<u>\$7,929 65</u>
Increase the number of workmen to 100 men, with a capital of \$50,000, and there results from one month's labor of 26 days,	41,735 00
Carried forward,	<u>\$49,664 65</u>

Brought forward,	\$49,664 65
Two, three, or five hundred men can be employed to advantage, with a corresponding increase of capital.	
Deduct from the above amount 5 per cent. for accidents, delays, &c., incident to so large a work, viz,	2,086 75
	<hr/>
The clear profits of one month's labor is,	\$39,648 25
Which gives in one year, (12 months,) allowing 26 working days in a month, an annual income of	\$475,779 00
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The foregoing is not the result of speculation, but from what is well known, and corroborated by the certificates herewith of the most reliable men in New Mexico and in Texas—men who had no object in telling other than the truth, and have been cautious in their statements, as they were told that what they said upon the subject was designed for public use. The individuals who have given statements in the following pages are well known to me, and are acknowledged to be among the first men, in all relations, to be found in the country. Each statement given, though made at different points, and at various periods within the past two years, corroborate each other in a striking manner, all going to show clearly and conclusively the products of the Mine, as known, as well as the inexhaustable abundance of the ore. It is well established, from the various statements, that the ore will produce seventeen dollars worth of silver for every three hundred pounds.

A Company is now organized under the existing laws of the State of New York, capital \$1,000,000, or fifty thousand shares at \$20 per share.

Specimens of the ore, slag, flux, virgin silver, and the dollars, coined at the Mint in Chihuahua, Mexico, can be seen at the office of the Company, No. 34 Pine Street, New York.

J. T. S., *Major, &c., U. S. A.*

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MEMOIR

UPON THE

ORGAN RANGE OF MOUNTAINS, N. M.,

AND UPON

STEPHENSON'S SILVER MINE.

MEMOIR.

The Organ Range of Mountains is in the Territory of New Mexico, running parallel to the Rio Grande, from north to south, for a distance of about thirty miles, having a general direction of about fifteen miles from the river. The serrated summit of the range is strikingly picturesque and elevated, much like the pipes of an organ, many of them resembling burnished silver, their height being about three thousand feet above the valley of the Rio Grande. The mountain slopes gradually to the plain, which is destitute of timber, but covered the year round with verdant gramma grass. Beneath this is an underground forest of timber of muquite roots, from two to ten inches in diameter; these are abundant and afford excellent fuel and coal. The mountains present a most rugged and barren appearance: overhanging cliffs, deep ravines, and steep precipices intercept the explorer in every direction. The formation is old slate, porphyry and igneous rock; all vegetation is blighted, the huge cliffs and sides of the mountain look as though they had been run over by liquid fire, curling the protruding galena into all sorts of curious shapes. This range of mountains has been known to the Mexicans for many years as possessing great mineral qualities; large sums of money have been expended, and many lives lost in the efforts to develop its resources. The Muscalaro Band of Apache Indians, the most formidable in New Mexico, have waged an exterminating war against all who made the attempt. Thirty years ago, strong mining parties came from Chihuahua, two hundred and fifty miles distant, accompanied by Mexican troops, determined to work at all hazards. For a time these armed parties were successful, but the incessant and vigorous attacks of the Indians decimated their numbers, destroyed their herds and ultimately compelled them to make a hasty retreat.

This state of things existed until within a few years past. The cession of New Mexico to the United States, in 1848, involved the necessity of bringing this band into subjection. They soon encountered the Americans, and up to 1851 seemed determined to hold their ground. The large herds of cattle and mules from Fort Fillmore, ten miles distant, guarded by strong detachments of U. S. troops, were attacked, but finding an obstinate and successful resistance, the Indians soon concluded they had a different class of men to deal with than those they had encountered for fifty years past. This Apache Band, after several conflicts, in which they lost many of their numbers, are now planting large crops of corn and living peaceably in the Sacramento Mountains, thirty miles east of their old homes. For three years past, no act of hostility has been committed, and travelers pass round among them alone, without molestation. Immense herds of cattle, guarded by Mexican boys, can be seen occupying these plains in all directions. This state of affairs afforded to all classes an opportunity to explore the Organ Mountains. It is now well known that there are Mines of copper and lead as well as silver. In many places shafts have been sunk thirty and forty feet, and the decayed adobe walls of smelting houses, together with large quantities of slag around them, show conclusively that mining was carried on in this region to a great extent, in years past. A vein of Galena runs along the western slope for a distance of ten miles; croppings out are frequently to be seen. The citizens of Dona Ana, as well as those of Mesilla, have explored these by sinking shafts, in every instance obtaining valuable ore, which was sent to the U. S. mint in New Orleans and there tested. These people have not the means of working, even had they the industry, and they now profess to be at work in order to hold the mines, in the expectation of selling to those who have the vigor and money to commence extensive operations.

LOCATION.

Stephenson's Silver Mine is situated in the Organ Range of Mountains, New Mexico. It is 650 miles from San Antonio, Texas; 300 from Santa Fe, N. M.; 260 from Tucson, or Fort

Buchanan, the frontier of Sonora, or Old Mexico. The United States Post, Fort Fillmore, is ten miles distant. Mesilla, the most growing town on the Rio Grande, in an extensive valley of that name, is fifteen miles; Las Cruces, ten; Dona Ana, fifteen; Fort Bliss and El Paso, forty miles. The Mine is approached from the Rio Grande, due east, by a road turning off of the main road about three miles from Fort Fillmore, and continues ten miles to the base of the mountain by a gentle ascent. Before reaching this point, a road diverges to the left, passing over the range to St. Augustine Spring, thence to Fort Stanton, one hundred and twenty miles. The smelting house is on the Rio Grande, where the route to the Mine leaves the great highway, three miles from Fort Fillmore. This consists of a number of adobe houses, enclosing an area of about two acres of ground, within which is the Furnace, also the store houses and dwellings of the workmen with their families. The entire construction is composed of dry mud, after the fashion of the country, hastily thrown up to meet immediate wants. The position is well chosen, as the river, half a mile wide, flows in a bold and rapid current at its base, almost washing the foundation of the buildings. To this place the ore is brought in ox carts, with one yoke of oxen, driven by a Mexican boy, containing from four to five thousand pounds. The descent from the mountain, or Mine, is so gradual, and the road so smooth, a wagon runs the entire distance with no other assistance than a proper direction. There are several streams on the route, but these cannot be relied upon for a permanent supply of water. At the Furnace (in the river) the ore is washed and broken into small particles and smelted. One pair of bellows, aided by a mule and a boy, keep up a feeble blast. The refining furnace is in the adjoining room, made of sun dried clay, and repaired from day to day. Small boys and girls are employed to break the ore for the furnace. The lead, or flux, is thrown away with the slag, both of which contain a portion of silver, as the rude machinery is incapable of obtaining the whole. The silver bullion is sold to merchants in the vicinity for one dollar an ounce, paid in goods, at a large profit. The merchant takes it to the New Orleans mint, where one

dollar and twenty-two cents is obtained per ounce, owing to the quantity of gold found after the usual assaying.

THE DISCOVERY OF STEPHENSON'S SILVER MINE.

The Treaty of Guadalupe in May, 1848, ceded to the United States the Territory of New Mexico. The Indians occupying the country had for forty years waged a successful warfare against the Mexicans, and were reluctantly brought to realize the power and resources of the United States. To the year 1852, they disputed the highways, and murdered, with impunity, hunters, travelers and herdsmen, and it was not until after many severe conflicts that they were induced to yield to the supremacy of the Americans, when they, from necessity, abandoned this mode of warfare, and sought honest industry for support. During the year 1850, Hugh Stephenson, Alexander Carrasco, Jose Perez and Ramon Duran, in company with others, determined to explore, or prospect, the Organ Range of Mountains, though at the peril of their lives. From day to day in their rambles they discovered strong evidences of valuable ores. Croppings out of Galena were found in a continuous vein on the western slope, extending for five miles, and then terminating on the eastern slope. Quite a large lump of Galena protruded from the crest of a peak, which, with some difficulty, was detached, and taken by them to Dona Ana, where it was smelted in a rude manner, and proved to contain a large proportion of Silver. The next season they sunk a shaft, and as they followed the vein from the peak, where they detached the lump, the ore increased in richness. Without means to work, they from month to month labored successfully, in a most economical and limited way, until the Mexican laborers refused to expose their lives in the mountain and on the Plains, at any price. Their herds were driven off by the Indians, the wagons were intercepted in going and coming from the smelting house, the drivers killed, when, for the want of arms and ammunition, they were compelled for a time to relinquish all hopes of a successful result. Supposing they held the Mine under the laws and customs of Mexico, and to secure beyond litigation

their right, immediate steps were taken to record their discovery in Dona Ana County. The papers accompanying this are copies of the proceedings had at that time, showing their honest purposes in regard to the discovery. The foregoing I obtained from Mr. Stephenson, and from other respectable citizens in the towns of Dona Ana, Las Cruces and Mesilla.

THE TITLE TO STEPHENSON'S SILVER MINE.

The Title to the Mine is discovery, possession, and constant working, the only right known under the customs and laws of the United States. Such have been regarded in California for ten years past, and in no instance has the United States Government interfered; on the contrary, have given every encouragement.

In order to place beyond litigation the right or title, a Warranty Deed is given to me by Mr. Stephenson, transferring all that he possesses in the Mine; no more can be had. The papers are complete, and duly recorded at Mesilla, Dona Ana County, in which the Mine, and all that appertains to it, is located. Jose Perez and Ramon Duran sold their portion, six shares each, to Hugh Stephenson; Alexander Carrasco sold his, six shares, to Mr. Flotte, thus making, in accordance with Mexican laws, twenty-four shares. This gave Mr. Stephenson three-fourths of the Mine, viz: eighteen shares, or three-fourths. Mr. Flotte died in 1855.

THE MINE AND HACIENDA OR FURNACE.

In the month of August, 1856, I visited Stephenson's Silver Mine and Smelting Establishment. The latter I found situated three miles from Fort Fillmore, on the main road, immediately on the bank of the Rio Grande. It consisted of a number of adobe buildings, well made, enclosing an area of about two acres, in which resided the workmen with their families. Within the space were large piles of ore, around which sat six small boys breaking the ore in pieces with hammers. The Furnace was in operation,—a boy and one mule kept up a blast with a rude pair of bellows. The refining furnace was in the

immediate vicinity. A large cake of silver was undergoing the process; a man with an iron rod scraped off the lead as it arose to the surface. The flake when finished, he said, would be worth about fourteen dollars. All the arrangements were of the most simple construction, and of the most rude material, costing but little labor or money. Large piles of slag and flux lay around the building. The poor Mexicans were allowed to make use of this, and generally obtained from seventy cents to one dollar a day in re-smelting; women and children were generally employed in the work. The fuel used in the Furnace was coal, of an excellent quality, made from musquite roots, which are obtained in any quantity upon the Plains, extending for ten miles to the mountains. Every thing about the establishment indicated great shiftlessness and poverty, as well as want of care. Large piles of ore lay about untouched, only requiring industry and proper machinery to well reward them for their labor. But three men were employed, the women and children aided in the work. There were extensive corn fields around the establishment, and good gardens. The nearest house was two miles distant. The town of Las Cruces, of about fifteen hundred inhabitants, was five miles up the river; Mesilla, containing from six to eight thousand, on the opposite bank, was four miles, where the Rio Grande could be forded, which was generally about ten months of the year. When the river was high, the usual route to the town was through Las Cruces. The Braxcito Grant, owned by Mr. Stephenson, comprising three thousand acres of land, adjoins that on which the Furnace stands. Upon this grant Fort Fillmore is located. Three large mercantile establishments are near the post; the mail passes here weekly, from San Antonio in thirteen days, thence to Santa Fe in five; also the great overland mail from St. Louis and Memphis to San Francisco, to Tucson in Arizona, or Fort Buchanan, the frontier of Sonora, thence on to San Francisco, California.

From the Furnace, I went to the Mine by a good road, due east, distant ten or twelve miles. The high cliffs, sparkling in the sunlight, mark the spot as far as the eye can reach. Around at the base of the mountain, I clambered up a rugged

foot path, perhaps two hundred yards, to the mouth of the Mine. This I found to be about ten yards wide, truncating the peak of the summit; around were several small shanties in which the workmen slept. I then entered the Mine by the means of a ladder about twenty feet long: here was a small chamber, or drift, following the vein, dipping in a south-west direction. Leaving this, another ladder took me down perhaps ten feet, here another vein was being worked. Two men were blasting and drilling. The veins upon which they were at work, were from three to four feet square, surrounded by gravel, shale and yellow dirt. The vein was extremely hard. Instead of taking away the soft earth surrounding the vein, they work directly upon the vein, and by blasting and drilling tunnel or drift for yards, until it becomes so limited, at the extremity, a man creeps upon his hands and knees, and when too inconvenient, it is abandoned. The depth of the shaft does not exceed fifty feet. The general direction of the excavations are in a southwest course, descending gradually, and becoming richer in quality, and increasing in quantity as the vein continues. In addition to the two men blasting, there were six Mexicans, packers, as they were called, who brought the ore to the mouth of the Mine in skin bags, containing each from fifty to sixty pounds, a most laborious task, as the ladders were simply round logs, upon which were nailed slats or strips of boards, at proper intervals. The intelligent Mexican in charge, told me that these men would make fifteen trips a day, and the average weight of ore, each trip, would be from forty to fifty pounds, thus giving an aggregate of six hundred pounds of ore per day to each man. This would yield, at the lowest rate known as the product of the ore, twelve dollars for the three hundred pounds, or twenty-four dollars for the six hundred pounds at the mouth of the Mine. The packers were hired at ten dollars a month, finding themselves. The drillers and blasters were paid fifteen dollars a month and fed. The results of their daily labor were uncertain, but he found that three could keep six packers constantly at work; at a rough estimate this six hundred pounds could not cost more than one dollar, two, at the extent; thus six hundred pounds of ore from which

twenty-four dollars, certain, perhaps thirty-six, could be procured, was the result of the labor of one man, one day. The cost of transportation to the smelting house, the overseer, refiner, workmen there, &c., must be considered, costing, probably, three dollars, thus leaving a clear gain, in silver, of thirty-four dollars for the six hundred pounds at the highest valuation per *carga*, or twenty dollars at the lowest, viz: twelve dollars per *carga*. With proper arrangements in the way of machinery, mule and steam power, experienced miners, and industrious laborers, it is impossible to estimate the amount of ore which could be brought to the surface in one day, even at a much cheaper rate. The Mexicans base their calculations upon the labor of one man, and what is called a *carga*, or 300 pounds. The overseer at the Mine was a practical Mexican miner, and had followed the business in Old Mexico fifteen years. He further stated that he had known this Mine to yield nineteen dollars to the *carga*, or three hundred pounds, most generally fifteen and sixteen, occasionally twelve, never less; and that he had worked years in Mexico upon Mines yielding not to exceed seven dollars the *carga*. He had been employed here nearly two years; at no period had there been at work more than twelve or fifteen men; sometimes but six. This man accompanied me along the slope and over the crest of the mountain. He showed me the croppings out of the vein in three places, which he said continued to the east side of the Organ Range, and believed it to be richer from the specimens he had seen, than the vein now worked. He was of the opinion that the vein should be struck at the base of the mountain and entered by drifts from the plain below. From Mr. Stephenson's limited means, and his inability to give his personal attention, he would not consent to the expenditure of a dollar without being sure of its return the coming week. The means of transportation which had been in use two years, in taking ore to the smelting house and bringing back subsistence, had been two ox carts drawn by four yoke of oxen each, and driven by two Mexican boys.

Water at the Mine was taken from natural tanks in the mountain; enough was always there for the use of the work-

men; when failing it was brought from the Rio Grande. Wells can be sunk and water obtained in any quantity at the base of the mountain.

THE PRODUCTS OF STEPHENSON'S SILVER MINE.

It is well settled that the mine is sure to average from sixteen to seventeen ounces of silver to three hundred pounds of ore; as high as nineteen and twenty ounces are named. This is worth, at the United States Mint, in New Orleans, one dollar and twenty-two and a half cents per ounce. Mr. Stephenson states that he has obtained from the Mine about thirty thousand dollars. He further says, he has expended fifteen thousand dollars in obtaining it. It must be remembered, that in this sum his smelting houses are included, which cost six thousand dollars, besides many contingent expenses incident to a commencement. The ore, flux and slag speak for themselves. The large quantity and richness of the ore is fully established by experience and observation. The certificates herewith are conclusive upon the matter, and the pure silver, ten thousand dollars of which I have seen in flakes, is, to my mind, more so.

REMARKS.

The value of Stephenson's Silver Mine being established, the title perfect, as far as the laws of our country will permit, it is well to consider briefly what course should be adopted in order to develop its mineral wealth. In the first place, thirty or forty thousand dollars should be in hand to make a fair start. The object is to get the ore and deliver it at the smelting house at as cheap a rate as possible. An intelligent, practical miner should be employed—then about one hundred laborers; machinery of the most approved kind purchased, besides the implements necessary for blasting and drilling. Laborers can be hired from prices ranging from six to fifteen dollars per month. To pay these men there should be a store at the smelting house, with a well assorted stock of goods, worth at least twenty thousand dollars. Nearly all the workmen could be paid in goods and groceries, which must be sold at a low

price to command the trade, say at fifty per cent profit. The ore being at the mouth of the Mine, it has to be transported to the smelting house, ten miles. This should be done by the company. Ten teams, six mules each, with substantial wagons and harness, should be purchased for the purpose. The wagons could take at one load about five thousand pounds of ore. Mexican drivers can be had for ten dollars a month. The mules are to be fed upon corn raised by the company, or else purchased with goods at seventy-five cents per bushel, the goods sold at one hundred per cent profit. The surrounding plains afford an abundant supply of grass nine months of the year, but mules constantly at work must have corn. These wagons, at the proper time, can be used in transporting bullion to the coast, and return laden with merchandise. The trip can be made, going and returning, in forty days. The ore being at the smelting house, the next thing is to obtain the pure silver from it. To effect this, an experienced, honest refiner must be had. Such, it is said, can be found in Chihuahua for about two thousand dollars a year. There are also to be washers of ore, and laborers to aid in all kinds of work. The number of these will depend much upon the machinery introduced. There should also be an experienced assayer of minerals, who should devote his time to this branch, which would enable the company to purchase all kinds of minerals brought in by Indians and Mexicans at a low price, and paid for in goods. When the silver is obtained, it is to be taken to San Antonio, six hundred and fifty miles, and then to Lavacca, on the coast, one hundred and forty miles, thence by steamer to New Orleans, La. At the United States Mint it is to be disposed of at one dollar and twenty-two and a half cents per ounce. Some has been sold for one dollar and twenty-five cents an ounce. The trip from Lavacca, on the Gulf of Mexico, can be made to the Mine at any season of the year. The road is constantly traveled, and guarded by six U. S. military posts. The business incident to the store could be made to yield a large income. The company could well afford to under sell the merchants in Mesilla, Las Cruces and Dona Ana, from their facilities of trade, and money at hand to

purchase goods advantageously. This valley, and the Mesilla valley, are rapidly filling up with industrious Americans, as well as Mexicans. This is on the great highway to Old Mexico, Arizonia, California, and to Santa Fe, N. M. Every encouragement should be given to the Indians and Mexicans to bring in all kinds of ores, if valuable, a few presents would induce them to show where they were to be found. There are no merchants in the country who will hazard the purchasing of any kind of minerals. In this manner, the trade would be a monopoly, and involve, during the year, many thousands of dollars; doubtless lead to the discovery of valuable mines. Most excellent coal for use is obtained from the musquite roots at twenty cents per bushel. The Musquite Plains, extending for thirty miles around, afford an abundant supply of this kind of fuel. All that will be required can be paid for in merchandise.

This country, which is now being opened, has been closed to all enterprise and industry for fifty years past, from the determined hostility of the Indians. The opportunities for favorable investments are great. The purchase of land alone will give a handsome interest upon money. The Pacific Railroad may pass near this point, so urgently recommended by the Secretary of War, and by Captain Pope, of the Topographical Engineers, who surveyed the route from Fulton, Texas. The great overland California inland Mail, from St. Louis to San Francisco, now passes within one hundred yards of the smelting house. All that is required in this region is money, industry and intelligence. The old population are poor and indolent. The Indians, once so active, are quiet and friendly, and may be made most useful laborers in and around the Mine, as well as in herding cattle. It would be well for the company to purchase from two to three hundred head of beef cattle; they will be useful as working oxen, and for fresh beef. The cost is but little, beyond the expense of herding, as a rich grass plain extends from the smelting house to the Mine. Indian and Mexican boys, as herders, can be hired for three and four dollars a month and fed upon beef and beans. These cattle are bought in Texas for ten dollars a head. The buildings at the smelting house should be enlarged by adding wings of the

same material; besides outhouses. These can be built for a small sum by Mexicans. Land is abundant and unoccupied. Taking a front on the Rio Grande from the Braxcito Grant, running up the river to Las Cruces, nine miles, thence due east to the Organ Mountains, making a square, and coming back to the place of beginning, the entire space is public domain. The Surveyor General of New Mexico, informs me that this country has just been surveyed, and, that the maps and field notes are in the Land Office, Washington, D. C. At some future time the land will be placed in market, most likely not for many years, in the mean time, any portion can be occupied, and when sold, public notice will be given. I would recommend that a front upon the river of four or six miles be purchased. In order to effect it at a low rate, obtain land warrants from time to time, and locate them when the land is placed in market. In this manner, a most valuable section of country, comprising thousands of acres, could be purchased at less than fifty cents an acre. The Furnace, or smelting house, is upon public land. Mr. Horace Stephenson has filed his claim to the one hundred and sixty acres of land upon which the buildings stand. His right is under the Donation act of Congress of July 22d, 1854. The Surveyor General informs me that his claim is on file, in due form, and will be confirmed by the Government. The buildings I have purchased of Mr. Hugh Stephenson, the ground of Mr. Horace Stephenson, his son. The whole is placed beyond litigation. At the present time, and for years to come, there cannot be any interruption in the use of thousands of acres of land.

In conclusion, the object is simply to obtain ore from a mountain where there is an abundance, transport it to the Furnace, smelt it; then take the silver to the U. S. Mint, New Orleans, La., where coin is obtained, allowing one dollar and twenty-two and a half cents per ounce for the bullion. Contradictory statements are given as regards the value of the ore per cargo, three hundred pounds. But there is no question, from the most authentic testimony, that sixteen and seventeen dollars per three hundred pounds, can be relied upon. The larger amount of money in hand, to go into this operation, the

better. Machinery could then be had upon the most improved and enlarged scale ; two or three, or even five hundred laborers could be employed ; a large amount of goods sold with a profit of one hundred per cent ; business would be concentrated here, and the general current of population would make all things prosperous and certain, when a corresponding result would well reward capitalists for a large investment. One hundred thousand dollars in hand, applied in a proper manner, by an agent, or agents, acquainted with the country and people, would yield, in twelve months, *certainly*, fifty per cent profit. The result is certain, judging from what is now known, under the most unfavorable workings, and from what can be seen in the Mine, without the contingency of striking numerous and richer veins. The Mine, in time, will yield 100 per cent, clear, if not more. There are known to be other Silver Mines, also a Copper Mine, not five miles distant. The proper method would be to commence a system of "prospecting" with experienced scientific geologists and miners ; take possession and commence working, which establishes the *right* acknowledged by the U. S. Government.

I have papers in my possession showing the position of one Silver Mine owned by officers of the army, which can be obtained at a low price.

Merchandise is transported from the coast at Lavacca, Texas, for nine cents per pound. Wagons often return empty, and will take a return load for two and three cents per pound.

The manufacture of Lead could be made a lucrative business. The Government is about establishing Arsenals of construction in New Mexico. The Lead required for bullets can be sold at a much less rate than transporting it from the States. Sheet Lead might be introduced successfully for the covering of buildings, and sold at such a price as to induce all classes to cover their buildings in this manner instead of with dirt, as at present. The sale could be carried throughout Old Mexico, extending to Chihuahua and Durango. Bar Lead is now sold throughout the country for twenty to thirty cents a pound. Shot sells for fifty cents per pound. The above articles could

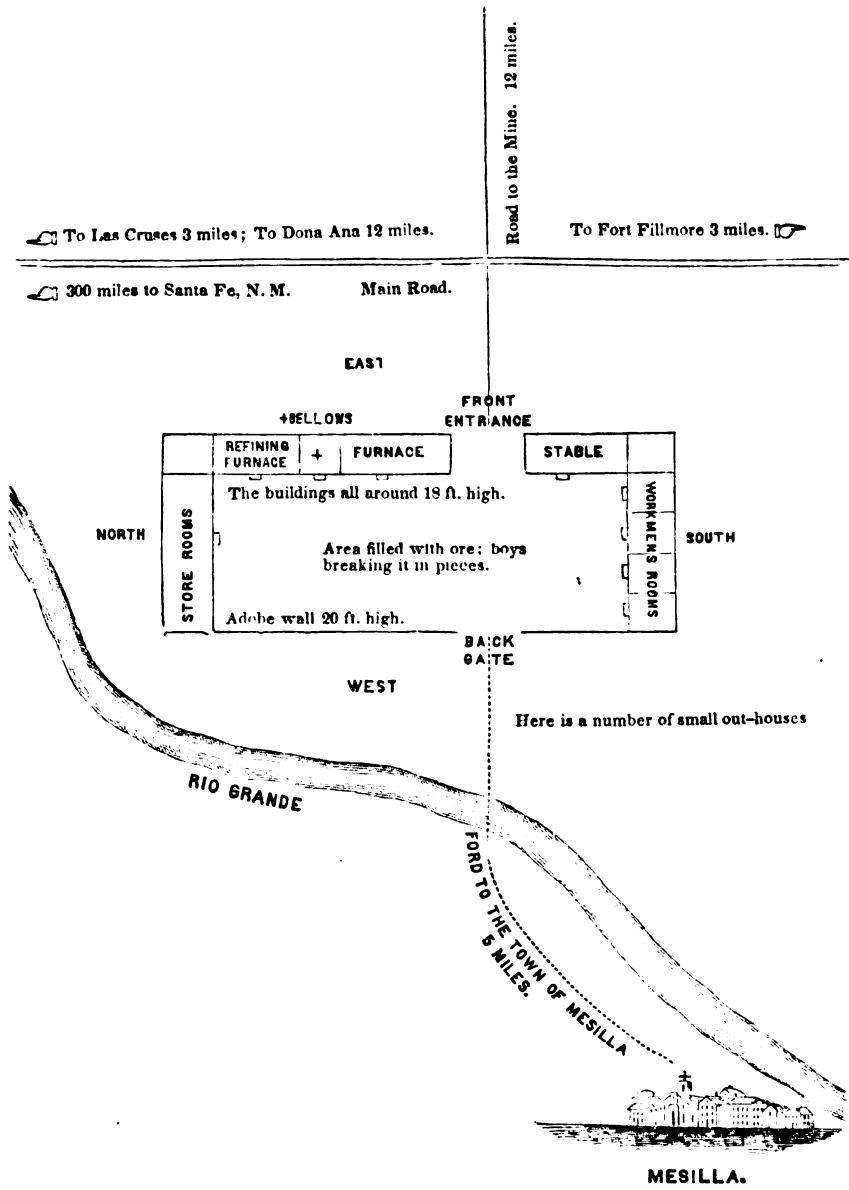
be sold at the smelting house for ten or fifteen cents per pound, thus controlling the entire business of the country.

The foregoing remarks are merely suggestive of what might be done, but it would be far better to have a clear cash capital in hand, and confine operations to simply getting out the ore and silver, and paying up all workmen every Saturday night in cash. Great advantages would be derived from adopting this course.

J. T. SPRAGUE,

Brv. Major and Captain U. S. Army.

GROUND PLAN OF STEPHENSON'S SMELTING HOUSE.



APPENDIX.

(A)

COPY.

**SILVER PURCHASE NO. 229—Bullion Branch Mint, New Orleans, 25th
February, 1856. Wm. McGrorty.**

DESCRIPTION.	GROSS WT. BEFORE MELTING.		GROSS WT. AFTER MELTING.		FINENESS OF SILVER.	STANDARD WT. OF SILVER.		RATE FOR OZ STAN'D.	VALUE OF SILVER.	
	Ounces.	Dec.	Ounces.	Dec.		M.	Ounces.		Dec.	Dols.
Cakes,.....	635	25	629	55	961	672	21	at 122½ cts.	823	46

A true copy from the original,

(Signed)

J. T. SPRAGUE.

We do hereby certify, that we have purchased of the Mexican working what is known as the Stephenson's Mine, near this post, since January 1st, 1856, about thirty-five hundred dollars worth of Crude Silver, or Bullion, in flakes or cakes, paying him at the rate of one dollar per ounce.

(Signed)

HAYWARD & McGRORTY,

Sutlers U. S. Army, Fort Fillmore, N. M.

FORT FILLMORE, N. M., August 30, 1856.

Messrs. Hayward & McGrorty are sutlers at this post.

(Signed)

B. L. E. BONNEVILLE,

Col. 3d Inf. Commanding Post.

COPY.

**SILVER PURCHASE NO. 803—Memorandum of Silver Bullion purchased at
New York, the 11th day of November, 1856, from Thos. J. Dix.**

DESCRIPTON OF BULLION.	GROSS WT. BEFORE MELTING.		GROSS WT. AFTER MELTING.		FINENESS OF SILVER.	STANDARD WT. OF SILVER.		RATE PER OZ STAN'D.	VALUE OF SILVER.	
	Ounces.	Dec.	Ounces.	Dec.		M.	Ounces.		Dec.	Dols.
Mexican cakes..	3011	95	2971	70	963	3179	71	at 122½ cts.	3,895	14

COPY.

NO. 212—Memorandum of Silver Bullion deposited at the U. S Assay Office, at New York, the 1st day of December, 1856, by G. A. Hayward.

DESCRIPTION OF BULLION.	WEIGHT.				FINENESS.	VALUE OF SILVER, AT \$1.22½ PER ST. OZ.		
	BEFORE MELTING.		AFTER MELTING.			1000ths.	Dois.	Cts.
	Ounces	Dec.	Ounces.	Dec.				
Mexican discs with gold.....	271	20	269	40	978½	358	80	

I certify that the net amount of the above deposit is three hundred and fifty-eight dollars and eighty cents, payable at the U. S. Assay Office, only on presentation of the receipt, of a corresponding date and number, heretofore issued, viz: in Silver Coins \$358.80.

(Signed) GEO. W. EDELMAN,
For Treasurer of the Assay Office.

COPY.

BANKING AND COLLECTION HOUSE OF H. B. MERRELL & CO., DEALERS IN BULLION AND EXCHANGE.

NEW ORLEANS, July 7, 1857.

For amount of Bullion received from M. Koenzyheim, Esq.—3,871 9-20th ozs.
 Bullion at \$1 25, \$4,839 30
 \$4,522.50 for New York,..... 4,522 50
 Sent by Hayward & McGrorty,..... \$9,360 81

COPY.

FORT FILLMORE, NEW MEXICO, May 20th, 1858.

In the month of November, A. D. 1856, we sent to the Mint at New Orleans and the U. S. Assay Office, New York, 3605 ounces averdupoise of Silver Bullion, taken out of a Mine in the Organ Mountains, near this place (called "The Stephenson's Mine"). Part of said Bullion was assayed at the Mint in New Orleans, and part at the U. S. Assay Office, New York, for which we received in coin \$4,253.94, the proceeds of the above amount of Bullion.

(Signed) HAYWARD & MCGRORTY,
Sutlers U. S. Army. Fort Fillmore. N. M.

(B)

CAMP OF PACIFIC RAILROAD SURVEY, }
 Rio Pecos, New Mexico, June 3, 1856. }

Dear Sir—Your letter requesting information upon the geological character and productiveness of the Silver Mines in the vicinity of the Organ Mountains, New Mexico, have been received. In reply I would state, that for want of the proper means, I have not as yet been able to make a thorough quantitative



A SECTION OF THE ORGAN RANGE OF MOUNTAINS, SHOWING THE DIRECTION OF THE VEINS OF SILVER ORE.
BY G. G. SHUMARD, M. D., GEOLOGIST, &C.

analysis of the ore, and can, therefore, upon that head, only give you such (approximate) results as were obtained in the field by the limited means at my disposal, and from persons engaged in working the Mines.

These Mines are situated near the western base of the Organ Mountains, at a point about fifteen miles east of Dona Ana, and are composed of a number of distinct and nearly parallel veins which are nearly vertical; vary greatly in thickness, and as far as examined by myself, pursue a general northeasterly and southwesterly direction, through upheaved and highly metamorphosed strata of limestone (*carboniferous*). The one referred to in your letters, and which is at present owned by Mr. Stephenson, is situated only a few hundred feet from igneous rock, and from present indications bids fair to prove inexhaustible, and would, undoubtedly, if properly worked, yield a handsome per centage upon almost any amount of capital invested. The ore there occurs principally in the form of sulphuret of lead and silver, or argentiferous galena, and is extracted from the vein by means of a shaft sunk to the depth of about thirty feet. The matrix, or veinstone, consists principally of crystalline carbonate of lime and quartz, both of which are often dissolved with oxide of iron, and present an average thickness of about ten feet. The metalliferous portion varies in thickness from a foot to eighteen inches, and is, for the most part, very easily detached from the matrix.

The ore as at present worked, yields about eighteen dollars in silver to the three hundred pounds; but this cannot be taken as any indication of its real value, as the silver is but partially extracted, while the lead, for want of proper transportation to market, is either thrown away as refuse, or sold at very reduced prices.

A little to the north, and south of Mr. Stephenson's, several other shafts have been sunk; but for want of capital and other causes, are now abandoned. In one of them, the ore was observed to be between two and three feet in thickness, and was not inferior in quality to that above described.

The accompanying section will explain more fully the position of the different veins examined, as well as the character of the neighboring rocks. As soon as specimens of ore, now in my possession, shall have been fully analyzed, I will not fail to acquaint you with the result.

I am, Sir, with much respect,

Your ob't servant,

GEO. G. SHUMARD, M. D.,

Geologist U. S. P. Railroad Survey.

MAJ. J. T. SPRAGUE, U. S. A., FORT STANTON, N. M.

A Texas paper, the San Antonio Texan, Aug. 10, 1858, says that "Dr. Shumard, State Geologist, is making preparations to forward his library and geological collections to Texas. He will go in person to New York to superintend the purchase of instruments, chemicals and other necessary articles for the prosecution of the work. He will then proceed to this place. He has secured the services of his brother, who was with Captain Marey in his explorations in

Texas. He is well known to our citizens in connection with his having drawn attention of the scientific world to the mezquite gum, and his discovery of coal fields in this State. The geological survey of Texas will be joint work of those distinguished brothers."

(C)

Extract from the Doylestown (Penn.) Democrat, August 17, 1858, edited by Major W. W. H. Davis, formerly Secretary and acting Governor of New Mexico :

NEW MEXICO AND THE PRECIOUS METALS.

"We are much gratified to learn that our old friend, Major John T. Sprague, of the United States Army, has recently acquired possession of the richest deposit of silver ore in New Mexico, and probably in North America. This is known as the "Stephenson Mines," and is situated in the Organ Range of Mountains, in the valley of the Rio del Norte, and but a few miles north of the southern line of the Territory where it joins Texas. These Mines were discovered at the early settlement of the country, and their richness was fully known, but on account of the hostility of the neighboring tribes of Indians, it was not possible to work them until within a few years, when they came into the possession of Mr. Stephenson, the late owner. He erected rude works near by, for the purpose of smelting the ore, and without either care or skill, he obtained a very large amount of silver. We visited his works when in that country, and never saw handsomer or purer metal turned out from any establishment; and from the rude machinery in use, not over two-thirds of the silver could be extracted. In the Mines a shaft is sunk about thirty feet deep, from which drifts diverge on the different leads or veins, some of which are two or three feet in thickness. The ore is sulphate of lead and silver, and is sufficiently rich to yield eighteen ounces of pure metal to every *carga* of three hundred pounds, and the gold in it makes the silver bullion worth one dollar and twenty-five cents per ounce at the United States Mint. We have heard the ore pronounced, by competent judges, the richest in the country. For those who desire to invest a little capital in mining operations, we know no better opportunity anywhere. The ore is undoubtedly of the first quality in point of richness. Labor can be had at low rate, and provisions are cheap. There is, apparently, a whole mountain of ore; and there is every reason to believe the supply to be inexhaustible. We think there is a rich harvest of wealth to be acquired by those who embark in this enterprise. It cannot fail to yield large profits on the investment."

(D)

EL PASO, Texas, July 3, 1858.

MAJOR JOHN T. SPRAGUE, U. S. A. :

Dear Sir—Your letter of June 4th, propounding certain *interrogatories* to me touching the Mine Santa Domingo de la Calzada, situated in the Territory of New Mexico, has been received, and I hasten to respond to the same.

To your 1st Interrogatory—"How much bullion have you taken from said mine?" I answer, about \$30,000.

2d Interrogatory—"How much money have you expended in extracting the above quantity of bullion from said Mine?" I answer, not more than \$15,000.

3d Interrogatory—"How much *ore* can one man get out in a day, and how many dollars will the amount yield?" I answer that one man can get out from 500 to 900 lbs. of ore per day, or 3 *cargas*, which yield from 12 to 14 ozs. per *carga* of 300 lbs., under our inferior mode of smelting the same.

4th Interrogatory—"What will the labor of one man cost per day?" I answer that laborers can be procured at 62½ cents per day.

I will state, however, for your information, that the above expenses are much higher than they should be, owing to the want of proper machinery and other facilities, which can be easily obtained by a company desiring to work the same.

Hoping the above answers may be definite enough,

I am your ob't servant and friend,

HUGH STEPHENSON.

SANTA FE, New Mexico, July 13, 1858.

Major—In answer to your inquiries, it gives me great pleasure to state that I have known Mr. Hugh Stephenson twelve years, and was in his employ three and a half years.

In any statement he may make, you can place the most implicit confidence. He is a man scrupulously exact in all his dealings, and of unimpeachable veracity and integrity.

I remain yours, &c.,

JAMES L. JOHNSON,

Of Beck & Johnson, Santa Fe.

TO MAJOR JOHN T. SPRAGUE, U. S. A., SANTA FE, N. M.

SANTA FE, N. M., July 15, 1858.

Mr. James L. Johnson, who has signed the above, is personally well known to me. He is partner in the first mercantile establishment in New Mexico. Any statement that Mr. Johnson may make, can be relied upon to the utmost extent, as he is a man of the highest respectability and veracity.

JOHN B. GRAYSON,

Brev. Lt. Col. and C. S. U. S. Army.

(E)

FORT FILLMORE, N. M., Sept. 12, 1856.

Senor Jose Agarie, a Mexican miner, now in charge of Stephenson's Mine, states as follows: I have followed the business of mining eighteen years; have been employed in this mine about one year. I now employ six drillers at \$15 per month, and seven packers at \$10 per month—they find themselves. When the *lead* is good, Mexicans can be obtained who work for three dollars per *carga*, or who deliver at the mouth of the Mine three hundred pounds, and find themselves: this is the best method.

The largest amount of ore obtained in one month has been one hundred and fifty *cargas*. the lowest seventy *cargas*.

Three hundred pounds of ore is sure to yield twelve ounces of silver. The average yield is sixteen ounces to the three hundred pounds.

The average of Silver obtained in the last twelve months has not been less than \$700 per month, nor more than \$1,200.

I have carefully examined Stephenson's Mine, and consider it reliable and rich; all that is wanted is money to work it to advantage. Now the loss in working is great, owing to bad machinery and inexperienced workmen. Three rich veins are now open, yielding ore in abundance, each more than a yard wide.

I am satisfied that if a man would invest to the amount of \$5,000, he would realize from it \$10,000 in cash.

The Mine is now worked to great disadvantage, beginning at the surface, and worked by one shaft of 50 feet. The Mine should be worked by drifts entering the Mine at the base of the mountain. A large quantity of lead is obtained, but we find no sale to make it an object.

Mr. Agarie, who is referred to in above statements, I know to be the superintendent of the Mine known as Stephenson's Mine, and believe the information he has given to be correct, and that all of his information can be relied upon, and that I acted as interpreter.

G. A. HAYWARD,
Of Firm of Hayward & McGroarty,
Sutlers U. S. Army at Fort Fillmore.

(I')

EL PASO, Texas, June 16, 1858.

TO MAJOR J. T. SPRAGUE, U. S. A.:

Sir—Having been requested by a gentleman of this place to give you information touching the quantity of Silver Bullion I had purchased of Mr. Hugh Stephenson, of this county, and former owner of the Silver Mine Santa Domingo de la Calzada, I have the pleasure to state, for your information, that on the 14th day of June, 1854, I made the first purchase of Silver Bullion, from Mr S., amounting to \$1,450, for which I paid him \$8.75 per mark of 8 ounces. And on the 12th of May, 1857, I made another purchase to the amount of \$4,800, for which I paid Mr. S. \$9 per mark of 8 ounces. And in the month of September, 1857, I know that Mr. Koningham, of the firm of Koningham & Gans of San Antonio, Texas, purchased from Mr. Stephenson bullion to the amount of \$4,500, for which he paid \$9 per mark of 8 ounces. And I hereby certify that all of said bullion was taken from the above Mine Santa Domingo de la Calzada above alluded to, and which Mr. Stephenson recently sold to yourself, situated in the Territory of New Mexico.

Yours, very respectfully,

ISAAC LIGHTNER.

Mr. Lightner I know to be a reliable and successful merchant at El Paso.

J. T. SPRAGUE.

(G)

MESILLA, DONA ANA CO., N. M., May 26, 1858.

MAJOR J. T. SPRAGUE:

Dear Sir—My friend, Mr. Morton, informed me yesterday, that, as you had, or were about negotiating for Mr. H. Stephenson's Mine, you were desirous to obtain as much information respecting the same as you possibly could; and he requested me to write you on this subject, which, accordingly, I most willingly do, although, at the same time, afraid the information I am able to give will be of but little value.

In the first place, concerning the amount of silver which the Mine has yielded since the year 1852, though not so great as it otherwise would have been, if instead of being worked by a single individual, it had been in the hands of a company, has, notwithstanding, turned out in pure silver, over \$30,000; and this since the above mentioned year, 1852. Touching the expense of getting the ore from the Mine, and delivering the same at the Furnace, will average, per *carga*, (300 lbs.) from \$2.00 to \$2.50; and the smelting of the same, would probably cost not quite so much.

The ore in this Mine has been examined by many scientific persons here, and has, more than once, undergone careful assays in various parts, as well as at the Mint, in the city of Philadelphia, and every assay and analyzation has proved it to be exceedingly rich. I have known it, at one time, to have yielded as much as \$18.00 of silver to each 300 lbs. of ore, though its average I think to be somewhat less, say \$16.00, \$16.50 and \$17.00.

This Mine is, without doubt, the *richest* which has, as yet, been discovered in this Territory, and I am perfectly convinced, if properly worked, will turn out to be a most invaluable investment to all concerned.

I remain, respectfully yours,

FRED AUGUSTUS PERCY,

Merchant, Mesilla, N. M.

Mr. Percy is well known to me; he has been in this country eight years, and is a man of integrity, and a highly respectable merchant in the town of Mesilla, N. M.

J. T. SPRAGUE,

Major &c. U. S. A.

(H)

SANTA FE, N. M., June 2, 1858.

MAJ. JOHN T. SPRAGUE:

Sir—I have learned with great pleasure that the Silver Mine formerly belonging to Mr. Hugh Stephenson, situated in Dona Ana county, has, through your agency, been bought by a company of gentlemen from New York, with the intention that mining operations will soon be commenced, with all the skill and capital necessary to the development of its vast resources so long known to those who have had any knowledge of its products, and which have lain dormant for want of the means now about to be applied. I have had a knowledge

of that Mine for many years, even while the Territory was under the Government of Mexico. The ore having been sent to the assay office at Chihuahua, while I was a resident of that city, for the purpose of having its quality tested, and it was then considered one of the Mines that would, when aided by skill and capital, produce millions per annum. But at that time, the Indians were so hostile, and capital so scarce, in that part of Mexico, that no individual, or company, could safely embark in the enterprise. After the acquisition of New Mexico by the United States, and the establishment of Fort Fillmore, in the neighborhood of the Mine, Mr. Stephenson then commenced extracting and smelting the ore, but in a very economical and primitive manner, and from which he has never deviated. Enough is known however, to leave no doubt that the mine is one of vast resources, and only needs the application of skill and capital to realize the brightest hopes of the parties interested. In the year 1852, I took a small amount of this ore to Philadelphia and had it tested, the result was the same as that in Chihuahua many years previous, say twenty ounces of silver to the *carga* (load of three hundred pounds of ore). It is known that six ounces will pay all expenses attending the extraction and smelting of the ore, you may judge, then, what will be the profits to a company with the resources necessary to enter into this great work, aided by all the machinery that has been brought into requisition within the last ten years in mining operations, by which time and expenses have been lessened fully one-half. I have never visited the Mine you have purchased, but it is represented as fruitful and abundant in the ore of the quality mentioned. Desiring that every expectation of yourself and of the company you represent, may be realized, through the laudable enterprise in which you have embarked,

I remain, very truly, your ob't servant,

HENRY CONNELLY.

The United States of America, Territory of New Mexico:

The undersigned, Secretary of the said Territory, certifies that he is well acquainted with Dr. Henry Connelly, author of the foregoing letter; that, as the undersigned is credibly informed, the said Dr. Connelly has been a resident of the said Territory, and of the State of Chihuahua, in Mexico, for more than thirty years past, and is surpassed by none in a thorough and accurate knowledge of the country, and particularly its mineral resources and wealth, that he is a gentleman of the first standing, and, in all respects of unimpeachable character, and that his representations in regard to any subject pertaining to the said Territory, its mineral or other resources, are entitled to implicit confidence.

L. s. In testimony whereof I have hereunto set my hand
and official seal, this 23d day of June, 1858.

ALEX. M. JACKSON,

Secretary of the said Territory.

(I)

EL PASO, Texas, May 10, 1858.

Major—I embrace an early opportunity to answer your inquiries in regard to Stephenson's Silver Mine, near Fort Fillmore, forty miles above this point, and regret that I have not time to reply as minutely as desired.

The value, its products and richness, are unquestionable. Mr. Stephenson was one of the discoverers in 1851. From that time to the present he has worked it under various circumstances, depending very much upon his necessities and inclination. He is advanced in years, and has not the ability to give it the necessary attention. The ore smelted, as it has been under every disadvantage of rude and imperfect machinery, yields about sixteen dollars to the 300 pounds, and there still remains, in the slag and flux, silver enough to repay for re-smelting it under proper advantages. From my knowledge of Mr. Stephenson's business transactions during the last eight years, he has taken from the Mine somewhere about twenty-five thousand dollars. The Mine, with the necessary means, say twenty or thirty thousand dollars, could be worked to great advantage, and the ore is abundant and rich—all that is wanting is industry and capital to develop its resources. I have been in this country since 1847, and have had abundant opportunities to verify what I have here stated.

If you decide to work this Mine, supported by necessary means, I would like to become a stockholder, and will transmit to you the amount of funds upon due notification.

I would mention, that there are other locations in the Organ Range of Mountains, quite as valuable as Mr. Stephenson's, which you could obtain without expense. These could be taken possession of, and a few thousand dollars would soon develop their resources.

I remain, Major, yours most truly,

S. HART.

MAJOR JOHN T. SPAQUE, U. S. A.

Mr. Hart has been well known to me for the last five years. He is intelligent, wealthy, and altogether the most reliable man of my acquaintance in New Mexico and El Paso.

JOHN GARLAND,

Brev. Brig. General U. S. A.

(J)

LAS CRUSES, N. M., July 3, 1858.

Dear Sir—Yours under date of June 22d, 1858, requesting of me information regarding the productiveness of the Mine known as Stephenson's Mine, is received. In reply I would state, that the said Mine is situated about twelve miles N. E. from this place, in the Organ Mountains. These mountains have been known to the Mexicans, from the settlement of the country, to contain

rich deposits of silver. Several efforts were made to work them, from time to time, but the occupants were driven off by the Apache Indians, who had always claimed the country south of the Jornada as their own, and held possession of it, not permitting the same to be settled by Mexicans or others.

Until after the Americans took possession of New Mexico in 1846, with the exception of a few families who had recently located at Dona Ana, there was no settlement from the Jornada to El Paso. In 1849, a U. S. Military Post was established at Dona Ana, from which period this valley began to fill up with permanent inhabitants, and this immediate vicinity now contains about twelve thousand persons, industrious and frugal, mostly engaged in tilling the soil. They have been able to obtain such prices from the Government for their produce as to induce them to give their undivided attention to agriculture. In 1852-3, several persons commenced operating in the Organ Mountain Mines, but having comparatively no means whereby to erect buildings and put up machinery suitable to operate with profit, they were compelled to abandon the pursuit and turn their attention to other occupations; not, however, until the fact was fully demonstrated that with proper machinery and sufficient capital to enable the work to be prosecuted with energy, the Mine could be made to yield a rich profit upon an investment.

I think the Stephenson Mine was discovered in 1851, by an experienced Mexican miner named Currascas (now residing at this place), and subsequently purchased by Hugh Stephenson, Esq., a wealthy gentleman, who owns a large tract of land in this valley. He informed me that he was induced to make a small investment in the erection of the present machinery, for the purpose of testing the fact, whether the Mines could be made profitable, that in the event they could, he considered his other interests would be sufficiently enhanced in value to remunerate him for the experiment, that he was engaged in other pursuits more congenial to his tastes and habits than mining, that he had only worked the Mines occasionally, sufficient however to establish the fact that they are a profitable investment.

I have resided the last four years in the vicinity of these Mines. I have frequently visited the works while they were smelting the ore, and have made inquiries of those in charge of the works what amount of silver they obtained from the ore. They informed me that the yield varied from twelve to fifteen dollars for each three hundred pounds of ore, the usual product. I fully believe the statement correct. I would add that the machinery now in use at the works is of the most rude and primitive kind, and a very large per cent of the metal must be lost in working it. My wonder has been how they were able to accomplish anything, so very imperfect are the works. I have no doubt, with proper machinery and sufficient capital, the Mines can be made very productive. The facilities for obtaining supplies and operatives is as good as could be desired; laborers can be had at from \$8 to \$15 per month—produce at about the same rate as in our Western States of the Union.

The Indians are so nearly subjected, that very little trouble may be apprehended from them any more in this valley. Taking all things into consideration,

it does appear to me that these Organ Mountains present to capitalists a prospect of investing their means in an enterprise which must, beyond a doubt, prove to be of no ordinary character in point of profits.

I am, Sir, your ob't servant,

CALEB SHERMAN,

*U. S. Collector of Customs,
District Paso del Norte, N. M.*

MAJ. J. T. SPRAGUE, U. S. ARMY, SANTA FE, N. M.

(K)

SANTA FE, NEW MEXICO, August 5, 1858.

Dear Sir—Allow me to congratulate you upon your success in the purchase of the Stephenson Silver Mine. I was myself some years ago negotiating for the purchase of that Mine, but the price then fixed upon it by Mr. Stephenson, was more than I felt able to pay; and indeed he did not then seem much inclined to sell at any price. I was not aware that he had made up his mind to sell, or I would have been your competitor in the purchase; and now I would like to take an interest with you.

Soon after I came to this Territory, now more than thirty years ago, I learned that there was a valuable Silver Mine in the Organ Mountains, and saw specimens of the ore, which was pronounced by all competent judges to be of exceeding richness. But what gave me most confidence in the Organ Mountain Mine, was the opinion of Mr. Robert McNight, a gentleman, now deceased, who was undoubtedly one of the best miners in Mexico of his day. He for many years worked very successfully the famous Copper Mine in the southern part of this Territory, but he was finally compelled to abandon that enterprise on account of the Indians. He then opened and worked, with great success, the Silver Mine in the State of Chihuahua, Mexico, known as the Corralitos or Barrance Colorado Mine. He was still working that Mine at the time of his death, which took place in the spring of 1846. Mr. McNight told me that he had long known that there was a valuable Silver Mine in the Organ Mountains, and that after he commenced to work the Carralitos Mine, he sent to the Organ Mountains and obtained a specimen of the ore, and upon testing it in his works at Carralitos, he found it to be much richer than the ore he was working from the Carralitos Mine, although the specimen tested was the out-crop of the lead. He expressed the belief that when the Mine was opened the ore would be found to yield a rich lay of silver.

One great advantage which he seemed to attach to the quality of the Organ Mountain ore, was the ease and facility with which it could be smelted; requiring, as he stated, no other flux than that combined with the ore in its native state.

Mr. McNight also mentioned to me that there was a Silver Mine near the town of Manzana, in this Territory, from which he has obtained specimens of the ore; and that it contained a rich lay of silver; but that he was unable to

smelt it, not understanding the proper flux with which to aid it in fusing. I would like to see some investigation made of this Mine.

I have understood from Mexicans that there is a Silver Mine in that locality.

Very respectfully, your ob't servant,

J. L. COLLINS,

Sup't Indian Affairs, N. M.

BREV. MAJOR J. T. SPRAGUE, U. S. A.

(L)

FORT BLISS, TEXAS, June 22, 1858.

Dear Major—In reply to your inquiries relative to the Silver Mine situated in the western slope of the Organ Mountains, Dona Ana county, New Mexico, and known as Stephenson's Mine, I have the honor to make the following reply:

At the time the above named Silver Mine was discovered, in 1852, I resided at Fort Fillmore, N. M., a point about sixteen miles distant from the Mine. During that year I opened a Mine some four or five miles below, and south of Stephenson's, and as I then and still believe to be on the same vein as that of Stephenson's. The vein has also been opened at other points for the purpose of obtaining specimens of the ore. A vein has also been opened on the eastern slope of the Organ Mountain; the character of the ore at all the above named points appears to be exactly the same.

The parties who have opened these veins, with the exception of Mr. Stephenson, did not possess the means to work a Mine, and never, to my knowledge, attempted to form a company for that purpose.

On one occasion a Mr. John R. Tullis, an experienced miner and mineralogist, was with me two days examining the vein. We found that it cropped out at several points between Stephenson's Mine and the point where I was at work.

Mr. Tullis was of the opinion that the vein was rich in silver and worthy the attention of capitalists.

Mr. Stephenson, after experimenting on the ore from his Mine for five or six months, erected smelting works on the Rio Grande, some ten miles from his Mine, at an expense of several thousand dollars; and it is here understood that he has, as the result of his labor, extracted quite an amount of silver.

I would further state, that the opinion of all well informed persons in this vicinity, is, that Mr. S has not, in any instance, from the want of experience in handling ores, extracted all the silver that the ore contained, or in any way worked the Mine properly. He has at no time had any one in his employ who understood the business.

There is, within three miles of the smelting works, wood (mesquite roots) sufficient for wood and coal for several years; and at a point not more than eighteen miles from the smelting works, there is a vein of coal from which I have in person taken specimens, which specimens I gave to Col. J. K. Mansfield, Inspector General U. S. Army, who was at that time at Fort Fillmore.

Should this vein of coal prove to be of good quality and sufficient in quantity, it will be of the utmost importance to the mining interest.

The Stephenson Mine, to be properly worked, will require a capital of at least \$100,000.

There should be in charge of the whole works a man of unquestioned ability. And it is of the utmost importance that the services of a first rate practical assayer and mineralogist should be secured, who fully understands handling silver ore containing a large proportion of galena. It may be advisable to send to Zacatecas or the city of Mexico to engage an English or German assayer; and he should come in advance of all other parties that he may have ample time to make a thorough examination of the vein and Mine, and make the necessary assays of the ore, that he may know what description of furnaces &c., &c., may be required.

The services of the following named persons will also be required:

An experienced miner to take charge of the mine; two experienced smelters; a good machinist to put up and run an engine; a good blacksmith with a full set of tools; a good carpenter and joiner with a full set of tools; a brick mason with tools.

It will be advisable to purchase in New York, all the utensils that may be required to work the Mine, such as iron, steel, iron bars, spades, shovels, picks, hoes, axes, &c., &c.; also light railroad iron to lay a track about 400 yards long to transport the ore from the mouth of the Mine to a point that can be approached by wagons.

A steam engine of about sixteen horse power, with two *single flued* boilers (for muddy water).

A small pair of mill stones capable of grinding about 25 bushels of corn or wheat per day.

I would also recommend the purchase of ten or twelve heavy wagons, to be drawn by ten mules each, to be used for transporting the effects of the company from the Gulf, and for hauling ore, coal, wood, &c.

It will be for the interest of the company to establish at the smelting works a store with a large and general assortment of merchandise, where the employees of the company can be paid every Saturday, half in goods, half in money. Such a store could sell to the employees, and others, goods to the amount of \$50,000 per annum (New York cost).

I trust that the foregoing statement and suggestions may prove of some service to you. I possess but little practical knowledge of mining, but during the past twelve years have, from time to time, visited some of the Mines in different parts of Mexico, and know something of their general management.

Very truly and respectfully yours,

MAJ. J. T. SPRAGUE, U. S. A., SANTA FE, N. M.

T. F. WHITE.

EL PASO, TEXAS, 20th June, 1858.

Dear Major—Your letter (making inquiry of the character of Mr. T. F. White, and if his opinion and statements can be relied upon), came duly to

hand. In reply I have to state that I have known Mr. White for ten years since my residence here. He is one of the best business men in this part of the country, and I deem his opinions and statements, on any subject pertaining to the business and resources of this country, worthy of the highest credit.

I remain, Major, very respectfully,

Your ob't servant,

S. HART.

MAJ. J. T. SPRAGUE, U. S. A., SANTA FE, N. M.

Who is S. Hart? See General Garland's certificate to S. Hart's letter.

(M)

No. 1.

TO THE PREFECT OF THIS COUNTY OF DONA ANA :

The undersigned, all of whom are citizens of Las Cruces, and one other, who resides at the Valle de la Concordia, and all being citizens of the United States, appear before you with all proper respect and say: That in the name of the national sovereignty of the said States, we register according to law a vein which is situated in the Organ Mountain, running from south to north, bounded on the east by the height of said mountain, and on the west by the Dona Ana Mountain, on the south by the Brasito Mountain, and on the north by the road running down from the San Agustin Gap, to which we have given the name of Santo Domingo of the Calsada, which we register according to the Mining Ordenances, for the purposes of working the same for gold, silver, and whatever God may be pleased to give us. Therefore we pray you, if the granting of this our petition be within the jurisdiction of this county, that it be returned to us, in order that we may sink a shaft ten varas in depth, within the period of ninety days, as provided by said Ordenances, and present within said time this same registry, in order that the possession provided in said Ordenances be given us.

(Signed)

JOSE PEREZ,
ALEJO CARRASCO,
HUGH STEPHENSON,
RAMON DURAN.

OFFICE OF THE PREFECT OF THIS COUNTY OF DONA ANA, June 9th, 1852.

Presented and granted, and so far as respects the work which the parties interested wish to perform in the vein registered by them, be it known to them that they can commence operations, with the understanding that this Office of Prefect cannot take the steps provided for in the Mining Ordenances, to which they refer in their registry, as they (said Ordenances) do not exist in this county; but it is understood that the Government of this Territory shall be advised of the fact, for its information and final determination, returning the application to the petitioners for such purposes as they may deem proper.

(Signed)

PABLO MELENDRES.

No. 2.

TO THE SUPERINTENDENT OF THE COUNTY OF DONA ANA :

The citizens, Alejo Carrasco, Jose Perez, Ramon Duran, residents of the town of Las Cruces, and Don Estevan Estibenson (Hugh Stephenson), of the Concordia Valley, following the mining business, appear before you with the most profound respect, saying : That the period of ninety days, as specified in Act 4th, tit. 6, of the Mining Ordenances, being nearly ended, and not having sunk the shaft ten varas in depth in the Mine, which we have registered as required by said Act, for the reason of the scarcity of men versed in the art, and in consequence of the hostilities of the enemies. For these and other reasons, we pray you to grant us the further period of sixty days, provided for in Act 9, tit. 6, of the aforesaid Ordenances. Therefore, we pray you that upon the approval of this our petition, it be returned to us, in order that we may present it at the time of asking possession.

We swear that it is not done through malice, and it is necessary.

TOWN OF LAS CRUCES, February 2d, 1852.

(Signed) HUGH STEPHENSON,
ALEJO CARRASCO,
JOSE PEREZ,
RAMOND DURAN.

COUNTY OF DONA ANA, February 3d, 1852.

Presented and granted, and concerning the request contained in the present petition, be it known to the parties interested, that this Prefect's Office having taken into consideration the reasons they set forth for the nonfulfilment of the promise contained in their registry, to be performed in the aforesaid Mine, the further period of sixty days is granted them, with the understanding that these presents be returned for such subjects as may be proper.

(Signed) PABLO MELENDRES.

TO THE SUPERINTENDENT OF THE COUNTY OF DONA ANA :

Having completed the shaft of ten varas in depth, as expressed in the Mining Ordenances, you will be pleased to proceed to give us the possession, as expressed in tit. 6, art. 4 of the Mining Ordenances. We therefore pray and request you to grant this our petition.

We swear that it is not done through malice, and it is necessary.

(Signed) JOSE PEREZ,
ALEJO CARRASCO,
RAMON DURAN,
HUGH STEPHENSON.

No. 3.

TERRITORY OF NEW MEXICO, COUNTY OF DONA ANA, }
OFFICE OF PREFECT OF SAID COUNTY, November 11th, 1852. }

The Documents originating under the order which authorizes the formal possession of the Mine, which you have registered, and which have been here-

tofore transmitted to this office, are hereby placed at your disposition, so as to enable you to secure the same in the best possible manner. Having consulted the Judge of the District Court, he informs me that neither the Governor nor any other authority in the Territory can grant it (the possession), but that you can continue your labors therein, and avail yourselves of such benefits as may result therefrom. Of which you are informed for such purposes as you may deem proper.

(Signed) PABLO MELENDRES.

MR. ALEJO CARRASCO AND HIS ASSOCIATES.

P. S. Dear Alejo—It would be advisable for you to come and have a conversation with me in person, and I am of opinion that the business would assume a different aspect to that which it now does, if you would do so. I cannot go, as I desire, on account of having a great amount of business to transact before the meeting of the Supreme Court.

Yours,

(Signed) JUAN JOSE CARRERA.

I hereby certify that the foregoing is a correct translation of the Spanish copy furnished me of the original documents.

SAM'L ELLISON,
Translator to Ex. Dept.

SANTA FE, New Mexico, June 12th, 1858.

(N)

GENERAL LAND OFFICE, July 28, 1856.

TO THE HON. LEWIS CASS, SENATE CHAMBER :

Sir—I have the honor to acknowledge the receipt, by reference to this office, from the Dept. of the Interior, of a communication addressed to you by Major J. T. Sprague, dated Fort Stanton, New Mexico Ter., March 15, 1856, on the subject of a Silver Mine discovered in that Territory about five years since, that is in 1851, and desiring to know the views of the Government as to what extent protection would be given in working the Mine under the alleged claim and title of the discoverer, it being stated that all the laws of Old Mexico, regarding the working of Mines, have been strictly complied with.

In reply, I have to state that the supposed discovery and claim having originated subsequent to the Treaty of Guadalupe Hidalgo, of 2d February, 1848, the laws and customs of Old Mexico can have no controlling influence in the matter upon the action of the Executive Departments of the Government.

By the fourth section of the act of 22d July, 1854, for establishing the offices of the Surveyors General of New Mexico, Kansas and Nebraska, to grant donations to actual settlers therein, and for other purposes, Stat. at large, vol. 10, p. 308, it is enacted that none of the provisions of said act shall extend to the "mineral, or school lands" &c., thus reserving mineral lands. From this, it follows that, as there is yet no law for the disposal of such lands in New Mexico, they are reserved for further legislation. Such is

the case in regard to the Gold Mines and "mineral lands" in California too, which, under the latter comprehensive designation, are reserved from survey by the last proviso of the 3d section of the act of 3d March, 1853, "an act to provide for the survey of the public lands in California," &c., Stat. vol. 10, p. 245. Those in California, however, as is notorious, are freely "prospected" and "worked," simply because, though there is no statute of Congress permitting, there is none in express terms forbidding it.

As the matter now stands, in regard to the Silver Mines of New Mexico, the Executive Department cannot recognize any right or claim in the same, on the part of any private individual, nor take any action in reference to the alleged discovery, without authority and direction of Congress.

I am, very respectfully, your ob't serv't,

JOS. S. WILSON,

Acting Commissioner.

(O)

SANTA FE, New Mexico, February 11, 1856.

Dear Sir—In regard to the mineral lands of New Mexico, and the tenure or title by which they are held, our Government has not as yet made or established any fixed rule for taking possession of those lands; nor has any department of the Government decided, so far as we know, upon the validity of possessions taken by individuals of that description of public domain.

The old Spanish and Mexican laws allowed discoverers of Mines to take possession of a certain extent (as much as they could work), upon filing a description of the Mine and depositing a specimen of the mineral with the Prefect or County Judge. The discoverer had then a good title as long as he continued to work the Mine, or unless he abandoned it for the space of one year. We do not know of any instance in which our Government has not respected such titles and possessions.

Very truly yours,

H. N. SMITH,

J. HOUGHTON.

MAJOR JOHN T. SPRAGUE, U. S. A.

EXECUTIVE OFFICE, TERRITORY OF NEW MEXICO, }
SANTA FE, February 11, 1856. }

H. N. Smith and Jacob Houghton, Esquires, whose names are signed to the above communication to Major Sprague, U. S. A., are members of the Bar of Santa Fe, in good standing in the profession. Their opinion on the subject of the title to mineral land in New Mexico is correct, and the General Government has taken no further action upon the subject than to reserve said land from entry and sale. The mountains of this country, I am well satisfied both from personal observation and reliable information from others, are rich in gold and silver, and that capital is only required to develop them in great profit.

Where the discoveries have been mainly made, wood and water are convenient and abundant, and laborers cheap in all parts of the country. I do not think there would be any risk in putting up mining works upon public land.

W. W. H. DAVIS,
Acting Governor.

(P)

Extract from the report of Captain John Pope, Topographical Engineer U. S. Army, in charge of Pacific Exploring Expedition, to Hon. Jefferson Davis, Secretary of War, dated Washington, D. C., October 17, 1854, from Congressional Documents, vol. 3:

EXTRACT.

"On the west side of the Organ Mountains, which bound the valley of the Rio Grande, valuable Silver and Lead Mines are found, extending over a continuous distance of twenty-five miles. The want of means to open them, and the ignorance of mining, characteristic of the New Mexican, have altogether prevented any development of their richness; and it has only been within the last eighteen months that any thing like a serious commencement has been made. Mr. Stephenson has opened a Mine about fifteen miles from the river, at Dona Ana, and notwithstanding the impossibility of getting an experienced miner, and the crude and imperfect manner of smelting he has been compelled to adopt, the results have been exceedingly profitable. The ore is powdered between two stones, and the smelting is done without one convenience common to the States. The refuse probably contains half as much silver as the original ore, and, notwithstanding this, from a mule load of three hundred pounds of the ore, he gets \$18 of silver."

A true extract.

J. T. SPRAGUE,
Major, &c., U. S. A.

(Q)

EXECUTIVE DEPARTMENT, SANTA FE, August 14, 1858.

MAJ. J. T. SPRAGUE, FORT MARCY, N. M.:

Dear Sir—I return your interesting Memoir upon the Organ Range of Mountains, which I have perused with very much pleasure. From what I had previously heard of the Stephenson Silver Mine, I had formed a favorable opinion of its value, but the letters and certificates which accompany your Memoir seem to put its value beyond doubt, if properly developed. The plan you propose is undoubtedly a judicious one. In all mining operations economy is essential, but to operate to advantage a sufficient amount of capital is not less so.

Wishing you great success in your enterprise,

I remain very truly yours,

A. RENCHER,
Governor of New Mexico.



