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"A B" CODE

STOCKS, BONDS, SECURITIES

NEW YORK
BOSTON
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INTERSTATE INVESTMENT CO.

1118 ASHLAND BLOCK

TELEPHONE CENTRAL 3053

CHICAGO, Oct. 24th, 1905.

Prof. Henry C. Beeler,
State Geologist,
Cheyenne, Wyo.

2033
9
18297

Dear Sir:-

I am sending you herewith application for report and check for \$100.00 in payment, a flash-light photo. of the ore streak in drift B. S. M. Shaft and one of part of streak in Anconda Tunnel, and under two other covers, my Map of the Region and photo. of McFadden's Survey, tracing of my properties at Three Forks and roast of a chunk of ore with the Scorifier I roasted it in.

This roast I send because I thought it might be desired in your State Collection. I made it by keeping it covered in the B. S. M. Blacksmith Forge for 13 minutes and then oxidizing away the Lead from the scorifier in the open fire of the forge. I did not attempt to melt out all the mineral in the piece of quartz, as I wanted some of it to remain on the chunk. In the scorifier there are scores of minute beads of silver and that rough elongated grey ridge about 1/4 inch long is also pretty near pure silver. This scorifier may break in transit, but some that are broken I have cemented very solidly with Le Page's Glue.

You will see by the weight of the piece of ore that the metal is not nearly all burned out, and by careful examination with glass, you will find almost innumerable metalics upon it in almost pure silver and Lead Beads at almost every stage of oxidation. On the most glassy, blackened flat side, you will find a considerable Bead that manifestly contains considerable Copper, and on the side of the lesser angle, near the edge next the blackened side is a partly oxidized Bead that appears to have some Copper, while further down the same angle near the middle line, 3/16 of an inch from the lower bright red stain there is a yellow-tinged Bead that indicates a fair percentage of Gold. Again, close to the upper left-hand corner of same side is a well coppered Bead. On the opposite angled side there is considerable green stain, about half way down, close to the edge of the blackened side, is a nearly oxidized Bead that is very prettily stained and set in the dark green.

On the rough side, which was turned up in the roast, little metal appears, yet there is one Bead set in the glassy place towards the little end from the middle that has sufficient yellow tinge to indicate good percentage of gold. The rectangular flat side also has metallic beads, making metals represented on every side of the chink.

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I estimate this piece to have carried probably 200 ounces Silver per ton, with possibly some Gold. I have other roasts that give out fully five times as much Silver as this, and some that have handsome small beads of unquestioned nearly pure gold, but no other that manifests the variety of mineral this one I send you does, so I send this as illustrative of what there is in the ore.

AS TO THE PROPERTIES:

PEASE PLACER takes the whole of S. 1/2 of S. 1/2, Sec. 14, (T. S. 12 N., R. 86 W., 6th P. M.), except Lode Claim conflicts.

BATTLE STREET PLACER, N. 1/2 of S. 1/2, Sec. 14, ex. L. C. Conflicts

NORTH BENCH PLACER takes in part of N. W. 13 and N. E. 14, ex. L. C. Conflicts.

These placer boundaries are shaded. I have washed out Gold and Silver from each of these placers, but I have devoted all my ability to develop towards mines to the Lode Claims and don't know how valuable the placers may become.

The two claims "NORTH FORK" and "TABLE SPOON" belong to the Boston Sierra Madra M. I. Co., of which I own nearly all the stock. North Fork is patented. Table Spoon is in Land Office now for patent.

VEIN:

The North Fork Vein has a course N. 45 deg. 55 min. W., a dip N. E. about 20 deg. from the vertical into the hill and has been opened up to view close to the surface, or actually crops for 1760 feet. It shows strong mineralization in most of the openings. The ore is Lead and Zinc Sulphides, carrying Gold and Silver with some Copper.

ORE MATRIX:

The mineral carrying rock is smoky white quartz, bordered and seamed with Hematite, which, in places, carries free gold. There are several quartz streaks.

DYKE:

And the whole is carried in a dyke of that black rock generally called Diorite in the district, but which partakes in part of Andesite according to most of the more highly classed opinions I have obtained.

COUNTY ROCK:

The county rock, in which the Diorite Dyke lies, is Granite, with Gneiss belts parallel to dyke, commencing 1/4 mile N. E. and at right angles with dyke across the river 1000 feet from North End

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Line on Independence Claim.

COPPER:

There is much Copper Pyrites disseminated through the dyke rock.

DEVELOPMENT:

The working shaft is down 160 feet and has a good sized ore streak all the way, which, in places, is 26 inches wide of nearly solid mass of Galena and Blend. The actual measure, where the flash-light was taken, is from 15 inches to 18 1/2 inches.

WIRE SILVER:

In some places, where there is less Galena and Blend, there are cells of wire Silver.

VALUES:

Specimens of the Galena with manifest Chlorides have assayed 600 ounces Silver per ton, and Quartz and Hematite specimens have assayed 33 ounces Gold and 72 ounces Gold. The last average made of workable ore, omitting every test of specially rich ores, was \$36.29 per ton of Gold, Silver, and Lead, with some lots not tried for Lead. Basis: Silver, 60 cents per ounce; Lead at \$4.00 per C. W. T. Trial shipments to smelter have averaged \$42.09 per ton.

CROSS VEIN:

A large cross-vein having a course N. 88 deg. E. and dipping North about 10 deg. from the vertical, intersects the North Fork Vein 490 feet from the N. End of the North Fork Claim. This vein consists of quartz streaks and metamorphosed rock of the diorite character. It is at the surface on the side hill at the mouth of the tunnel 23 feet wide, and carries low-grade Gold, Silver and Copper.

TUNNEL:

A tunnel is in 275 feet on this vein and will intersect the N. F. Vein in about 135 feet more. The tunnel is 4 feet x 6 1/2 feet in the clear above the car tracks and is timbered with square sets and lagin, except where the walls need no support.

SHAFT:

The shaft is four feet by eight feet in the clear, timbered with substantial cribbing wherever support is needed; is divided by solid partition into manway and bucket-way with slides for bucket. Man-way is laddered with oak sound ladders and has safety landing and platforms every 16 feet. The shaft is ventilated with tube and equipped with F. M. Davis whim in a temporary log

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shaft house 22 ft. by 40 ft. Beside this working shaft and tunnel there are on the property many prospecting shafts and cuts from 10 to 60 feet, making a total of about 675 lineal feet of ground work.

PARALLEL:

Parallel discovery shaft in on a vein of smoky white quartz, much honey-combed at surface, having little beside hematite. There are several other cuts along this vein. Vein dips N. E. about 5 deg. from vertical.

PARALLEL EXTENTION:

Parallel Extention has several prospecting shafts and cuts along the vein, both sides of the river, which show Copper very strongly North of the River. In the discovery shaft, from the surface down, the vein is about 3 feet wide. Vein dips N. E. about 5 deg. from vertical.

NORTH FORK EXTENTION:

North Fork Extention has a 5-foot leade in the discovery shaft in the hillside 250 feet North of the River. This vein has not been tested for values nor has the claim been further prospected. Dip of Vein in this claim at surface is west about 5 deg. from vertical.

ANCONDA:

Anconda has a development Adit Tunnel 4 ft. x 6 1/2 ft. in the clear, well timbered in through unstable ground. This tunnel is 100 feet long and all the work has been done in vein matter. The ore in tunnel is low-grade Copper, Gold and Silver. The vein crops at surface on the hillside along the line of the tunnel. Vein dip is S. W. about 30 deg. from vertical. You will note part of the ore streak on the foot wall by flash-light photo. inclosed.

INDEPENDENCE:

Independence is on a quartz vein along the contact line of a diorite foot wall and Gneiss hanging wall, and dips but slightly into the hill to the N. W. At the open-cut, near the center of the claim (which is the discovery cut), there is a very large out-crop of Gossan, which has not yet been cut through either in depth or width.

Starting from the South Side Line 190 feet from S. E. Corner is a 90-foot cross-cut tunnel 4 ft. by 6 1/2 ft. in clear. This tunnel is wholly in the Diorite, which is impregnated with Copper Sulphides, chiefly Pyrites.

On the hillside, above the tunnel, there are several prospect

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CHICAGO, Oct. 24th, 1905.

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cuts and shafts on the leade along the contact.

HOMESTAKE:

Homestake is located on the same vein, that is the cross vein on the North Fork Claim. This vein bends to the South to about the same course the river takes. The 40-foot tunnel from the river bank is all in the diorite, which carries some Copper Pyrites as the same rock does on the North Fork Claim. In the discovery cut there is a well defined vein about 3 feet wide, dipping South about 20 deg. from the vertical, into the hill, thus having an opposite dip to that of its extention on the North Fork Claim across Homestead Creek. A six-inch streak on the hanging wall side of this vein tests 19% Copper, with some Gold and Silver.

THREE FORKS VEIN:

Monarch, Three Forks and Battle Ax Lode claims are all on what is called the Three Forks Vein, which is well defined, and largely mineralized from near the South Bank of the river throughout the three claims to the South, and for more than 2000 feet across the State Line into Colorado, making more than 6500 feet of this vein that is known to be largely mineralized. The course of the vein, where the ground is nearly level, is approximately North 25 deg. West and dips N. E. about 8 deg. from the vertical. Like the North Fork Vein it lies in a dyke of the so-called Diorite, except that near the joint end lines of Three Forks and Monarch it is on the contact line of the Diorite and Granite, the Granite forming the hanging wall.

WIDTH OF VEIN:

About where Three Forks and Battle Ax claims join there are either several veins, or the general vein is 120 feet wide. The ore bearing rock is smoky white quartz and the ore Argentiferous Galena, with a trifling amount of Zinc Blend, with now and then different ores of Copper in insignificant quantity. There is quite a little Silver Chloride in places, some Lead Carbonates and abundance of Hematite. Some Gold is carried in the Hematite and in the solid quartz. One strong streak apparently on the foot wall of the great vein extends the entire length of the vein so far as it has been opened up. This streak, so far as it has been opened up, is from six inches to 54 inches wide, carries approximately 10% Lead and runs about \$30.00 on an average in Lead, Silver and Gold.

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CHICAGO, Oct. 24th, 1905.

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Other ore streaks carrying the same minerals and having the same dip extend in lines parallel to this large one, the furthest one being 120 feet from the large and constant one.

DEVELOPMENT:

On Monarch there is a 170-foot Adit Tunnel on a spur of the main vein and many 10-foot shafts and cuts.

On Battle Ax, one 22-foot shaft, one 90-foot shaft and many cuts and trenches.

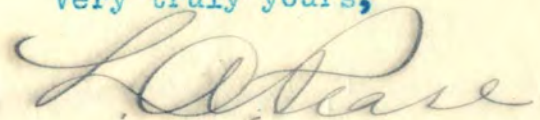
On Three Forks there starts an Adit Tunnel, which runs at a level to cut the 90-foot shaft on Battle Ax, 106 feet from surface. This tunnel has a length of 491 feet. On Three Forks there are also several cuts and trenches, making a grand total of ground work on these three claims of between 1100 and 1200 lineal feet.

Of all the claims Three Forks, Battle Ax and North Fork are patented and Table Spoon is now in land office for patent.

The properties are located in Sections 11, 12, 13 and 14, T. S. 12 N., R. 86 W., 6th P. M.

As you requested me to give you data when I should write for the report, and I don't know just what data you want of me, I am giving you quite a complete statement, so that you can draw from it whatever you want, either in body or as conclusions,

Very truly yours,



P. S. I had overlooked the remark of your letter of Aug. 2nd (until I had filled out the blank and written the above for one report) stating distinctly that I can have two separate reports, one on the B. S. M., and the other on my personal holdings, so I am sending two written applications, modelled like your blanks.

No. _____

APPLICATION FOR MINE REPORT.

Henry C. Beeler, State Geologist,

Cheyenne, Wyoming.

Sir: Enclosed find fee for examination of the Pease group of mining claims, consisting of nine Lode Claims, located in the Three Forks Mining District, Carbon County, Wyoming, and situated about 14 miles from the town of Battle, Wyoming.

Development work has been done on said claims as follows:

Shaft,.....	300 feet.
Open cuts or tunnel,-----	1031 do.
Other work,.....	<u>200 do.</u>
Total Development,.....	1531 do.

Property may be reached by Wagon Road from Battle, a distance of fourteen miles.

Name of Owner: L. A. Pease,
Address: 1118 Ashland Block,
Chicago, Ill.

No. _____.

APPLICATION FOR MINE REPORT.

Henry C. Beeler, State Geologist,

Cheyenne, Wyoming.

Sir: Enclosed find fee for examination of the North Fork group of mining claims, consisting of two Lode Claims, located in the Three Forks mining district, Carbon County, Wyoming, and situated about fourteen miles from the town of Battle, Wyoming.

Development work has been done on said claims as follows:

Shaft,.....	240 feet.
Open cuts or tunnel,.....	275 do. -
Other work,.....	<u>160 do.</u>
Total Development,.....	675 do.

Property may be reached by Wagon Road from Battle, a distance of fourteen miles.

Name of Owner: Boston Sierra Madra Mine Industry Co.
(L. A. Pease, owning majority of stock,
Address: 1118 Ashland Block,
Chicago, Ill.

Field



LITTLE need be said about the Grand Encampment Region, as it has become pretty well known all over the Country, through mention of the varied features of the great transformation scene that has been enacting there during the last few years.

In 1897, along the valley of the North Platte River, and the upper valley of the Little Snake, there were a few scattering ranches where industrious farmers had made permanent residence, but aside from these, this vast region of Southern Carbon County, Wyoming, and Northern Laramie and Routt Counties in Colorado, a region nearly 50 miles square, had for permanent occupants only wild animals and birds. A few million sheep and a few hundred sheep herders, spent 60 to 90 days each summer in the mountains, and these features constituted the total of the industries of the region.

But to-day, there is a tremendous contrast, and it all comes from mining. The Sierra Madre Mountains on the West and the Medicine Bow Range on the East are filled with small villages and camps of men opening up the innumerable deposits of precious and useful minerals, and the ranches in the valleys are being multiplied to supply crops for the consumption of the miners. Town and City centres of supply are established, and where so few human beings and so little industry existed but a few years ago, many thousands of people now live, engaged in mining and kindred industries and action and vigor are manifest wherever one may turn.

The Mines

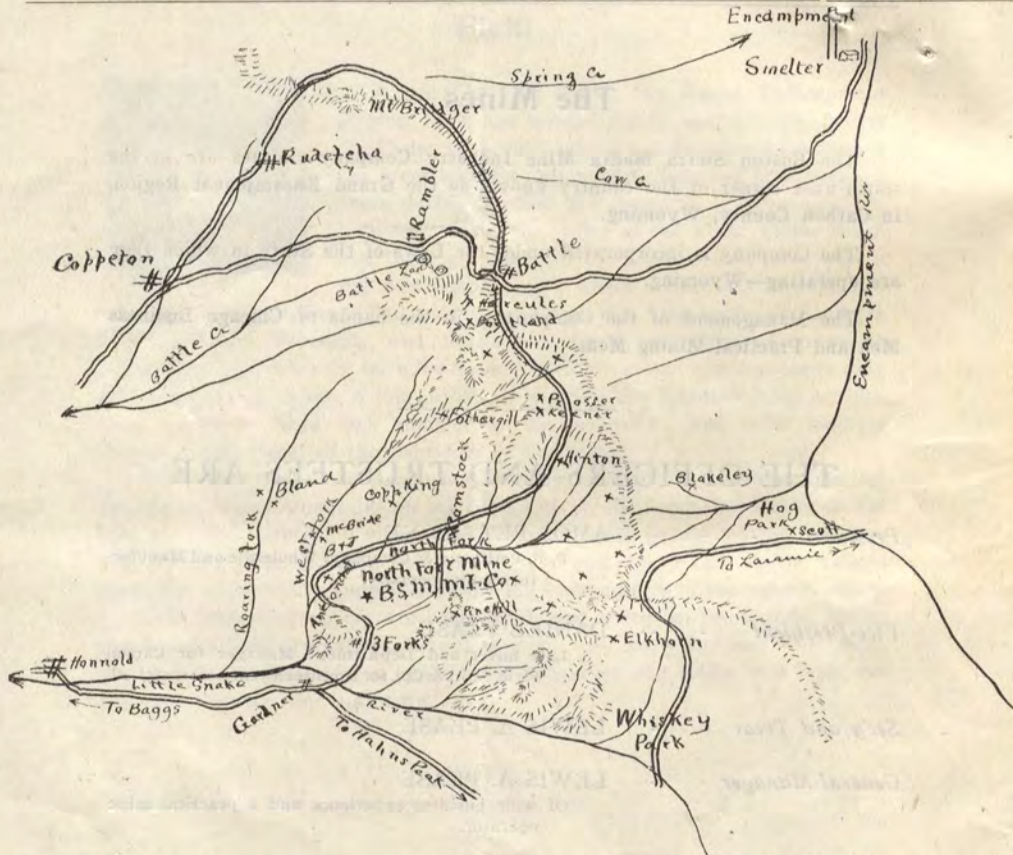
The Boston Sierra Madra Mine Industry Company's Mines are in the south-west corner of the country known as the Grand Encampment Region, in Carbon County, Wyoming.

The Company is incorporated under the Laws of the State in which they are operating—Wyoming.

The Management of the Company is in the hands of Chicago Business Men and Practical Mining Men.

THE OFFICERS AND TRUSTEES ARE

<i>President</i>	- - -	AMOS PETTIBONE P. F. Pettibone & Company, Wholesale and Manufacturing Stationers.
<i>Vice-President</i>	- -	DANIEL PEASE Late Buyer and Department Manager for Carson Pirie, Scott & Co., for seventeen years, now retired.
<i>Sec'y and Treas</i>	- -	LEWIS A. PEASE
<i>General Manager</i>	- -	LEWIS A. PEASE Of wide business experience and a practical mine operator.



OUTLINE OF ENCAMPMENT REGION

Let a practical mining man of long experience tell how he regards the Company's property.

Pollock, Wyo., June 18, 1902.

Boston Sierra Madra Mine Industry Co.,

Battle Lake District.

Gentlemen:

For fifteen months I was superintendent in charge of development work on the North Fork Lode Claim and another nearby property.

In more than twenty-five years' mining experience in the Rocky-Moun-

tain and silver bearing lode I have watched their development, and but half dozen that showed signs of development, and but what property does.

Commencing with paragraph under heading "New Development," Page 6; and extending to end of second paragraph, Page 8; and commencing with last paragraph, Page 11; and extending to heading, "Permanency of Deposit," Page 13; shows facts and results of operating according to Engineer McFadden's recommendations and calculations.

and silver—and also silver best of business mining. being high above the river makes mining convenient. Iron and coal are nearby. readily.

I recommend investment for development, believing it will richly pay for itself.

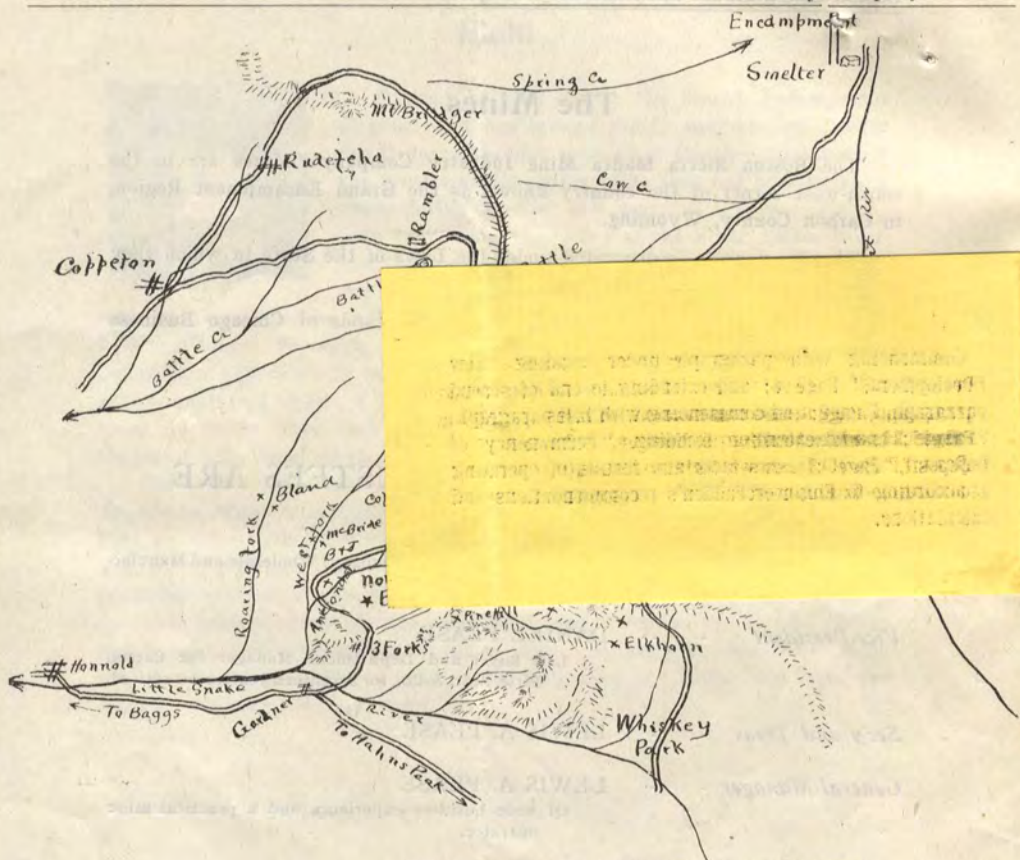
Signed, WM. ROPER.

Engineer's Report

[With some notes after much had been done on the mine along the line of his recommendation.]

Report on the Properties of the Boston Sierra Madra Mine Industry Company—their condition and needs

The properties of the Boston Sierra Madra Mine Industry Company consist of the North Fork and Table Spoon Lode Mining Claims, 41½ acres



OUTLINE OF ENCAMPMENT REGION

Let a practical mining man of long experience tell how he regards the Company's property.

Pollock, Wyo., June 18, 1902.

Boston Sierra Madra Mine Industry Co.,

Battle Lake District.

Gentlemen:

For fifteen months I was superintendent in charge of development work on the North Fork Lode Claim and another nearby property.

In more than twenty-five years' mining experience in the Rocky-Mountains I have become familiar with every class of gold and silver bearing lode and have known many thousand properties and watched their development, and I can declare that I have seen not to exceed a half dozen that showed up better than the North Fork at its present stage of development, and but very few that showed up anything like as well as that property does.

The class of deposit—Galena carrying gold and silver—and also silver chlorides, with some lime and iron, make it of the best of business mining.

It is a fine fissure vein on a mountain side rising high above the river which runs across one end of the property, which makes mining convenient. The river furnishes water enough for power; timber and coal are nearby. The region is well mineralized and is developing rapidly.

I most heartily indorse the property and recommend investment for developing it and equipping it with concentration plant, believing it will richly repay such investment.

Very truly yours,

Signed, WM. ROPER.

Engineer's Report

[With some notes after much had been done on the mine along the line of his recommendation.]

Report on the Properties of the Boston Sierra Madra Mine Industry Company—their condition and needs

The properties of the Boston Sierra Madra Mine Industry Company consist of the North Fork and Table Spoon Lode Mining Claims, 41 2/3 acres

extending 3,000 feet along the North Fork Lode in a Northwest and Southeast course, situate in Township 12 N., Range 86 W., on the North Fork of the Little Snake River in the Southern part of the Battle Lake Milling District, Carbon County, Wyoming, near the Colorado boundary line.

Deposit

The deposit is a fissure vein of quartz carrying Argentiferous Galena, Gold, Copper, Lime and Iron in an Andesite formation.

Development

Sufficient prospecting has been done to open up a pay streak about 1,700 feet long and in that pay streak an ore chute over 300 feet long, 6 inches to 18 inches wide.

The remaining problem is one of business mining. The speculative, uncertain conditions are already overcome. The ore is found and its character determined.

The ore is ideal for smelting and will concentrate easily.

New Development

A temporary Shaft House has been erected, sufficient for all purposes until a large power plant is to be installed.

A permanent working shaft is being sunk on the ore and will be continued to as great depth as practical mining will admit, and at proper intervals, cross-cuts and drifts will be run in regular mine fashion.

This shaft has shown great increase in the size of the ore body, which, in places, is over two feet thick of nearly solid Mineral—Galena and Blend. The Galena always carries good values in Silver and sometimes in Gold. The Blend carries both Gold and Silver, beside the Zinc. And frequently the Quartz and the Hematite, which always borders and often splinters into the crevices in the Quartz, sparkles with free Gold.

In places, cavities in the Quartz contain nests of wire Silver, and a small percentage of Copper is often present.



B. S. M. HILL AND THE RIVER

Besides this ore streak, upon which the shaft is being sunk, when blasts break too far into the foot wall, other ore bodies are uncovered, two feet, three feet and four feet away from the main one and parallel to it. It is, therefore, certain that when cross-cuts are made, the vein will be found to be very wide.

Tunnel

For the first level, and also to drain and ventilate the mine as well as for transportation of ore, a tunnel is being driven from the mill site to connect with the shaft about 200 feet below the surface. This tunnel was started on what was supposed to be a small stringer, but the work has revealed a great vein over twenty feet wide, containing several streaks of low-grade Gold and Silver ore. This vein angles obliquely from the main vein and intersects it about 270 feet from the shaft.

Problem

A proper concentrating plant on the ground and enough ore opened up to keep the plant going will completely solve the problem of making this a rich paying mine.

Location and Facilities

The deposit is close to a fine timber country. The North Fork of the Little Snake River flows across the property near the north end. Great coal fields commence seven miles down the river.

The river affords at all seasons abundance of water for power and all other purposes.

The hill rises abruptly from the river to a height of nearly 300 ft. along the line of the vein, thus affording desirable conditions for carrying ore from the mine workings to where reduction plant should be placed.

Determination of Values

There has not been an innumerable number of promiscuous assays made on the ores of this North Fork Lode, but only such as to give an intelligent idea of their commercial value.

The following are assay results on ore taken at various times since August, 1898:

No.	Oz. Gold	Value	Oz. Silver	Value	Per Cent Lead	Value	Total
1	1-50.100	\$ 30.00	11-50.100	\$ 6.90	None	.....	\$ 36.90
2	82.100	16.40	31-28.100	18.76	Not tried	.....	35.16
3	35.100	7.00	31	18.60	10 per cent	\$ 8.00	35.60
4	22.100	4.40	42-80.100	25.68	7 per cent	5.60	35.68
5	10.100	2.00	26	15.60	17-99.100	14.38	31.98
6	76.100	15.20	56-37.100	33.82	Not tried	.....	49.02
7	14.100	2.80	63	37.80	Not tried	.....	40.60
8	90.100	18.00	22	13.20	5-5.10	4.40	35.60
9	55.100	11.00	27-80.100	16.68	8	6.40	34.08
10	48.100	9.60	38	22.80	Not tried	.....	32.40
11	16.100	3.20	200	120.00	Not tried	.....	123.20
12	18	360.00	5	3.00	None	.....	363.00
13	72	1,440.00	60.100	.36	Not tried	.....	1,440.36
14	14-70.100	294.00	Trace	.....	Not tried	.....	294.00
15	Trace	.....	600	360.00	Not tried	.....	360.00
16	03.100	.60	52-63.100	31.58	Not tried	.....	32.18

The first ten and the last one were from attempts to get at average ore. Nos. 11, 12, 14 and 15 were choice bits of ore tried to ascertain how rich ore could be found.

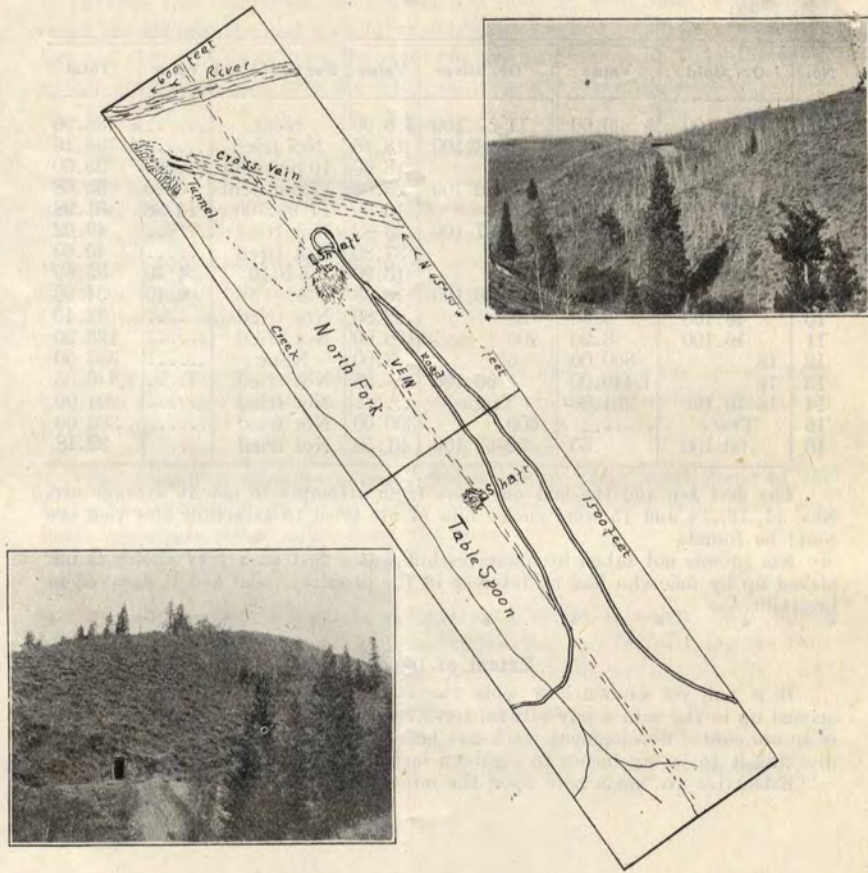
No. 13 was not taken by ourselves but was a test on a very choice chunk picked up by one who had no interest in the property, who had it assayed in Leadville.

* * * * *

Extent of Deposit

It is not yet known how wide the vein may prove to be, but there is opened up in the vein a pay stream for 1,700 feet in length, 300 feet of which is an ore chute; development work has been principally done on the chute and revealed it to be six inches to eighteen inches in width.

Estimates are made here upon the minimum of six inches.



[Note: The note under the head of New Development shows the ore deposit to be immensely greater than revealed at the time Mr. McFadden made his examination.]

Estimates

By actual test it has been found that 8-75/100 cubic feet of this heavy ore weighs one ton. To be conservative, estimate is here made at ten cubic feet per ton.

On this basis of 300 feet in length, 6 inches in width, 10 cubic feet per ton, 15 tons are obtained per foot of depth.

Operation

This ore will concentrate 5 to 10 tons into 1. Estimates below are based on 5 tons into 1.

Proper concentration appliances will save 97 per cent of values. Calculations below are based on saving only 90 per cent.

Cost of Operation

Thus opened up the ore can be stoped for	\$1.00 per ton
Concentrated for	1.00 "
Cartage to Rawlins for which only \$12.00 per ton has thus far been paid, call \$15.00 per ton of concentrates, 1 ton concentrates to 5 tons crude ore therefore equals	\$3.00 per crude ton
Freight Rawlins to Denver is \$4.00, which equals . . . . .	.80 " "
Smelter charges will be nil, but call them \$5.00 per ton concentrates, equivalent to	1.00 " "
Estimated loss on \$30.00 10 per cent	3.00 " "

Total cost to stope, reduce and market \$9.80 per crude ton
 To still further exercise conservativeness call this \$10.00.

Output and Profit

Development is progressing with the object of opening up sufficient territory under ground to produce 50 tons of ore per day and a Mill to concentrate that amount to start.

The average of the sixteen test is **186.23 per ton**

The average of the eleven general ores is **36.29 per ton**

It is, therefore, conservative to expect a working average of at least the \$36.29, showing a profit of \$26.00 per ton.

At fifty tons per day, fifteen hundred tons would be handled every month.

Fifteen hundred tons per month at \$26.00, equals a profit of \$39,000 or \$468,000 per year, OVER FORTY-SIX PER CENT on the entire capital stock of the Company.

Make your own calculations on an average of 186.23 per ton.

Again 6 inches of ore has been made the basis for estimates, while from the first it was from 6 to 18 inches wide, an average of 12 inches, or double that figured upon, and deeper sinking has found it to be 26 inches wide. Still further, these calculations are made on only 300 feet of this 1,700 feet of actually known paystreak. There probably are a dozen different ore chutes and paystreaks in the vein.

The vein runs along a shelf on the side of the mountain. This shelf is from thirty to sixty feet wide and the indications are that this whole shelf is the apex of the real vein.

This known pay streak 1,700 feet long by 1 foot wide would produce 170 tons of ore per foot of depth, which at \$36.29 per ton amounts to **\$ 6,169.30**
 1,000 feet, a common mine depth **\$ 6,169,300.00**
 5,000 feet, the present depth of Calumet and Hecla **\$ 30,846,500.00**
 At the general average of the sixteen tests of \$186.23 per ton **\$158,295,500.00**

The indications are this ore will be much richer and the vein at reasonable depth widen to more than 30 feet. Allowing an average of 5 feet of ore and the same value as at surface as shown by the eleven test of low grade ore the yield at 5,000 feet would result in the enormous amount of over one hundred and fifty millions of dollars.

(Or at average value of all the tests of \$186.23 per ton, **791,477,500.00**).

The same splendid character of ore has continued all the way down, and reports from the contractor in January say that there is 4½ feet to 5 feet between well defined walls.

Here are seven recent tests on the ore:

Ozs. Gold per ton	Gold Value	Ozs. Silver per ton	Silver Value	Per cent Lead	Lead Value	Per cent Zinc	Zinc Value	Total Value per ton
Trace	.....	25	\$14.75	78 ⁶ / ₁₀	70.44	.....	.....	\$85.49
0.03	\$0.60	68 ⁸ / ₁₀	28.67	60 ⁸ / ₁₀	54.45	.....	.....	83.72
Trace	.....	3 ³ / ₁₀	2.24	.....	.....	50 ¹ / ₁₀	\$50.10	52.34
.....	.....	29 ³ / ₁₀	17.58	77 ⁷ / ₁₀	\$69.93	.....	.....	\$87.51
.....	.....	8 ⁹ / ₁₀	5.24	.....	.....	52 ⁶ / ₁₀	\$52.60	57.94
.....	.....	18 ⁴ / ₁₀	11.04	62 ⁸ / ₁₀	56.34	.....	.....	67.38
33 ⁶ / ₁₀	\$694.51	11 ² / ₁₀	6.72	.....	.....	.....	.....	701.23

Naturally not all of this 4½ to 5 feet is of the highest grade ore, but a good proportion of it is, and it is pleasing to see 4½ to 5 feet at greater depth when only 6 inches had been calculated upon.

Permanency of Deposit

Mining history proves that man can never get deep enough into the earth to reach the limit of an argentiferous Galena fissure deposit in an Andesite formation.

Railroads

The Laramie, Hanhns Peak & Pacific Railroad now building must run within a half mile of this property to reach the territory it was announced it will build into.

The course of the Burlington in building from Gurnsey to Salt Lake City lies directly across the property. Work on this line has already commenced.

Signed GEO. B. McFADDEN,

Denver, Colo., February 14, 1902.

Civil and Mining Engineer.



SHAFT DUMP

What a Geologist and Mining Engineer says upon Examination, after Development had progressed much beyond the conditions when Mr. McFadden reported.

Denver, Colo., Aug. 3, 1904.

Mr. L. A. Pease, Three Forks, Wyo.

Dear Sir:—I herewith submit report and map of the North Fork and Table Spoon claims of the Boston Sierra Madra M. I. Co.'s property, located in Battle Lake Mining District, Carbon County, Wyoming, which property I have just examined.

This section is locally known as the Three Forks (mining district) Section of the Battle Lake District, and is plainly connected geologically with

the more extensively developed and, therefore, better known district surrounding the Rudefeha, Doane-Rambler and other large producers in that section which connects with Three Forks on the north. Sedimentaries distributed by volcanic and eruptive overflows and intrusions, the intrusive rock being a black diorite, ragged granite outcrops and fissures lined with mineralized quarts, are the physical characteristics of both sections.

In the northern part of the district the ore is mainly copper, lying in lenticular masses and chambers in the limestone and quartzite. The gold ore is generally found in place in the granite and quartz formation, and was first found in 1897 in boulders of quartz. In the adjoining district the values are principally in copper, but the presence of quartz in the Three Forks section suggests that the values will remain principally gold until water level is reached, after which the permanent character of the ore values will be determined. From the presence of copper, both oxides and carbonate, in all the side seams of the North Fork group, the presumption is the values will be in a gold-copper form. The silver will depend upon the amount of argentiferous galena found at the same level. At present the largest amount of ore extracted is a silver-bearing lead ore. Most of the ore, of whatever character, found in the district at present is this silver-bearing lead ore (argentiferous galena), or copper ore in places where the diorite intrusion is most marked and this specially shown by the intrusions in the two claims which are the subject of this report.

The presence of springs at the surface proves the activity of the subterranean circulation, to which agency much of the adjacent ore deposits are indebted for their size and value.

The geologic age of the formation in which the fissures are located is evidence of their strength, permanency and value. The age of the granite is the Archean, with intrusions during the Paleozoic. The sedimentaries are probably Silurian, with the exception of the upper layer, sandstone, which is rarely found in this section. The veins of the North Fork and Table Spoon are very strong as shown in the outcrop, which can be followed several thousand feet along the line of the claims and beyond, both ways, where light prospecting has developed the extension of the vein.

The development of the North Fork consists of one 50-foot tunnel and a 150-foot shaft or incline. In the tunnel, at the breast, can be seen several mineralized feeders (see cross-section on map) dipping toward a common center in the vein under the floor of the tunnel, giving positive evidence of a

rapid enlargement of the vein and deposit at a little depth, which the tunnel is steadily gaining. In the 150-foot shaft, on the same claim, a vein of good quartz has been followed on its dip, and in the last work is showing steady improvement in quality and quantity. As shown by openings (see map), the main vein (upon which both claims are located), which outcrops the entire length, crosses in a N. W.-S. trend the vein in the tunnel, which has an E.-W. trend. Farther examination shows that a strong N. E.-S. W. vein meets these at their point of intersection (see map) below the shaft level, and suggests the probability that a large deposit of ore will be there found, as the ground has been so thoroughly fractured and chambered that the water has found a large amount of space in condition to receive its mineral constituents. The development on the Table Spoon is a shaft and tunnel in the same character of ground as the North Fork. The prospects are the same as the other showed at the same depth.

The claims are 600x1500 feet in dimensions, as shown on map. The topography of the camp is hilly and rough, affording many sites for tunnels that can rapidly gain depth, and the hills afford a plentiful supply of timber for mining or fuel.

The tunnel on the North Fork claim will, in a distance of 250 feet, cut the cross-vein at a depth of 200 feet, and at a point where the junction of the three veins insures a large deposit of ore. I state this positively from the fact that the veins all show mineralization their entire length, and the junction will furnish the place of enlargement and enrichment. The location of development openings has been well chosen for speedy and satisfactory results. The work of timbering and the surface improvements are all well done.

The character of ore so far as tested shows it to be a smelter gold ore averaging \$42.00 per ton smelter returns, and much richer in general tests, which have reached 72 ounces in gold and from 33 ounces to 107 ounces in silver, and where the silver chlorides predominated it went up to 600 ounces per ton, but the showing of copper is sufficient to warrant the belief that the mine will eventually be a gold copper producer. The zinc is dropping out as depth is gained, but at present all lead is zinciferous, but has good gold values.

The original silver values were found with this galena in the form of cerargyrite (chloride of silver), carrying the high values as shown above and 5 per cent lead, but as the silver values lessen the lead increases.

In continuing the development I would earnestly recommend steadily driving the North Fork tunnel to the point of intersection before mentioned, and then connecting with the shaft on the level of the tunnel. This will give good ventilation and provide a drainway for the shaft water, which will lessen the present cost of hoisting water and ore at the shaft, as well as save time and labor.

The cost of driving the tunnel to the suggested point of intersection will be about \$6.00 per foot.

I have found the ore to be of a character requiring and favoring concentration. This can be done near the mine and thus eliminate much of the freight expense, by the erection of a medium-capacity plant, which can be enlarged as the output may require.

I have examined the different openings on the vein, and the outcrop. I have followed the entire length of the claims, and I assure you but one result will follow systematic and intelligent development, and that is, a mine will be opened the equal of any as yet found in this country.

Respectfully submitted,

FRANK EARLE, M. E.

Of the mines to which Prof. Earl refers, the Rudefeha is owned by a corporation with \$20,000,000 Capital Stock. They have built a smelter at Encampment and the longest aerial tramway in the world to carry the ore to the smelter. A recent report stated the smelter was turning out 28,000 pounds (fourteen tons) of 99 per cent fine Copper daily.

The Doane-Rambler has the record of the highest average per ton value of Copper in ore shipments of any mine in existence. This mine is owned by a Company with \$2,500,000 Capital Stock.

Many more in close proximity have made such trial shipments as to show their high value, and as fast as they can be developed there is positive evidence that the numerous Copper deposits to the north and Argentiferous Galena deposits to the south of the North Fork of the Little Snake River, will pass into the producing stage of very rich and profitable mines.

Railroad Development

Since Mr. McFadden's report was written, The L. H. P. & P. have completed their grade to the foot of Medicine Bow Range and their survey to Encampment, and are now equipping the road with proceeds of first sale of their bond issue.

The D. N. W. & P. Moffatt Road, is completed and handling traffic to a point West of the top of the continental divide, and it will soon reach a point South of the B. S. M. Mine, which will reduce the haul from the mine to less than 40 per cent of the distance to R. R. Mr. McFadden based hauling expenses upon.



VOLCANIC OUTCROP

The Wyoming Central has surveyed a line from Walcott, Wyoming, to the great Anthracite Coal Fields 25 miles Southwest of the Boston Sierra Madra Mine, which line passes the mine only a short distance to the East.

The railroads must, of necessity, cross the great Divide in this Country to get the Anthracite Coal in Routt County, Colorado, and the immense Bituminous Beds along the Little Snake River, and handle the products of Mine, Farm and Forest, and the formation of the Range, the low passes and valleys for approach on each side make the Three Forks Country the location of the Boston Sierra Madra property, the absolute key to this transmountain R. R. situation.

Coal, wood, water and Mineral here are abundant and sufficient for every mining purpose.

The character of the deposit of B. S. M. Mine is the most desirable and ideal known in the precious mineral bearing group.

The smelters must have this ore to flux all others with.

Another business feature of this Company is, it **OWNS THIS PROPERTY**. It has been bought and paid for by the projectors of this Company.

Further, these projectors personally furnished the money to do all the prospecting work. They furnished the speculative and inquiry capital. They put up the money and did the work to reveal an actual ore chute, which is the necessary success guaranteeing constituent of any mine.

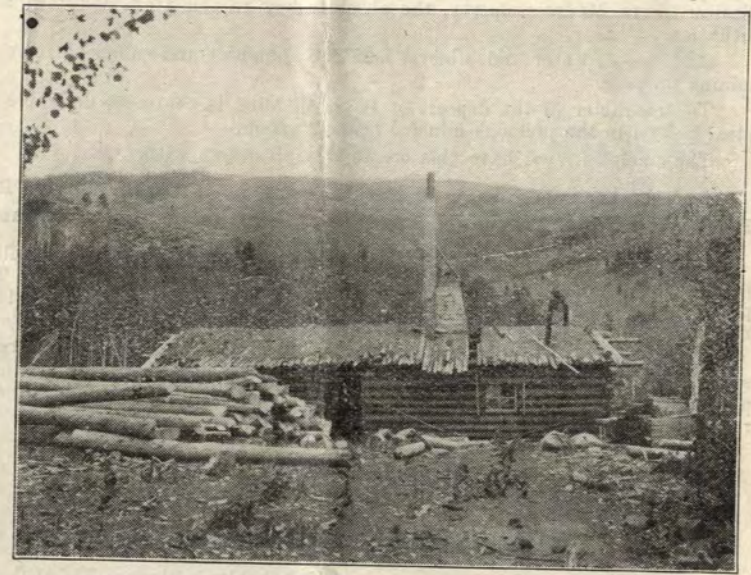
The public was not asked to invest while the property was in the unknown speculative state. But now that the speculative period is passed, a limited amount of stock of the Company will be sold to furnish funds to erect reduction works and put the mine in paying condition.

This is a gilt edge investment of rare promise.

Financed by

INTERSTATE INVESTMENT CO.

1118 Ashland Block, CHICAGO, ILL.



TEMPORARY SHAFT HOUSE