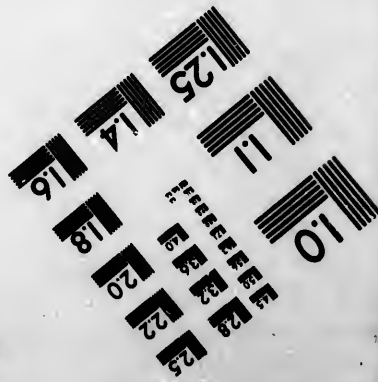
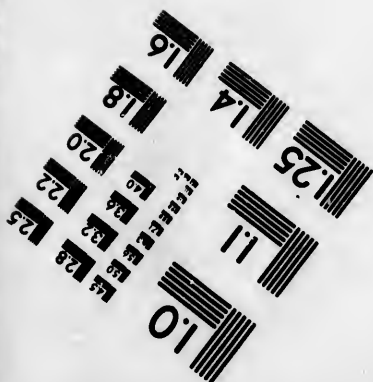
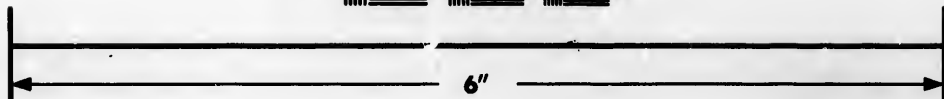
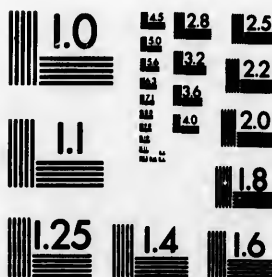


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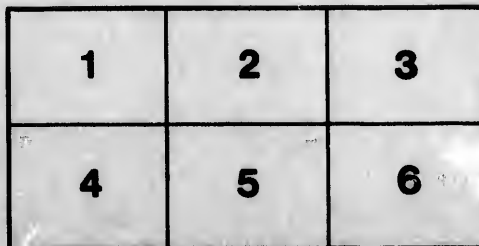
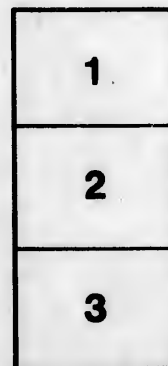
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PROSPECTUS

OF THE

New Hampshire Silver-Lead

COMPANY.

71 BROADWAY, NEW YORK.

Capital Stock, 100,000 Shares.
Nominal par value, \$5 Each.

NEW YORK:

MACOY & HERWIG, STATIONERS AND PRINTERS,

112 & 114 BROADWAY.

1864.

1864
(42)

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LEW
JOH
L. B

T H E

New Hampshire Silver-Lead Company,

Organized under the Laws of the State of New York.

O F F I C E R S .

President,

LEWIS A. OSBORN.

Secretary,

WILLIAM H. FARRAR.

Trustees,

| | |
|---------------------|------------------------------------------------------|
| REUBEN BURKHALTER, | of Messrs. C. Burkhalter & Co., New York. |
| EDWARD J. HAMILTON, | “ Quackenbush & Hamilton, New York. |
| WILLIAM H. BLACK, | “ Garbutt, Black & Hendricks, New York. |
| GEORGE C. FARRAR, | President of Fall Creek Coal and Iron Co., New York. |
| JOSEPH T. WHITE, | “ Bergen Coal and Oil Co., New York. |
| EZRA W. KEELER, | 70 Murray Street, New York. |
| LEWIS A. OSBORN, | 69 Warren Street, New York. |
| JOHN B. I. ROBISON, | Newark, N. J. |
| L. H. ARMSTRONG, | Newark, N. J. |

Executive Committee,

JOHN B. I. ROBISON,
GEORGE C. FARRAR,
EDWARD J. HAMILTON.

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P R O S P E C T U S .

THE NEW HAMPSHIRE SILVER-LEAD COMPANY is organized under the laws of the State of New York for Mining and Manufacturing purposes. The Capital Stock of this Company consists of 100,000 Shares of nominal par value of \$5 each, 80,000 Shares of which were paid for the mines in fee, situate in the township of Lyman, Grafton County, New Hampshire, said stock not assessable; the remaining 20,000 Shares being reserved for working capital, to be disposed of by order of the Board of Trustees, 5,000 Shares of which are now being sold at \$2.50 per share, and issued as full paid stock not liable to assessment. This Company has been organized under the most favorable auspices, the mines having already been sufficiently developed to produce some of the finest and richest Silver-Lead Ore ever found in this country, yielding, according to several assays, about 80 per cent. of Lead and from 35 to 57 oz. of Silver to the ton of galena, the present value of which ore is about \$500 per ton. It will readily be seen from the statement of Prof. Wurtz, hereto annexed, showing the relative value of each of the metals contained, that either the Lead or the Silver alone, would produce a large revenue, and that the two combined cannot fail to become very remunerative, inasmuch as ample provision has been made for a large working capital, in order that the proceeds of the mines may be divided amongst the Stockholders. The mines of this Company consist of five valuable veins already explored, and

several unexplored veins, running nearly the entire length of the property, (100 acres,) and located on the eastern slope of Gardner's Mountain, very advantageous for mining expeditiously and economically, having natural drainage to some of the veins through adits to the depth of from 75 to 200 feet.

The Company have already located several shafts and adits, and are now sinking a shaft on one of the largest veins, by contract, twelve feet by six feet, sixty feet deep. The locating of these shafts and adits has been done by the best professional geological skill, together with the experience of the best practical mining engineers in the country. From explorations already made and ore obtained, it is believed there is also a very valuable Copper Vein upon this property, and as soon as practicable the Company intend to further develop it, confident of a very large yield of that ore. A very great advantage which the locality of these mines presents, is, that it is within six miles of railroad communication, making the expense of transportation to market very light, and accessible at all seasons of the year. It is the intention of this Company, with the excellent facilities which it has, by proper and careful management of its operations, to make it a permanent and profitable investment for the Stockholders. Specimens of the ores from these mines may be seen, and copies of this prospectus obtained, at the office of the Company,

71 BROADWAY,
New York.

Annexed will be found reports from Professor Henry Wurtz, upon the property of the Company, together with reports of Dr. John Torrey, U. S. Assay Office, upon the assay of the ores; also report of Samuel Truscott, practical mining engineer, all of which are respectfully submitted.

R E P O R T
OF
Prof. HENRY WURTZ,
ON THE PROPERTY OF THE
New Hampshire Silver-Lead Company,
IN THE TOWNSHIP OF LYMAN, GRAFTON COUNTY,
New Hampshire.

GENTLEMEN—The preliminary examination, which I have made of your property at this place during the past week, enables me to report as follows:

This property is located upon an exceedingly well-marked belt of metalliferous rocks, composed chiefly of talcose and quartzose schists, which crosses a small portion of the State of New Hampshire, in a direction from N. E. to S. W.

Owing to a large, nearly semi-circular, bend in the Connecticut River, forming the State Line, in the concavity of which bend this locality lies, the portion of the outcrop of this metalliferous belt lying within the State of New Hampshire is quite limited; and this is probably the reason why Dr. Charles T. Jackson, in his excellent geological survey of this State, appears to have given this district but a very cursory examination.

He has marked down upon his geological map, however, one locality of copper ore, another of lead ore, and another of iron ore, situated upon this belt, within the limits of Lyman township; and it would appear, judging from the direction indicated by residents of

the neighborhood, for a locality spoken of by Dr. Jackson, in Bath township, on the property of Mr. H. Lang, that this locality also should lie upon the same belt, or range, though not marked thus on Dr. Jackson's map.

Dr. J. gives the following description of Lang's locality:

"Two veins occur near the residence of Mr. Lang's tenant, Mr. Hunt, on the margin of a small brook, in a ravine over the hill; and a large detached block of very pure ore, $2\frac{1}{2}$ feet in diameter, was found in the meadow below the ravine, and must have been derived from some vein in the vicinity. The vein on this hill runs N. 50 deg. W. (N. 50 deg. E. ?) nearly in the same direction with the slate strata.

"A cross vein, having a course N. 45 deg. W., is from one foot to eighteen inches wide, and is mixed with fragments of slate, forming with it a breccia. Over the hill, in the ravine, the vein is from four to eight inches wide, and a cross vein is two inches wide.

"The copper ore on this estate appears worthy of being wrought, and by mining operations it can be ascertained whether the veins continue to be rich as they descend. By a single blast we raised nearly 100 lbs. of good copper, which would yield about 20 per cent. of pure metal."

In another place Dr. J. gives the results of two analyses of the copper pyrites of this locality, which indicated respectively 32.5 and 31.92 per cent. of metallic copper.

It is also interesting to remark, that one of the few localities in Vermont mentioned by the State Geologist of that State, Prof. Adams, where copper pyrites had been found in any quantity, probably lies on the southwesterly prolongation of the same range. This is at Corinth, Orange Co., Vt.

Prof. A. states that at that time copper had been found along a line bearing N. 10 deg. W. for 200 rods. At one place the vein was more than a foot wide. I understand that some mining has

since been done at this place, but have no further information on the subject.

The portion of this metalliferous belt crossing your property in Lyman has a course somewhat less westerly than that attributed by Dr. Jackson, (as inferred from the above, N. 50 deg. W., being, no doubt, a misprint for N. 50 deg. E.,) to the schists on Lang's property, being about due N. E. and S. W., the dip being southeasterly, and *at least* 45 deg. from the horizontal.

These schists have, in most places, more or less of a talcose character, though in some places passing into a quartzose schist.

The country is everywhere highly metalliferous, the indications of this being obvious to an experienced eye almost at first glance, in the very frequent occurrence of masses of honey-combed quartz, usually containing more or less limonite gozzan, indicating the past existence of metallic sulphurets. In some places a large percentage of the stones of which the fences are built are of this character.

I, myself, picked out of a stone fence such a mass of quartz, still containing bunches of galena and blende.

The schists themselves, in most places where exposed, are loaded with small particles of *limonite*, derived, as was seen in places where we blasted into it, from more or less thickly interspersed crystals of pyrites.

In many places the ledges of schist were stained and encrusted with *limonite*.

Everywhere throughout these schists were found seams and bunches of quartz, sometimes assuming the form of thick beds, conformable with the stratification, sometimes even that of fissure veins crossing the stratification at an angle.

Such quartz was almost invariably accompanied by the well-known indications, of carrying, in depth, more or less of the metallic sulphurets, or ores; the particular ores observed, so far as opened, being common iron pyrites, copper pyrites, galena and

blende. The proportion of silver in the galena will be determined by the assays, now in progress by Dr. Torrey, at the United States Assay Office.

The most important of these quartz formations found upon the property, were three thick beds, cropping out and forming three heavy parallel ledges at different heights along a very steep hillside, on the western side of the tract, known as "Gardner's Mountain." There was only time to give special examination to the lower or most easterly of these three heavy quartz outcrops, though it is to be presumed that they will all three be found similar in character.

This outcrop, which we have called *West Lode, No. 1*, is composed of highly metalliferous quartz, intercalated between the beds of the schists, and having the same strike and dip as the latter.

No place was found where the walls were distinctly visible, and, therefore, no measurement of its thickness could be made. I am inclined to estimate its average thickness, however, as *at least ten feet*, and it may be more.

The blastings which I directed to be made will shortly determine this point.

This lode of quartz cannot be regarded as presenting all the characteristics of a *true fissure vein*, but this is of little *practical* importance, the outcrop being distinctly visible, and of great thickness for a distance of at least four or five hundred yards, and no doubt extends much further still where it is not visible; so that no reasonable fear can be entertained with regard to the supply of ore bearing material. As regards the character of this material, the surface indications are also very encouraging, the quartz, at one point where we have made two small excavations, marked A and B on the map, one near the foot wall side, and the other near the hanging wall side of the lode, showing numerous strings and bunches of galena, with some copper pyrites, together with gozzans and honey-combed cavities, indicating an increase in the proportion of metals in depth.

A very encouraging feature was the finding of many cavities or "vugs," lined with beautiful crystals of quartz, in some of which there was much gozzan, intermixed with decomposing crystals of galena and yellow copper. A feature of the greatest importance, and encouraging the expectation of *an increase of copper in depth*, was the generally clear and untarnished appearance of the few crystals of iron pyrites found, which shows the gozzans to have been chiefly, if not wholly, derived from copper pyrites.

In fact, in some places gozzan was found distinctly passing into yellow copper, some specimens of which were brought back, so that the indications are quite strong that, in addition to the silver lead, an important quantity of copper will be found in depth on this lode.

In one vug was found a quantity of a rich blue powder, which may have been *indigo copper*.

Until further excavation has been made in this large quartz lode, no certain opinion can be formed as regards the certainty of finding here the regular structural features of a fissure vein; but still it may with some confidence be calculated that, even should it be merely a large "segregated" bed of quartz, certain structural lines will exist, along which the metallic minerals will be found more or less concentrated, and the *width* of such a lode will enable such richer portions to be followed up and taken down, without much waste of labor on the less productive tracts of the veinstone. With regard to the further exploration of this lode, the proper course seems to be to carry such explorations from the point now being opened toward the S. W., in which direction the ground at the foot of the mountain falls off rapidly; and if the surface indications continue to promise as well in that direction, a short adit would in many cases cut the lode, and the subsequent operations could be guided by the developments made. Should surface blasting show that the west lodes No. 2 and No. 3 possess the same metalliferous character as No. 1, cross cuts may be driven to them from any

suitable point in the workings on No. 1, and a great depth of drainage obtained upon them.

Proceeding from the foot of Gardner's Mountain southeasterly, we find, first, two wide outcrops of schist, the outcropping edges of which are greatly stained and encrusted with limonite, indicating for the country here a highly metalliferous condition—this country, as will be observed, being adjacent to the hanging wall of the west lode, No. 1—a circumstance which must certainly be regarded as highly encouraging to the expectation of finding that portion of this lode which dips beneath this rich country proportionately rich in metals.

Proceeding further, in a southeast direction, to a distance altogether about 220 yards from the opening in west lode No. 1, we encounter a group of outcrops of quartz of a character differing considerably from those described above.

Here are two well-marked *fissure veins*, somewhat irregular in thickness and in dip, but having a course about N. 50 deg. E.; the same, therefore, as given by Dr. Jackson for the copper vein on Lang's property.

These veins each appear to be, on an average, about two feet in width; are known as Orchard Veins Nos. 1 and 2. Orchard Vein No. 2 being a new discovery by your mining captain, Mr. Truscott, and not yet explored to any extent, nothing can be said about it, except that gozzans and honey-combed quartz appear in it, and that no doubt can be entertained of its proving altogether similar in character to its companion, Orchard Vein No. 1, and that both these appear to belong to a system of small fissure veins traversing the country, more of which will, in all probability, be discovered.

A strong quartz outcrop, discovered by Mr. Osborn and myself, in the barnyard of Mr. Bailey, seems to lie near the course of Orchard Vein No. 2, and has been marked provisionally on the map as belonging to that vein, though it may turn out to belong to another parallel vein.

Orchard Vein No. 1 is of much more immediate interest. It was discovered twenty years since, in sinking a well for the farm-house, at the point E, and was traced some few yards northeasterly to F and G, where several blasts have been made into it. The well is about 18 feet deep, and this vein is sufficiently developed to enable some idea of its nature to be arrived at.

There can be no doubt of this being a true fissure vein, somewhat irregular at the surface in its thickness and dip, but regular, so far as is known, in its course. From F to G were taken out, besides large quantities of gozzan, many specimens of galena and blende, still undecomposed. The excavations made here, however, have been but three or four feet deep. Parts of the quartz showed a strongly-marked, *comby* structure, so characteristic of true fissure veins. Much more was made out by descending into the well at E. Until within a few feet of the bottom, the quartz vein at that point was quite irregular, much branched, and divided by a large horse, the vein itself being mostly barren, though its walls were filled with large masses of rich-looking gozzan. Towards the bottom of the well, however, a change appeared, the vein becoming more regular, about two feet thick, with a steep dip to the southeast, carrying *itself* large quantities of gozzan, and its wall, which consisted above of a rotten, highly talcose schist, assuming here the character of *capels*, or becoming very compact, hard and quartzose, and becoming loaded with brilliant crystals of pyrites.

This system of small fissure veins is well worthy of further exploration, although, as before stated, no hesitation can exist in pronouncing the west lode No. 1 to be the portion of your property possessing the most immediate importance, and calling for earliest thorough investigation. Their course, so far as they have been observed, being so nearly parallel to that of the west lodes, it is concluded, from general analogy with other known districts, that their metallic contents will be similar, and both the galena and blende of these fissure veins will probably be found to contain, in

any case, much *silver*. To determine this important point, much labor was expended in picking out from the decomposed gozzans and quartz, at the openings F G, a sufficient quantity of the small particles of the galena for an assay, for both silver and gold, the results of which will be given in the report of Dr. Torrey, to be appended to this.

In proving this system of veins, below water level, it will be advisable to mark out the course of one of them, where it should cross the low, swampy ground lying southwesterly from the points D and E, and to sink a shaft here at some point a short distance to eastward of this course, the dip of these veins, as above stated, being apparently southeasterly. From the bottom of this shaft, a cross cut made in a direction from N. E. to S. W. will, of course, intersect all these veins about at right angles.

To sum up my chief reasons for believing that this will prove to be a highly valuable mining property:

1. The highly metalliferous character of the range, which is particularly apparent in the country which overhangs the dip of the three great west lodes, and appears also in the existence of the other known localities of metallic minerals in the range.

2. The great magnitude and extent of the west lodes, which throws out of estimation any near possibility of exhaustion of the mining ground, and at the same time enables judicious selection and discrimination to be made in following up the most promising tracts of ground.

3. The favorable contour of most of the surface, which will enable large bodies of the west lodes to be taken out from short adits, without artificial drainage.

4. The unusually rich character of the surface rock at the outcrop of the west lode No. 1, wherever opened; so much unalter-

ed galena and copper pyrites being found, in addition to the gozzans, which are universally believed to indicate an increase of metals in depth, below water level; and the important chemical reasons given above for believing that at this place the gozzans represent chiefly copper pyrites.

5. The generally argentiferous character of the galenas of this section of the United States, some of them having been found by Dr. Jackson and others to contain as much as two or three pounds of silver per ton.

6. The increased value given to ores of this character by the numerous and important improvements, made in recent times, both in the modes of concentration of the ore, and in the modes of extracting their various metallic contents.

In conclusion, I desire to express my most emphatic approval of the policy, too seldom followed by proprietors of mineral localities, which has, however, in the case of your property, been wisely and conscientiously adopted, of instituting competent scientific explorations and examinations of the locality, before initiating or inducing heavy expenditures in the way of mining operations.

Such investigations, now in progress, will, without doubt, lead to the saving of much money in the end, this being, in fact, proved, as I may confidently claim, by the developments already made.

All of which is respectfully submitted.

HENRY WURTZ.

NEW YORK, *August 1, 1864.*

UNITED STATES ASSAY OFFICE,
New York, August 2d, 1864. }

To the New Hampshire Silver-Lead Company:

GENTLEMEN—Professor H. WURTZ has placed in my hands, for assay, three samples of galena, which were collected by him personally upon your property.

I find them to give the following results:

| | | | |
|-----------------------------------|-----------|---|-------------------|
| No. 1, per ton of 2,000 lbs. ore, | - | - | Silver, 49.89 oz. |
| " 2, " " " " " | - | - | " 31.89 " |
| " 3, " " " " " | Lead Ext. | " | 56.95 " |
| | " | " | Gold, 1.006 " |

Yours respectfully,

JOHN TORREY,
United States Assayer.

Remarks upon the Results of the Assays.

The samples No. 1 and No. 2 were both from the West Lode, No. 1; sample No. 1 being from the opening B, near the hanging wall; and sample No. 2 from the opening A, further up the hill and near the foot wall.

The reason why they were assayed separately, was the observation that they differed perceptibly in color and lustre. No. 1, from near the hanging wall, being of a darker blue color, and higher lustre than No. 2. It appears that the darker and more brilliant variety contains 56 per cent. more silver than the other. The practical value of this important observation will appear hereafter in the working of the mine.

The value of the silver in one ton of 2,240 lbs. of the dark variety of this galena is, in coin, at \$1. $\frac{293}{1000}$ per oz., the standard value,

\$72 24—equal, at present rates, in currency, to about \$180. Pure galena contains 86.6 per cent. of lead. Supposing this to yield 80 per cent., the value of the lead in 2,240 lbs. at 15 cts. per lb., (its present value,) is \$280; making the total present value of the metal in one ton of this galena \$450. Making the same calculations with regard to the other samples, and reducing the metallic lead upon which the assay was made, in the case of the Orchard Vein, back to the form of galena, we have the following table:

| IN ONE TON OF GALENA FROM | Ounces of Silver. | Ounces of Gold. | Value of Silver in Coin. | Value of Gold in Coin. | Tot'l Value of Metals in Coin. | Tot'l Value of Metals in Cur'ncy |
|---------------------------|-------------------|-----------------|--------------------------|------------------------|--------------------------------|----------------------------------|
| West Lode, dark..... | 55.877 | | \$72 24 | | \$180 00 | \$450 00 |
| “ “ light..... | 35.716 | | 46 18 | | 154 00 | 385 00 |
| Mean of W. Lode..... | 45.798 | | 59 21 | | 167 00 | 417 50 |
| Orchard Vein..... | 51.027 | 0.9014 | 65 98 | \$18 63 | 192 50 | 481 00 |
| Mean of the three..... | 47.54 | | 61 43 | | 175 50 | 438 75 |

The most interesting result here is, that, notwithstanding the important quantity of gold in the Orchard galena, the superior richness in silver of the dark galenas, from the hanging wall side of the west lode, brings the value of the metals in the latter very nearly up to that of the Orchard Vein.

The discovery of gold, for the first time, in this part of New Hampshire, and in such important quantity, is of great interest, and encourages further examinations of the rocks and minerals upon your property for this metal.

The suggestion to assay these galenas for gold as well as silver, was made by me in consequence of the striking resemblance of this belt of talcose schists and its included veins to certain belts of the same rock, and their included veins, in the gold regions of North

Carolina. Slight indications of gold have previously been found in New Hampshire, in Canaan, Enfield and Grafton townships, in the southern part of this same County of Grafton, by Dr. Jackson, in magnetic pyrites; and at Bridgewater, Windsor County, Vermont, in small quantity, in quartz, associated, as in this place, with the sulphurets of iron, copper and lead.

HENRY WURTZ.

NEW YORK, *August 3, 1864.*

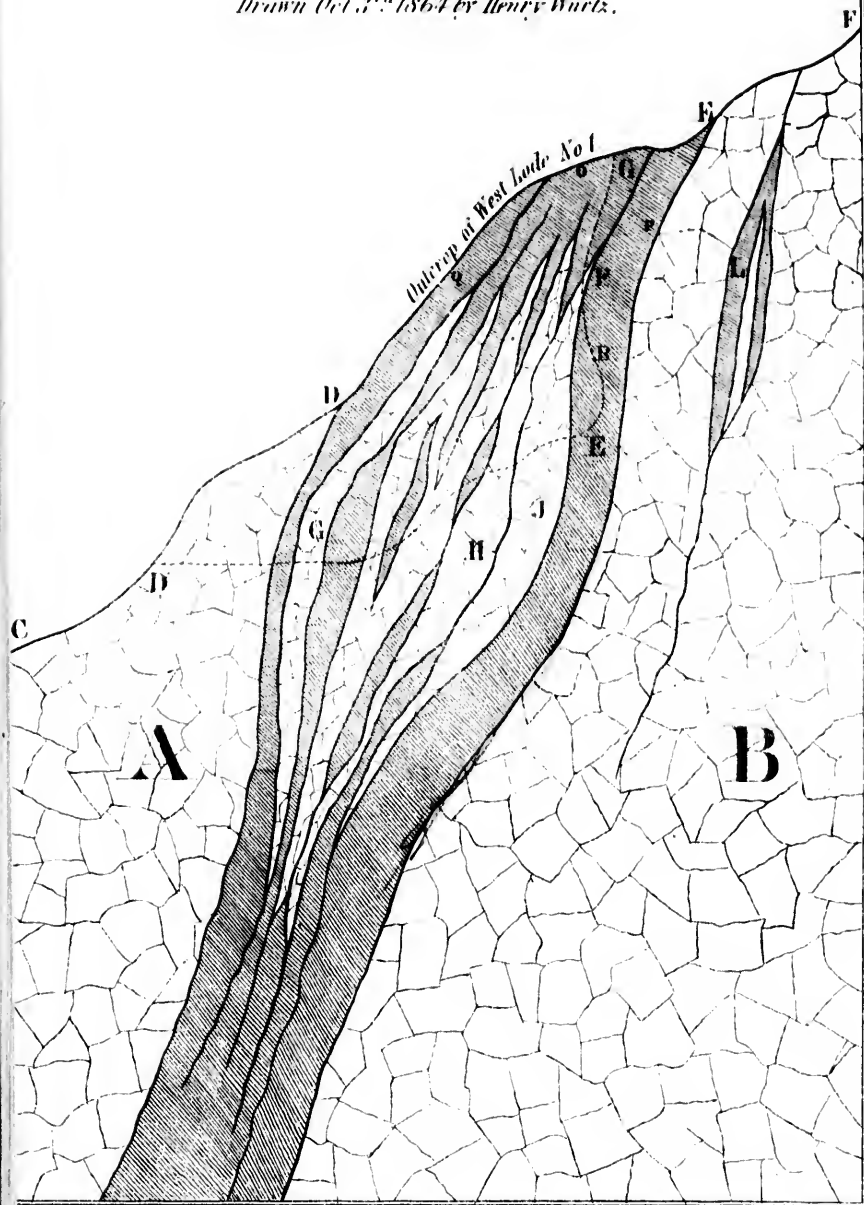
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SECTION OF LODE No. 1.

Partly Ideal.

Drawn Oct. 3rd 1864 by Henry Wurtz.



New Hampshire Silver-Lead Company.

GENTLEMEN—Renewed examination of your mining property on Gardner's Mountain, in New Hampshire, and the further developments made since my former visit, enable me now to report as follows:

An apparent misunderstanding of the recommendations made by me at my first visit has occasioned some delay in developing the outcrop of West Lode, No. 1, and some expenditure not altogether necessary in the present stage of the undertaking, although it may be that in the end this expenditure will not have been unprofitable. The imperfect developments of the outcrop of Lode 1, that have so far been made, lead me to present the sectional sketch appended hereto, which is partly founded upon actual appearances, and is partly conjectural; so far as it is conjectural or ideal, this rough sketch will serve as an illustration of the general structure of such mineral countries as this in which your lodes are found. The section is supposed to be made through the excavation into the outcrop, looking towards the S. W., the line C D E F representing the surface of the country along the slope of the mountain, D E; the outcrop of Lode 1, the dotted line D E F G, approximating to the outline of the excavation at my last visit. Of course everything represented in the drawing below this line is ideal. A B is the "country" composed of a talcose quartzite schist; the laminae of talc being represented by the black lines. At the

place where the excavation is being made it happened that a considerable number of irregularly formed beds of the country rock itself are enclosed in the body of the Lode, constituting what is technically called a "horse." This horse, though containing in many places, like the country rock, much mundie, is nearly barren of ore, and even of gozzans and other indications of the previous existence of ore; and even the irregular branches of the Lode itself, which penetrate in places between the ramifications of the horse, are much decomposed and less rich in indications than the more compact portions of the Lode at the surface. At the point of greatest penetration into the hill, however, the excavation seems to have passed beyond the horse, as at E, where the Lode appears again to be compact, as on the surface, and shows bunches of lead and copper. At this place the wall limiting the ore-bearing portion of the Lode *appears* to dip into the hill. This wall, however, I regard as simply the inner wall of the horse. In depth I should regard it as almost a certainty that the Lode would soon be found to re-assume its original dip, and that, moreover, the horse, like other horses in veins, would be found in depth to thin out and disappear below, as it plainly does above, the Lode becoming again, as represented at K, compact and highly metalliferous, as it is at the surface. The persistence in magnitude and metalliferous character of these Lodes, throughout so great a longitudinal extent, is sufficiently satisfactory evidence that the same persistence will be found in depth; at the same time it cannot be doubted that these Lodes will be found to throw off branches, both longitudinally and vertically, and the schists will be ^{found} ~~found~~ to enclose lenticular masses of metalliferous quartz, such as that ideally represented at L, which thin out both in length and depth. In places, these lenticular beds are found coming to the surface and cropping out, between the outcrops of the great Lodes themselves. The red lines drawn across the Lode are introduced for the purpose of indicating a peculiar structure of these Lodes, which careful examination

has made manifest to me. The bunches of strings of ore, gozzans, vugs and other indications, are found arranged in parallel layers, sometimes only a few inches, sometimes a foot or two distant from each other, dipping into the hill towards the N. W. about as represented, but having also another dip towards the S. W., so that their direction of dip is westerly. Large bunches of ore are frequently found detached from these layers, though usually connected with one of them by strings of ore. The layers themselves, as well as the strings and bunches of ore proceeding from them, will be found in some cases to penetrate beyond the foot-wall boundary of the Lode, into the talcose country beneath. These layers form a series of cleavage planes pervading the mass of the Lode, which will no doubt greatly facilitate the stoping and breaking out of the vein-stone; sometimes these planes pass through the horse, though usually displaced and distorted by it. The same system of planes was found strongly developed along the outcrop of Lode No. 2. It is extremely probable, therefore, that this curious and peculiar variety of vein-structure will be found to be a feature of the metal-bearing Lodes of this section.

I wish here to offer a few suggestions which seem peculiarly applicable to the case of your mining property. In operating upon such large lodes as these, it seems to me that a very favorable opportunity is presented to test the applicability (which, however, can scarcely be doubted) of the improved forms of *drilling machines*, now in such extensive use in tunnelling operations. Such machines, operated by compressed air, would be of peculiar value in mining operations on a large scale, for breaking out the galleries of the mine, as their use, besides the immense saving of labor and time, would obviate the heavy expense of sinking air shafts in many places for ventilation. This would be particularly the case, were the blasting accomplished by means of cartridges charged with gun-cotton, which makes no smoke, in lieu of the common blasting powder.

In conclusion I will remark, that my favorable impressions as to the value of your mining property, as set forth in my first report, remain unaltered.

All of which is respectfully submitted.

HENRY WURTZ.

QUEBEC, C. E., *October 28th*, 1864.

as to
report,

Z.

WARREN, NEW HAMPSHIRE,)
June 18th, 1864. }

LEWIS A. OSBORN, Esq., New York:

MY DEAR SIR—I have been to the Lyman Mine again since I saw you, and put in some blasts—a part of the specimens I forward to you; most of these specimens came from the West Vein that has been discovered to this date. This vein, I should say, is about twelve feet wide, running about 40° East of North, with a dip to the S. E. about 45° . The rock beside the vein is a granular quartz, with some felt spar and lime intermixed with it. About 100 feet east from this vein there are strong indications of another vein; 300 feet east from the west vein, so called, there is a large vein, the outcrop or gozzan is some eight to ten feet wide, and the sulphur is oxidizing through the vein, giving very strong indications of a large champion vein; the iron pyrites form in fissures, as it always does in these champion veins. 400 feet from this vein I discovered another vein, running just in the same direction as the former ones. I should say this vein is about two feet wide. About 120 feet east from this vein is the Orchard Vein, that was first discovered by sinking a well for the farmhouse; this vein is from two to three feet wide, containing quartz, with good spots of lead within a few inches of the surface. The country beside the vein is of granular quartz, lime and slate. The course of the vein is about 80 degrees E. of N. It underlies about one foot in a fathom, or say about 70 degrees toward the S. E. You ask for my opinion about the mine. I have had about thirty years' mining experience, and I have done considerable exploring in this country, also in Cornwall and Devon, England, but I never before took so rich a lot of specimens so near the surface as I took from the West Vein on your prop-

erty. You can see the moss on the outside of one of these specimens, and as soon as the rock was broken there was the silver-lead. You also can see another stone that came out with the same blast, about 20 inches long, and about 8 by 12 the other way—more than one-third is silver-lead; it is also full of vugs and fissures, as all good lodes show themselves. As the vein now appears, it would pay all it would cost, to work as soon as you get tools and machinery. As to the adjoining vein, there has been nothing done, so I cannot say anything about it, except that the surface indications are excellent. The large Gozzan Vein, I think, will be the best vein on your property, although it does not show the ore—there are the indications unmistakable. The next vein you have not as yet seen; it looks promising, but nothing has been done on it yet. The Orchard Vein you have seen; the work has been limited, as I wanted to return home; but there has been good samples taken from it; you took some with you; also, Mr. A. J. Walker and others. As regards my opinion, I think you own one of the best mining properties that I know of, and where everything for mining purposes may be obtained cheap; lumber about \$8 per thousand, wood \$3 per cord; labor as cheap as any place in the States; distance from railroad depot about 5½ miles, with a good road, and conveniences in general very good. I consider your mining district a very valuable one.

I am sir, respectfully yours,

SAMUEL TRUSCOTT,

Mining Engineer.

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