REPORT
ON
BARRETT MINE
BY
A. M. WELLES
1906
LOCATION: The properties composing the Barrett Group are located near the foot of the easterly slope of the Dragoon Mountains in Arizona. More definitely they are about two miles southerly from the eastern entrance to "South Pass", and about one mile from the westerly border of Sulphur Springs Valley.

PROPERTIES: The group consists of the following properties:


The mining claims are each 600' in width by 1500' in length.
The mill sites are each 350' in width by 600' in length.

TITLES: It is understood that United States patent, or Receivers receipt for same at least has been issued for each of the properties mentioned, though the same were not available for inspection at the time of this examination. It is further understood that the title to these properties is in all other respects clear and free from debts, liens,attachments, suits,or cloud and incumbrance of any form, although the examination of such was not a part of this report, or undertaken by the writer.

GEOLOGY: The formation covered by the properties of this company is that of an Upper Carboniferous limestone, uplifted and forming deep seated contacts which extend to the surface with eruptive rocks such as Porphyry and Diorite. In this particular locality it is what may be termed a Porphyritic Diorite; a quartzless variety and containing much soda lime feldspar.
A main contact passes through the properties of this company, having a general northerly and southerly course, though irregular. The great field of limes lying on the east and the eruptives on the west. These eruptives extend westerly in an almost unbroken sheet for several miles.

The apparent dip of the contact from the surface downward so far as can be determined from its limited exposure, is westerly at an angle of nearly forty five degrees; though there is little to be determined from this that may safely govern greater depths.

ORE AND ITS OCCURRENCE: The ore of this property so far has occurred along the line of contact and in secondary form. No exploration of moment has been made of either the limes on the one side or of the eruptive formation on the other. Such ore as may be found in the lime at any reasonable depth will be in secondary form, as carbonates and oxides, while that in the opposite or eruptive formation will be in primary form as sulphides and possibly native copper.

In these ores it is reasonable to expect a greater or less precious metal value, most largely silver, to a depth of about five hundred feet; below this zone in most instances this product gradually diminishes, and finally ceases.

DEVELOPMENT: The development of this property is comparatively limited; and consists (aside from some surface work of shallow depths) of an incline, the mouth of which is located on the south side of a gulch which cuts across the property from west to east, and which is about forty feet vertically above the bed of said gulch. This incline in its course downward follows approximately the contact; though nearly all the way so far as observable it is well into the eruptive formation which forms the hanging wall, and which formation so far as the incline is open and possible of investigation, is a more or less soft, decomposed, and incoherent
mass, forming especially when in saturation, somewhat heavy ground. This incline is said to have reached a depth of about two hundred and twenty-five feet, measured along its slope or pitch, which is little more than forty-five degrees from the horizon. In its downward course however it encounters at about seventy-five feet from the collar a tunnel which has been driven from a point a short distance above the bed of the creek following approximately along the line of contact. That portion of the incline extending below this tunnel level, together with whatever workings may have been extended therefrom are filled with water.

The tunnel beyond where it is encountered by the incline, has been extended apparently several hundred feet, though the whole of same was not subject to exploration at the time of this examination, owing to caving ground together with deposits of mud and water.

The incline has a width of about nine feet in the clear, or in fact not in the clear, as it is partitioned longitudinally with a row of posts, (one at each square set) dividing the incline into two compartments, one a "skip" way, and the other a man way. All of the timbering of this incline is of six inch sawed timbers, the same being wholly inadequate for the purpose intended; the timbers should have been at least ten inches square, while twelve inches would have been better. The roof of this incline is simply lagged with boards. And now as a result of this poor timbering in the incline, and of practically no timbering at all in the tunnel, these workings are now in the following shape.

The incline above water level has commenced to cave and crush its timbers, while the next coming rains will augment this process of destruction rapidly. That portion of incline now, and for a long time past under water, will with the drifts therefrom, when unwatered be found to have caved badly, and quickly after unwatering, will collapse in great part.
The tunnel though already caved badly, could be cleaned out and fortified at almost any time if required. Yet this requirement is questionable from its lack of depth, or "backs" which it will attain, until at least it has been extended to some considerable additional distance.

**IMPROVEMENTS:** The improvements of this property in so far as buildings or structures of any sort are concerned were at no time of any great importance or value. They consist of 5 small houses of cheap construction, together with a Blacksmith shop. All of these are now in a state of comparative ruin.

In addition however there is,

1-40 H.P. internal fired boiler.
1-single cylinder hoist (old style)
1-30 ton capacity water jacket furnace practically new and operated by 1-25 H.P. boiler(Ames)
1-Baker blower #5.
1-straight line Chandler & Taylor 20 H.P. Engine, all in good shape.

**PHYSICAL CONDITIONS:** The facilities for the operation of the Barrett properties upon an extensive scale are as good upon the whole as can be found in the desert region. The Pierce branch of The Southern Pacific Railway system extending from the station of Cochise to the Mining camp of Pierce in Sulphur Springs valley, has its terminus about nine (9) miles distant from this property over practically level ground, wherein the extension of the road would be a comparatively small matter, when operations require it.

Transportation of course governing all supplies, discussion of such is unnecessary. In the matter of water, there exists in the gulch which crosses the property a small supply of good water, but sufficient only for operation on a small scale. Extensive development may of course present a greater or less volume of water, but this for most uses, as domestic, and in contact with iron is not to be regarded; as it will be most liable to be so charged with copper as to be wholly unfit for these uses. Water for unlimited uses
however may be easily obtained when required. Sulphur Springs Valley upon whose borders this property is situated, holds but a few feet below its surface a sea of water. A pumping station but a few miles distant from the property with pipe line rising to a probably head of about 250 feet will provide any volume required. Cost of labor and supplies will be practically the same as in all the great Copper camps of Arizona, especially in the south.

REMARKS AND RECOMMENDATIONS: The past operation of the Barrett property has been outlined and conducted in a somewhat unskillful, impracticable and unworkmanlike manner. The sinking of an incline upon this contact was a method of opening the ground not to be recommended for various reasons, while the manner in which it was supported was a simple throwing away of money.

The property has never made any striking surface presentations of ore or remarkable evidences upon the surface of ore bodies existing beneath. Yet this in no manner condemns its possibilities; for in the great ore producing field about Bisbee Arizona, where the ore occurs in practically the same formation and is practically the same ore, and further upon one of the grandest scales to be found anywhere, there was little upon the surface to indicate the immense deposits beneath the surface save the one "Blow Out" that presented itself upon the Copper Queen Claim.

It is not probable that any such a tonnage will ever be found in the Barrett properties, or in their immediate locality; or is it necessary in order that this should make a producer of no mean dimensions.

The development so far done does not present, (so far as the workings are to be seen) any considerable reserves of ore of any grade, while no great tonnage seems to have ever been extracted and treated; yet these workings are limited in extent, somewhat unintelligently extended, and the greater portion of same under water
at the time of this examination.

The present incline is said to have reached a depth of about two hundred and twenty-five feet (225) as measured along its course; this with the dip it has, would give it little more than one hundred and twenty-five feet (125) of vertical depth, which is insufficient to in any reasonably conclusive manner demonstrate the merits or demerits of the property. The final operation of this or any other property through an incline, is clumsy, expensive and slow, moreover the restoration and refitting of this now means practically beginning anew.

The prospective value, or possibilities of this property however, as deduced from the limited evidence obtainable from the fact of so great a portion of the workings being under water, is yet sufficient to warrant a certain amount of further and more rational inquiry on the part of its owners. To this end a well chosen point should be selected, and from here a vertical shaft sunk to a depth of not less than two hundred and fifty feet (250) (a greater depth being preferable) and from this central opening, the ground in all directions explored by drifts, both along the line of contact, and into the surrounding formations to whatever extent the evidence attending the work warrants.

Five hundred feet of drifting should disclose something of appreciable value, or signs at least to indicate the same.

The present workings of this property exist on each side of the narrow gulch referred to. The incline and deepest workings being on the south side; however, from the work done on the north side, there seems to have been some ore produced, although these workings are shallow.

The new shaft recommended should be so located that a level beneath bed of gulch will reach north side conveniently, and explore the same.
The nature, extent and cost of development work to reasonably determine the merit of this property will be approximately as follows:

- 40 H. P. Hoist with 80 H. P. boiler, cage, cable, 2 cars, sinking pump and all tools and other appurtenances complete (Installed) $4000.00
- 300 ft. of 2 compartment shaft (Timbered) $10000.00
- 1000 ft. drift (If necessary) with supports, $10000.00
- Extra service engineering and incidentals, $6000.00

Total, $30000.00

The foregoing estimate is ample to, as stated reasonably determine the merit of this property and may possibly be accomplished with $5,000.00 less money; or at a total cost of $25,000.00. The condition of the ground, volume of water encountered and etc. will govern the cost, and this estimate can be safely based on presentations already made, though less than one half of this proposed depth has been attained, while in the additional depth to be encountered, both heavier ground and a heavier flow of water may present themselves; although from the writer's experience with workings of about equal depth in the near neighborhood of this, anything of an extraordinary nature along this line is hardly to be anticipated.

In the matter of the habitations and other structures, although the same were originally of no great pretensions, and now in a much dilapidated condition, they can be repaired at nominal expense and made to answer every purpose, while doing this inquiry work.

Little of the remaining improvements enumerated in the foregoing list can be used in this work, with the possibility perhaps of the boilers. The furnace and its attachments are first class, but of course of no use in the character of work first to be done.
In conclusion it may be advised; that located as it is, the property owned under perfect title, the precedents established throughout the territory in which it exists, together with what indications it presents, it is advisable to engage in the further inquiry work, herein before stipulated, or in that portion of it to which a point may possibly be reached, and a condition developed wherein further effort and expense may be deemed inadvisable. In fact, there is nothing else to do but this, or abandon the holdings, while for the reasons above set forth; together with the present and advancing price of copper, it should be done; when it only remains to outline and direct these operations along the most intelligent and economical lines.

Dated
Denver,
July 28th,
1896.