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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: WARREN BASIN CO

ALTERNATE NAMES:

COCHISE COUNTY MILS NUMBER: 707

LOCATION: TOWNSHIP 23 S RANGE 24 E SECTION 22 QUARTER --
LATITUDE: N 31DEG 23MIN 15SEC LONGITUDE: W 109DEG 47MIN 26SEC
TOPO MAP NAME: BISBEE NE - 7.5 MIN

CURRENT STATUS: UNKNOWN

COMMODITY:
MANGANESE

BIBLIOGRAPHY:
ADMMR WARREN BASIN CO FILE

See: Arizona Mining Journal Jan 1919 p. 19
June 1917 p. 18

M E N I N G E N G I N E E ' S R E P O R T .

REPORT MADE BY CHARLES ALBERT SMITH, ON THE
PROPERTY OF THE WARREN BASIN LEASING AND DE-
VELOPING COMPANY, OF BISBEE, COCHISE COUNTY,
ARIZONA.

"Copy" of Sealed ^{original} in this file, original
Dec. 5, 1918

REPORT ON PROPERTY OF THE WARREN BASIN
LEASING AND DEVELOPING COMPANY

LOCATION AND SURROUNDINGS

The property of the Warren Basin Leasing and Developing Company is located in the Warren Mining District, Cochise County, Arizona. The claims, all of which have a general N.W. and S.E. trend, lie on the Eastern slope of the Southeastern Spur of the Mule Mountains, and in the adjacent Sulphur Spring Valley. They embrace portions of Sections 34 and 35 of Township 23 South, Range 25 East, and Sections 2 and 3 of Township 24 South, Range 25 East. The famous mines of Bisbee lie seven miles to the North West while the smelters of Douglas are fourteen miles to the East.

TOPOGRAPHY VEGETATION AND WATER SUPPLY

The Western portion of the property lies in the rugged hills that rise abruptly from nearly level country and attain an altitude of over 5000 feet, while the Eastern portion seven hundred feet below occupies a part of the gently sloping floor of the Sulphur Spring Valley.

Vegetation is almost absent; timber is non-existent; the precipitous hillsides are almost without soil and the level places where soil can lodge are without sufficient moisture to sustain anything but scanty desert growth.

Of water, there is none, save when one of the torrential storms which none too frequently visit this district fills the arroyos, which are ordinarily parched with rushing seething rivers. These subside almost as soon as the storm has passed. Thus it may be seen that the natural water resources are of no use, while none have as yet been developed by artificial means. Water can undoubtedly be found by sinking. As to its probable depth, all I can say is, Bulletin No. 71 of the University of Arizona Agricultural Experiment Station, gives the probable depth of water in this locality as somewhat over 100 feet.

ACCESSIBILITY

The property is very accessible. The grade of the original railroad into Bisbee, now abandoned, but still in good shape, crosses the property and joins the present El Paso

& Southwestern System but a mile distant. The Bisbee-Douglas Highway, which will soon be made one of the finest stretches of highway in the State passes only a mile and a half away.

ACREAGE AND TITLES

The Warren Basin Leasing and Developing Company hold twenty six claims, in two groups, having a total acreage of about 520 acres. Of these twenty six claims, eighteen are the property, outright, of the Company, having been deeded to it by the owners who held them under location. I have been assured by the President of the Company that these claims have been properly staked, (or monumented wherever rocks were available) and that they are legally held. The other eight claims are held under lease from the Warren Basin Copper Mining Company.

GEOLOGY

While the geological situation, taken as a whole, is relatively simple, closer study will reveal a considerable complexity due to primary and secondary faulting. However, the purposes of this report will not be advanced, either by study or exposition, of the more minute structural features, so I shall confine myself to the consideration of the major formations.

Geologically, the entire tract under consideration is of Cretaceous and Quaternary origin. The underlying formation, consisting of fairly thick beds of reddish brown to buff calcareous sandstones, alternating with arenaceous shales of about the same color, is known as the Morita Formation. Conformably overlying this Morita Formation are the greyish and brownish strata of impure and sandy limestone which form the lower member of the mural limestone. On top of these lie the thick cliff like beds of hard grey limestone which form the upper member of the Mural Series. All of these have a strike of approximately N.W. and S.E., and a dip, varying from 20-42°, which takes them out of sight, beneath the quaternary deposits of the Sulphur Spring Valley. About sixty feet below the limestone cliffs near the highest point on the property, on claim "Copper Centgr No. 5" a hard, silicified stratum of limestone makes a prominent showing, partly on account of its own hardness and partly because of the badly broken and altered stratum overlying it. At this point it shows considerable amounts of large crystalline galena carrying silver. This stratum, which is from

four to six feet in thickness, seems, at this place to be pretty thoroughly impregnated with the galena. The mineral is not scattered uniformly throughout the mass, but occurs in rather thickly scattered, more or less irregular lenses of small extent, surrounded by almost barren rock. A sample picked from one of these lenses, assayed as follows: Gold 0.01 oz. Silver 2.55 oz.; Lead 34.2%. (It should be born in mind that this assay represents a picked sample only, not an average of the stratum) This stratum I have traced for over a mile by its outcroppings. With the exception of this one part, possibly 150 feet long, it shows no metalliferous mineralization. However, the stratum is strong, for on Grassy Hill, nearly seven miles away, about sixty feet below the cliffs, I encountered a very similar outcropping of hard, highly silicified limestone. I believe these to be the same stratum.

HISTORY AND DEVELOPMENT

The History of this particular piece of ground, as I have gleaned it, is similar to that of most small properties on the outskirts of large camps. The surface showings have been picked and gouged into by men of small means, but the ground has never been opened up enough to demand the interest and attention of the larger companies, nor to prove or disprove the existence of ore in really commercial quantities. The "Copper Center No. 5" contains most of the work in the territory under consideration. There are several open cuts penetrating into, or cutting through the ore bearing stratum. There is also a tunnel about 40 feet long driven along the stratum, but pitching downward so that the difficulty of removing the broken rock brought the work to an end. This tunnel shows small bunchy irregular masses of galena scattered rather thickly throughout the stratum for at least 30 feet. I did not go further on account of the bad condition of the roof.

PREVIOUS REPORTS

The entire property of the Warren Basin Copper Mining Company, of which eight claims are under lease to the Warren Basin Leasing and Development Company, has been subjected to a favorable report by Mr. Rochester, but much of the property which impressed him favorably is not included in the lease, but is situated near the Northwestern end of the ground. I am not attempting to duplicate his work in any way, but for fear I may leave the impression that the

only mineralization is that upon which I have dwelt at some length, I wish to state that in another place there is a strong copper showing; near the Northern end also are strong showings of Hematite and possibly Manganese. I have been credibly informed that an adjoining property has been mining Manganese, to what extent, however, I am ignorant.

DISCUSSION

From my work and observation of the ores and ore bearing strata where they have been opened up, both on the claims under discussion, and nearby, I conclude that solutions wandering through loose porous rocks have been responsible for the mineralization and ore deposition. I have, however, no data which warrant any opinion as to the genesis or direction of flow of these solutions. The large perfect grains of galena in the hard silicified rock lead me to believe that at one time the rock was loose and porous, affording the solutions more ample opportunity for flowage than the denser surrounding strata. Under favorable conditions the mineral in solution was deposited, forming large grains, and gradually silicification took place but this latter phase was largely subsequent to ore deposition. Now these strata are harder than the average formation, as the stratum traced for over a mile, and outcropping on Grassy Hill attests. It seems probable that a stratum having such lateral extension should have similar vertical extension. This would cause it to follow the anticline to the Eastward, passing at no great depth under the detritus of Sulphur Spring Valley and the eighteen claims now the property of the Warren Basin Leasing and Developing Company. It has been fairly well shown that the Lead-Silver values in this stratum occur on the outcrop for a distance of at least 150 feet. The proving of the continuance of values with depth has never been attempted heretofore. The general idea of the Warren Basin Leasing and Developing Company is to drift in near the foot of the hill, cut this stratum, and prospect it at some depth below the surface occurrence of the ore, thereby proving its existence at considerable depth, with comparatively little work. Faith in the continuation of the formation below the alluvium of the valley have led to the taking up of ground away from the foot of the hills. After proving the existence of the ore at depth by this comparatively inexpensive drift, the Company intends to start a shaft or drill holes on its own property, which should cut this stratum at no very great depth, probably not much over 500 feet.

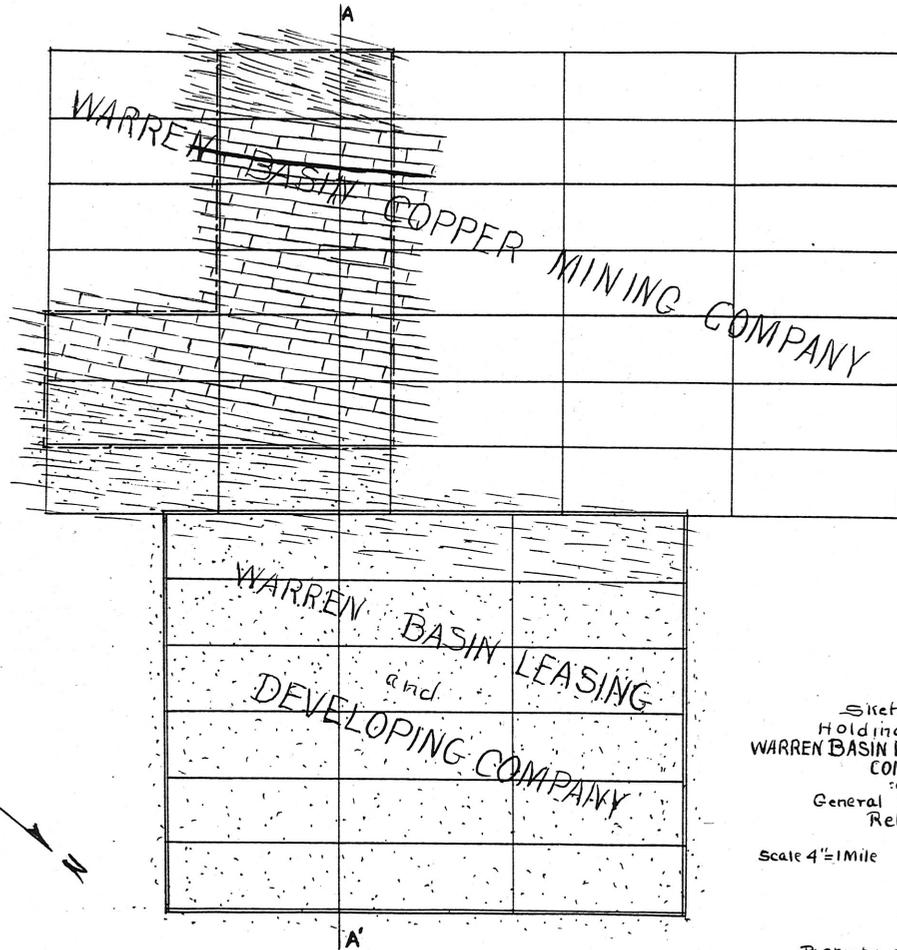
CONCLUSION

This property is not a proven mine, but I consider that there is sufficient stability of formation and enough ore bearing rock exposed to warrant further exploration. The property is ideally situated, first for getting a good depth on the ore bearing stratum with a comparatively small amount of work, and second, for getting in supplies and shipping out the ore. Furthermore such ore as has been exposed consists of large heavy grains of mineral in a comparatively light gangue. This should afford an excellent concentrating combination. I believe that this stratum will surely be found beneath the 18 claims owned by the property. If the projected drift cuts the ore, I believe that the stratum will undoubtedly carry it below the claims.

This proposition is not without hazard of course, but I am convinced that it is a prospect of considerable merit, and as such, can recommend it to those who are interested in the opening and early developing of properties.

Dated at Bisbee, Arizona, December 5th. 1918.

Charles Albert Smith
Mining Engineer

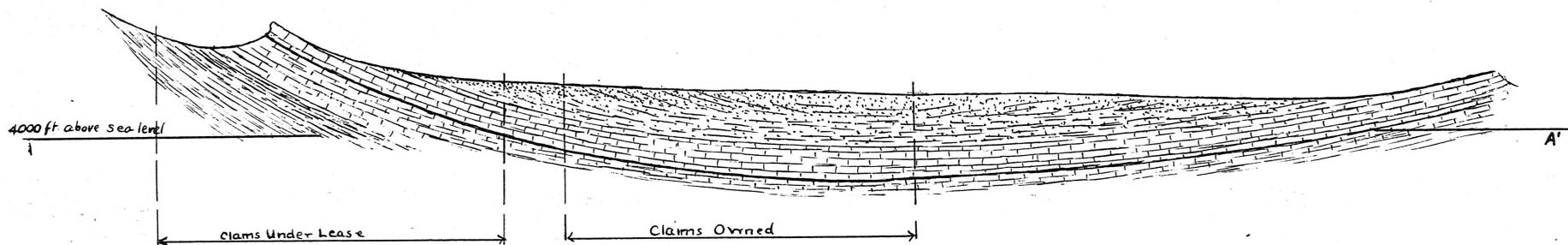


Sketch Showing
 Holdings of the
 WARREN BASIN LEASING and DEVELOPING
 COMPANY
 and
 General Geological
 Relations

Scale 4"=1 Mile Legend

- Alluvium
- Cintura Formation
- Mural Limestone
- Morita Formation
- The Stratium
- Property Owned
- Property Under Lease

C.A.S
 12-5-18



2
 Sketch Showing
 Probable Relationship Between
 WARREN BASIN LEASING and DEVELOPING COMPANY'S
 HOLDINGS
 and
 The Stratum Which Shows
 The Lead Outcrop

Scale 4" = 1 Mile
 Vertical section on A-A'

G.A.S.
 12-5-18

Legend

Alluvium	
Cintura Formation	
Morita Formation	
The Stratum	