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PRINTED: 05-13-2010

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: INSPIRATION GROUP

ALTERNATE NAMES:

NORTH BISBEE PROPEERTY
WILDCAT GROUP

COCHISE COUNTY MILS NUMBER: 701

LOCATION: TOWNSHIP 22 S RANGE 24 E SECTION 32 QUARTER NE
LATITUDE: N 31DEG 28MIN 12SEC LONGITUDE: W 109DEG 55MIN 35SEC
TOPO MAP NAME: BISBEE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD LODE
SILVER
LEAD
COPPER
TUNGSTEN

BIBLIOGRAPHY:

ADMMR INSPIRATION GROUP FILE

GENERAL SOURCES
Arizona
Fairgrounds
ARIZONA

PHOENIX, ARIZ.
FEB 25
7-PM
79 58



REASON CHECKED

- Unclaimed Refused.....
- Unknown
- Insufficient address
- Moved, Left no address
- No such office in state
- Do not re-mail in this envelope

Mr. P. Kennenovich
~~P. O. Box 2029~~
Bisbee, Ariz.

ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

February 24, 1958

To the Owner or Operator of the Arizona Mining Property named below:

INSPIRATION GROUP
(Property)

GOLD SILVER LEAD COPPER TUNGSTEN
(ore)

We have an old listing of the above property which we would like to have brought up to date.

Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

INSPIRATION GROUP

Au, Ag, Pb, Cu, W

Cochise

2 - 5

T 23 S, R 24 E

Kannenovich & Miller, Box 2029, Bisbee

'39

m-m-e has copy

**DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT**

Date July 11, 1939

Mine Inspiration Group

District Warren District, Cochise

Location 2 mi. north from Bisbee.

Former name

Owner Konnenovich and Miller

Address P O Box 2029, Bisbee

Operator Pete Konnenovich

Address Same

President No corp.

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold Silver, Lead, Copper, Tungsten

Men Employed 1 reg., 1 occasional.

Production Rate Not established

Mill: Type & Cap.

Power: Amt. & Type Studebaker, 6 cyl. 1915

Operations: Present Sinking and drifting.

Operations Planned Depend on finances to develop more ore.

Number Claims, Title, etc. Twelve unpatented lode claims, on public domain. Part since has been taken as stockraising homestead by Fred Schere (/). Claims: Inspiration, Silver King, Sunday, Comet, Hope, Hope No. 2, Hope No. 3, North Bisbee, Mars, Mars No. 2, Gold Trail, Accident.

Description: Topog. & Geog. In Mule Mountains. Covers Vein system cutting across two parallel hills separated by gulch. Crests of hills rise 500 to 800 feet above level of gulch. Elevation 6,000 to 7,000 ft.

Mine Workings: Amt. & Condition Hope claim 1 tunnel 300 ft., with 30 ft. raise, 1 incl. shaft 25 ft. (not accessible). Accident claim 1 shaft 70 ft. (sinking). Gold Trail claim 1 shaft 80 ft., 1 shaft 40 ft., with 35 ft. drift. Note the 80 ft. shaft has water at about 40 ft. Inspiration Claim tunnel 30 ft., Silver King open cut 15 ft. Sunday claim tunnel 40 ft., 5 shafts 10 ft. to 20 ft. Comet claim shaft 20 ft. incl., Mars claim shaft 20 ft. with 40 ft. drift. North Bisbee claim tunnel 50 ft.

Geology & Mineralization Country rock granitic porphyry and schist cut by veins of quartz and iron carrying the metals. Sulphide minerals begin at about 50 ft. depth, oxidized above. Gold is free. General direction of vein N-Sly. Variable dips.

Ore: Positive & Probable, Ore Dumps, Tailings Ore showing in five of the faces that, with sorting, is of shipping grade. Assays:

Accident 9-17-38--	Gold 0.37 oz	Silver 2.4 oz.	(50' lev. of shaft)
" 11-12-38--	0.54	1.2	(Av. of about 40 T)

Mine, Mill Equipment & Flow Sheet None

Road Conditions, Route Partly improved road from Bisbee to property, passable by auto.

Water Supply Water for domestic use from well 30 ft. deep. Believe deeper development will provide water for small mill. Larger operation could get unlimited water by pumping from Bisbee.

Brief History This ground was first located in the early days of Bisbee, and some production, mainly in gold was made from shallow workings, but no deep development was done.

Special Problems, Reports Filed None available. Claim map attached.

Remarks Hope claim has Tungsten. Sample of best ore assayed. Scheelite 1.3% WO_3 , and Woframite 2.4% WO_3 , Total WO_3 3.7%. (Scheelite and Woframite were determined separately from the same sample.

If property for sale: Price, terms and address to negotiate. Price for sale on bond and lease \$40,000. Allow 18 months development without payment. Would take a grubstaking partner and carry on development with object of putting property in shape for sale at higher price.

Signed.....Pete. Komnenovich.....

Use additional sheets if necessary.

M-S 22
MW 8

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date July 10, 1939

Mine Wildcat Group

District Warren, Cochise

Former name North Bisbee

Owner ✓ Adolf Aldinger
Jos. E. Hall

Operator Same

President No corp.

Mine Supt.

Principal Metals Gold, silver, lead, copper

Production Rate Not established

Power: Amt. & Type None

Operations: Present Driving adit. tunnel, 150'

Location 3 1/2 mi. N. of Bisbee

Address Box 893, Bisbee
Box 390, Bisbee

Address

Gen. Mgr.

Mill Supt.

Men Employed

Mill: Type & Cap.

Operations Planned

Number Claims, Title, etc. Six unpatented lode claims. Public Domain.
Sec. 30 & 31, Twp. 22 S - R. 24 E. Claims: 1 - Wildcat
Lucky Dutchman Yankee #1-#4

Description: Topog. & Geog. Mule Mts. Dovers crest and NE slopes of hill rising from
Dixie canyon on Juniper Flat. Crest rises about 1000 ft.
above bed of canyon. 7000' elevation.

Mine Workings: Amt. & Condition Tunnel 150' on Wildcat - Lucky Dutchman. 1 shaft 150'
Yankee #1 (collar caved). 1 shaft 25' Wildcat.
1 shaft 12' Lucky Dutchman

Geology & Mineralization Granite porphyry; country cut by quartz ledges. Some conglomerate. Strike ledges N & S. Main ledge N & S. Feeder vein to main ledge NW SE.

Ore: Positive & Probable, Ore Dumps, Tailings Ore in sight; no tonnage

Mine, Mill Equipment & Flow Sheet No mine or mill equipment

Road Conditions, Route Off Highway 80, $1\frac{1}{2}$ mi. but no road. Natural road through Dixie Canyon within 3 miles of property. 7 mi. from mine to High Lonesome Highway and 9 mi. to Forrest Ranch, or Highway 80.

Water Supply Water makes water. Plenty of domestic water. Development will get water for small mill. Good dam sites.

Brief History Was lightly developed about 1902-3. Joined old Bisbee Honietown Mining Co.

Special Problems, Reports Filed No reports

Remarks Good looking prospect. From outcrops have confidence will make big mine.

If property for sale: Price, terms and address to negotiate. Will lease or sell on lease and bond, or will take partners to furnish capital. Adlinger experienced miner and capable of carrying on development; making 20-25'a month by hand labor. With compression can operate for \$200 a mo. and drive 40-50' mo.

Signed.....Adolf Adlinger.....Joseph E. Hull.....
(Adlinger on WPA.)

Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

- Date July 11, 1939
1. Mine Inspiration Group
 2. Location 2 mi. north from Bisbee
 3. Mining District & County Warren Dist., Cochise Co.
 4. Former name
 5. Owner Konnorovich and Miller
 6. Address (Owner) P. O. Box 2029, Bisbee, Ariz.
 7. Operator Pete Konnorovich
 8. Address (Operator) Same
 9. President, Owing Co. No Corp.
 - 9A. President, Operating Co.
 10. Gen. Mgr.
 14. Principal Minerals Gold, Silver, Lead, Copper, Tungsten.
 11. Mine Supt.
 15. Production Rate Not established.
 12. Mill Supt.
 16. Mill: Type & Cap.
 13. Men Employed 1 reg. 1 occasional
 17. Power: Amt. & Type Studebaker, 6 cyl. 1915
 18. Operations: Present Sinking and drifting.

19. Other groups: The Grand Central Company of Youngstown, Ohio, controls valuable properties in this district. This company has produced dividends running into the six figures, and is one of the leading companies in the district. It owns the following mines, all well equipped with operating machinery and each of which has produced many thousands to the owners: The Grand Central, Emerald, Comet, State of Maine, Silver Thread, and other groups. It also owns a 35-stamp mill. None of the mines are being worked by the company at present.

REPORT OF THE GOVERNOR 1895

20. Number Claims, Title, etc. Twelve unpatented lode claims, on public domain. Part since has been taken as rock-raising homestead by Fred Schere (/). Claims: Inspiration, Silver King, Sunday, Comet, Hope, Hope No. 2, Hope No. 3, North Bisbee, Mars, Mars No. 2, Gold Trail, Accident.

21. Description: Topography & Geography In Main Etc. Covers area extending across two parallel hills separated by gulch. Crests of hills rise 500 to 800 feet above level of gulch. Elevation 6,000 to 7,000 ft.

22. Mine Workings: Amt. & Condition Hope claim 1 tunnel 300 ft., width 30 ft. raise, 1 incl. shaft, 25 ft. (Not accessible). Accident claim 1 shaft 70 ft. (sinking). Gold Trail Claim 1 shaft 80 ft., 1 shaft 40 ft., width 35 ft. drift. Note the 80 ft. shaft has water at about 40 ft. Inspiration Claim tunnel 30 ft., Silver King open cut 15 ft. Sunday Claim tunnel 40 ft., 5 shafts 10 ft., to 20 ft. Comet claim shaft 20 ft. incl. Mars claim shaft 20 ft. with 40 ft. drift. North Bisbee Claim tunnel 50 ft.

Geology & Mineralization

Country rock granitic porphyry and schist cut by veins of quartz and iron carrying the metals. Sulphide minerals begin at about 50 ft. depth, oxidized above. Gold is free. General direction of vein N-Sly. Variable dips.

Ore: Positive & Probable, Ore Dumps, Tailings

Ore showing in five of the faces that, with working, is of shipping grade. Assays:

Accident	9-17-36	Gold 0.37 oz	Silver 2.4 oz. (50% lev. of shaft)
"	11-12-36	0.54	1.2 (Av. of about 10 ft)

Dimensions and Value of Ore body

Mine, Mill Equipment & Flow-Sheet

None

Road Conditions, Route

Partly

16. Mill: Type & Cap.

Water Supply

Water for domestic use from well 30 ft. deep. Believe deeper development will provide water for small mill. Larger operation could get unlimited water by pumping from Bisbee.

Brief History

This ground was first located in the early days of Bisbee, and some production mainly in gold was made from shallow workings, but no deep development was done.

Special Problems, Reports Filed

None available. Claim map attached.

Remarks

Hope claim has tungsten. Sample of best ore assayed. Scheelite 1.3% WO₃, and Wolframite 2.1% WO₃, 3.7%. (Scheelite and Wolframite were determined separately from the same sample.)

If property for sale: Price, terms and address to negotiate.

Price for sale on bond and lease \$40,000.

Allow 18 months development without payment. Would take a grubstaking partner and carry on development with object of putting property in shape for sale at higher price.

32. Signature (Signed) Pete Kossanovich

Use additional sheets if necessary.

1908

COPY

I N T R O D U C T I O N



I find the North Bisbee holdings to consist of 24 claims and fractions of claims occupying part of Soto Canyon in the Warren Mining District, at Bisbee, Arizona as indicated on the accompanying map.

The work so far prosecuted on the group comprises one shaft about 63 feet deep on the west side of the Canyon, and one tunnel about 35350 feet long driven in the east side. The shaft is equipped with an excellent gallus frame and a whim for hoisting, and is supplemented by one main drift at the bottom extending a little west of northwest, and a crosscut extending east of northeast. The shaft is sunk in granite, and after passing the usual leached zone, ore running about 12% in copper was encountered and continues to the present depth of the shaft. The vein contents are very much decomposed granite enclosing carbonates and silicate of copper, the whole varying from 4 to 12% and carry slight values in gold and silver. In its general make-up the ore compares favorably with some of the shipping ores in Butte, Montana, as to silica and iron contents. A representative sample assays as follows:

Copper 8 to 10%

Silica 50 to 60%

Iron 18 to 27"

Gold and silver up to as high as \$3 and \$4 per ton.

The whole ground is a network of veins and stringers, practically all of which shows mineralization. The east side of the valley holds several large quartz veins, all of which carry sulphides, and running up to 7% copper.

Thus far the tunnel has shown nothing of value, and it is probable from an inspection of the ground that considerable further depth will have to be obtained before it does. Cross-cutting at the present depth will probably find ore, but of doubtful commercial value.

The ground generally shows signs of better mineralization at greater depth.

From the exposures and surface showings at the North Bisbee, property, everything points to the ore deposits being the work of solutions percolating through fissures favorable to the deposition of the ore-forming minerals. The circulation of solutions was engendered by the heat of cooling magma, and by the additional heat furnished by secondary intrusions of the still liquid or pasty interior of the magma itself. From the foregoing, the discussion of the ground with reference to its ore-bearing possibilities would seem to be to divide itself into four subjects, each of which I will treat in turn:

1. Formation and movements of the ground.
2. Intrusive agencies.
3. Fault and vein system.
4. The work and probable course of the metal-bearing solutions.

FORMATION AND MOVEMENTS OF THE GROUND.

Soto Canyon is essentially a valley of erosion, whose position was predetermined by the intrusion of the large body of granitic magma (of which Juniper Flat is a portion) and its spurs and off-shoots.

The canyon extends roughly north and south, the average line of erosion dropping about 900 feet from the saddle at the south end to the "Goat Ranch," about the northern boundary of the ground which I shall discuss.

The upper west side of the canyon is the east side of a long spur extending north from Juniper Flat, and of which I shall speak later. The granite composing this spur plunges under schist to the west and to the south. The surface line of contact between the granite and the schist comes over the saddle a little east of the center line, roughly follows the valley in a line a little west of north, which in the neighborhood of the North Bisbee shaft rapidly increases its westerly trend until it leaves the valley altogether. South of this point of exit the formation grades from schist into the Cretaceous formations.

On the east side one passes down the valley from the saddle, encountering successively: schist, conglomerate and the sandstones and shales of the Morita Formation. For further particulars regarding the Cretaceous formations, see Ransome's Report on the Bisbee Quadrangle. The group is not locally very important from an ore-bearing standpoint. It is pertinent

here to introduce a rough sketch of the geological history of Soto Canyon, leading to a better understanding of the discussion of the ore deposits.

This region was at one time covered by over 5000 feet of Paleozoic limestones resting on a schist foundation. Forces acting in a northwest southwest direction first folded the strata and then elevated all the region northeast of a northwest southeast line drawn roughly from the present Dividend Fault in Bisbee through Juniper Flat. This elevation was accompanied or immediately followed by extensive faulting and the intrusion of the Juniper Flat granitic magma which protruded through the schist. Erosion reduced this elevated portion to a moderately hilly topography, consisting of partially eroded schist and granite. Juniper Flat was exposed and partly eroded when the land sank below sea-level, and from 4200 to 4700 feet of the Bisbee group of sediments were deposited. The region was again elevated, tilting about 15 degrees -- twenty degrees to the northeast and erosion set in and has continued to the present. Soto Canyon probably had its first inception at the time of the post-Paleozoic uplift and was a synclinal fold in the strata. This syncline after sinking was filled more or less with conglomerate, a remnant of which may still be seen, resting on the eroded upper parts of Juniper Flat. As the valley emerged again from the sea it tilted to the northeast.

The west side now having a steeper slope than it had before was rapidly eroded, and as it carried a thinner layer of conglomerate than its neighbor lower on the east, was eroded bare, except for a thin topping, while the east side of the valley still bears schist and conglomerate. The granite may also have ~~been~~ absorbed some of the schist while still hot, but this is unimportant to us.

INTRUSIVE AGENCIES.

The granite composing the upper west side of the canyon is typical and grades from the coarsest to the finest, occasionally showing porphyritic phases. It came in as mentioned and shows signs of subsequent disturbance, as manifested by well defined dikes and sills of very fine-grained granite and granite porphyry, as identified in polished sections. Quartz veins are plentiful, and as some of these can be traced up into the Morita Formation, some of the active water circulation at least was post-Cretaceous.

After intrusive of the granite, contraction of the cooling mass set up stresses and strains in the cooler outer crust, resulting in lines of weakness along which subsequent slipping and faulting occurred, probably accompanied by further intrusions of the still hot interior mass. This action is plainly shown in the mass, and in some cases, the rock has been pushed aside to make room for the intruding magma. A general line of this intrusive action can be traced south and southwest along the upper west side of Soto Canyon, and apparently culminating in the southeast end of Juniper Flat near the road from the Flat to Tombstone Road. Further down toward the creek the general line of intrusive action is marked by a series of roughly northeast and southwest lines radiating from Juniper Flat.

Intruding magma follows the laws of hydrostatics. A pressure from below is transmitted equally in all directions throughout the mass. Were the resistance to intrusion uniform over the whole mass and normal to its surface, the intrusion would assume a symmetrical form. That it does not do so is due to unequal resistance to intrusion at different points, which resistance undoubtedly changes during the course of intrusion. Imagine a handkerchief stretched horizontally and its center pushed up by a lead pencil. The sides become folded. Suppose each fold to represent a fold in the overlying strata. Each arch is a line of lesser resistance to intrusion, and by the laws of hydrostatics will be kept filled with magma and will give more easily than the anticlines; they are lines of weakness. Inspection of the west side of the Canyon shows a series of erosion gullies running northeast to the creek bed. The spits between these gullies seem to be the backbones of subsidiary intrusions which, composed of fine-grained granite, have shoved the coarse-grained rock aside and resulted in slips in the present arroya beds. It is probably because of the rock being more broken and crushed along these lines that has determined the positions of the arroyas. Some of these faults continue across the valley and are shown in the schist, usually accompanied by a more or less parallel series of quartz-filled fissures. Intrusive action is manifest in the lower east side of the valley to a lesser extent. The three little knobs about opposite the shaft would appear to be underlain by intrusive stock, and the one marked "K" on the sketch would seem at one time to have been a continuation of the intrusive spit between Arroyas "A" and "N" before erosion cut it down to the creek level. The rock comprising the lower part, as exposed

it down to the ^{creek} level. The rock composing the lower part, as exposed by erosion seems to be a schistose rock strongly indurated by contact with heated magma. The hard rock in the Blass tunnel has the appearance of a quartz porphyry which has been subjected to tremendous pressure.

FAULT AND VEIN SYSTEM.

The various orogenic movements have resulted in a fault and vein system, at places accompanied by many subsidiary slips, distorting the ground so badly as to make the identification of the main lines somewhat difficult. But as every fault and fissure is a possible channel for an ore-bearing solution, it is important to get an intelligent idea of at least the main features. The main line of intrusive action in the valley proper seems to emanate from the general north and south line higher up previously mentioned, and to extend from this at the saddle, nearly northeast. Further north, the subsidiary lines of intrusion bears more to the east, the general line of the whole being from a little south or west to a little north or east. I do not think that the present valley creek represents a line of profound faulting between the granite and the schist, but rather a fold in the granite. The result of these lines of intrusion is shown in a shoving of the rock mass to the north and northeast with lines of more or less east and west faulting, some of these lines on the west side being erosion gullies, and on the east side, shown as quartz veins.

Shaft exposures. The shaft is sunk at the junction of two lines of breaching. One line consists of a series of parallel cracks which resemble tension cracks, but coincide almost exactly with the direction of the ridge southwesterly of the shaft. As this coarse-grained granite ridge is bounded on the south-east by an intrusion of fine-grained granite, it looks as though the rock had been shoved to the northwest, and as though these cracks were the result of such squeezing. This system of cracks is cut by a well-defined fault ("A" on the sketch) dipping N- eight degrees *W at about sixty degrees. This slip has all the appearance of a compression slip. There is an innumerable quantity of smaller slips, and the ground at the junction is completely shattered. Fault "A" appears to have been caused by a blanket hard rock (porphyry) bearing what looks like indurated schist, shoving up over the granite. The hard wall is still intact to the surface, but so shattered and weathered as to make

still intact to the surface, but so altered and weathered as to make identification difficult. This fault I believe I have traced across Arroya "A", southwest of the shaft. If so, Arroya "A" occupies in its lower part a fold in the schist. A tiny line of depression runs from the shaft southwest by south, parallel to the ridge before mentioned. This may mark a slip in the granite, I shall refer to Fault "A" again while discussing the work of solutions. Other faults are at the junction of the two gullies forming Arroya "B" and on the south gully, indicating that the tongue of ground between Arroyas "A" and "B" as a whole has sunk. A possible explanation of this is that settling of the granite crust has forced out the fine-grained granite composing the upper part of this tongue. This is substantiated by an eruptive dike extending north and south between Arroyas "A" and "B" marking the bump in the topography, by a series of parallel north and south quartz veins east of the dike, and indicating general faulting around the tongue.

The fracturing seems to center around the shaft, which I believe occupies the best possible position for immediate ore returns.

THE WORK OF SOLUTIONS.

The North Bisbee ores will be found occupying fissures, fault fissures and broken ground generally. It will be essentially a vein formation with no ore bodies as the term is understood in Bisbee, except where the ore may occupy extensive broken areas.

Without entering too much into detail, the ore was deposited as follows: Alkaline solutions of silicates and alkaline sulphides in solution, carrying sulphides of copper and iron moved through the ground and rose in all fissures they encountered. The ore was deposited as sulphides of iron and copper, with possibly a little silicate. As the solutions rose in the channels, dilution acidification (carbonic acid) from descending waters, decrease of pressure and cooling of the solutions probably all contributed to the deposition of the sulphide ores along with a large quantity of siliceous cementing gangue. The quartz veins were formed on the same principle. Carbonic Acid acting on the alkaline

silicate and sulphide solutions formed soluble alkaline carbonates, and colloidal silicic acid slowly decomposes into water and silica, and this silica has crystallized as vein quartz enclosing the sulphides.

In the shaft vein the ore is not so well protected by the resistant quartz, and leaching and carbonation by surface water and the atmosphere has resulted in the almost total transformation of the original sulphides into a mass of copper carbonate and silicate running from 5 to 12% copper. As in most veins we can look for a more or less barren cap near the top, underlain by a richer zone, in this case slightly enriched from above by a process of secondary enrichment, and gradually merging into sulphides fairly rich in copper and very rich occasionally in scattered bunches. This lower ore should run well in copper, iron and hence, less in silica.

The depth of these vein zones varies according to local conditions, the humidity or aridity of the region and topography and consequent depth of ground water. The depth of ground water at the North Bisbee is a difficult question to settle. From the formation I shall expect to find it deeper on the east side of the canyon than on the west side. As remarked before, your shaft is sunk at the intersection of a series of parallel fissures (probably tension crack in the granite) and a clean-cut fault. The line of intersection of these two general lines of breaking if the dip of each remained constant, would gradually recede from the shaft in a northeasterly direction at the rate of about seven inches for every foot in depth. Mathematically, at 50 feet depth, the junction should lie roughly 30 feet distant from the shaft, and about N-sixty degrees E from it, and at 100 ft. depth 60 feet distant. Your present ore showing appears ~~xx~~ to favor the Fault "A" which seems to have been an important solution channel. I shall expect the ore to make local extensions into the parallel fissures to some extent. I shall also expect to find the ground more shattered as the junction is approached, and this shattered zone will probably be well stocked with ore of about the same grade as exposed in the present shaft workings and in the cross-cut. The shattered zone will probably be found to extend back or almost back to the shaft, and ore may come in from the east, northeast, west and northwest of the shaft. Continuation of the main drift would probably strike ore at 40 to 50 ft. but these distances are not absolute, owing to distortion of the ground. Immediate extension of the cross-cut will probably strike good

commercial ore, which would be better ten feet lower down. In your large quartz veins you have a good concentrating proposition, and if the silica runs better than 85%, with the present copper, they should make a good converter lining.

In conclusion I should state that I would consider the North Bisbee showing as very promising, and the prospect is well worth developing.

You have many of the factors which go to make ore, including general mineralization of the ground, fissures for the deposits, and extensive volcanism, promoting an active circulation of waters for the solution and deposition of ores.

Necessarily, the exact extent of the ore zones can only be determined by development, and in this connection I would strongly advise sinking your shaft to greater depth as soon as practicable.

Your chief difficulty will be with highly siliceous ores, which, however, is not an insurmountable objection.

Wishing you all possible success in the exploitation of your property, I am,

Very truly yours,

(Signed)

Geo. J. Miller.

1070,

Bushy Hometown Dev. Co.,

Record File,

(Signed)

Geo. J. Miller

Very truly yours,

...ing you all possible success in the exploitation of your pro-
...ever, is not an insurmountable objection.

Your chief difficulty will be with highly siliceous ores, which
...mine striking your shaft to greater depth as soon as practical.
...ained by development, and in this connection I would strongly
...necessarily, the exact extent of the ore zones can only be de-
...solution and deposition of ores.

extensive volcanism, promoting an active circulation of waters for
General mineralization of the ground, fissures for the disposal, and
...You have many of the factors which go to make ore, including
developing.

Diabase showing as very prominent, and the prospect is well worth
...In conclusion I should state that I would consider the North
...a good converter lining.

...ation runs better than that with the present copper, and I refer
...the veins you have a good concentrating proposition, and I think
...as a whole one, which would be better than just lower down, and I think

1908

COPY

REPORT ON THE BISBEE COALITION MINING COMPANY,
WARREN MINING DISTRICT, COCHISE COUNTY,
ARIZONA.



Location and Accessibility:

This property is located in Soto Canyon about three miles north of Bisbee, Cochise County, Arizona, and extending from the top of the divide to about half way down the Canyon. It is reached by a good wagon road to the divide and trail to the canyon, but a good wagon road could be built, with little expense, to reach Sulphur Spring Valley, a distance of about four miles to the E. P. & S. W. Railroad.

Title:

There are forty-five claims and fractions in this group, owned and held under possessory title, with a mean elevation of about 5000 feet above sea level.

Water:

About three hundred feet below the shaft in Soto Canyon there is a good spring of water that will furnish all necessary water for domestic purposes and the mine will produce all water for the mine and reduction works of any size.

Geology:

The great Warren Mining District is so well known that I will only treat this subject as relates to this individual property. Just north of Bisbee there is a great granite reef that seems to have its apex at the top of the divide where it is thin and as it follows the valley north deepens to great depth. This property lies in this granite belt, which at this point has been considerably altered and decomposed. There are several quartz dikes that cut this formation, carrying the mineral.

From the bottom of Stot Canyon and trending westwardly is a great quartz vein which intrudes through the granite and adjoining it on the north Micaceous Schist to quite a thickness has followed the quartz to the surface and forms its hanging wall. The foot wall is composed of a mixture of the schist and decomposed granite, so far as the surfact shows. There seems to be a quartzite dyke starting from the bottom of the canyon and traversing a northwesterly direction, but has no special bearing on the quartz ledge. The ledge which shows a width on the surface of approximately fifteen feet and is exposed for a distance of some three thousand feet is capped with an iron garson carrying from a trace to one and one-half per cent. of copper and at the opening just above the shaft is perfectly stratified, showing the permanency to depth.

At this opening the ledge of fifteen feet carries from a trace to four per cent. copper and will average three per cent. In the bottom of the shaft, which has a depth of about 65 feet, the values have increased greatly, as it has now reached water level, and in my opinion as the shaft penetrates the water and gets below oxidation the values will remain permanent and of a sufficient grade to be commercial.

About midway of the property and with a trend of nearly a north and south course there is another great intrusive quartz dike that traverses the property at right angles to the first above mentioned ledge. This dyke has several openings that show some copper, but the development is so slight as to prevent a just opinion as to its merits except that where it intersects the east and west veins it should assist to make large bodies of ore.

From the top of the divide there is a series or system of smaller veins forming a checker board of several claims, all carrying more or less copper, with two of them making a good showing where they have been opened and carrying the same general character as those first described.

Development:

The property is virgin ground except where the open cuts as mentioned and where the shallow shafts have been sunk. In Soto Canyon there are two shafts about 100 feet apart, the upper having a depth of about 65 feet with commercial ore in the bottom. The lower shaft has a depth of 35 feet and was put down higher up on the side of the Canyon to avoid the surface water. From the bottom of the upper shaft a drift was run about sixty feet and a cross-cut driven through the ledge. On the north side of the Canyon a tunnel was driven a distance of about 350 feet, but as near as can be determined from the surface it lacks about 50 feet of cutting the ledge. Starting from the west end of the property there are numerous open cuts and about half way up the hill are two shafts, one, the upper about 40 feet deep and the lower about 300 feet down the hill about 70 feet. Both shafts show a well defined vein carrying good values in copper, this vein having nearly an east and west course. About half way down the hill a north to south vein is exposed carrying an iron garnet, but has not been developed.

Values:

Assays taken from these various openings show from a trace to several per cent. of copper. In the shaft in Soto Canyon the values run from 3 to 12 per cent. in copper and carry some gold and silver.

Recommendations:

I consider the showing on this group at the present workings justifies thorough development and with depth ore in sufficient quantities will be encountered to make a paying mine.

The property should be equipped with a hoisting and drilling plant, together with suitable pumps so as to sink the Soto Canyon Shaft, enlarging it to a three compartment, to a depth of not less than 200 feet, before the first station is cut, and continued to a depth of 500 feet, at both points the ledge should be cross-cutted, and from present indications the 200 foot level will encounter commercial ore that will make a mine of this property.

Another shaft should be sunk on the west side of the property below the lower shaft and the ground at this point thoroughly prospected.

Even with its present meager development I consider the property to be one of commercial merit of a high class.

Respectfully yours,

(Signed) S. S. Badger.

M. E.

1909

The property of the Bisbee
Coalition Mining Co., Warren Mining District.
Cochise County, Arizona.



The Bisbee Coalition claims consist of an amalgamation of two properties--the North Bisbee and the Eureka. The claims form one group, and are three miles north-west of the Town of Bisbee. The group consists of 46 claims 600 by 1500 feet. The total area covered is close to 900 acres.

HISTORY.

THE property seems to have been first worked by a party of Italian miners shortly after the discovery of "Tombstone" some twenty-five years ago. They were said to have been looking for silver ore and did several hundred feet of exploration work. In the Eureka portion of the property, which is nearest to Bisbee, several shafts have been sunk, none of them over 100 feet in depth, on copper outcrops, and some copper ore was shipped from this ground to the Copper Queen Smelter in Bisbee. With one exception, these shafts are now full of water. In the Bisbee Coalition ground, in the northern part of the property, several tunnels have been run and two shafts sunk, the latter being full of water. In all, I would estimate that over 1000 ft. of work, tunneling and sinking, has been done on the claims.

(Copy.)

NORTHERN PORTION OR PROPERTY.

The first exposure of ore visited was in the group originally known as the North Bisbee, in the northern part of the property. Here the granite schist contact had turned and ran northwest. This fault, or contact, which dipped north, was copper stained and altered for a total width of approximately 20 feet, and ore could be picked out running from 2 to 10 per cent copper. This outcrop has been sampled across many times and carries between 2 and 4 per cent copper for its entire width. A tunnel has been driven in along the contact and two shafts sunk to a depth of - I was informed - 65 feet, and some 18 feet of drifting done, but were full of water. A tunnel has also been driven 350 feet into the schist, not at the granite contact, to cut what appears to be a silicified seam or quartz ledge with indications of copper. This latter work does not yet appear to have cut the ledge.

SOUTHERN PORTION.

The southern portion of the Coalition property, formerly known as the Eureka, consists of a number of quartz seams or veins with work done showing mineralization over 300 feet in width in the granite near the before mentioned contact between the granite and the Pinal Schist. These quartz seams are accompanied by indications of Copper, and the work done has been on some of the most promising seams. Three shafts have been sunk to a depth of from 40 to 100 feet and with one exception are filled with water, the dumps show considerable azurite and other copper carbonates mixed with silica and the ground would appear to be worth farther prospecting, the carbonates carrying - I would estimate - high copper values.

Conclusions.

There is a resemblance between the schist granite contact at the Bisbee Coalition and the granitoid schist contact at Miami and Inspiration near Globe; the schist is the same in both places, and the granite rock has been forced through at both places. Prospecting might very readily open up an ore body on the contact or in the vicinity of the contact similar to those in the granite porphyry near the Pinal Schist in Globe and at other points.

MINING POSSIBILITIES.

The property is of interest as a prospect on account of its proximity to the great copper mines of Bisbee, which are only two or three miles away.

The Bisbee copper ores as worked in the Copper Queen, Galumet and Arizona, and other mines in the town, occur for the most part as large, irregular masses in limestone lying generally parallel to the bedding planes. At the boundaries of the ore bodies, they shade off into more or less altered limestone.

A great fault runs through the Copper Queen Mine; The Dividend Fault. This has the ore bearing limestone on one side and Pinal Schist on the other. Large ore bodies are worked in the Limestone along this fault, but they do not appear to be found on the north side of the fault in the Pinal Schists.

The Bisbee Coalition property covers a granite schist contact, there are numerous indications of mineralization and several very striking outcrops of copper ore on the claims, and in view of recent discoveries in other camps there is good reason to expect to find copper ore bodies near Bisbee, not in the limestone. I believe the ground to be worthy of additional exploration work for these reasons:

In the Bisbee Coalition property no limestone has been found. The claims cover a contact between granite and Pinal Schist, the contact running through the greater part of the property from North to South. Most of the prospecting work done so far has been done at points along this contact where it is copper stained.

The Pinal Schist is the underlying rock of the entire Bisbee District, and the granite on the Bisbee Coalition claims has broken through it. The contact between this granite and Schist is copper stained in several places, and the value of the property depends on the possibility of ore being discovered at or near the contact, or in some of the numerous quartz seams running through the granite in the vicinity of the contact.

near the Pinal Schists in Globe and at other points.

Prospecting should be carried on at as deep a level as the water will permit without undue cost. The amount of water which will have to be handled is indefinite. The mine is 750 feet above the town of Bisbee, and the water should not be troublesome. In sinking the North Bisbee shaft to a depth of 65 feet a small gasoline pump and hoist worked 24 hours daily handling the water and kept it down with difficulty. Just how much water would be cut by sinking the shaft another 100 feet cannot be estimated, as there are no other prospects in operation in the immediate vicinity for comparison, but I do not believe it would be more than 100 gallons per minute.

(Signed) James W. Malcolmson.