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VERITY & SMITH  
ATTORNEYS AT LAW  
SUITE 902 TRANSAMERICA BUILDING  
177 NORTH CHURCH AVENUE  
TUCSON, ARIZONA 85701

VICTOR H. VERITY  
LEO N. SMITH  
JAMES E. MUELLER  
JOHN C. LACY

November 11, 1970

AREA CODE 602  
TELEPHONE 622-7445

HEINRICH'S  
GEOEX

Cable: GEOEX



REC'D

NOV 13 1970

REC'D

BOX 5964 TUCSON, ARIZONA 85703

Phone: (AREA 602) 623-0578

50 Congress St  
C  
O  
P  
Y

Mr. Quincy A. Shaw  
North American Mines, Inc.  
60 State Street  
Boston, Massachusetts 02109

Dear Quinny:

Attached is a copy of Paul Jones' letter to me dated November 9, regarding your driver's license. Will you please mail the information directly to Paul Jones in the enclosed envelope?

I am sending a copy of this letter to Walt Heinrichs with a request that if you have not received my letter in Boston, he can show you a copy and you can furnish the information to Paul Jones when you get to Tucson.

Very truly yours,

Victor H. Verity

VHV:cj  
Enclosures

cc: Messrs. Paul H. Jones  
✓Walter E. Heinrichs (w/enclosure)

✓J.S.  
↑

PAUL H. JONES & COMPANY, INSURANCE, INC.

EXPERIENCE

INTEGRITY

Paul H. Jones, C.P.C.U.  
James E. Craig, C.P.C.U.  
William L. Jacobs

1221 EAST BROADWAY  
MAIL: P. O. BOX 2350  
TUCSON, ARIZONA 85702  
TELEPHONE 623-5791

November 9, 1970

Mr. Victor Verity  
2207 E. Waverly  
Tucson, Arizona 85719

Re: North American Mines, Inc.

Dear Vic:

I would appreciate it if you would ask Mr. Quincy Shaw if he would furnish us with his current driver's license information. We would like it just as it appears on his license, which I presume to be a Massachusetts--one--the full name, address, drivers' license number and expiration date of the current license.

I enclose a return envelope in case you want to send it on to Mr. Shaw and ask him just to mail this information to us directly.

Thanks for your help.

Sincerely yours,



Paul H. Jones, C. P. C. U.

PHJ:nc  
Enc.

QUINCY A. (ADAMS) SHAW

39 SEARS ROAD, BROOKLINE zip code

MASSACHUSETTS 02109

Licence # 059051E

Expires ~~April~~ April 22, 1971



# B. O. W. MINING COMPANY

12 October 1970

Heinrichs Geoex Floration Co.  
806 West Grant Road  
P. O. Box 5964  
Tucson, Arizona

Attn.: Mr. Don Cooley

Dear Mr. Cooley:

I was contacted this morning by Mr. Paul Bryant and requested to send you the enclosed information regarding the Silver Bell - Columbia, Martinez property in Pinal County.

I am enclosing a two page general review of the property, two older reports, a selection of smelter reports and a claim map. We have 3 patented claims and 50 unpatented.

Paul no doubt told you that Cerro was on our property a couple of years ago and put down two shallow holes and only had about  $\frac{1}{2}$  oz. silver showing. This is very understandable to us - because of where they put the holes. Their trouble in South America seemed to cut their exploration money a little short so they pulled out before they had to make an additional payment to us. I have the log of these two holes and will let you see them if you are interested in the property. In fact, you will be welcome to review any and all papers that we may have regarding the property.

We normally have a watchman at the BOW property, but in case you happen to go on his day off, I am enclosing a key that should fit the gate lock.

Please keep the enclosed papers as long as you have any use for them, and if there is any additional information that you want please ask.

At this time I can not locate a claim map for the "Windy Gap" property, but can tell you that there are 73 surveyed claims. The Windy Gap and BOW come within a very short distance of each other.

We would appreciate an early inspection on your part and we are in a position to talk business anytime that you are ready.

If you need to contact me during the day I can normally be reached at (602)264-9393, or you can contact Mr. Neil McNeice at Florence Junction #3 (McNeice Stone Works), and naturally Mr. Bryant can give you most any help that you may need.

Respectfully,



C. R. Ball



7032 N. Via Pisa  
Tucson, Arizona

297-2426

Pete - Villa Verde

# Daily Citizen

NOVEMBER 11, 1970 PAGE 23



★  
GEO EXPLORATION CO.  
Box 5964 Tucson, Arizona 85703  
Phone. (602) 623-0578

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*Blair Report*

**B. O. W. MINING CO.**  
1272 E. CAMBRIDGE 279-5432  
PHOENIX, ARIZONA 85006

*9123 Report*  
*1937*

**REPORT ON THE EXAMINATION  
OF THE MARTINEZ AND SILVERBELL MINES  
(ARIZONA)**

The investigation and examination of the Martinez and Silverbell Mines presented a fourfold problem:

1. The examination of the geological formations in which the ore bodies are found, the determination of the character and evidences that could warrant a continuation of the known deposits, and the probable discoveries of new ones;
2. The determination of the character of the deposits, their size and volume;
3. The present state of the mines regarding the possibility of their development for a more intense exploitation of the deposits;
4. The necessary conditions under which the enlargement of the mines would be advisable in case the results obtained from 1, 2 and 3 could be considered favorable for such enlargement.

In order to eliminate any possible bias from my opinion about the property and its improvements, and to reach a conclusion that would not be influenced by any previous reports or data, I had to start my work as if it were an original one and treat it in such a manner as if this kind of work had been performed for the first time. If later some reference to the past work in the mine is made, then it has the value of an illustration of the location of ore and the system adopted for its mining in the past.

The examination also had to disregard the recordless claims of the great riches extracted in the past, and I had to base my judgment on the actual conditions prevailing in the mines at the time of their examination. Samples were collected from many places, assayed and then compared with each other, serving in such a way to establish the value and content of the ores.

I have omitted the geographical description and history of the property, which can be found in H. B. Starbird's reports of May 25, 1920, and which are later repeated in G. A. Collins' report of August 1934.

**B. O. W. MINING CO.**  
1272 E. CAMBRIDGE 279-5432  
PHOENIX, ARIZONA 85006

GEOLOGICAL INFORMATION

The surface of the majority of claims, including the Martinez claim on which the Martinez Mine is located, and the Columbia and Silverbell claims on which the Silverbell Mine is located, represents a rugged broken up and partially eroded cap of a rhyolitic formation of great magnitude and thickness. The beds of creeks, as well as the existing lowest levels in the mines, indicate that this massive and enormous in size rocky formation has not yet reached its end, and there are no indications that this end is anywhere near. This rock is easily distinguished and being the carrier of the valuable ore bodies assumes an importance and significance for the investigator of the deposits.

This Rhyolite represents an igneous rock composed mostly of fine grained alkalic feldspars and quartz. The rock is dense and appears as an uniform and homogeneous substance. The joining is platy or in small blocks. The usual color ranges from gray, through pink to light red, due to the presence of ferromagnesian minerals, which being decomposed leave rusty spots, and being removed from their places by wind and water leave cavities of various sizes. The rocks crumble at these places and cover the slopes of the hills with loose rocks. Beside these changes the rhyolitic formation has undergone another form of destruction which has been caused by the dislocation of great blocks of rocks due to the formation of a number of faults along which the sliding of the blocks against each other took place. The faces of the faults are smooth and sometimes highly polished and the space between them ranges from 2'0" to 30'0" and possibly 35'0". This space is filled with pieces of broken up rhyolite, which very often retain their identity, and with the products of their decomposition occurring as a natural result of changes in the composition of minerals entering into the make-up of rhyolite. And so we have a clay surrounding the debris and sometimes veins of calcite, quartz and fluorite, everything having a reddish brown color due to the presence of iron oxide.

All known, exploited and investigated veins of ore on the property are confined to these faults. The ore bodies, composed of lead and silver compounds with traces of gold and small quantities of copper compounds, are disseminated between the broken up and disintegrated masses of the original rhyolite, accumulated between the two sides of the faults, which sides form the hanging and foot walls of the veins. It is natural, therefore, that practically all of the existing galleries and workings in both mines, the Martinez and the Silverbell, are following these faults and that the possible end of them would be an end of the ore deposits at these places.

It is evident that the penetration of metallic ores went along these faults representing lines of least resistance for their travel. The mineralization of the breccia (disintegrated material between the walls

of the faults) did not follow the full width of the faults with a uniform intensity. High-grade ore is found sometimes at the hanging wall, sometimes at the foot wall, and also at the centers of the veins, leaving the rest in a state of lesser accumulation of minerals. The ore, therefore, is of various values--from mill ore to low grade with an inclusion of high grade ore at some places.

The mineral deposits of both mines were formed along the same law, and the same forces of nature have been at work when the faults were changed into ore veins. There is one difference between the two; whereas the Martinez Mine is a predominantly lead ore mine, having the silver compounds as subordinate minerals, the Silverbell is more a silver ore mine with the lead compounds in the background. Malachite, azurite (combinations of carbonates and oxides of copper) and chalcopyrite (copper-iron-sulphur combination) are encountered in both veins as well as traces of gold.

The succession of the formation of ores in the mines is easily detected by examination of the ores. The lead ores consist of galena, cerussite and anglesite (sulphide, carbonate and sulphate respectively) and are always accompanied by silver sulphide (argentite) and mostly silver chloride (cerargyrite). Galena is distributed unevenly in the vein and in most cases appears in the form of rounded pebbles or boulders covered with lead sulphate and lead chloride, the latter representing a product of decomposition of galena. In many instances this decomposition went on to the full disappearance of galena and its replacement by lead sulphate and carbonate. The silver compounds are usually found distributed in galena and its derivatives. Galena in its natural state is always an indication of the presence of high grade lead and silver ores in its vicinity.

The classification of ore into high-grade, milling ore and low grade has been made on the basis of the present working conditions in the mine and serve to indicate its lead and silver content within the following limits:

1. High-grade or shipping ore:

15 oz. (or more) of silver with whatever quantity of lead might happen

or 6% (or more) of lead with any amount of silver not less than 10 oz.

2. Milling ore:

Containing not less than 5% of lead or 8 oz. of silver, or both.

3. Low grade ore:

All other ore falling below limits for milling ore.

The above limits are arbitrary and depend on the efficiency of the concentration plant operation. With the improvement of the plant these limits can be extended, and the low grade ore of today may become a milling ore of tomorrow.

The two mines are working at present in two faults, but four more are known to exist (and possibly more) and the determination of their contents has yet to be done. The two main faults have practically constant strikes and dips, the other very nearly follow them.

The Martinez vein has a strike N 15° W and a dip from 45°W to 52°W. The Silverbell strikes N 25° W and dips 42°-45°W.

There are a few cross veins along the main Silverbell vein that can be seen inside the mine. At these places the vein is usually enlarged.

The extent of the veins has never been determined. The natural limits of the upper levels are the slopes of the hills in which the veins are located, the lowest levels reaching a depth of about 300', do not show that the extension of the ore body is going with the depth. It can be shown that in some places lenses and kidneys of very rich ore have been found in the lower levels. It is not possible to state at present whether or not a change in the value of ore in either direction is possible with the depth. One thing is clear, that the mine can be worked deeper with good prospects in view.

On the surface the outcrops of the Martinez Mine vein are clearly visible and can be followed for about 50' to the south of the incline, after which they disappear under the debris of rocks from the surrounding mountains, but the fault can be traced still further to the south as far as 250'. Also to the north of the incline and across the Martinez Canyon one can locate the continuation of this fault. Samples taken from the outcrops show an average of 5% lead and 3 oz. of silver and from the other side of the canyon only traces of lead and as high as 5 oz. of silver. It has to be realized that these samples were taken close to the surface, where a destruction of the minerals always takes place, and the results can serve as an indication of the probable presence of good ore in these places. Only a more extensive research could definitely supply information as to the extent and content of these veins.

The Silverbell fault, containing the Columbia-Silverbell vein, has been traced for about 1000' on the surface north of the "Glory Hole" (top of the hill and point of the original start of work years ago) and also for about 1000' to the south of this point, which shows that the lower level workings in the Silverbell mine are not confined to their existing horizontal extent and can be increased in their length at still lower levels.

In order to study the possibility of finding other ores (besides lead and silver) the district between the Magma Mine and Ray has been in-

investigated and the geological formation interconnected. It occurs that rhyolites are the upper formations below which are located diabase, granite, amphibolic porphyry, dacite and then limestone. The majority of the existing mines have started but as lead-silver mines on the higher levels and finally were transformed into copper mines in the lower levels and are operating as such at present. Though it is too early to predict such a trend in the Martinez and Silverbell mines, there are indications of the presence of small quantities of copper minerals throughout the veins. The investigation of lower depths might show how correct this general rule is for the veins on this property.

The Silverbell, located at higher levels, is a dry mine and no water has been encountered in it although some dampness shows up at the lower levels. Possibly that water can be found still lower with the advance of the mine.

The Martinez Mine has a very well defined water level (below the fourth level) which does not show any considerable changes in elevation. This water is the only supply that is used on the property for the purpose of ore concentration and seems to be adequate for all needs at the present time. There is no doubt that the amount of water available from that mine will increase with the depth and that the needs in water for an increased production can be easily met in the future.

#### ORE RESERVES

As indicated before, the thickness of the veins presently under exploitation are varying in thickness and content. In the Martinez Mine the lead content drops very seldom below 4% and this percentage can be considered as the lowest limit. An average of 8% will be a conservative one. Silver drops very often to 0.3 oz. but raises in some places to 3 oz. An average of 2 oz. per ton can be accepted.

The lead content in the Silverbell Mine is varying from traces only to about 4%; 2% can be taken as an average. Silver varies from 4 oz. to 13 oz. to the ton, the higher limits prevailing. Kidneys with as high as 1006 oz. of silver were found at places close to the top of the mine.

Wherever galena is found the content of lead is reaching 72% and 35% in close vicinity.

The determination of ore reserves has been principally done on the basis of visible and existing beyond doubt ore. This ore is exposed in the workings and on the surface of the mines.

#### MARTINEZ MINE

About 3000 tons, some high-grade ore. Average content 8% lead, 2 oz. of silver.

Most of the ore has been taken out; the remaining is included between the main incline drifts and raisers in the form of blocks and can be easily taken out.

The vein does not show any strength to the north and south of the incline at the upper levels and wedges out at short distances from it.

At the lower levels the vein becomes stronger and its extent in the horizontal direction is more prominent. At the third and fourth levels the workings are followed in ore which stops at the south end and continues as a low grade ore to the north. Another 1000 tons can be taken out in the existing levels if continued. Below the fourth level we are entering the water zone of the mine. No work has been done below this level, except the sinking of a sump for the accumulation of water. There are indications that the ore is continuing below the fourth level in some places as high-grade. Its extent can be determined only when some exploration work is done. It is advisable to make this exploration work pay for itself by working at points of high-grade ore exposures.

For all practical purposes the Martinez Mine down to the fourth level can be regarded as a very much exhausted mine and if additional paying ore is not found below the fourth level all the visible ore would have to be cleaned out and the mine abandoned as a source of ore but partly maintained for the sake of water, of which the mine is at the present time the only supply.

The ore exposed on the surface could supply about 500 tons of low grade ore and that would make a total of 4500 tons of visible ore in the Martinez with an average content of 6% lead and 1-1/2 oz. of silver.

The dumps at the mouth of the mine do not represent any tangible value. Occasional pieces of highgrade ore can still be found there, but as a whole the dump is very well combed through.

#### SILVERBELL MINE

The ore here is of uneven character. High-grade is intermixed with milling and low grade ore. At the top of the vein (Glory Hole) the richest ore has been located, but in an attempt to extract the richest pieces only the former operators have ruined a great part of the vein at that place, leaving cavities in such a state that it is dangerous to carry on the work. Some quantity of this rich ore can still be taken out, probably to the extent of ten cars. Other places yield rich ore also. The south of 400 level shows a concentration of rich ore running strong in silver at about 40 oz. In general such places are not encountered very often, though there are chances to find them scattered while proceeding with the normal work in the lower levels.

The possibility of find high-grade lenses and kidneys have been entirely eliminated from the calculation of the reserves, and only

normal ore with a content of from 5 to 13 oz. of silver has been taken under consideration. Here also only the visible supply has been figured. As far as it could be seen at present, about 55,000 tons of ore are contained between the different levels. Some of the adits can be continued closer to the slopes of the hill and the lower levels could serve as a base for work necessary to establish new levels. At the lowest so called 400 level, the ore is showing a sound composition and can be followed below this limit.

It is evident that the quantity of visible ore will grow with the development of the mine below the 400 level, and that the Silverbell Mine can supply ore for a number of years to come.

The ore in the dumps is of the same value as that in the Martinez.

The values of the visible ores are calculated on the basis of their present market prices with a reduction of 15% for losses and penalties:

<u>MARTINEZ</u>	4,500 ton	6% lead	1-1/2 oz. silver
	Value	\$ 29,750.00	\$ 4,298.00
<u>SILVERBELL</u>	55,000 ton	2% lead	8 oz. silver
	Value	\$ 93,500.00	\$282,942.00
	TOTAL	\$123,250.00	\$288,240.00

Together the value represents \$411,490.00.

All combined expenses per ton of ore should not exceed \$4.50 which would make a total expense for all visible ore of 59,500 x \$4.50 = \$267,750.00. Putting aside \$24,000.00 for development and equipment, the total profit would be about \$124,000.00. By working 100 ton a day the visible ore can be extracted in 595 days or 1-3/4 years, and in the meantime the mine would be prepared for continuous work at the same rate.

High-grade ore from both mines naturally would increase this profit, but as stated before it has not been taken under consideration.

#### THE UNDERGROUND WORK

At present the production in both mines is about 20 tons per day. Work is being done by hand and no compressed air equipment is being used. The average production per man per day is about 3 tons. The normal production in other mines working with similar physical properties of ore is about 10 tons per man per day. The cost of mining (all expenses included) is here about \$2.00 per ton of ore, whereas in the other instance it is not greater than 75%. The Martinez and Silverbell Mines require a minimum of timbering and the mining conditions are, therefore, much more favorable than in other mines. The productivity of the mines could be increased if an adequate compressed air and hoisting equipment were installed. The presence of this equipment is not the

the only factor affecting the normal work of the mine. A system of work (stoping) most suitable for the existing conditions in the mine (thickness of ore body, dip and strike, character of hanging and foot walls) must be devised so that with the least expenses, efforts and danger to life the best results could be obtained. Up till now no such system is in existence. The ore has been mined in a "grab-as-you-go" way with no idea of developing the mine for the future and taking out whatever rich ore has been encountered. The horizontal workings (adits) have been used for the purpose of reaching or discovering rich ore which has been taken out in a most ruthless way, with the result that at certain places the mine is losing great quantities of good milling ore. Even for the last 8 to 9 months no attempt has been made to establish a standardized system of work.

After a careful study of the conditions of work and physical properties of the veins, I am submitting the following scheme of work in the mine:

Horizontal workings or levels of normal cross section are established at a distance of about 60' from each other. Beginning at a lower level (say level 2) raisers "a" are being cut 3' to 4' long, then inclined raisers "c" are run to the sides of the future mining chambers "M" which are about 25' wide. Vertical raisers "d" are then continued to a point at the upper level 1 which is symmetrical to the points at level 2 and then proceed with raisers "e" and "b" until level 1 is reached. All the ore is being delivered to level 2 by gravity and from there to the shaft or incline. After this preliminary work begins the cleaning out of the ore from the chambers, raisers acting as chutes. Doubly shaded spaces indicate ore still in place, single shaded ore taken out. Work proceeds in several chambers simultaneously along line "AB" leaving pillars "X" along the levels and also along the incline to protect them and maintain as transportation arteries. After the ore has been taken out from the chambers caving in is permitted to follow after some time. In case some levels

are destined to be abandoned, the pillars can be taken out by underhand and overhand methods. This scheme requires very little or no timbering and will give the maximum tonnage per man.

The work can be so organized that some levels in the Silverbell Mine can serve as points of departure for that scheme, and after all development work has been done five men can work in each chamber delivering 50 tons of ore per day. So two chambers would deliver 100 tons per day and so on. The normal and constant work along these lines can be easily and quickly arranged.

CONCLUSIONS

1. The veins exploited in the Martinez and Silverbell Mines must be regarded as sources of milling ore only.
2. Kidneys of high-grade shipping ore will be found while proceeding with the normal mining work underground, and will raise the value of ore considerably, but cannot be used as a basis for calculating the value of the ore.
3. Some exploring must be done in the Martinez Mine in order to determine its fitness for a prolonged life. Otherwise the ore reserves must be considered as coming to an end.
4. The Silverbell vein shows great strength and can possibly supply the needs of the mill for a long time.
5. New sources of ore might be located on the property, but this needs some special investigation and expenses.
6. Mining costs must be reduced by installing compressed air equipment for drilling. Hoisting facilities must be increased also.
7. A new system of underground work must be adopted.
8. The mines can be prepared to produce 100 tons of ore per day within two months.

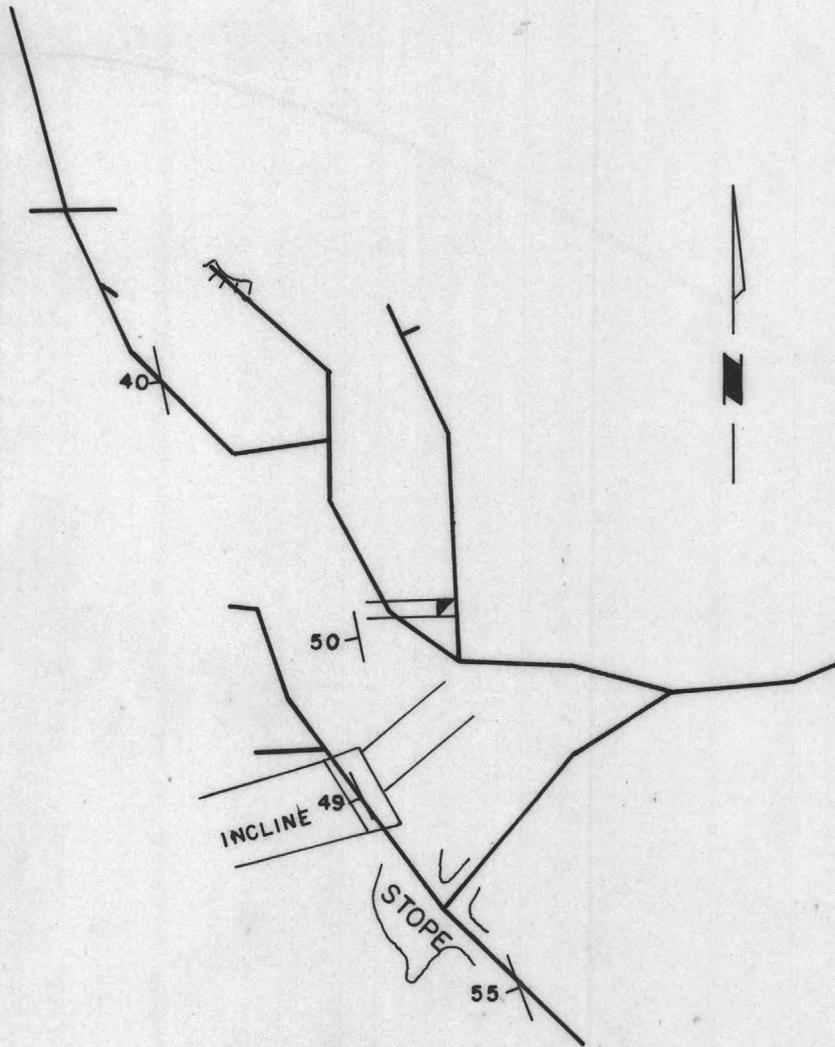
Respectfully submitted by

Anatol Glas, Mining Engineer

October 6, 1937

April 26, 1971

MINE ENTRANCE



UPPER LEVEL - SILVER BELL MINE SEC. 18, T 3S, R 12 E.  
PINAL COUNTY, ARIZONA

<b>HEINRICHS GEOEXPLORATION COMPANY</b>	
POST OFFICE BOX 5964, TUCSON, ARIZONA, 85703	
Phone: 602/623-0578	Cable: GEOEX, Tucson
geophysical engineers	vancouver sydney
	<b>GEOEX JOB NO. 628</b>

*Silver Bell*

To the President and  
Board of Directors,  
Silver Bell Cons. Mining Company  
Santa Barbara, Calif.

**B. O. W. MINING CO.**  
1272 E. CAMBRIDGE 279-5432  
PHOENIX, ARIZONA 85006

Gentlemen:-

Pursuant to your request I have made a personal examination of the Silver Bell group of mines and claims, and after spending five weeks on the property, submit the following as my report.

LOCATION

The Silver Bell property is located in Township 3 south, range 12 East, Section 18, in the Pioneer Mining District, Pinal County, Arizona, in a spur of the Pinal Mountains, Latitude 33 degrees 18' north, longitude 111° 10' west. The elevation is between 2,500 and 3,000 feet above sea level, it is a silver-lead property.

GENERAL INFORMATION

The nearest towns are Florence, the County seat, fifteen miles away; Ray, ten miles away and Superior, also ten miles distant. All three can be reached by wagon routes, but the shortest way to Superior and Ray is via mountain trails.

ROADS

In the olden days a wagon road used to run from the Silver Bell mine to Price, on the Arizona Eastern Railroad, which passes within five miles of the property. Distance to Price via this road is about eight miles. The nearest station of the Arizona Eastern R. R. is Cochran, five miles away. The wagon road is at present in bad repair. The logical solution for providing shipping and transportation facilities would be, to build a siding on the Arizona Eastern R. R., about half way between Cochran and Price, repair that part of the road which would tie up with the proposed new route, and construct whatever additional new road is required. Such road would be mostly down hill and bring the railroad loading and shipping siding within five miles of the property.

CLIMATE

The climatic conditions are such that the property can be worked all year around.

The labor supply is plentiful and the scale of wages paid are according to the miner's union scale, which rate is adhered to by all the operating mines of the district, large and small.

OTHER LARGE OPERATING MINES

The nearest large operating mines whose shares are listed at the stock exchange, are the Ray Consolidated, at Ray, and the Magna Mine, at Superior.

The Ray Consolidated is capitalized at \$16,000,000 owns 2,143 acres of mineral, and 4,454 non-mineral lands at Ray and Hayden. Equipped with a mill of 10,000 tons daily capacity. Mine is operated on shrinkage stoping system. Total dividends paid, including March, 1919, \$21,469.00 -- note. Dividends to date are over \$50,000,000.00.

The Magma Copper Company is capitalized at \$1,500,000.00 owns 1,160 acres of mineral lands at Superior. Equipped with a 300 ton mill. Product: Copper, Silver, Lead and Gold. Paid in dividends to January, 1920, \$1,704,000.00. Note. This company has just decided to spend \$1,000,000.00 with which to build a smelter at Superior and increase the mill from 300 to 600 tons per day capacity, also broaden the railroad they own.

### SUPPLIES

Cost of supplies will be normal, since goods can be shipped in over standard gauge railroad, the A.E.R.R. subject to a five-mile haul by truck, after wagon road has been repaired and rebuilt.

### WATER

The present water supply is more than sufficient for all camp and domestic purposes and ample water can be developed whenever required for milling or reduction operations.

### HISTORY OF PROPERTY

The Silver Bell was discovered about forty years ago and famous in the olden days as a silver Bonanza. Dr. Tibbets, in his report dated January 1, 1901, states "The Columbia and Silver Bell Mines were operated by the Pinal Mining Company at intervals for a period of ten years. During the time the company operated a smelter on the Gila River, five miles away. As a result of a short run they shipped a hundred and four carloads of bullion value not obtainable by reason of the looseness with which the books of the old company were kept."

When Silver was demonetized and the price of silver took such a material drop, the mine was shut down. At intervals, leasers have since operated the Bell during intermittent periods. Since the nearest railroad in those days was the Southern Pacific with the nearest shipping point, Casa Grande, sixty miles away, it paid only to ship the highest grade of ore. Consequently these leasers did very little development work, but contented themselves with hunting for the exceedingly rich pockets of ore, scattered throughout the ore deposits. As a result the present sampling really does not do full justice to the property, for due to this gouging by leasers and wandering prospectors, who helped themselves to exposed rich ore, without opening up any new ore bodies, only the leaner ore remained exposed. There is no doubt, that with very little development work, rich kidneys and shoots of the high grade ore for which the Bell was famous in the olden days, will be opened up again.

### DESCRIPTION OF THE PROPERTY

The property of the Silver Bell

consists of twenty-five claims, or 450 acres. Three of these claims or 60 acres, the Silver Bell, the Columbia and the Martinez, are patented. The rest is held by right of location. Titles are perfect and there are no litigations or incumbrances against the property. At present there exist no surface improvements, such as shops, buildings or power plants. There is however, quite some tract still in place in the mines and a small hoist and skip on the third adit of the Columbia Mine.

DEVELOPMENT WORK

The development work in the Silver Bell and Columbia workings consists of 4,330 feet of adit, drifts, cross cuts, inclines and winzes, as tabulated below:

Number one adit .....	60 feet
Number two adit .....	750 "
Number three adit .....	1750 "
(including drifts and cross cuts)	
Intermediate, between number one and two adit .....	150 "
Intermediate, between number two and three, drifts .	240 "
Below adit number three, drifts .....	830 "
Incline and winzes .....	550 "
TOTAL	4330 "

Most of the development work is in the ore body. In fact, ALL but 450 feet of adit number three, which is parallel to the deposit on the foot wall side and connects with the drifts on the vein by cross cuts.

The upper workings, close to the surface consists of overhand stopes, and an underhand open pit or glory hole, from which several hundred thousand dollars worth of high grade ore was extracted. The deposit showing stope width of approximately twenty feet as mined.

Intermediate drift below adit number one, for 150 feet shows ore for the entire width of the drift. It is connected with the number one and two adits by four winzes.

Number two adit has followed pay ore in two parallel drifts, which show good values the entire width of the drifts and the sample value from cross cuts and connections is such as to indicate that the valuable ore deposit extends from drift to drift, which fact may be easily established beyond doubt by very little further cross cutting.

Between the number two and three adits, the ore shoot dips to the South and West and has been followed by two winzes and a small stope, all of which show strong high grade values. The extreme limits North and South, as well as the thickness of the ore body here, has not been thoroughly explored, but even at that a considerable tonnage of valuable ore is in sight.

In the North and South breast of the drifts from the number three adit the ore body shows strong and further extension will probably expose parallel ore shoots of similar value to the one already so well developed.

Below the number three adit no large amount of work has been done. The main drift has penetrated the shoot on its southerly strike and dip, showing high grade ore of good strength. The small stope has caved badly but evidence of further extension to the south and below is great. Cross cuts show excellent values extending twenty feet into the hanging wall side, which evidence is also exhibited in the level above. Further development by cross cutting here will open up a large additional tonnage of good ore.

#### THE MARTINEZ MINE

Is opened up by an incline, 108 feet in depth, such on the vein, and 45 feet down, an adit on the vein cuts the incline and extends for 120 feet further on the strike of the vein. At eighty feet down a drift extends sixty feet to the South and twenty feet North, all in fine ore. At 108 feet and the bottom of the incline a drift South, and thirty feet long, exposed a fine grade of ore for the entire distance.

The ore body as a whole shows great strength. Most of the drifts and incline are entirely in ore, and the limits of the valuable ore are yet outside of the present workings. Numerous cross cuts will increase the developed tonnage materially without having to extend the adit, drifts and the incline.

I believe the workable ore, for milling purposes, will prove to be ten or twelve feet and possibly more in average width in which case the possible ore reserve estimated will be double than exposed at present. Several sections of the drift expose a definite hanging wall, but the foot wall does not seem to have been reached as yet.

#### FORMATION

The rock formation of the district is entirely eruptive. Sedimentary rock is strikingly absent. The prevailing rock is a Rhyolite and its blocky condition shows a well-developed fracture plane, parallel with the strike of the Columbia-Bell vein. Much cross-faulting is evidenced of extensive movements.

The Columbia-Bell mineralization has immense strength filling the broken area on either side of the central fissure of fissures to be considerable extent, locally in places 75 feet wide, seldom does the main line of lines of weakness show less than five feet in width and always accompanied by large fracture zones on either side. The Rhyolite generally is much broken and cut by canyons 1500 feet in depth, which expose the fault fissuring the block movement for a long distance, together with a very strong mineralization. The district rock formation is similar to the formation of the largest silver-lead mining districts of Western America, such as Comstock, Virginia City, Nevada; Tonapah, Nevada, etc.

#### VEINS AND ORE

The two main veins on the property of the Silver Bell Consolidated Mining Company are the Columbia Bell vein and the

Martinez vein. Both have the same strike, viz. north 16° West, and dip 41° west. The latter shows to be a branch of the former as the veins come together in the Silver Bell claim, north of the present workings.

These veins show a maximum width of 75 feet and can be traced for a mile on the strike. Both show much fault movement by "sliken slides" mud gouge and cemented wall rock breccia, as well as extensive fault and cross fracturing. The vein filling is a red hematite of iron and hematite stained replacement deposit, carrying silica, lime and manganese, together with the valuable metals, both in the form of galena and its alteration forms, carbonate and sulphate, and silver as chloride mainly close to the surface. The sulphides are coming in in the lower portions.

The ore shoot in the Columbia-Bell vein dips 45° and strikes south 14° West. The strike of the Martinez shoot is South 60° West and the dip 35°. Both show 400 feet in length and are extending.

The other veins on the property are: The Aspen, the Aspen #2 two veins on the Aspen #3, the Cave Vein, Cave #2 and #2 and the Lorado. All of these veins show exceedingly strong and are all well mineralized. While but little work has been done on them, the indications are such that there seems to be no doubt that they will open up valuable and extensive ore bodies when developed.

ORE RESERVES

At the time of this examination, the survey and sampling shows the following ore reserves, classified as follows:-

Ore in sight.

These are ore bodies, with two, three, and four sides exposed and sampled every ten feet.

Probable ore.

These are ore bodies estimated as probable to be found for a limited distance beyond the ore in sight. One side was exposed and sampled every ten feet.

Possible ore.

This is a calculation based on general indications of the ore likely to be found within the limits of the Columbia-Bell Martinez, as far as opened up. The extension of the ore in sight and probable ore to the extent of 100% of the block values, laterally and into the foot or hanging wall, is very much indicated as possible.

ORE IN SIGHT

		Equated Metal Value in place
Columbia and Bell, blocked out,	58,807 tons	\$ 639,115.00
Martinez	do	6,083 " 102,484.00
		64,890 " 741,599.00
On Dumps, Martinez	910 "	18,014.00
On Dumps, Columbia-Bell	12,536 "	236,410.00
		78,336 " \$996,025.00

PROBABLE ORE

Columbia and Bell	23,229 tons	\$ 217,945.00
Martinez	3,056 "	54,296.00

POSSIBLE ORE

Columbia and Bell	138,598 tons	1,676,046.00
Martinez	14,878 "	313,560.00

Ore reserve total	257,097 "	\$3,257,871.00
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In calculating the ore bodies, only the ore deposits of the Columbia-Bell and Martinez Mines were taken into consideration, and no attention paid to the rest of the veins, on the property which will materially add to the ore reserves when opened up. The method of sampling and the system used was such as to give the value of the ore, if same is properly mined and treated, and the property developed and explored to the best advantage. Owing to the size of the veins, the drifts were entirely enclosed in them and the samples were taken by a cut, three inches wide and three inches deep, from both sides of the drift and across the top, making a section sample from 25 to 75 pounds in weight. This sample was then broken to minimum one quarter mesh, mixed and quartered to one third pound and then assayed by Baverstock and Payne of Los Angeles, California. This was mixed and broken to one half to a quarter inch diameter and progressively mixed and halved to about six pound weight.

The rejections from the samples were filed and retained at the mines. Galvanized sheet iron tags with stenciled numbers were nailed firmly into the sample cuts and the rejections from the 75 pound of the half inch material was left at and near each sample cut.

The estimation of the ore reserves involves the character of the veins and ore shoots. The veins show to be true fissures and possess marked evidence of extensive faulting and remarkable persistency in maintaining their course and parallelism in strike. Some portions of the ore shoots are low grade, other of high grade, but the change occurs both ways alternately, so that the estimation of the block values necessitates the mining of the lower grade ore with the better grade and higher grade ores, for often the difference in character is not plainly visible by simple observation. In addition with the nature of true fault fissures parallel shoots may occur at intervals, so that the lateral extension of the commercial ore can be predicted and estimated and such estimation safely allowed for possible ore, as the veins are strong in all drifts and laterally on the strike.

Originating in dislocations, cause by extensive movements, the extension in depth will be great and should give permanent and long life to the mines.

COST OF MINING, TREATMENT, ETC.

This is based on the following analysis:

Insolubles .....	70 to 80%
Iron (Oxides) .....	5 to 10%
Lime (Carbonates) .....	2 to 4%
Manganese .....	1 to 2%

This is exclusive of lead and the metal values and give a fair idea of the gangue material. There will be no difficulties in the mechanical reduction (grinding).

MINING

The mining costs will be very low. The ore drills easily and breaks easily. It stands without timbering. There is absolutely no water to contend with and shrinkage stoping system can be employed. The ore can be drawn without hoisting. Judging from costs incurred under similar conditions \$2.00 per ton will be more than ample to pay for the expenses of placing the ore in the mill or reduction plant bins on a daily tonnage of 100 tons or more.

The simple system of shrinkage overhead stoping should be used, for when the block is mined it can be drawn and the country rock allowed to cave. As mentioned before, no hoisting will then be required and just sufficient timbering for chutes and man ways.

TREATMENT

As the valuable metals are mostly in the form of carbonates of lead and chloride of silver, and much of the minerals disseminated, concentration of some form must be used. Stage breaking classification and classified machine treatment will recover at least 70% of the metal values, the balance up to 90% can be saved by flotation. Smelting of the concentrates to follow. Cost of this milling and concentrating should be less than \$2.00 the ton, based on a 100 ton daily capacity.

The ore seems also adaptable to the chloridization Volatilization Roasting process, where the resulting metal fumes are collected with Cottrell electric precipitator.

Six representative samples of 50 lbs. each were sent to the U. S. Gov't. Mining Experimental station at Salt Lake City, Utah, and thoroughly tested by Mr. Varley to see whether or not the ore is adaptable to this process. Results were very gratifying and tabulated details of this test are attached to this report. Under favorable conditions practically 100% of the gold and lead may be recovered. 85 to 98% of the silver, and 80 to 98% of the copper. This process will reclaim all metals contained in an ore.

Roughly speaking the cost of such a plant would be \$1,000 per ton capacity and the cost of treating the ore \$4.00 per ton. The resultant saving in freight when shipping pure metal, instead of ore or concentrates of ore, would increase the profits of the operation considerable. This process would also do away with the expensive smelter treatment charges, as the product would be shipped and sold to the refiners of metal direct.

MARKETING

Whether a combination milling-concentration-flotation process or the Cottrell precipitation is used, the reduction of the ore into concentrates or bullion will be about 20 to 25 tons of ore into one ton of concentrates or bullion. Hence the marketing cost against each ton of ore original ore should be within \$1.00 the ton, for on above basis this would give \$20.00 to \$25.00 per ton for the product to be shipped. The cost would be approximately \$2.00 per ton for hauling to railroad, about \$12.00 smelter charges and \$6.00 per ton freight. The smelter charges would fall away when bullion is shipped, but there would be an increased freight charge for shipping bullion.

TOTAL COST MINING, TREATMENT, MARKETING

Mining .....	\$2.00	per ton
Treatment .....	2.00	" "
Marketing .....	1.00	" "
	<u>\$5.00</u>	<u>" "</u>

RECOMMENDATIONS

Owing to the particular nature of the Martinez Mine ore deposit, considerable of the ore in sight contains lenses of solid galena and carbonate of lead. By sorting, this ore could be shipped and made to yield 50% of lead and over 5 ounces of silver. The combined mining and sorting cost should not run over \$5.00 the ton. A five mile haul by truck to the railroad, the freight and smelter treatment charges would amount to about \$16.00 which would leave a net profit of some \$20.00 per ton on such ore shipments.

In order to start shipping from the Martinez and draw the ore from the bottom workings of this mine, 296 feet of adit should be constructed, which adit would connect with the bottom of the present incline shaft. This would do away with all hoisting operations. An ore bin should also be constructed near portal of this adit. The present wagon road to the railroad is in bad repair. About two and a half miles of the five miles require new construction. The balance can be repaired. Work on both adit and the road might be started simultaneously, as both will require about the same amount of time for their construction, and with the adit completed and the road ready for hauling, ore shipments from the Martinez can begin.

It will also be necessary to put in a railroad siding about half way between Cochran and Price, and an ore bin and loading platform at this siding.

There should also be installed at the Martinez a medium size power plant, such as a 75 HP internal combustion engine, with compressor, air receiver, drills and other accessories of proportionate size. With this power equipment and by keeping half of a force of men developing ore, and the other half breaking ore, the Martinez would open up rapidly and produce a handsome monthly net profit.

Next a good truck road should be constructed from the Martinez Mine up to the Columbia-Bell Mines, a distance of about 2500 feet. As soon as the Martinez Mine is shipping, or even before, an adit connecting with the lower workings of the Columbia-Bell should be constructed.

This would consist of a 150 cross cut to the Columbia vein, and a drift of some 800 feet on the vein proper. Besides making it possible to draw the ore from the Columbia-Bell workings, without hoisting, this adit will without doubt open up large and valuable new ore bodies and materially increase the ore reserve, and thus pay for itself many times over. This opinion is expressed by several other engineers who have examined the property.

A power plant should next be installed at the Columbia-Bell Mine. Would suggest a 150 HP internal combustion oil engine with compressors, drills, electric and other equipment of proportionate size (NOTE: since then government electric power has become available, so that we won't have to generate our own electricity).

#### TREATMENT PLANT

While much of the ore from either Martinez or Columbia-Bell Mine can be shipped direct to the smelters, the most profitable and economical way would be to take the ore as a whole and in some manner concentrate and reclaim the metal values. Whether a milling or the Cottrell precipitation plan is adopted, the logical place for the erection of either plant would be at the latitude 10,500 departure 16,000 in the main draw, and just below the Martinez Mine.

The ore from the Martinez Mine would thus go directly into the hauling. When productions have reached a large scale, an arterial tram would be the most economical means of transporting the ore to the reduction plant, but until a plant of at least 300 ton capacity is in operation, hauling by truck will be more economical.

If ore hauling by truck is contracted for, no initial equipment expenses is required and the ore could be hauled for 40 cents per ton-mile. This would mean 20 cents per ton for the distance hauled. An aerial tramway handling 100 tons per day, which will no doubt be the capacity of the first reduction plant until is in proportion far more expensive than a tramway that handles several hundred tons per day, as both sizes will require the same expensive terminal and necessary equipment.

Aerial tram hauling would come to about ten cents per ton. Based on a 100 ton per day capacity the actual saving is small and would amount to only \$3,000 per year. Against this must be figured the tram investment charges, depreciation, etc. Also, that with an initial cost of such a tram of \$25,000.00 it would require eight years to offset this outlay and at the end of eight years to offset this outlay and at the end of eight years the value will practically have depreciated.

When, however, a reduction plant of 300 tons and more is up, a larger tram will be required, but the savings will be greater the proportionate cost of this tram smaller, and the same will pay for itself before it is worn out.

CONCLUSIONS

Five weeks, spent in a thorough examination, careful and systematic sampling, and the use of conservative figures, has established the following facts:

ORE IN SIGHT

Blocks opened of two, three and four sides, sampled every 10'.		
Columbia-Silverbell Mine, Blocks	..... 58,807 tons	\$639,115.00
Martinez Mine	" 6,083 "	102,484.00
	<u>64,890 "</u>	<u>\$741,599.00</u>
Columbia-Silverbell Mine, Dumps	..... 12,536 tons	\$236,410.00
Martinez Mine	" 910 "	18,014.00
	<u>13,446 "</u>	<u>254,424.00</u>
TOTAL	78,336 tons	\$996,023.00
Less 15% loss in course of treatment	.....	149,403.00
		<u>\$846,620.00</u>
Mining, Marketing, Treatment \$5 per ton	.....	391,680.00
		<u>\$454,940.00</u>
Resulting net profits from this part	.....	\$454,940.00

It should be borne in mind, that the ore in place values have been estimated very conservatively and that there are scattered throughout the ore bodies kidneys of exceedingly high grade ore, which will materially increase the value of the ore in sight, but which factor has not been considered at all, when computing these figures.

In estimating the total ore reserve, including the probable and possible ore, this estimate has been computed solely on the Martinez and Columbia-Silverbell Mines, not taking into consideration the veins of the Lorado, and the Aspen, the Aspen #2 two veins on the Aspen #3, the Cave, the Cave #2, Cave #3, and the Silver Pick.

Proper development work on these veins will without doubt open up additional ore bodies similar to the ones encountered on the Bell, Columbia and Martinez, and immensely increases the ore reserves of the property, assuring its permanency and long life.

The total ore reserve of ore now in sight, probable and possible ore, (not including the undeveloped veins) would yield as follows:

Columbia-Bell Mine	..... 232,170 tons	\$2,769,517.00
Martinez Mine	..... 23,227 "	488,354.00
	<u>255,397 "</u>	<u>\$3,257,871.00</u>
Less 15% loss in treatment	.....	488,680.00
		<u>\$2,769,191.00</u>
Mining, Treatment and Marketing \$5 per ton	.....	1,276,985.00
Net profit on operation	.....	<u>\$1,492,206.00</u>

SUMMARY

To summarize I wish to say that I consider the property to be one of exceptional merit. Much of the success of the enterprise will, of course, depend upon competent and efficient management, and upon the result of systematic exploration of the veins and ore bodies, but I do not hesitate to say, that I believe that the metal values will prove permanent with depth and that the property will be not only a very productive one of long life, but also a well PAYING ONE.

Signed, H. B. Starbird, E.M.

May 25, 1920  
Superior, Arizona

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To summarize I wish to say that I consider the property to be one of exceptional merit. Much of the success of the enterprise will, of course, depend upon competent and efficient management, and upon the result of systematic exploration of the veins and ore bodies, but I do not hesitate to say, that I believe that the metal values will prove permanent with depth and that the property will be not only a very productive one of long life, but also a well PAYING ONE.

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May 25, 1920  
Superior, Arizona

# B. O. W. MINING COMPANY

## PROPERTY

The Silver Bell - Columbia - Martinez Mines, a lead-silver property, is currently controlled and operated by the B. O. W. Mining Company, an Arizona corporation. The property consists of three (3) patented claims and fifty (50) mining claims located on federal land. They are in the Pioneer Mining District, Pinal County, Arizona.

## LOCATION

This property is located about 70 road miles southeast of Phoenix, Arizona,  $18\frac{1}{2}$  miles east and south of Florence Junction, about 13 air miles south-west of Superior and about 15 air miles west of Ray. There is a road maintained by the Pinal County Highway Department from highway 60-70 to the property, 15 miles. This is a graded mountain road and is not paved.

## PHYSICAL FEATURES

Rugged topographic features abound in the immediate mine vicinity. Recent erosion of the rhyolite flows create steep near verticle pinnacles of great relief. A mean elevation from mining activity can be considered as 2700 feet above sea level with a range of elevation from 2400 feet down wash from the Martinez Mine to 3450 feet up slope above the Columbia-Silver Bell Mine. Climate wise, the property is ideally situated to permit an uninterrupted yearly operation.

## FACILITIES

There is a mining camp on this property, the size of which could be easily increased, the present capacity is about 12 men. Electricity is produced on the property and "bottled gas" is used for cooking and hot water.

## HISTORY and PRODUCTION

This property is well known for its silver production, the majority of which has been mined from enriched, near surface, chloride zones in the Columbia-Silver Bell Mine. Production dates back to 1880. Prior to the past 36 months all mining was underground. The present mining operation is by open cut with raw ore being trucked. Recent production was about 5 cars per week (250 tons) and could be increased to 500 tons per week within a short time.

## GEOLOGY

The property is situated in an area of Tertiary Volcanic flows which have been up-lifted and distorted to some extent. Rhyolite and its many phases of mineralogical composition and physical textures is the principal country rock. Into this rock there has been intruded some later rhyolite and basalt-diabase series dikes. These dikes could have influenced the metallic mineralization.

## MINERALIZATION

Metallic mineralization, silver, lead and some copper occures as lenses within wide parallel zones of weakness in the rhyolite series. These zones are identified on the surface by the greater amount of iron oxide and quartz present in the zone as contrasted to the lesser degree in content in the various rhyolite phases. - The general trend of the zones of weakness is north-south and their dip is westerly at a moderate angle.

# B. O. W. MINING COMPANY

## SILVER BELL - COLUMBIA - MARTINEZ M I N E S

### PAST DEVELOPMENT

Two mines have been developed on the property. The Columbia-Silver Bell mine is primarily a high silver-low lead ratio and has underground workings to a depth of 300 feet. The Martinez mine on the other hand has a high lead-low silver ratio and has been worked underground to a depth of 200 feet.

### RECENT DEVELOPMENT

Within the past 36 months a road has been built from the camp site to the Columbia-Silver Bell area. This is the first usable road to the area as early day mining was done by pack burro. Mining is now open cut and the ore body is about 1,000 feet in length, 30 feet wide and 250 feet deep, (this is the actually exposed ore at this time-not the total amount available) which would indicate at least 300,000 tons of silver ore that will average about 9 to 10 ounces. Past shipments have been running high in silica. We have shipped about 300 rail cars of raw ore.

### CURRENT SHIPPING ABILITY

With present road conditions to the ore body in the Columbia-Silver Bell area it is possible to ship one rail car (about 50 tons) per day. This has been done in the past.

### FUTURE SHIPPING ABILITY

With improvement of the road up the mountain side it is possible to triple production with only a slight increase in manpower.

### UNKNOWN ORE DEPOSITS

This is a very interesting subject. There are some 3000 feet between the Columbia-Silver Bell and the Martinez Mines. NO exploration work has been done on this area except for surface sampling. Surface rock in this area carries some silver. Extensive drilling is needed to fully realize the great potential of this mining area.

### A COPPER MINE?

There is copper present in the Silver Bell-Columbia at the 300 foot level, about 2%, and in the Martinez at the 200 foot level. Also, silver production from the Columbia-Silver Bell shows copper in assay, less than 1%. It is believed that a large copper deposit is located under the silver-lead body; however, drilling will be necessary to make this a fact.

### INSPECTION

Inspection of the property is invited, during normal hours, by anyone interested in a mining operation. Additional information can be given those who show an interest in the property.

### AVAILABILITY

We will give serious consideration to a sale or participation in our venture.

Above data believed reliable but can only be confirmed by your personal inspection.

October 13, 1970

Mr. C.R. Ball  
B.O.W. Mining Company  
1272 E. Cambridge  
Phoenix, Arizona 85006

Dear Mr. Ball:

I received the following items on October 13, 1970:

- a. One key to B.O.W. gate lock
- b. Two page synopsis of property by B.O.W. Mining Co.
- c. One claim map - Martinez - Silverbell - Columbia Mine by R.E. Mieritz
- d. 12 copies of smelter settlement sheets for ore shipments
- e. One copy of report by H.B. Starbird, 25 May 1920
- f. One copy of report on property by Anatol Glas, 6 Oct. 1937

I will abstract this information, add what I know and think of the property and pass this on to several clients who have expressed an interest in hearing of such properties.

These clients may contact you directly if they may go through us.

GEOEX does not take on such work on our behalf as we believe this would conflict with our consulting and contracting business.

Feel free to contact us at any time about any progress we may have made or with other proposals.

Thank you,  
HEINRICHS GEOEXPLORATION CO.

Donald B. Cooley  
Senior Geologist

DBC/dm

**AMERICAN SMELTING AND REFINING COMPANY**  
**HAYDEN ARIZONA PLANT**

SHIPPER P. O. W. Mining Co. DATE 3-16-67  
 ADDRESS 1265 S. Cambridge Lane, Phoenix, Ariz. SMELTER LOT 104  
 SHIPPING POINT Flanagan, Ariz. SHIPPERS LOT 7  
 NAME OF MINE Silver Bell - Maricopa CLASS OF MATERIAL Copper  
 TERMS - CONTRACT \_\_\_\_\_ SCHEDULE (Rates Subject to Change Without Notice) 243

DATE RECEIVED	CAR		WEIGHT				SETTLEMENT DATE		METAL QUOTATIONS
	NUMBER	INITIAL	GROSS	TARE	WET	% H <sub>2</sub> O	DRY		
2-20	461399	SP X	232340	48340	184000	4.3	176088	2-20	Silver 1.289
	460570	✓	231100	47100	184000	4.0	176640		Less .025
	460915	✓ X	237040	47860	189180	5.1	179532		Net 1.264
TOTAL					557180		532260		

ASSAY CONTENT PER TON				ANALYSIS										
GOLD OUNCES	SILVER OUNCES	COPPER PERCENT		INSOL %	SiO <sub>2</sub> %	FE %	MN %	CAO %	ZN %	S %	AL <sub>2</sub> O <sub>3</sub> %	AS %	SB %	B <sub>2</sub> %
Smelter	9.45			89.8	75.7	2.8		1.2			8.9			
Shipper	10.3													
Umpire	9.8													
Metallics														
Settle	9.8													

PAYMENT VALUE PER TON				FREIGHT	DEDUCTIONS		CHARGE	CREDIT
PAY CONTENT	PRICE	AMOUNT	VALUE	VALUE				
Gold					Base Charge "10.00"		2.00	
Silver - Less	2474.01				(Incl. Escalator Clauses)			
5 Oz. %	9.3	1.264	11.76	11.76	Additional Treatment			
Copper - Less					Acc. Value Over 1.76 @ 10%		18	
Lbs. %					SiO <sub>2</sub> 15.7 @ 10¢			15
Gross Value			11.76	11.76	CaO 4178.44			
Deductions			.61	2.13	Net Deductions		2.13	15
Freight Valuation		X X X	9.58	9.58	= 9.15 Per Wet Ton			
Net Value			11.15	11.15	@ 266.1300 Dry Tons			2,967.31
Less Freight On	278.5900	Wet Tons @ \$ 1.79			Per Ton			7.16
" Weighing	2	Cars @ 4.47			Per Car			
" Hauling	@ \$ 4.00	P.W.T. 1,114.36			less advance (975.07)			
" Representation		Umpires 7.16			Sampling			
" Royalty	10%	to Calvert Investment						
" Withheld Pending Return Of Silver Affidavit								
Toll Metals					Due Date			
					Balance Due Shipper		1204.39	
Checked:	Correct:	<i>[Signature]</i>	Approved:	<i>[Signature]</i>				

**AMERICAN SMELTING AND REFINING COMPANY**  
**HAYDEN ARIZONA PLANT**

SHIPPER B. O. W. Mining Company DATE 3-15-67  
 ADDRESS 1265 E. Cambridge Ave. Phoenix, Ariz SMELTER LOT 121  
 SHIPPING POINT Hayden Arizona SHIPPERS LOT 8-14  
 NAME OF MINE Phoenix CLASS OF MATERIAL Copper  
 TERMS - CONTRACT \_\_\_\_\_ SCHEDULE (Rates Subject to Change Without Notice) 243

DATE RECEIVED	CAR		WEIGHT					SETTLEMENT DATE	METAL QUOTATIONS
	NUMBER	INITIAL	GROSS	TARE	WET	% H <sub>2</sub> O	DRY		
2-28	461638	SP	236200	47860	188340	3.4	181936	2-28-67	Silver 1.259
-	461393	-	231900	47580	184320	3.4	173053		Less .025
-	460657	-	229900	47940	181960	4.7	173408		Net 1.264
TOTAL					554620		530247		

**B. O. W. MINING CO.**  
 1272 E. CAMBRIDGE  
 PHOENIX, ARIZONA 85006  
 279-5432

ASSAY CONTENT PER TON				ANALYSIS										
	GOLD OUNCES	SILVER OUNCES	COPPER PERCENT	INSOL %	SiO <sub>2</sub> %	FE %	MN %	CAO %	ZN %	S %	AL <sub>2</sub> O <sub>3</sub> %	AS %	SB %	
Smelter	-	6.81	-	88.4	75.0	2.4		1.3			8.6			
Shipper	-	8.4	-											
Umpire		6.95		<i>Root &amp; Simpson 3-10-67</i>										
Metallies														
Settle		6.95												

PAYMENT VALUE PER TON				FREIGHT	DEDUCTIONS		CHARGE	CREDIT
	PAY CONTENT	PRICE	AMOUNT	VALUE				
Gold					Base Charge	"10.00"	2.00	
					(Incl. Escalator Clauses)			
Silver - Less		1721.21			Additional Treatment			
0.5 Oz. %	6.45	1.264	8.15	8.15	Acc. Value Over	4000.50		
Copper - Less					SiO <sub>2</sub>	15.0 @ 10¢		150
Lbs. %					CaO			
Gross Value			8.15	8.15				
Deductions			.50	2.00	Net Deductions		2.00	150
Freight Valuation			X X X	6.15	= 5.91 Per Wet Ton			
Net Value			7.65		@ 266.6985 Dry Tons			2,040.24
Less Freight On	277.3100	Wet Tons @ \$ 1.99			Per Ton			7.16
" Weighing	Cars @ 4.47	Per Car			1610.09		4.47	2,033.08
" Hauling	@ \$4.00 P.W.T. = 1109.24				less advance 970.59		138.65	
" Representation	Umpires 7.16				Sampling		4.10	
" Royalty	10% to Calvert Investment						42.30	
" Withheld Pending Return Of Silver Affidavit								
Toil Metals					Due Date			
					Balance Due Shipper		380.69	

Checked: *[Signature]* Correct: *[Signature]*

Approved: *[Signature]*

**AMERICAN SMELTING AND REFINING COMPANY**  
**HAYDEN ARIZONA PLANT**

SHIPPER B. O. W. Mining Co. DATE 4-3-67  
 ADDRESS 1265 E. Cambridge Ave. Phoenix, Ariz. SMELTER LOT 152  
 SHIPPING POINT Florence, Ariz. SHIPPERS LOT 10  
 NAME OF MINE Silver Bell - Martinez CLASS OF MATERIAL Crude  
 TERMS - CONTRACT \_\_\_\_\_ SCHEDULE (Rates Subject to Change Without Notice) 243

DATE RECEIVED	CAR		WEIGHT					SETTLEMENT DATE	METAL QUOTATIONS
	NUMBER	INITIAL	GROSS	TARE	WET	% H <sub>2</sub> O	DRY		
3-13	4611638	SP X	242340	47920	194420	2.4	189754	3-13-67	Silver 1.289
✓	461393	SP	243880	47440	196440	3.3	189957		Less .025
✓	460657	SP X	247300	48740	198560	3.9	190816		Net 1.264
									Copper —
									Less —
									Net —
		TOTAL			589420		570527		

**B. O. W. MINING CO.**  
 1272 E. CAMBRIDGE  
 PHOENIX, ARIZONA 85006  
 279-5432

	ASSAY CONTENT PER TON			ANALYSIS									
	GOLD OUNCES	SILVER OUNCES	COPPER PERCENT	INSOL %	SiO <sub>2</sub> %	FE %	MN %	CAO %	ZN %	S %	AL <sub>2</sub> O <sub>3</sub> %	AS %	SS %
Smelter	—	8.44	—	90.4	72.3	2.5		1.4			8.8		
Shipper		8.50											
Umpire		—											
Metallics													
Settle		8.47											

PAYMENT VALUE PER TON				FREIGHT	DEDUCTIONS		CHARGE	CREDIT
	PAY CONTENT	PRICE	AMOUNT	VALUE				
Gold					Base Charge	"10.00"	2.00	
					(Incl. Escalator Clauses)			
					Additional Treatment			
Silver - Less	2273.55				Acc. Value Over	.07 @ 10%	01	
0.5 Oz.	%	7.97	1.264	10.07		3528.74		
Copper - Less					SiO <sub>2</sub>	12.3 @ 10¢		123
Lbs.	%				CaO			
Gross Value			10.07	10.07	Net Deductions		2.01	123
Deductions			.78	2.01				
Freight Valuation			X X X	8.06	= 7.80	Per Wet Ton	CHARGE	CREDIT
Net Value			9.29	@ 2.85	2635	Dry Tons		265010
Less Freight On	294.7100	Wet Tons @ \$	1.79	Per Ton			527	53
" Weighing	2 Cars @	4.47	Per Car				8	94
" Hauling	@ 4.00 P.W.T.	= 1178.84	Less Advance	(1031.49)			147	35
" Representation	Umpires	—	Sampling				17	31
" Royalty	10% to Calbarit Investment						93	48
" Withheld Pending Return Of Silver Affidavit								
Toll Metals				Due Date				
				Balance Due	Shipper		841	31
Checked: <i>[Signature]</i>	Correct: <i>[Signature]</i>	Approved: <i>[Signature]</i>						

*B.O.W.*

**AMERICAN SMELTING AND REFINING COMPANY  
HAYDEN ARIZONA PLANT**

SHIPPER *B. O. W. Mining Co.* DATE *1-25-16*  
 ADDRESS *1565 E. Cambridge Ave. Phoenix, Ariz.* SMELTER LOT *32*  
 SHIPPING POINT *Toronto, Arizona* SHIPPERS LOT *2*  
 NAME OF MINE *Silver Hill - Martinez* CLASS OF MATERIAL *Concentrate*  
 TERMS - CONTRACT \_\_\_\_\_ SCHEDULE (Rates Subject to Change Without Notice) *943*

DATE RECEIVED	CAR		WEIGHT					SETTLEMENT DATE
	NUMBER	INITIAL	GROSS	TARE	WET	% H <sub>2</sub> O	DRY	METAL QUOTATIONS
<i>1-16</i>	<i>461633</i>	<i>SPX</i>	<i>232320</i>	<i>47700</i>	<i>184620</i>	<i>4.3</i>	<i>176681</i>	Silver <i>1.234</i>
	<i>461393</i>		<i>232560</i>	<i>47640</i>	<i>185220</i>	<i>3.8</i>	<i>178182</i>	Less <i>.025</i>
	<i>460657</i>		<i>224580</i>	<i>47880</i>	<i>176700</i>	<i>4.2</i>	<i>169279</i>	Net <i>1.209</i>
								Copper _____
								Less _____
								Net _____
		<b>TOTAL</b>			<i>546540</i>		<i>524142</i>	

**B. O. W. MINING CO.**  
 1272 E. CAMBRIDGE  
 PHOENIX, ARIZONA 85006  
 228-4432

ASSAY CONTENT PER TON				ANALYSIS									
	GOLD OUNCES	SILVER OUNCES	COPPER PERCENT	INSOL %	SiO <sub>2</sub> %	Fe %	MN %	CAO %	ZN %	S %	AL <sub>2</sub> O <sub>3</sub> %	AS %	SB %
Smelter	-	<i>9.5</i>	-	<i>29.2</i>	<i>73.9</i>	<i>2.7</i>		<i>1.2</i>			<i>8.3</i>		
Shipper													
Umpire													
Metallica													
Settle		<i>9.5</i>											

PAYMENT VALUE PER TON				FREIGHT	DEDUCTIONS		CHARGE	CREDIT
	PAY CONTENT	PRICE	AMOUNT	VALUE				
Gold					Base Charge	<i>"10.00"</i>	<i>2.00</i>	
					(Incl. Escalator Clauses)			
					Additional Treatment			
					Acc. Value Over	<i>1.35 @ 10%</i>		
Copper - Less					SiO <sub>2</sub>	<i>13.9 @ 10%</i>	<i>14</i>	<i>13</i>
					CaO	<i>3643</i>		
Gross Value			<i>11.38</i>	<i>11.38</i>				
Deductions			<i>.75</i>	<i>2.14</i>	Net Deductions		<i>2.14</i>	<i>13</i>
Freight Valuation			X X X	<i>1.24</i>	Per Wet Ton			
Net Value			<i>10.63</i>	<i>@ 262.0710</i>	Dry Tons			<i>2785.8</i>
Less Freight On	<i>273.2700</i>	Wet Tons @ \$	<i>179</i>		Per Ton		<i>487.15</i>	
" Weighing	<i>41 Cars @ 4.17</i>	Per Car					<i>4.17</i>	
" Hauling	<i>24.00</i>	<i>1000 Lb. to J.M. Wingfield</i>					<i>1,043.00</i>	
" Representation		Umpires			Sampling		<i>1,586.90</i>	
" Royalty	<i>10%</i>	<i>to Calvert Investment Co.</i>					<i>119.91</i>	
" Withhold Pending Return Of Silver Affidavit								
Toil Metals					Due Date			
					Balance Due	<i>Shipper</i>	<i>4074.20</i>	
Correct:	<i>[Signature]</i>				Approved:	<i>[Signature]</i>		



**INSPIRATION CONSOLIDATED COPPER CO.  
SMELTING DEPARTMENT**

Sn or Lot 5717 Shipper Lot 1

DATE July 15, 1965

BOUGHT OF B.O.W. Mining Company

Date Received July 10, 1965

Street 1265 E. Cambridge St. City Phoenix, Arizona 85006

Initial	CAR Number	WET WEIGHT	Moisture %	DRY WEIGHT	N. Y. QUOTATIONS			
ICC	923	67,320	3.20	67,102	Copper (per lb.)	35.600¢		
					Less	4.85¢ =	30.750¢	
					Silver (per oz.)	128.900¢		
					Gold (per oz.)			

ASSAY and ANALYSES	Copper %	Silver Oz.	Gold Oz.	Silica %	Alumina %	Iron %	Lime %	Sulphur %
	.60	18.76	Tr.	67.0	4.8	4.4	3.9	.1

PAYMENTS PER TON				DEBITS	CREDITS	Valuation For Freight
Copper	12.00	Lbs. per ton, less 10% = 2.00	Lbs. at 30.750¢	\$	\$ .62	\$
Silver	18.76	Ozs. per ton, less 5% = 17.82	Ozs. at 128,900¢		22.97	
Gold		Ozs. per ton, less % =	Ozs. at			
Excess Metal Values	\$23.59 - 15.00 = \$8.59 @ 10%			.86		
Treatment Charge				6.00		
<b>TOTALS</b>				6.86	23.57	
Net Value per ton					16.73	

Net Value for Freight Charges, per wet ton \$

Royalty to be paid to <u>Investment Company</u> <u>Geo. F. Bent</u> <u>50 Luna Court</u> <u>San Rafael, California</u>	33,351	Dry tons at \$ 16.73	\$ 561.31 ✓
Trucking To be Paid To <u>J.W. Winfield</u> <u>1265 E. Cambridge Street</u> <u>Phoenix, Arizona 85006</u>			
AMOUNT DUE SHIPPER			① 353.35 ✓
Less 10% Royalty		Smelter Net after Trucking	35.34
NET AMOUNT DUE SHIPPER			\$ 318.01

**B. O. W. MINING CO.**  
1272 E. CAMBRIDGE 279-5432  
PHOENIX, ARIZONA 85006

Approved

*PET*

**AMERICAN SMELTING AND REFINING COMPANY  
HAYDEN ARIZONA PLANT**

SHIPPER B.O.W. Mining Co. DATE 5-2-68  
 ADDRESS 1272 E Cambridge Ave. Phoenix, Ariz. SMELTER LOT 3  
 SHIPPING POINT Fluorocel Ariz. SHIPPERS LOT 1  
 NAME OF MINE Silver Bell - Martinez CLASS OF MATERIAL Oxide  
 TERMS - CONTRACT \_\_\_\_\_ SCHEDULE (Rates Subject to Change Without Notice) 913

DATE RECEIVED	CAR		WEIGHT					SETTLEMENT DATE	METAL QUOTATIONS
	NUMBER	INITIAL	GROSS	TARE	WET	% H <sub>2</sub> O	DRY		
4-12	461393	SP	243440	47320	196120	7.2	181999	Silver 2.114	
✓	460383	✓	236880	46080	190800	6.6	178207	Less .025	
✓	460940	✓	241120	47660	193460	6.5	180885	Net 2.089	
								Copper	
								Less	
								Net	
		TOTAL			580380		541091		

**B. O. W. MINING CO.**  
 1272 E. CAMBRIDGE  
 PHOENIX, ARIZONA  
 85006

ASSAY CONTENT PER TON				ANALYSIS											
	GOLD OUNCES	SILVER OUNCES	COPPER PERCENT	INSOL %	SiO <sub>2</sub> %	Fe %	MN %	CAO %	ZN %	S %	AL <sub>2</sub> O <sub>3</sub> %	AS %	SB %		
Smelter	—	10.25	—	79.3	73.2	2.5		1.1			7.4				
Shipper		10.40													
Umpire		—													
Metallics															
Settle		10.325	—												

PAYMENT VALUE PER TON				FREIGHT	DEDUCTIONS		CHARGE	CREDIT
	PAY CONTENT	PRICE	AMOUNT	VALUE				
Gold					Base Charge "10.00"		2.00	
					(Incl. Escalator Clauses)			
Silver - Less					Additional Treatment			
Oz. 5 %	9.80875	2.089	20.49	20.49	Acc. Value Over 10.49 @ 10%		1.05	
Copper - Less					SiO <sub>2</sub> 13.2 @ 10%			1.32
Lbs. %					CaO			
Gross Value			20.49	20.49				
Deductions			1.73	3.05	Net Deductions		3.05	1.32
Freight Valuation			X X X	17.44	= 16.26 Per Wet Ton			
Net Value			18.76	@ 270.5455	Dry Tons			5,075.43
Less Freight On	290.1900	Wet Tons @ \$ 2.44			Per Ton		708.07	
" Weighing	Cars @	Per Car						
" Hauling	@ 4.00 P.W.T.	to B.O.W. Mining Co.					1160.76	
" Representation	Umpires	Sampling						
" Royalty	10% to Calhoun Investment Co.						320.66	
" Withheld Pending Return Of Silver Affidavit								
Toll Metals					Due Date			
					Balance Due	Shipper	2,885.94	

Checked: [Signature] Correct: [Signature] Approved: [Signature]

# MAGMA COPPER COMPANY

SUPERIOR, ARIZONA

Settlement No. 158

Smelter Lot 348

DATE 1-10-67

Shipper Lot M-158

BOUGHT OF B O W Mining Company Classification Crude Ore

ADDRESS 1265 E. Cambridge Ave., Phoenix, Arizona

BOWER CO., PHOENIX

C A R		WET WEIGHT			Moisture	DRY WEIGHT	N. Y. QUOTATIONS
Initial	Number	Gross	Tare	Net	%		
MA	76	153,460	38320	115,140	5.0	109,383	Date <u>12-20 &amp; 12-22, 1966</u>
MA	78	155,520	37020	118,500	4.5	113,167	Copper (per lb.) .....
		308,980	75340	233,640		222,550	Less <u>1.293</u>
							Silver (per oz.) <u>- .004 = 1.289</u>
							Gold (per oz.) .....

ASSAY and ANALYSIS	PAYMENTS PER TON	DEBITS	CREDITS
Copper <u>0.15</u> Pct.	.....lbs. per ton, less.....lbs. at.....Per lb.		16.9600
Silver <u>13.85</u> Oz.	<u>13.85</u> oz. per ton, less <u>5% = 13.1575</u> oz. at <u>1.289</u> Per oz.		
Gold <u>0.003</u> Oz.	.....oz. per ton,.....oz. at.....Per oz.		
Iron <u>3.6</u> Pct.	.....units at.....Per Unit.		
Lime <u>1.3</u> "	.....units at.....Per Unit.		
Alumina <u>4.8</u> "	.....units at.....Per Unit.		
Silica <u>79.0</u> "	<u>24</u> units at <u>.10</u> Per Unit.		2.4000
Sulphur <u>0.2</u> "	.....units at.....Per Unit.		
Manganese .....	.....units at.....Per Unit.		
Arsenic .....	.....units at.....Per Unit.		
Antimony .....	.....units at.....Per Unit.		
Bismuth .....	.....units at.....Per Unit.		
Insoluble .....	.....units at.....Per Unit.		
	Treatment Charge .....	6.00	
	TOTALS .....	6.00	19.3600
	Net Value Per Ton .....		13.3600

Total Value of <u>111.275</u> Dry Tons at \$ <u>13.36</u>		1486.63
Less Freight <u>116.82</u> Tons at \$ <u>4.00</u> per <del>xxx</del> wet ton to: <u>J. W. Wingfield, 1265 E. Cambridge Ave, Phx, Ariz.</u>		467.28
Less Switching .....		14.60
Less Smelter Royalty of 10% of net smelter returns to: Calbont Investment Co. c/o Geo. F. Bont, 50 Lyndana Court, San Rafael, California		95.62
Less Additional Treatment Charge .....		48.52
TOTALS .....		626.02
Amount Due Shipper—Voucher No. ....		1486.63
		860.61

# MAGMA COPPER COMPANY

SUPERIOR, ARIZONA

Settlement No. 50

Smelter Lot 132

DATE April 23, 1966

Shipper Lot M-50

BOUGHT OF B O W Mining Company Classification Crude Ore

ADDRESS 1265 E. Cambridge Ave., Phoenix, Arizona

POWER CO., PHOENIX

CAR		WET WEIGHT			Moisture	DRY WEIGHT	N. Y. QUOTATIONS
Initial	Number	Gross	Tare	Net	%		
MA	74	140,280	37,360	102,920	3.7	99,112	Date <u>April 18, 1966</u>
MA	75	120,040	35,240	84,800	7.5	78,440	Copper (per lb.) .....
		<u>260,320</u>	<u>72,600</u>	<u>187,720</u>		<u>177,552</u>	Less <u>1.293</u>
				<u>93.860</u>		<u>88.776</u>	Silver (per oz.) <u>= .004 = 1.289</u>
							Gold (per oz.) .....

ASSAY and ANALYSIS	PAYMENTS PER TON	DEBITS	CREDITS
Copper <u>0.15</u> Pct.	.....lbs. per ton, less.....lbs. at.....Per lb.		
Silver <u>14.06</u> Oz.	<u>14.06</u> oz. per ton, less <u>5%</u> = <u>13.357</u> oz. at <u>1.289</u> Per oz.		17.2172
Gold <u>0.003</u> Oz.	.....oz. per ton,.....oz. at.....Per oz.		
Iron <u>4.2</u> Pct.	.....units at.....Per Unit.		
Lime <u>1.3</u> "	.....units at.....Per Unit.		
Alumina <u>8.0</u> "	.....units at.....Per Unit.		
Silica <u>69.8</u> "	<u>15</u> units at <u>.10</u> Per Unit.		1.5000
Sulphur <u>0.6</u> "	.....units at.....Per Unit.		
Manganese .....	.....units at.....Per Unit.		
Arsenic .....	.....units at.....Per Unit.		
Antimony .....	.....units at.....Per Unit.		
Bismuth .....	.....units at.....Per Unit.		
Insoluble .....	.....units at.....Per Unit.		
	Treatment Charge .....	6.00	
	TOTALS .....	6.00	18.7172
	Net Value Per Ton .....		12.7172

Total Value of <u>88.776</u> Dry Tons at \$ <u>12.7172</u>	1128.98
Less <del>TRUCKING</del> <u>TRUCKING</u> <u>93.86</u> Tons at \$ <u>4.00</u> per <del>TON</del> wet ton to: <u>J. W. Wingfield, 1265 E. Cambridge Ave., Phx, Ariz.</u>	375.44
Less Switching .....	14.60
Less <del>ROYALTY</del> <u>ROYALTY</u> <u>10%</u> Royalty of net smelter returns to Calbont Investment Co., c/o Geo. F. Bont, 50 Lunada Court, San Rafael, California	70.59
Less Additional Treatment Charge <u>of 10% of metals paid for in excess of</u> <u>\$15-\$30 per ton - Excess = 3.7172 x 10% x 88.776 =</u>	33.00
TOTALS .....	493.63
Amount Due Shipper—Voucher No. <u>16270</u>	1128.98
	635.35

Made by BGT Checked RSM **B. O. W. MINING CO.**

1272 E. CAMBRIDGE 279-5432  
PHOENIX, ARIZONA 85006

# MAGMA COPPER COMPANY

SUPERIOR, ARIZONA

Settlement No. 157

Smelter Lot 346

DATE December 30, 1966

Shipper Lot M-157

BOUGHT OF B.O.W. Mining Company Classification Crude Ore

ADDRESS 1265 E. Cambridge Ave., Phoenix, Arizona

POWER CO., PHOENIX

CAR		WET WEIGHT			Moisture	DRY WEIGHT	N. Y. QUOTATIONS
Initial	Number	Gross	Tare	Net	%		
MA	78	142880	37020	105860	4.7	100885	Date <u>Dec. 14, 1966</u>
MA	70	144900	38120	106780	5.0	101441	Copper (per lb.) .....
		287780	75140	212640		202326	Less <u>1.293</u>
				106.320		101.163	Silver (per oz.) <u>- .004 = 1.289</u>
							Gold (per oz.) .....

ASSAY and ANALYSIS	PAYMENTS PER TON	DEBITS	CREDITS
Copper <u>0.25</u> Pot.	.....lbs. per ton, less.....lbs. at.....Per lb.		10.7760
Silver <u>8.80</u> Oz.	<u>8.80</u> oz. per ton, less <u>5%</u> = <u>8.36</u> oz. at <u>1.289</u> Per oz.		
Gold <u>0.003</u> Oz.	.....oz. per ton,.....oz. at.....Per oz.		
Iron <u>3.4</u> Pot.	.....units at.....Per Unit.		
Lime <u>1.2</u> "	.....units at.....Per Unit.		
Alumina <u>6.4</u> "	.....units at.....Per Unit.		
Silica <u>75.6</u> "	<u>21</u> units at <u>.10</u> Per Unit.		2.1000
Sulphur <u>0.2</u> "	.....units at.....Per Unit.		
Manganese .....	.....units at.....Per Unit.		
Arsenic .....	.....units at.....Per Unit.		
Antimony .....	.....units at.....Per Unit.		
Bismuth .....	.....units at.....Per Unit.		
Insoluble .....	.....units at.....Per Unit.		
	Treatment Charge .....	4.00	
	<b>TOTALS</b> .....	4.00	12.8760
	Net Value Per Ton .....		8.8760

PAID  
Voucher No. 30015  
DEC 29 1966  
MAGMA COPPER CO.

Total Value of <u>101.163</u> Dry Tons at \$ <u>8.876</u>		897.92
Less Freight <u>106.32</u> Tons at \$ <u>4.00</u> per xxx wet ton to: <u>J. W. Wingfield, 1265 E. Cambridge Ave, Phx, Ariz</u>		425.28
Less Switching .....		14.60
Less Sampling Royalty of 10% of net smelter returns to: Calbont Investment Co., c/o Geo. F. Bont, 50 Lunada Court, San Rafael, California		45.80
Less Additional Treatment Charge .....		
<b>TOTALS</b> .....		485.68
Amount Due Shipper—Voucher No.....		897.92
		412.24

Made by BGT

Checked RSM

Approved B.O.W. Mining Co.  
1272 E. CAMBRIDGE 279-5432  
PHOENIX, ARIZONA 85006

# MAZMA COPPER COMPANY

SUPERIOR, ARIZONA

Settlement No. 142

Smelter Lot 316

DATE October 25, 1966

Shipper Lot M-142

BOUGHT OF B O W Mining Co.

Classification Crude Ore

ADDRESS 1265 East Cambridge Ave., Phoenix, Arizona

BOWER CO., PHOENIX

CAR		WET WEIGHT			Moisture	DRY WEIGHT	N. Y. QUOTATIONS
Initial	Number	Gross	Tare	Net	%		
MA	73	139,600	36,740	102,860	4.8	97,923	Date October 11, 1966
MA	79	132,780	36,600	96,180	5.3	91,082	Copper (per lb.)
		272,380	73,340	199,040		189,005	Less
				99,520		94,5025	Silver (per oz.) * *1.293 - .004 = 1.289
							Gold (per oz.)

ASSAY and ANALYSIS	PAYMENTS PER TON	DEBITS	CREDITS
Copper 0.10 Pct.	.....lbs. per ton, less.....lbs. at.....Per lb.		
Silver 9.88 Oz.	9.88 oz. per ton, less 5% = 9.3860 oz. at 1.289 Per oz.		12.0986
Gold 0.005 Oz.	.....oz. per ton,.....oz. at.....Per oz.		
Iron 4.0 Pct.	.....units at.....Per Unit.		
Lime 2.2 "	.....units at.....Per Unit.		
Alumina 5.4 "	.....units at.....Per Unit.		
Silica 73.8 "	19 units at 10 Per Unit.		1.9000
Sulphur "	.....units at.....Per Unit.		
Manganese "	.....units at.....Per Unit.		
Arsenic "	.....units at.....Per Unit.		
Antimony "	.....units at.....Per Unit.		
Bismuth "	.....units at.....Per Unit.		
Insoluble "	.....units at.....Per Unit.		
	Treatment Charge .....	4.00	
	TOTALS .....	4.00	13.9986
	Net Value Per Ton .....		

Total Value of 94,5025 Dry Tons at \$ 9.9986	944.89
Trucking	
Less Freight 99.52 Tons at \$ 4.00 From Wet ton to:	398.08
J. W. Winfield, 1265 E. Cambridge Ave., Phoenix, Arizona	14.60
Less Switching	
Less Sampling Royalty of 10% Net Smelter returns to: Calbont Investment Company, C/o Geo. F. Bont, 50 Lunada Court, San Rafael, California	53.22
Less Additional Treatment Charge	
TOTALS	465.90 944.89
Amount Due Shipper—Voucher No. 19003	478.99

Made by ..... Checked ..... Approved .....

**B. O. W. MINING CO.**  
1272 E. CAMBRIDGE 279-5432  
PHOENIX, ARIZONA 85006

# MAYMA COPPER COMPANY

SUPERIOR, ARIZONA

Settlement No. 130

Smelter Lot 295 DATE 9-16-66

Shipper Lot M-130

BOUGHT OF B O W Mining Company Classification Crude Ore

ADDRESS 1265 E. Cambridge Ave., Phoenix, Arizona

BOWER CO., PHOENIX

CAR		WET WEIGHT			Moisture	DRY WEIGHT	N. Y. QUOTATIONS
Initial	Number	Gross	Tare	Net	%		
MA	73	153,500	36,740	116,760	3.3	112,907	Date .....
MA	79	155,500	36,600	118,900	3.4	114,857	Copper (per lb.) .....
		309,000	73,340	235,660		227,764	Less <u>1.293</u>
				117.830		113.882	Silver (per oz.) = <u>.004</u> = 1.289
							Gold (per oz.) .....

ASSAY and ANALYSIS	PAYMENTS PER TON	DEBITS	CREDITS
Copper <u>0.15</u> Pct.	..... lbs. per ton, less..... lbs. at..... Per lb.		
Silver <u>8.00</u> Oz.	<u>8.00</u> oz. per ton, less <u>5%</u> = <u>7.60</u> oz. at <u>1.289</u> Per oz.		9.7964
Gold <u>0.003</u> Oz.	..... oz. per ton,..... oz. at..... Per oz.		
Iron <u>3.6</u> Pct.	..... units at..... Per Unit.		
Lime <u>1.9</u> "	..... units at..... Per Unit.		
Alumina <u>6.0</u> "	..... units at..... Per Unit.		
Silica <u>75.0</u> "	<u>20</u> units at <u>.10</u> Per Unit.		2.000
Sulphur <u>0.2</u> "	..... units at..... Per Unit.		
Manganese .....	..... units at..... Per Unit.		
Arsenic .....	..... units at..... Per Unit.		
Antimony .....	..... units at..... Per Unit.		
Bismuth .....	..... units at..... Per Unit.		
Insoluble .....	..... units at..... Per Unit.		
	Treatment Charge .....	4.00	
	TOTALS .....	4.00	11.7964
	Net Value Per Ton .....		7.7964

Total Value of <u>113.882</u> Dry Tons at \$ <u>7.7964</u>		887.87
Less Trucking <u>117.83</u>	Tons at \$ <u>4.00</u> per <del>dry</del> wet ton to:	471.32
<u>J. W. Wingfield, 1265 E. Cambridge Ave, Phx, Ariz.</u>		
Less Switching .....		14.60
Less <del>SENDER'S</del> Royalty of 10% of net smelter returns to: Calbont Investment Co., c/o Geo. F. Bont, 50 Lunada Court, San Rafael, California		40.20
Less Additional Treatment Charge .....		
TOTALS .....		526.12
Amount Due Shipper—Voucher No. <u>18466</u>		887.87
		361.75

Made by BGT Checked RSM B. O. W. MINING CO. Approved .....

1272 E. CAMBRIDGE PHOENIX, ARIZONA 85006 279-5432

# MAYMA COPPER COMPANY

SUPERIOR, ARIZONA

Settlement No. 130

Smelter Lot 295

DATE 9-16-66

Shipper Lot M-130

BOUGHT OF B O W Mining Company

Classification Crude Ore

ADDRESS 1265 E. Cambridge Ave., Phoenix, Arizona

BOWEN CO., PHOENIX

CAR		WET WEIGHT			Moisture	DRY WEIGHT	N. Y. QUOTATIONS
Initial	Number	Gross	Tare	Net	%		
MA	73	153,500	36,740	116,760	3.3	112,907	Date .....
MA	79	155,500	36,600	118,900	3.4	114,857	Copper (per lb.) .....
		309,000	73,340	235,660		227,764	Less <u>1.293</u>
				117.830		113.882	Silver (per oz.) <u>= .004 = 1.289</u>
							Gold (per oz.) .....

ASSAY and ANALYSIS	PAYMENTS PER TON	DEBITS	CREDITS
Copper <u>0.15</u> Pct.	..... lbs. per ton, less..... lbs. at..... Per lb.		9.7964
Silver <u>8.00</u> Oz.	<u>8.00</u> oz. per ton, less <u>5% = 7.60</u> oz. at <u>1.289</u> Per oz.		
Gold <u>0.003</u> Oz.	..... oz. per ton,..... oz. at..... Per oz.		
Iron <u>3.6</u> Pct.	..... units at..... Per Unit.		
Lime <u>1.9</u> "	..... units at..... Per Unit.		
Alumina <u>6.0</u> "	..... units at..... Per Unit.		2.000
Silica <u>75.0</u> "	<u>20</u> units at <u>.10</u> Per Unit.		
Sulphur <u>0.2</u> "	..... units at..... Per Unit.		
Manganese .....	..... units at..... Per Unit.		
Arsenic .....	..... units at..... Per Unit.		
Antimony .....	..... units at..... Per Unit.		
Bismuth .....	..... units at..... Per Unit.		
Insoluble .....	..... units at..... Per Unit.		
	Treatment Charge .....	4.00	
	TOTALS .....	4.00	11.7964
	Net Value Per Ton .....		7.7964

Total Value of <u>113.882</u> Dry Tons at \$ <u>7.7964</u>	
Trucking <u>117.83</u> Tons at \$ <u>4.00</u> per <del>gross</del> wet ton to:	471.32
Less Freight <u>J. W. Wingfield, 1265 E. Cambridge Ave, Phx, Ariz.</u>	14.60
Less Switching .....	
Less <del>SEDITION</del> Royalty of 10% of net smelter returns to: Calbont Investment Co., c/o Geo. F. Bont, 50 Lunada Court, San Rafael, California	40.20
Less Additional Treatment Charge .....	
TOTALS .....	526.12
Amount Due Shipper—Voucher No. <u>18466</u>	887.87
	361.75

Made by BGT Checked RSM O. W. MINING CO. Approved CO.

Jim Sherman

Tucson Mtns - Survey Claims

Master key 3221 will unlock gate

1. Points to be surveyed shown in red  
claim corners  
section corner  
new drill hole  
old Anaconda drill hole

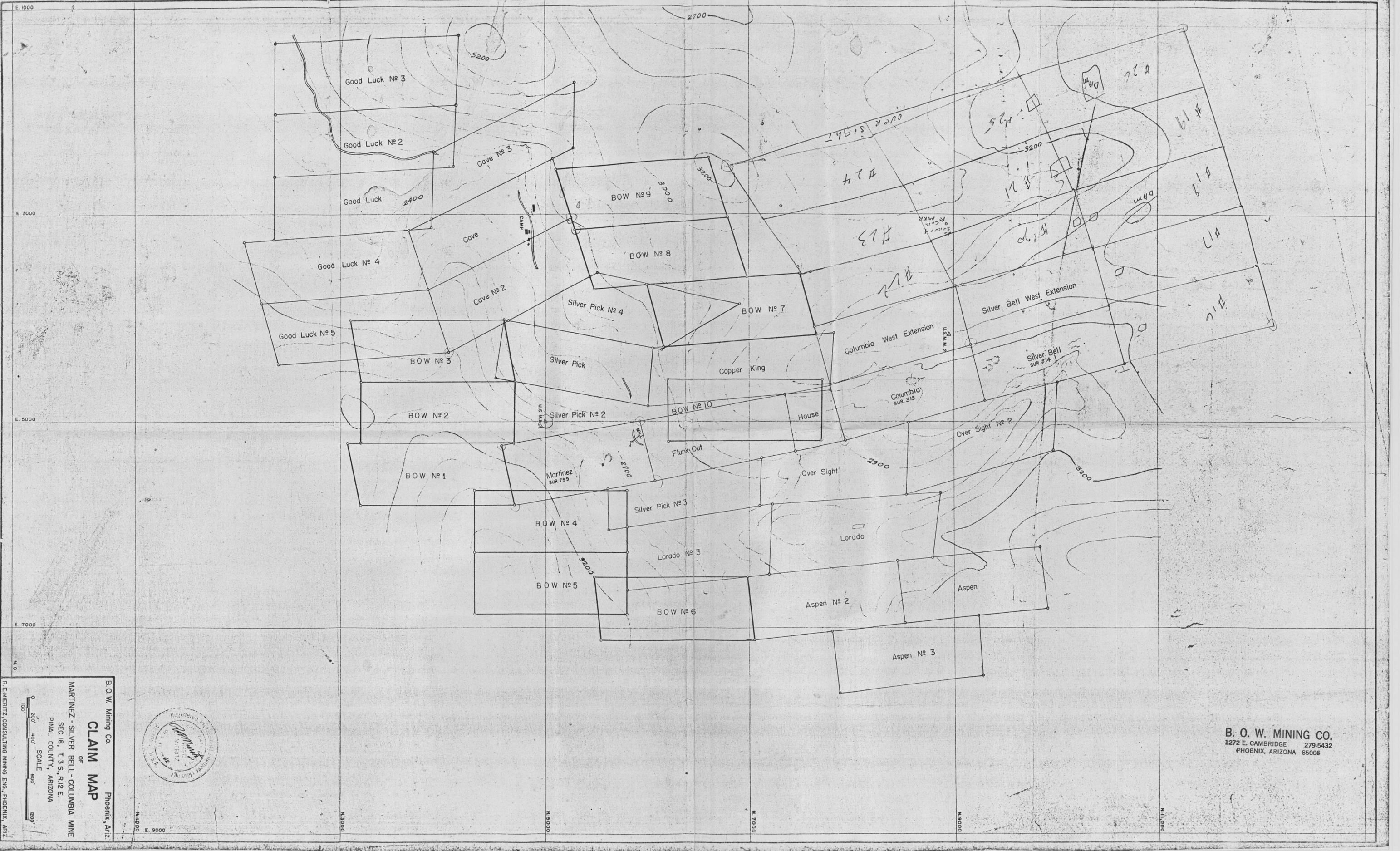
2. Angles & stadia - basic tie is drill & sec.  
corner - tie claim corners to new drill hole.  
Tie anaconda hole to claim corners.

3. Place location on sketch - check maps  
in Walts office & place on one of  
those if possible - esp. geophysical maps

Shaw - B.O.W. Mining Co. (etc)

Good luck - bring up Reymart  
Mine investigation - Also investigation of  
place we looked - I.P. - intrusive check out  
I think this is a good bet - See  
if you can sell it.

Hayser People on job will be:  
Bob Franks or Bill Bazzola (sp?)



B. O. W. Mining Co.  
 Phoenix, Ariz.  
**CLAIM MAP**  
 OF  
 MARTINEZ - SILVER BELL - COLUMBIA MINE  
 SEC. 18, T. 3 S., R. 12 E.  
 PINAL COUNTY, ARIZONA  
 R. E. MERTZ, CONSULTING MINING ENG., PHOENIX, ARIZ.



**B. O. W. MINING CO.**  
 1272 E. CAMBRIDGE 279-5432  
 PHOENIX, ARIZONA 85006

SPEED LETTER®

FROM Mr. Paul Bryant

TO Heinrichs GEOEXploration Co.

843 Spray Street

P.O. Box 5964

Superior, Arizona 85273

Tucson, Arizona 85703

SUBJECT GEOEX Job # 628 - sample submitted by Dennis Fischer to Southwestern

Assayers

No. 9 & 10 FOLD

MESSAGE

DATE May 17 19 71

Dear Mr. Bryant:

Enclosed please find a copy of spectrographic analysis of sample submitted to Pacific Spectrochemical Laboratory, Inc. by Southwestern Assayers & Chemists, Inc.

If you have any questions, please feel free to contact us.

Sincerely,  
Heinrichs GEOEXploration Co.

SIGNED

Walter E. Heinrichs, Jr., President

Enclosure

REPLY

DATE \_\_\_\_\_ 19 \_\_\_\_\_

Please acknowledge receipt

HEINRICHS  
GEOEX



Cable: GEOEX

REC'D MAY 20 1971 REC'D

No. 9 FOLD

BOX 5964 TUCSON, ARIZONA 85703

No. 10 FOLD

Phone: (AREA 602) 623-0578

SIGNED

*Paul Bryant*

TO Mr. Paul Bryant  
843 Spray Street  
Superior, Arizona 85273



**HEINRICHS GEOEXPLORATION COMPANY**  
808 W. GRANT ROAD - P. O. BOX 5671 5964  
TUCSON, ARIZONA 85703  
Area Code 602 Phone 623-0578  
Geophysical Exploration Research Engineering

END FOLD

SUBJECT: GEOEX Job # 628

DATE: May 13, 1971

Dear Mr. Bryant:

After Mrs. Fegert's call on Tuesday, May 11, we were able to get in touch with Southwestern Assayers. The sample was sent to Los Angeles, California on April 26 for spectrographic analysis. The results should be here any day, at which time we will call you, as Mrs. Fegert requested.

Your billing of April 29, 1971 has been amended to include the cost of the sample results. Please see the attached copy of the amended statement.

Very truly yours,  
Heinrichs GEOEXploration Company

*W. E. Heinrichs, Jr.*  
Walter E. Heinrichs, Jr.  
President

Enclosure  
WEH:dm

1ST FOLD

PLEASE REPLY TO → SIGNED

HEINRICHS  
GEOE



Call: 623-0578

REC'D MAY 20 1971 REC'D

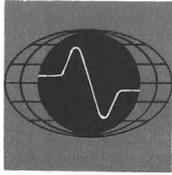
BOY 7094 TUCSON, ARIZONA 85703  
Phone: (REA 602) 623-0578

DATE 5-18-71

SIGNED

*Paul Bryant*

SEND WHITE AND PINK COPIES WITH CARBON INTACT. PINK COPY IS RETURNED WITH REPLY.



**HEINRICHS GEOEXPLORATION COMPANY**

806 WEST GRANT ROAD. TUCSON, ARIZONA 85703. P.O. BOX 5964. PHONE: (602) 623-0578

**S T A T E M E N T**

(AMENDED)

May 13, 1971

Mr. Paul Bryant  
843 Spray Street  
Superior, Arizona 85273

Re: GEOEX Job # 628

**Professional Fees & Services**

1 field day and report-----	\$ 125.00
1 vehicle day @ \$15.00/day-----	15.00
150 miles @ \$0.15/mile-----	22.50
1 sample - spectrographic analysis-----	24.50
Communications-----	1.00
	<hr/>
Total Amount Due-----	\$ 188.00 ✓
	<hr/> <hr/>

(301)

**HEINRICHS  
GEOEX**  
Cable: GEOEX



REC'D MAY 20 1971 REC'D

POY FROM TUCSON, ARIZONA 85703

Phone: (AREA 602) 623-0578

**SPEED LETTER** ®

TO Mr. Paul Bryant FROM Heinrichs GEOEXploration Co.  
843 Spray Street P.O. Box 5964  
Superior, Arizona 85273 Tucson, Arizona 85703

SUBJECT GEOEX Job # 628 - sample submitted by Dennis Fischer to Southwestern Assayers  
— No. 9 & 10 FOLD **MESSAGE** DATE May 17 19 71

Dear Mr. Bryant:

Enclosed please find a copy of spectrographic analysis of sample submitted to Pacific Spectrochemical Laboratory, Inc. by Southwestern Assayers & Chemists, Inc.

If you have any questions, please feel free to contact us.

Sincerely,  
Heinrichs GEOEXploration Co.

Enclosure

SIGNED \_\_\_\_\_

Please acknowledge receipt

**REPLY**

DATE \_\_\_\_\_ 19 \_\_\_\_\_

— No. 9 FOLD

— No. 10 FOLD

SIGNED \_\_\_\_\_

5/11/71

Paul Bryant

689-2627

Superior, Ariz.

Open job #628

---

A lady called Walt

Re: Spec. sample  
results.

---

# PACIFIC SPECTROCHEMICAL LABORATORY, INC.

CHEMICAL AND SPECTROGRAPHIC ANALYSIS

RESEARCH

2558 Overland Avenue

Los Angeles, California 90064

Att'n. Wil Wright

May 12, 1971

Report of semiquantitative spectrographic analysis of sample submitted by

Southwestern Assayers & Chemists, Inc.  
P. O. Box 7517  
Tucson, Arizona 85713

	009241-1	Cont.
Pb-	43. %	As- ND < 0.05
Fe-	15.	Be- ND < 0.0003
Si-	11.	Bi- ND < 0.001
Cu-	0.84	B - ND < 0.002
Al-	0.33	Cs- ND < 0.20
Sb-	0.43	Co- ND < 0.001
Cd-	0.064	Cb- ND < 0.02
Ba-	0.17	Ge- ND < 0.003
Mg-	0.0052	Au- ND < 0.001
Ga-	0.010	Hf- ND < 0.05
W -	0.47	In- ND < 0.007
Mn-	0.027	Li- ND < 0.02
Ca-	1.3	Hg- ND < 0.09
Mo-	0.018	Pt- ND < 0.002
Zn-	2.0	P - ND < 0.50
Ti-	0.015	K - ND < 0.20
Ag-	0.055	Re- ND < 0.005
Ni-	0.0023	Ru- ND < 0.01
Sr-	0.012	Rb- ND < 0.20
Cr-	0.011	Na- ND < 0.05
Zr-	trace 0.003	Ta- ND < 0.05
		Te- ND < 0.04
		Tl- ND < 0.10
		Sn- ND < 0.003
		V - ND < 0.002
		R.E.- nil

--cont.--

INTERNATIONAL  
**GEOEX**  
GEOGRAPHIC ENGINEERS  
TUCSON, ARIZONA



REC'D MAY 17 1971

BOX 5964 TUCSON, ARIZONA 85703

Phone: (AREA 602) 623-0578

Respectfully submitted,

PACIFIC SPECTROCHEMICAL LABORATORY, INC.

# SOUTHWESTERN ASSAYERS & CHEMISTS, Inc.

REGISTERED ASSAYERS

FELIX K. DURAZO  
WIL WRIGHT  
ARIZONA REG. NO. 5875

P. O. BOX 7517  
TUCSON, ARIZONA 85713

710 E. EVANS BLVD.  
PHONE 602-294-5811

Heinrichs Geoexploration Company  
808 West Grant Road  
Tucson, Arizona 85703

JOB # 009241  
RECEIVED 4-25-71  
REPORTED 5-14-71

SAMPLE NUMBER	GOLD OZ.*	SILVER OZ.*	LEAD %	COPPER %	ZINC %	MOLYBDENUM %
<p>Results of sample submitted by Mr. Dennis Fisher are attached.</p> <div style="position: absolute; top: 50px; left: 100px; font-size: 2em; font-family: cursive;"> <p>Geoex Job # 628</p> </div> <div style="position: absolute; top: 100px; left: 500px; text-align: center;">  <p><b>HEINRICH'S GEOEX</b> GEOLOGICAL CHEMISTS TUCSON, ARIZONA</p> <p>REC'D MAY 17 1971</p> <p>BOX 5964 TUCSON, ARIZONA 85703 Phone: (AREA 602) 623-0578</p> </div>						

CHARGE \$ 20.00

\* Gold and Silver reported in troy oz. per 2,000 lb. ton.

INVOICE

April 27, 1971

Mr. Paul Bryant  
843 Spray Street  
Superior, Arizona 85273

Re: Property Examination  
Report  
GEOEX Job # 628

Dear Paul:

On Friday, April 23, I drove to the Pinal Mountains to inspect and evaluate the Silver Bell Mine which is presently under lease to Paul Bryant of Superior, Arizona. Mr. Bryant and associates are presently mining and doing shallow exploratory work in the area. The Silver Bell Mine yielded several hundred thousand tons of high grade silver, lead and copper ore in the early 1900's. Today the economic potential of the mine lies in possible extensions which may be offset by faulting or downdip in the mine itself. Due to capital limitations, undertaking the latter possibility is beyond the sphere of present exploration limit capabilities.

The Pinal Mountains consist of Tertiary volcanics primarily rhyolitic in composition. The ore deposits occur along fault zones with associated alteration and brecciation. In particular, the Silver Bell Mine is situated on a fault which strikes N15°W and dips 40° west. Friday morning was spent mapping the upper level of the mine in order to confirm the possibility of mining a high grade show on the surface. Upon mapping the mine, we found that the workings have very likely removed any ore downdip and along strike from the surface showing.

In the afternoon, I walked north of the workings where no work has been done. The Silver Bell fault appears to have been faulted away on its north end by a nearly east-west striking fault. The slickensides indicate a strike slip movement. (The north side moving west relative to the southside.) Further investigation revealed that approximately three hundred

Cont'd.....

feet west of the mine area there is a brecciated zone some twenty feet wide. This zone strikes northerly and may very likely be the extension of the mineralized fault at the Silver Bell Mine. I recommend that three vertical holes be drilled just west of the brecciated zone for assay purposes. The initial holes will be about 125 feet deep followed by deeper ones if encouragement warrants them.

The area shows a good possibility for ore extensions. A detailed geologic structure map and a map of the whole underground mine workings would be invaluable in aiding future exploration efforts. Such work might require about 10 man days and consume approximately \$1,250.00 in total cost.

Very truly yours,  
Heinrichs GEOEXploration Company



Dennis Fischer  
Geologist

Enclosures: 3 Maps  
DF:dm