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Sheldon

Sheldon

Prescott, Arizona, August 17, 1917.

To M. D. Lathrop, Esq.,
New York City.

Dear Sir:

Since report on the Sheldon property dated October 12, 1915, was made, local conditions have changed on account of the war, that a modification of cost of supplies, and price of material quoted them should be made in order to correspond with present conditions.

At the present time mining timber will cost delivered at the mine $40.00 per thousand, instead of $32 and $28.00, a difference of eight and twelve dollars per thousand since 1915.

Miner's wages are now $4.00 per day of eight hours. Shaft men, engineers, and blacksmiths $5.00 per day. Muckers and laborers $3.50 per day, making a difference of about one dollar per day of eight hours more than in 1915.

Other supplies such as food stuffs, hardware, etc., should be figured at 40 per cent more at the present time. In regard to the prices above mentioned, no doubt there will be some change for the better in the near future.

To offset the increased cost of mining the ores in the Sheldon mine, we have the advantage of the rise in the price of metals. In the 1915 report we figured our copper value at 15 cents per lb., which on three per cent ore, would be 60 pounds per ton of ore, worth $9.00 per ton. The same ore now would be worth per ton copper, New York quotations, 27 cents per pound, or $16.20 per ton of ore, a gain of $7.20 per ton.

We also have the advantage of the rise in silver, our ore runs from 15 to 40 ounces of silver, in the 1915 report silver was figured at 50 cents per ounce. The mill runs show a saving of nine ounces in the old way of milling, which would be $4.50 per ton saved. At the present time silver is worth 83 cents per ounce, making the same ore now worth $7.50 per ton, a gain of $3.50 per ton in value, in other words in 1915 report we figured our ore at an average value of $12.00 per ton, the same ore with the increase of metal values is now valued at $22.77 per ton.

Therefore, figuring that we have 37,700 tons of positive ore, valued at $22.77 per ton, the gross value of this ore would be $858,429.00, instead of $452,400.00 as per 1915 report.

In 1915 the mining conditions were such that this ore could be mined for $7.90 per ton, now we figure that the same ore will cost to mine and mill $9.90 per ton. This is on account of increased prices brought about by war conditions, However, taking into consideration the increased price of the copper and silver values which this ore contains, we will have a better margin over all than the 1915 report shows, to wit:

Figuring the gross value of Positive Ore at	$858,429.00
Deducting $9.90 per ton mining and milling	505,269.00
Leaves a profit of	353,160.00

Now as against $154,570.00 in 1915. And throughout the property other ore can be figured along the same lines.

It is safe to say that with an up to date mill with oil flotation installed, and the mine opened up in harmony with the plant, the cost of milling can be greatly reduced with a very decided increase in the saving of the values.

In order to bring these results about, the company's engineers have recommended that a new double compartment shaft be sunk 100 feet east of the Champion shaft, east, and continued on down, cross cutting at every 100 feet, and run out the different levels at these points, By doing this the mine will be opened up in a practical way, and the ore can be drawn from all of the old workings, and new ground developed at the same time.

In order to accomplish this we will need a 50 H.P. hoist, compressor large enough for at least four drills, pump, and power drills. If electricity for power is used motors must be added, and other accessories. If steam is used, two boilers 80 H. P. will be required.

Prices on this cannot be quoted at this time, as they vary from day to day. All of the equipment will be contracted for at a given figure on the day of order.

In conclusion will state that the present area of this property consists of about 140 acres, and that the 1915 report was made to cover the exonomic conditions, and the local conditions at the mine.

It would not be advisable to consider the Poland Mill at this time in the treatment of ore, but on the other hand would ship direct to Smelter, pending the installation of the company's mill, when the mine is opened up.

On account of the heavy storms last year and this, it will take about $1500.00 to put in a different road about the mine which has been washed out. This was not needed in 1915, and therefore not an item of expense at that time.

Leasers now working on the Eureka claim have out about 50 tons of ore ready to ship to the Smelter, assaying from $35.00 to $50.00 per ton, pending treatment charges, as the ores from this claim are not as desirable to the Smelter as the ores from the Sheldon vein. The latter being in great demand as they are self fluxing.

Yours truly,

Mark Bradley

SHELDON MINE

Preliminary Report.
Sheldon Mining Co.

July 19, 1918.

PROPERTY:

The property of the Sheldon Mining Co. consists of twelve claims and fractions and a Millsite. All of which are patented and named as follows:

American Flag
Short Cut
Link
Capital
Midnight Snap
London
Eberhart.
Sheldon
Champion
Fortune
Eureka
White House
Goliath Millsite

LOCATION:

The property is located in the Walker Mining District, Yavapai County, Arizona about one mile west of the Walker Post Office and on the west side of the head waters of Lynx Creek.

TOPOGRAPHY:

The claims lie on high rolling hills partially covered with second growth pine although at some points there is considerable timber suitable for mining purposes and some suitable for dimension and building timber. A small saw mill could be erected and sufficient material cut for all purposes.

WATER SUPPLY:

Ample for small mining and milling operations.

FUEL & POWER:

Ample fuel for camp use. The line of the Arizona Power Co. crosses one end of the property and is connected to the Eureka Tunnel. This line could be extended to the Sheldon claim for two thousand dollars or less.

GEOLOGY:

The entire Walker District is in a Quartz Diorite with the exception of a small portion in the south east corner where there is a small area of Yavapai Schist. With the exception of this band of schist the Diorite is bounded on the south and east by Bradshaw Granite.

To the west there is a large area of Hornblende Schist with a few quartz diorite intrusions. To the north the quartz diorite fingers out into Yavapai schist.

On the Sheldon property there is evidently several bands or dikes of rhyolite porphyry, either this or a highly altered and sheared quartz diorite, considerably lighter in color than the quartz diorite, which makes up the greater portion of the district.

The veins on the Sheldon claim as well as the north and south extensions consist of gash or fissure veins in the porphyry, very frequently lying close to bands of quartz diorite. The general strike is N. 50 E. while the Sheldon vein which is the most westerly of the group dips to the east approximately 80 degrees. To the east of this vein there are several smaller veins striking parallel to the Sheldon but apparently dipping either vertical or to the west.

The Sheldon vein is very well defined and can be traced for the entire length of the Sheldon, Champion, and Fortune claims and appears on the surface as a highly oxidized siliceous outcrop varying in width from one to eight feet and carrying small values in gold and silver. At some points there has been considerable fracturing of the walls and stringers of quartz extend at these points several feet from the normal wall of the vein.

Sulphides appear quite close to the surface with practically a very shallow zone of oxidation and with apparently no secondary enrichment although at some points a secondary copper oxide has been formed as a result of leaching of chalcopyrite.

The Sheldon vein on the south end shows considerable copper with small amounts of lead and zinc and a large amount of pyrite. To the north the copper is less apparent while more lead and zinc appear. This change from copper values to lead and zinc is probably more apparent in the Eureka vein than in the Sheldon.

DEVELOPMENT AND ORE BODIES:

The Sheldon vein north of the Sheldon shaft has been prospected by means of widely separated pits and trenches. The trenching was probably done to gain the higher grade oxidized ores. A considerable amount of the material from these trenches lies piled along the sides and could be easily sampled. The trenches however are badly

caved and considerable expense would be necessary to clean and sample them. It is quite apparent that the points of most intense trenching represent the better grade outcrops and that all the free milling ores have been removed.

The principal underground developments are on the Sheldon, Fortune, Champion and Eureka claims. The latter was not inspected except at one point where leasers were extracting a narrow stringer of ore close to the surface.

Developments on the Sheldon vein consist of the Sheldon shaft, 207 feet deep with levels at the 100 and 200 foot points. Both these levels extend to the north from 400 to 500 feet. The 100 level is caved to the surface while the 200 is partly caved. To the south of the shaft the 100 level extends about 100 feet and the 200 level about 250 feet. From the above levels and stopes above the levels about 15,000 tons of ore was extracted carrying 2% copper, 4 ox. in silver and $6.00 ore. North of this some later work exposed a higher grade ore, reported to run about $13.00 with copper at 9¢ and silver at 50¢.

On the Short Cut between the Sheldon and Short Cut shaft all surface ore was extracted and two small stopes north of the 110 foot shaft were mined. It is stated by Mr. Casey that 100 tons of $26.00 gold silver ore was extracted here with values of 3.5% copper for which no settlement was received.

The Fortune shaft to the north is credited with a production of several carloads of $25.00 shipping ore and several small mill runs of $16.00 these values being in gold silver and copper with the latter at 9¢ and silver at 50¢.

All workings on the Sheldon, Short Cut, Champion and Fortune claims along the Sheldon vein show from one to four feet of oxidized surface quartz and it would be reasonable to expect bodies of commercial sulphide ore below the most favorable points on this outcrop.

The present owners in a report made by Mr. Bradley during 1915 assume 23,000 tons of ore above the 100 foot level (Block B 1) on the accompanying map. To the south of the shaft 2200 tons. On the 200 level north block (B 2) 4500 tons and south of the shaft on the same level 2000 tons. Also on the Champion block B. 3 they claim 6000 tons. Total tonnage claimed 37,000 tons with assumed value from

past shipments etc. of $12.00 per ton copper at 9¢ silver at 50¢ etc.

They assume that the vein between the 200 and the surface over its entire length will produce 200,000 tons of similar ore which assumption is not justified.

On the Fortune ground the Griffin shaft was sunk at the point marked with an X. It is claimed that several thousand dollars worth of ore was extracted while sinking this shaft.

The Capital, Midnight Snap, Eureka, White House and Eberhart show no indication of ore except small oxidized stringers. The Eureka property is credited with a total production of $250,000 although I could get no figures to confirm this statement.

CONCLUSIONS:

The principal vein of interest is the Sheldon and from present indications, past production and statements made by Mr. Wm. Casey the last foreman on the property it is not unreasonable to assume that to a depth of 200 feet commercial ore will be found at various points along the vein from one to four feet wide and carrying from $6.00 to $25.00 in gold and silver with the addition of not to exceed 2% copper. The fact that the Pine Mountain Mine to the north produced to the 500 level might indicate a greater depth of possible ore on the Sheldon vein.

All work would have to be done over although the Champion shaft could be used for a working shaft and the cleaning out and re-timbering would be less than the cost of sinking a new shaft. The cost of ascertaining the value of the property therefore would be exactly the cost of new development of the present indicated points of commercial ore. A careful examination of the surface by trenching and sampling of outcrops would give only gold and silver values and since there is considerable indication of leaching these results would be hardly accurate although they might indicate points of greatest value and thereby direct development.

The Transportation problem is good. A narrow gauge track of 30 pound rails runs nearly to the Sheldon shaft and connects with the west portal of the Poland Tunnel. Ore could be delivered to the Walker portal of the tunnel for 15¢ per ton. The cost of transporting

thru the tunnel at present is $1.50 per ton. This tunnel however will require the expenditure of several thousand dollars to put the timbering in a safe condition for heavy transportation and it might be possible by undertaking this work to get a big reduction in the rate. I know that the interests who own the tunnel would like to obtain some steady revenue from same and on a one hundred ton daily basis a rate of 25¢ per ton would not be unreasonable. The cost of transportation thru the tunnel would be at least 15¢ in addition to this, making a total cost delivered to the railroad of 55¢ assuming the 25¢ rate for tunnel service. The freight from Poland to Humboldt would therefore bring total transportation cost to about $1.00 per ton.

Mining costs once the shaft were down and some ore opened would be about $4.50 per ton assuming a mining width of 4 feet. This brings the total cost F.O.B. Humboldt to $5.50 per ton.

The cost of sinking the Champion shaft to the 300 foot level would be $15,000.00. Cost of equipment installation and one or two buildings would be $8,000.00. To repair and clean track to the mine, repair tunnel $8,000.00 making a total cost of $31,000.00. An addition of 500 feet of drifting at 300 level would cost $7,000.00, making a total cost of this work of approximately $38,000.00.

I thoroughly believe that for the above sum the property can be placed on a producing basis and that continued development will open a considerable tonnage of ore. The inter dipping veins to the east of the Sheldon might have considerable bearing on the size of the ore bodies with depth. Everything considered the property to my mind presents splendid possibilities although no very great tonnage can be hoped for, but with proper handling and by obtaining the property at a very low price I consider it worth expending the above amount of money on to further prove its value.

Capitalization of present company 1,500,000 shares
In treasury about 700,000 shares

The Lathrop and Bradley interests hold a large amount of the stock and in addition the Pell interests control a considerable portion. Mr. Bradley appears confident that he can get control of all minority stock and at present is administrator for the Lathrop interests.

Further information in regard to the stock could be obtained from Mark Bradley at 126 N. Montezuma St., Prescott, Arizona.

(signed) W. V. DeCAMP.

10/12/15

R E P O R T

O N

THE SHELDON MINING COMPANY'S PROPERTY

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NAMES OF CLAIMS
AND AREA OF GROUP:

This property consists of the following named lode claims, viz:

NAMES OF MINES

American Flag	Capital
Sheldon	Eureka
Short Cut	Midnight Snao
Champion	Whitehouse
Link	London
Fortune	Goliath Mill Sight

aggregating an area of about 140 acres. These claims are outlined and sketched on the map attached.

TITLES:

The titles of these claims are vested in the owners by United States patents, location and purchase and compliance with the mining laws of the United States, there being no lieus or other encumbrances against this property, the owners guaranteeing the titles as above set forth.

GEOGRAPHY:

This property is situated in the Walker Mining District, Yavapai County, State of Arizona, and lies about 14 miles east of Prescott, a station on the Sante Fe Railroad, Prescott & Phoenix Division, from where it is connected by a good automobile road. It is also about 2 miles distant from Poland, the nearest shipping point, which is a station on a branch of the Sante Fe System. The elevation of this district is about 6500 feet.

HISTORY:

The Walker District was discovered in 1858 by the Walker party, who were exploring through the northern part of what is now known as the State of Arizmna. The Indian War broke out about this time, and drove all the white people out. About 1852, a Mr. Peoples who was trapping and hunting along Kirkland Creek, discovered Rich Hill, which created considerable excitement in the country atmthat time. During this excitement, the survivers of the Walker party returned to this country and discovered gold at the mouth of Lynx Creek, and prospected to it's head, finding large deposits of placer gold, which Creek runs through the center of the Walker District.

GENERAL CHARACTERIS-
TICS OF VEINS:

The veins on the Major Mining & Milling Company's property have the following characteristics:

Strike.....	easterly & westerly
Outcrop.....	Entire length of property
Foot wall.....	Granite
Hanging Wall.....	Granite
Vein filling.....	Talc, silica, iron decomposed porphyry and felspar
Width.....	From 8 to 20 ft.
Dip.....	South 9 degrees
Character of Sheldon....	True fissure
Character of ore deposite..	Large Shoots
Character of ore.....	Silicious, containing gold, silver, copper and iron.

GEOLOGY:

The country rock in which these veins occur is porphyry diorits, lime schist, lime, altered granite and granite. The veins lie between diorite and porphyry, which are very distinct, but they are sometimes kept with a metamorphic rock. The country surrounding the immediate vicinity of the claims is composed of mountains and gulches, the surface of which is covered with a heavy growth of pine, fir, oak and juniper timber.

What the origin of these veins is, or how it became mineralized is not of commercial interest, except to question as to the extent and permanency of the mineralization or the habit of the vein and of the district.

The Mud Hole Mine which is parallel to this property has been mined profitanly to a depth of 900 feet. The same surface and underground conditions exist on this property as is found on the Major property, also on the Pine Mt., the Poorman and numerous other properties in the district which would seem to establish the habit.

DEVELOPMENT:

The Sheldon Mine has been developed to a depth of 207 feet. At the 107 foot level, a drift was run on the vein to the north, a distance approximately 500 feet, On the same level a drift was run in a southerly direction on the vein for a distance of about 90 feet. On the 207 foot level, a drift was run on the vein in a northerly direction for a distance of 210 feet and in a southerly direction for a distance of 180 feet.

On the Short Cut, there has been a shaft sunk to a depth of 110 feet, half of which is on the Champion ground.

On the Champion ground, there has been a shaft sunk to a depth of 140 feet and numerous other small shafts ranging in depth from 15 to 30 feet have been sunk.

On the Link, two shafts have been sunk to depths of 10 and 30 feet respectively.

On the Fortune, one shaft has been sunk to a depth of 150 feet, and others 90 feet, 50 feet, 60 feet, and 10 feet, making in all about 370 feet of shafting on the vein. From the 60 foot shaft, known as the Stukey shaft, a drift has been run north at the 50 foot level, a distance of 45 feet, and on the same level to the south, a distance of 18 feet.

The principal development on the Midnight Snap consists of a shaft about 100 feet in depth, a tunnel 90 feet lone, another 50 feet, and numerous open cuts and shallow shafts.

The main workings on the Whitehouse consists of a 90 foot shaft, a 40 foot shaft, a 25 foot shaft, and small tunnels and underhand surface stopes.

On the Eberhardt ground, a cross cut tunnel was started and continued on into the Eureka vein on the Eureka ground for a distance of 250 feet north and about the same distance south. From this south drift, a connection has been made with the old Eureka shaft. In the north drift they have driven several raises and the same have been connected by stoping.

On the American Flag, a 90 foot tunnel has been driven on the vein.

Two shafts have been sunk on the Capital, one to a depth of 10 feet and the other about 20 feet.

On the London claims there are two tunnels, one 20nfeet and one 40 feet.

PAST PRODUCTION:

The Sheldon Mine has produced 15,000 tons of milling and shipping ore. From the Coma shaft on the Champion claim, marked on the map 140' depth, 400 tons of ore was milled above the 50 foot level, which plated $5.00 per ton gold, and made a concentrate which netted $50 per ton.

From the 110 foot shaft, and known as the Champion shaft, which is sunk on the line between the Short Cut and Champion ground, 100 tons of ore was milled at the Poland Mill, which netted $26 per ton, gold and silver. The same ore carried 3½ % Copper, which value was not recovered in this mill, thereby losing $10.50 per ton in copper, or in other words, the total value of this ore in gold, silver and copper, figuring copper at 15 cents per pound, would be $36.50 per ton.

Several carloads of ore were shipt from the Fortune Mine direct to the Smelter, which gave net returns of $26.00 per ton, gold, silver, and copper. Several small Mill runs were made of the same character of ore, which gave a recovery of $16.00 per ton, gold and silver, the copper values being lost. The same conditions exist here as the ore taken from the Champion shaft, i.e., that the values in the ore were not recovered by the milling process.

From the Eureka vein about $250,000 worth of ore had been shipt before it was taken over by the past lessees, who have worked it for about five months and have shipt 8 carloads of ore, nothing but the highest grade being shipt, and only two men being employed during this time.

ORE:

In all the workings accessible on the Sheldon Mine large bodies of ore are in evidence, ranging in width from 3 to 7 feet. In the Champion the same condition exists as in the Sheldon. In all the shafts and open cuts shown on the profile map, there are from 2 to 5 feet of ore. In the Fortune, the ore has been shipt by the lessees, as fast as it has been mined. The bottom of the Stukey shaft shows an ore streak 18" in width. All the accessible workings in the Eureka show a high grade ore, ranging in width from 6" to 3'. All shafts, tunnels and open cuts on the Midnight Snap and Whitehouse veins show commercial ore from 1 to 4 feet in width.

The ores of the above mentioned claims all contain gold, silver, copper and iron values.

TONNAGE

In the Sheldon Mines north (See Map B 1) there is a block of ore which contains about 23,000 tons above the 107 foot level and between the Sheldon and Champion shafts. To the south on this level, there is a block of ore containing about 2200 tons. On the 207 foot level north (See Map B 2) and between the 100 foot level, there is a block of ore containing approximately 4500 tons. On this same level south from the shaft, there is a block of ore containing about 2000 tons. In other words, there is about 31700Ø tons of positive ore, which is accessible through the Sheldon shaft.

In the Champion Mine (See Map B 3) there is a block of ore which contains about 6000 tons, lying between the 110 foot shaft and the 140 foot shaft, which can also be figured as positive ore, making an aggregate positive tonnage of about 37,000 tons.

There would be above the 207 foot level about 200,000 tons of probable ore, providing the drift on that level was continued north on the Sheldon vein through the Champion, Link and Fortune ground for a distance of 3500 feet. Considering the fact that all openings on the Sheldon vein, i.e., the Sheldon, Short Cut, Champion, Link and Fortune Claims, show large bodies of continuous ore, it is safe to figure that this will be one large body of ore.

On the Eureka vein no positive ore tonnage can be given at this time, because of the fact that the mine has been operated for the past 18 months by lessees, who would strip and extract the ore from day to day and ship it to the Smelter, thereby not keeping up with the development work of the mine or opening up any reserved ore, but the ore that is in sight in the different drifts and stopes, figuring from past production under like circumstances, produce about two carloads per month.

On the Midnight Snap and Whitehouse veins, no ore has been blocked out, but in all openings, shafts or tunnels commercial ore from 1 to 4 feet is in sight, therefore it is only probable tonnage that can be figured on.

COST OF MINING:

With a suitable hoist erected on the Champion shaft, a compressor installed and jack hammer drills used, this ore can be mined for $2.50 per ton. The same figures apply to all ore mined on the different claims, under the same conditions.

PROFIT:

Sheldon shaft,	(See Map B 1)	North	23000	tons
" "	(" " ")	South	2200	"
" "	(See Map B 2)	North	4500	"
" "	(" " ")	South	2000	"
" "	(See Map B 3)	N	6000	"
			37,700	"

Ore Value per ton $12 - 37,700 tons
Gross value of positive ore $452,400.00

Cost of mining per ton	$2.50
Hauling from Mine to Poland Bin	1.50
Thru tunnel and loading on cars	1.25
R.R. Freight from Poland to Smelter	.40
Smelter charges	2.25
Total cost of turning ore into bullion	7.90 per ton.

37,700 tons at $7.90
total cost $297,830.00
Net profit of Positive ore $154,570.00

Positive ore is that which can be figured on 4 sides.

Considering the probable ore as herein described and shown on the map, there would be, approximately speaking 200,000 tons of ore. Figuring this on the same basis as above.

The Gross Value would be 200,000 at $12.00 -$2,400,000

Total Cost of turning ore into bullion

$7.90 per ton 200,000 at $7.90 - 1,580,000

Net profit on Probable Ore $ 820,000

The above tonnage is arrived at by allowing 12 cubic feet to the ton, and freight and railroad costs are figured from the mine to the Humboldt Smelter.

In addition to the above, there are 100 tons of ore on the surface ready for shipment to the Humboldt Smelter.

The ore being extracted from the Eureka vein, gives w smelter returns of from $40 to $65 per ton, gold, silver, and copper. Ther is about one carload of this ore on the dump at present.

WATER:

There is an abundance of water for all practical purposes on the ground.

FUEL & TIMBER:

For fuel purposes there is a good supply of timber on the property, consisting of pine, fir, oak and juniper. There is also timber for mining purposes, such as laggin and stull timber.

COSTS:

Stull timber costs on the ground	4¢	per running ft.
Laggin	5¢	per piece
Fuel	$5	per cord
Lumber, Prescott, (Oregon)	$32	M
Native Pins	$28	M
Railroad Freight from Prescott	50¢	per ton.

LABOR:

Miner wages are	$3.50	per	day of	8 hrs.
Machine men	4.00	"	"	"
Shaftmen	4.00	"	"	"
Muckers	3.00	"	"	"
Blacksmiths	4.00	"	"	"
Hoist Engineers	4.00	"	"	"

MAPS:

The large scale maps of the workings plan and longitudinal section on the vein, were made by survey, aided by maps furnished us. It is not pretended that those are accurate to an inch, but they show all accessible workings and serve to plot assays and figures blocks of ore.

PROPOSED DEVELOPMENT WORK:

In order to produce the above tonnage, it will be necessary to retimber the Champion shaft, which is now 110 feet in depth, and install a steam plant consisting of a 20 HP hoist and boiler capacity sufficient to run a #5 Cameron pump in order to continue this work. By so doing, this shaft could be continued down to a depth of 400 feet, from which the different levels could be run, and the ore blocked out, ready for stoping.

The reason that steam is suggested for power, is because of the fact that it would be necessary to pump water below the 100 foot level at this point, but in order to get at the positive ore mentioned, the gasoline hoist now on the Midnight Snap could be moved to this point and utilized for the extraction of the ore above the 100 foot level. This would save the outlay necessary for a plant at the present time. With this gasoline hoist and working on ore all the time, 50 tons per day could be easily handled, with three shifts thereby making this a producing mine at once.

The cost of moving & erecting the hoist would be-		$300.00
20 sets of timber at $5.00 per set		100.00
570 pieces of laggin at 5 cents per piece		28.50
Labor-2 men in shaft at $3.50	$7.00	
1 topman	3.00	
1 man to run engine and do blacksmithing	4.00	
Incidentals	1.50	
	$15.50 per day	
Allowing 20 days complete job at $15.50		310.00
		$738.50
To repair the road at this point would cost		250.00
Total cost of		$988.50

By making the Champion shaft the point of operation, the expense of retimbering the Sheldon shaft and catching up the caved ground below the 50 foot level, would be eliminated, and the ores could be drawn from this ground through the Champion ground at a nominal expense, otherwise it would take several thousands of dollars to put the ground in shape to draw the ore through the Sheldon shaft, which would not seem to be the most profitable undertaking at this time.

Another way to extract the ore from the Sheldon vein, but not advised at this time, would be to continue the drift south on the Eureka vein to the south end line, thence across cut from this point, an approximate distance of 450 feet, to the Capital vein. By then drifting south on this vein, a distance of 300 feet, and cross cutting from this point to the Champion vein, an approximate distance of 430 feet, the Sheldon vein would be tapped at a distance of 265 feet in depth, or 15 feet lower than the present Sheldon working shaft, thereby draining all of the ground to this depth. This would also open up the Capital vein, and a southern portion of the Eureka vein. These figures were ascertained by survey.

A survey made of a portion of the underground workings on the Eureka vein (See plan of Eureka cross cut Tunnel) shows that by continuing the drift north on the course, it would strike the Midnight Snap shaft 30 feet deeper and 10 feet farther to the southeast of the said shaft, or in other words, it would necessitate a cross cut 10 feet in length and a raise of 30 feet from this point to connect with the above described shaft. By doing so, this would vantilate all of the ground above this level, and drifts could be continued on the vein from these points.

100 feet in from where the cross cut intersects the Eureka vein, a cross cut vein was encountered, which for reasons unknown, has never been explored. An assay taken across 3 feet of this vein gave a gold and silver value of $165 per ton.

On the right hand side of the drift, opposite this point, a sample taken across 2 feet of the vein gave an assay value of $40 per ton, gold and silver. This vein seems to be a blind vein and is not visible on the surface, therefore considering it's value and size, believe it would be advisable to put several sets of timber in the Eureka drift at this point and drift both ways on this cross vein, for it is high grade ore to start on, which, from indications, will develop into large bodies.

The country rock and ore in this mine, being much harder than that in the Sheldon vein, it would be necessary in order to mine this ore at a reasonable cost, to install a compressor at the mouth of the Eberhardt tunnel, which could be operated by a gas engine or steam power.

CLIMATE:

The climatic conditions are such that mining operations can be carried on the year round, with no severe winters and no excessive heat during the summer months, with a temperature ranging from 40 degrees to 95 degrees Fahrenheit.

SUMMARY:

Considering the character of the ores, it would not be advisable to repair what is known as the Dixie Mill, or spend any money on a new Mill, but on the other hand, would ship all ore direct to the Smelter, because of the fact that special inducements are offered by the Smelter people for this character of ore. On account of the copper in this ore, some of which is in the form of carbonate, it would be useless to run it through a mill, for the copper values would be lost, but in case a mill run should be desired, daily shipments could be made to the Poland Mill, which is close by and the transportation and milling costs would be very reasonable.

DATA ON SHIPMENTS FROM SHELDON MINE
JANUARY TO MAY, 1923, Inclusive.

Date	Dry Tons	GOLD ozs.	GOLD Value	SILVER ozs.	SILVER Value	COPPER lbs.	COPPER Val.	Total Value
Jan.	887	246.80	$4,936.00	9,100.5	$9,100.50	48,735	$7,066.58	$21,103.08
Feb.	602	144.58	2,891.60	4,462.6	4,462.60	25,903	4,085.45	11,439.65
March	376	115.00	2,300.00	3.831.3	3,831.30	21,416	3,576.47	9,707.77
April	580	135.52	2,710.40	4,329.9	4,329.90	25,167	4,202.89	11,243.19
May	1086	386.22	7,724.40	12,868.0	12,868.80	73,568	11,329.47	31,921.87
	3,522	1028.12		35,592.3		194,789		$85,415.56

NOTE: January copper valued @ 14.50
February " " @ 16.00
March " - " @ 16.70
April " " @ 16.70
May " " @ 15.40

Operating Forecast (based on 14.5¢ copper market)

Treating 200 tons Sheldon ore per day in Sheldon Mill
" 190 " Bluebell & De Soto ore per day in Humboldt Mill
Smelting 110 " ore and concentrates (minimum tonnage)

Profit on Sheldon operations per day	$1,000
" " De Soto " " " (royalty)	55
" " Bluebell " " " "	15
" " Milling & Smelting at Humboldt	240
	$1,310

Earnings per annum ~~$418,150~~ 478,150 478,150

To apply:

Interest on Preferred Stock	$60,000
Sinking Fund for Preferred Stock	100,000
	160,000
Earnings applicable to Common stock	258,150 - ~~8.6¢~~ per share issued

318,150 on 10¢ pr

After six months development the mines should be in a position to substantially increase their production and it is also highly probable that a larger tonnage will be available for custom smelting so that earnings should reach a figure of well over $500,000 per annum if market price continues @ 14.5 ¢.

Each 1¢ decrease in the price of copper from that figure would reduce annual earnings by about $25,000 and each 1¢ increase would add to them a somewhat larger amount since the custom smelting business and the profits derived therefrom would mount rapidly with a rising copper market.

CLAIM	Acres	Approximate
Patented		
American Flag	4	
Shelton	14	
Short Cut	1½	
Champion	20	
Link	4	
Fortune	20	
Capital	18	
Capital - North First Extention	15	
Eureka	18	
Midnight Snap	10	
White House	8	
New State	14	
Eagle	17	
Luther Junior	1	
Monroe	15	
Penn	15	
Willetts	10	
Florence	5	
New Strike	12	
Elanor	2	
Lovekin	12	
Dyson	15	
Ninety Seven	17	
Homestead	20	
Golden Fleese #3	16	
North East Fraction - Golden Fleese #2	1½	
Snowflower	16	
Gold Belt	8	
Two Buddies	7	336 Acres
Unpatented		
Guard	4	
Ninety Eight	6	
Grasshopper	1	
Victory Group - 5 Claims - About	75	
M & S #1	20	
M & S	14	
Mary May	8	
Copper Lode	7	
Copper Lode #1	12	
Copper Lode #2	20	
Copper Lode #3	2	
Copper Lode #4	4	173
		509

It would be advisable to ship all ore now on the dumps to the Smelter or Poland Mill, accoridng to it's character, and turn it into cash.

All of these matters should be attended to at once, for it will not be long before bad weather sets in and than operations will be delayed more or less.

In conclusion would state, that the enclosed statements are conversative and true in every particular and the only thing necessary to make this a producing property, is to get busy on this end.

Respectfully submitted,

Mark Bradley

Mining Engineer.

Prescott, Arizona,

October 12, 1915.

COPY

SHELDON MINING CO.

Walker, Arizona

March 5, 1925.

Mr. G. M. Colvocoresses, Gen. Mgr.
Southwest Metals Co.
Humboldt, Arizona.

Dear Mr. Colvocoresses:

I wish to acknowledge receipt of your letter of February 18th As you requested I am sending you the average analysis of our concentrates for the past month. Due to the fact that we have not been assaying for zinc, we had to send a composite sample of smelter pulps to Hawley and Hawley at Douglas. This has been the cause of my delay in answering your request. The complete analysis is as follows:

	Au.	Ag.	Cu.	Pb.	Zn.	Fe.	Insol.	S.
Cu. Conc.	0.40 oz.	18.2	7.3%	3.2%	11.0%	32.6	9.5	40.4
Pb. "	3.01	30.3	1.7	30.5	14.1	26.0	1.7	

Our present tonnage is about 100 tons per day, and we are making from 22 to 25 tons of copper concentrates a day. The lead concentrate tonnage will run from 90 to 100 tons per month. The I note in your letter of February 18th to Mr. Lathrop, that you expect to give us notice some time this month, that you will be able to take our concentrates within thirty days. I sincerely hope that you will be able to do this very soon.

Yours very truly,

(signed) Geo. D. French

Supt.

Extra Copy

NAME: SHELDON MINE

DATE VISITED: Feb.27,1924. J. L. White.

At the time of my visit the only work being done in the Mine was sinking the main shaft now at 720 to 850 plus a sump, also raising thru from the North end of the 450 level to the surface for ventilation and an escape way.

A winze sunk 100 feet near the North face of the 650 drift is said to have shown good ore all of the way, being 4 ft. wide in the bottom. Everything underground looks to be in first class order.

I was told that Julias Kruttschmidt had recently examined and reported on the Mine and estimated 60,000 tons available.Ore shipped to Humboldt in the past had an average value of

Au.	.286 oz.
Ag.	9.17 oz.
Cu.	2.62 %

The impression that I obtained in talking with Mr. French, the Superintendent, is that the ore shipped was of better grade on the average than that remaining in the Mine.

At the time of my visit they were daily expecting the arrival of David Cole, to start construction of their mill.

REPORT

ON

THE SHELDON MINING COMPANY'S PROPERTY

****
****

NAMES OF CLAIMS
AND AREA OF GROUP:

This property consists of the following named lode claims, viz:

NAMES OF MINES

American Flag	Capital
Sheldon	Eureka
Short Cut	Midnight Snao
Champion	Whitehouse
Link	London
Fortune	Goliath Mill Sight

aggregating an area of about 140 acres. These claims are outlined and sketched on the map attached.

TITLES:

The titles of these claims are vested in the owners by United States patents, location and purchase and compliance with the mining laws of the United States, there being no lieus or other encumbrances against this property, the owners guaranteeing the titles as above set forth.

GEOGRAPHY:

This property is situated in the Walker Mining District, Yavapai County, State of Arizona, and lies about 14 miles east of Prescott, a station on the Sante Fe Railroad, Prescott & Phoenix Division, from where it is connected by a good automobile road. It is also about 2 miles distant from Poland, the nearest shipping point, which is a station on a branch of the Sante Fe System. The elevation of this district is about 6500 feet.

HISTORY:

The Walker District was discovered in 1858 by the Walker party, who were exploring through the northern part of what is now known as the State of Arizona. The Indian War broke out about this time, and drove all the white people out. About 1852, a Mr. Peoples who was trapping and hunting along Kirkland Creek, discovered Rich Hill, which created considerable excitement in the country atxthat time. During this excitement, the survivers of the Walker party returned to this country and discovered gold at the mouth of Lynx Creek, and prospected to it's head, finding large deposits of placer gold, which Creek runs through the center of the Walker District.

GENERAL CHARACTERIS-
TICS OF VEINS:

The veins on the Major Mining & Milling Company's property have the following characteristics:

Strike	easterly & westerly
Outcrop	Entire length of property
Foot wall	Granite
Hanging Wall	Granite
Vein filling	Talc, silica, iron decomposed porphyry and felspar
Width	From 8 to 20 ft.
Dip	South 9 degrees
Character of Sheldon	True fissure
Character of ore deposite	Large Shoots
Character of ore	Silicious, containing gold, silver, copper and iron.

GEOLOGY:

The country rock in which these veins occur is porphyry diorits, lime schist, lime, altered granite and granite. The veins lie between diorite and porphyry, which are very distinct, but they are sometimes kept with a metamorphic rock. The country surrounding the immediate vicinity of the claims is composed of mountains and gulches, the surface of which is covered with a heavy growth of pine, fir, oak and juniper timber.

What the origin of these veins is, or how it became mineralized is not of commercial interest, except to question as to the extent and permanency of the mineralization or the habit of the vein and of the district.

The Mud Hole Mine which is parallel to this property has been mined profitanly to a depth of 900 feet. The same surface and underground conditions exist on this property as is found on the Major property, also on the Pine Mt., the Poorman and numbrous other properties in the district, which would seem to establish the habit.

DEVELOPMENT:

The Sheldon Mine has been developed to a depth of 207 feet. At the 107 foot level, a drift was run on the vein to the north, a distance approximately 500 feet. On the same level a drift was run in a southerly direction on the vein for a distance of about 90 feet. On the 207 foot level, a drift was run on the vein in a northerly direction for a distance of 210 feet and in a southerly direction for a distance of 180 feet.

On the Short Cut, there has been a shaft sunk to a depth of 110 feet, half of which is on the Champion ground.

On the Champion ground, there has been a shaft sunk to a depth of 140 feet and numerous other small shafts ranging in depth from 15 to 30 feet have been sunk.

On the Link, two shafts have been sunk to depths of 10 and 30 feet respectively.

On the Fortune, one shaft has been sunk to a depth of 150 feet, and others 90 feet, 50 feet, 60 feet, and 10 feet, making in all about 370 feet of shafting on the vein. From the 60 foot shaft, known as the Stukey shaft, a drift has been run north at the 50 foot level, a distance of 45 feet, and on the same level to the south, a distance of 18 feet.

The principal development on the Midnight Snap consists of a shaft about 100 feet in depth, a tunnel 90 feet lone, another 50 feet, and numerous open cuts and shallow shafts.

The main workings on the Whitehouse consists of a 90 foot shaft, a 40 foot shaft, a 25 foot shaft, and small tunnels and underhand surface stopes.

On the Eberhardt ground, a cross cut tunnel was started and continued on into the Eureka vein on the Eureka ground for a distance of 250 feet north and about the same distance south. From this south drift, a connection has been made with the old Eureka shaft. In the north drift they have driven several raises and the same have been connected by stoping.

On the American Flag, a 90 foot tunnel has been driven on the vein.

Two shafts have been sunk on the Capital, one to a depth of 10 feet and the other about 20 feet.

On the London claims there are two tunnels, one 20 feet and one 40 feet.

PAST PRODUCTION:

The Sheldon Mine has produced 15,000 tons of milling and shipping ore. From the Coma shaft on the Champion claim, marked on the map 140' depth, 400 tons of ore was milled above the 50 foot level, which plated $5.00 per ton gold, and made a concentrate which netted $50 per ton.

From the 110 foot shaft, and known as the Champion shaft, which is sunk on the line between the Short Cut and Champion ground, 100 tons of ore was milled at the Poland Mill, which netted $26 per ton, gold and silver. The same ore carried 3½ % Copper, which value was not recovered in this mill, thereby losing $10.50 per ton in copper, or in other words, the total value of this ore in gold, silver and copper, figuring copper at 15 cents per pound, would be $36.50 per ton.

Several carloads of ore were shipt from the Fortune Mine direct to the Smelter, which gave net returns of $26.00 per ton, gold, silver, and copper. Several small Mill runs were made of the same character of ore, which gave a recovery of $16.00 per ton, gold and silver, the copper values being lost. The same conditions exist here as the ore taken from the Champion shaft, i.e., that the values in the ore were not recovered by the milling process.

From the Eureka vein about $250,000 worth of ore had been shipt before it was taken over by the past lessees, who have worked it for about five months and have shipt 8 carloads of ore, nothing but the highest grade being shipt, and only two men being employed during this time.

ORE:

In all the workings accessible on the Sheldon Mine large bodies of ore are in evidence, ranging in width from 3 to 7 feet. In the Champion the same condition exists as in the Sheldon. In all the shafts and open cuts shown on the profile map, there are from 2 to 5 feet of ore. On the Fortune, the ore has been shipt by the lessees, as fast as it has been mined. The bottom of the Stukey shaft shows an ore streak 18" in width. All the accessible workings in the Eureka show a high grade ore, ranging in width from 6" to 3'. All shafts, tunnels and open cuts on the Midnight Snap and Whitehouse veins show commercial ore from 1 to 4 feet in width.

The ores of the above mentioned claims all contain gold, silver, copper and iron values.

TONNAGE

In the Sheldon Mines north (See Map B 1) there is a block of ore which contains about 23,000 tons above the 107 foot level and between the Sheldon and Champion shafts. To the south on this level, there is a block of ore containing about 2200 tons. On the 207 foot level north (See Map B 2) and between the 100 foot level, there is a block of ore containing approximately 4500 tons. On this same level south from the shaft, there is a block of ore containing about 2000 tons. In other words, there is about 317000 tons of positive ore, which is accessible through the Sheldon shaft.

In the Champion Mine (See Map B 3) there is a block of ore which contains about 6000 tons, lying between the 110 foot shaft and the 140 foot shaft, which can also be figured as positive ore, making an aggregate positive tonnage of about 37,000 tons.

There would be above the 207 foot level about 200,00 tons of probable ore, providing the drift on that level was continued north on the Sheldon vein through the Champion, Link and Fortune ground for a distance of 3500 feet. Considering the fact that all openings on the Sheldon vein, i.e., the Sheldon, Short Cut, Champion, Link and Fortune Claims, show large bodies of continuous ore, it is safe to figure that this will be one large body of ore.

On the Eureka vein no positive ore tonnage can be given at this time, because of the fact that the mine has been operated for the past 18 months by lessees, who would strip and extract the ore from day to day and ship it to the Smelter, thereby not keeping up with the development work of the mine or opening up any reserved ore, but the ore that is in sight in the different drifts and stopes, figuring from past production under like circumstances, produce about two carloads per month.

On the Midnight Snap and Whitehouse veins, no ore has been blocked out, but in all openings, shafts or tunnels commercial ore from 1 to 4 feet is in sight, therefore it is only probable tonnage that can be figured on.

COST OF MINING:

With a suitable hoist erected on the Champion shaft, a compressor installed and jack hammer drills used, this ore can be mined for $2.50 per ton. The same figures apply to all ore mined on the different claims, under the same conditions.

PROFIT:

Sheldon shaft,	(See Map B 1)	North	23000	tons
" "	(" " ")	South	2200	"
" "	(See Map B 2)	North	4500	"
" "	(" " ")	South	2000	"
" "	(See Map B 3)	N	6000	"
			37,700	"

Ore Value per ton $12 - 37,700 tons
Gross value of positive ore $452,400.00

Cost of mining per ton	$2.50
Hauling from Mine to Poland Bin	1.50
Thru tunnel and loading on cars	1.25
R.R. Freight from Poland to Smelter	.40
Smelter charges	2.25
Total cost of turning ore into bullion	7.90 per ton.

37,700 tons at $7.90
total cost $297,830.00
Net profit of Positive ore $154,570.00

Positive ore is that which can be figured on 4 sides.

Considering the probable ore as herein described and shown on the map, there would be, approximately speaking 200,000 tons of ore. Figuring this on the same basis as above.

The Gross Value would be 200,000 at $12.00 -$2,400,000

Total Cost of turning ore into bullion

$7.90 per ton	200,000	at $7.90	- 1,580,000
		Net profit on Probable Ore	$ 820,000

The above tonnage is arrived at by allowing 12 cubic feet to the ton, and freight and railroad costs are figured from the mine to the Humboldt Smelter.

In addition to the above, there are 100 tons of ore on the surface ready for shipment to the Humboldt Smelter.

The ore being extracted from the Eureka vein, gives w smelter returns of from $40 to $65 per ton, gold, silver, and copper. Ther is about one carload of this ore on the dump at present.

WATER:

There is an abundance of water for all practical purposes on the ground.

FUEL & TIMBER:

For fuel purposes there is a good supply of timber on the property, consisting of pine, fir, oak and juniper. There is also timber for mining purposes, such as laggin and stull timber.

COSTS:

Stull timber costs on the ground	4¢ per running ft.
Laggin	5¢ per piece
Fuel	$5 per cord
Lumber, Prescott, (Oregon)	$32 M
Native Pins	$28 M
Railroad Freight from Prescott	50¢ per ton.

LABOR:

Miner wages are	$3.50	per	day of	8 hrs.
Machine men	4.00	"	"	"
Shaftmen	4.00	"	"	"
Muckers	3.00	"	"	"
Blacksmiths	4.00	"	"	"
Hoist Engineers	4.00	"	"	"

MAPS:

The large scale maps of the workings plan and longitudinal section on the vein, were made by survey, aided by maps furnished us. It is not pretended that those are accurate to an inch, but they show all accessible workings and serve to plot assays and figures blocks of ore.

PROPOSED DEVELOPMENT WORK:

In order to produce the above tonnage, it will be necessary to retimber the Champion shaft, which is now 110 feet in depth, and install a steam plant consisting of a 20 HP hoist and boiler capacity sufficient to run a #5 Cameron pump in order to continue this work. By so doing, this shaft could be continued down to a depth of 400 feet, from which the different levels could be run, and the ore blocked out, ready for stoping.

The reason that steam is suggested for power, is because of the fact that it would be necessary to pump water below the 100 foot level at this point, but in order to get at the positive ore mentioned, the gasoline hoist now on the Midnight Snap could be moved to this point and utilized for the extraction of the ore above the 100 foot level. This would save the outlay necessary for a plant at the present time. With this gasoline hoist and working on ore all the time, 50 tons per day could be easily handled, with three shifts thereby making this a producing mine at once.

The cost of moving & erecting the hoist would be-		$300.00
20 sets of timber at $5.00 per set		100.00
570 pieces of laggin at 5 cents per piece		28.50
Labor-2 men in shaft at $3.50	$7.00	
1 topman	3.00	
1 man to run engine and do blacksmithing	4.00	
Incidentals	1.50	
	$15.50 per day	
Allowing 20 days complete job at $15.50		310.00
		$738.50
To repair the road at this point would cost		250.00
Total cost of		$988.50

By making the Champion shaft the point of operation, the expense of retimbering the Sheldon shaft and catching up the caved ground below the 50 foot level, would be eliminated, and the ores could be drawn from this ground through the Champion ground at a nominal expense, otherwise it would take several thousands of dollars to put the ground in shape to draw the ore through the Sheldon shaft, which would not seem to be the most profitable undertaking at this time.

Another way to extract the ore from the Sheldon vein, but not advised at this time, would be to continue the drift south on the Eureka vein to the south end line, thence across cut from this point, an approximate distance of 450 feet, to the Capital vein. By then drifting south on this vein, a distance of 300 feet, and cross cutting from this point to the Champion vein, an approximate distance of 430 feet, the Sheldon vein would be tapped at a distance of 265 feet in depth, or 15 feet lower than the present Sheldon working shaft, thereby draining all of the ground to this depth. This would also open up the Capital vein, and a southern portion of the Eureka vein. These figures were ascertained by survey.

A survey made of a portion of the underground workings on the Eureka vein (See plan of Eureka cross cut Tunnel) shows that by continuing the drift north on the course, it would strike the Midnight Snap shaft 30 feet deeper and 10 feet farther to the southeast of the said shaft, or in other words, it would necessitate a cross cut 10 feet in length and a raise of 30 feet from this point to connect with the above described shaft. By doing so, this would vantilate all of the ground above this level, and drifts could be continued on the vein from these points.

100 feet in from where the cross cut intersects the Eureka vein, a cross cut vein was encountered, which for reasons unknown, has never been explored. An assay taken across 3 feet of this vein gave a gold and silver value of $165 per ton.

On the right hand side of the drift, opposite this point, a sample taken across 2 feet of the vein gave an assay value of $40 per ton, gold and silver. This vein seems to be a blind vein and is not visible on the surface, therefore considering it's value and size, believe it would be advisable to put several sets of timber in the Eureka drift at this point and drift both ways on this cross vein, for it is high grade ore to start on, which, from indications, will develop into large bodies.

The country rock and ore in this mine, being much harder than that in the Sheldon vein, it would be necessary in order to mine this ore at a reasonable cost, to install a compressor at the mouth of the Eberhardt tunnel, which could be operated by a gas engine or steam power.

CLIMATE:

The climatic conditions are such that mining operations can be carried on the year round, with no severe winters and no excessive heat during the summer months, with a temperature ranging from 40 degrees to 95 degrees Fahrenheit.

SUMMARY:

Considering the character of the ores, it would not be advisable to repair what is known as the Dixie Mill, or spend any money on a new Mill, but on the other hand, would ship all ore direct to the Smelter, because of the fact that special inducements are offered by the Smelter people for this character of ore. On account of the copper in this ore, some of which is in the form of carbonate, it would be useless to run it through a mill, for the copper values would be lost, but in case a mill run should be desired, daily shipments could be made to the Poland Mill, which is close by and the transportation and milling costs would be very reasonable.

It would be advisable to ship all ore now on the dumps to the Smelter or Poland Mill, accoridng to it's character, and turn it into cash.

All of these matters should be attended to at once, for it will not be long before bad weather sets in and than operations will be delayed more or less.

In conclusion would state, that the enclosed statements are conversative and true in every particular and the only thing necessary to make this a producing property, is to get busy on this end.

Respectfully submitted,

Mark Bradley

Mining Engineer.

Prescott, Arizona,

October 12, 1915.

SHELDON MINE

BASIS OF REPORT

This report has for its basis a thorough examination of the property in question early in December, 1916, occupying a week's time. Everything available in the way of workings records and history have been investigated. The field, however, is not a new one to the writer. In fact, the direction of work on adjoining mine has been in his hands for the past year. Moreover, during the past several years he has spent very considerable time in this particular part of Arizona, a qualifying factor of importance in arriving at conclusions on ore deposits in this mineral region.

REPORT ON THE SHELDON MINES

LOCATION:

The property of this company is located at Walker, Yavapai County, Arizona, 10 miles southeast of Prescott, 1½ miles from Poland on the line of the Santa Fe Railroad, and of the Consolidated Arizona Smelting Company. The Poland Tunnel Narrow Guage Railway pierces the mountain range between Poland and Walker for 8,400 ft. and its tracks in the Walker side, pass over and connect the various mines of the Sheldon Company with the Santa Fe Line at Poland, thereby securing convenient and economical transportation. A fair automobile road connects Prescott and Walker. A few hundred dollars would make it a very fair mountain road. Briefly speaking, the mines are well situated for economical working.

CLIMATE, WATER, TIMBER, ALTITUDE:

An elevation of 6,500 feet above sea level causes an admirable and exhilarating climate, devoid of the extremes of heat and cold. Many springs in the basin-like region, water from numerous small streams and from the mines, will furnish an abundance for milling and domestic purposes.

There is much valuable timber and cordwood on the property

itself, besides a large supply purchasable from neighboring properties and from the Government Forest Reserve. Enough to warrant the erection of a sawmill for mine-timbers and building purposes and for a steam plant to burn cordwood on the Sheldon Mine. Considerable money may be saved in taking advantage of these conditions.

HOLDINGS AND OTHER NEARBY MINES:

The property consists of about 114 acres of United States patented lode claims, with a millsite also patented. The Lode claims cover out-cropping veins in an advantageous manner. There is no outlying or waste territory. Several of these claims adjoin the Consolidated Homestead Mine, the Mudhole Mine and the Pine Mountain Mines, important properties of the district. All of the Sheldon claims cover valuable and promising mineral ground.

The Consolidated Homestead Mine, now being actively operated, is developed to a depth of 120 feet, and has quite extensive workings for 1,500 feet on one of its veins, with considerable reserves of milling and shipping ore. This property contains several other veins, all of which on their southerly strike pass into the Sheldon ground. A large promising vein 15 to 20 feet wide, containing low grade copper and some gold and silver, has recently been opened on the Homestead at a point only some 400 feet from the Sheldon, striking directly into the latter property.

The Mudhole Mine has been developed to a depth of 800 feet, where it is stated large bodies of commercial ore still existed when the mines were closed ten years ago. According to a reliable history, over a million dollars were extracted from the ores of the Mudhole.

The Pine Mountain Mine was worked 400 feet deep; it is an immediate extension of one of the Sheldon veins, and is said to have been a good purchaser, altho only about 50% of the values in the ore were saved in their crude milling methods of ten years ago.

TOPOGRAPHY:

The mineral belt of Walker, and the Sheldon Mines in particular, lies in the center of a basin-shaped depression, 1½ miles in diameter. This basin is drained by several gulches which converge

into Lynx Creek whose waters form the head of the Aqua Fria River. With exception of the outlet via Lynx Creek, this basin is walled in by domelike ridges which separate its waters from those of the Big Bug and Hassayampa Creeks.

GEOLOGY:

Nearly all of the rocks forming the floor of this basin are of igneous origin, consisting principally of quartz-diorite, rhyolite porphyry and darker colored basic rock, probably also belonging to the diorite family. These rocks are all of plutonic origin which were intruded into older schistose rocks at depths far below the present surfaces. All the rocks are much altered, the remnants of the schists and granite-gneisses now oreserved between the intrusives, presenting a perplexing appearance to the untrained eye. The schistose rocks, altho once lying flat, have been brought to nearly a vertical position, due in a great measure to the action of the intrusives, coupled with the continental uplift which is still going on over this entire region.

The rocks in the vicinity of the strong-cutting mineral bearing fissures, with which the basin is seamed, are highly brecciated and sericitized. In short, the geology is of the best for the occurrence of long lasting, regular, deep-seated-ore-deposits of the replacement fissure type.

The basin in which the mines of Walker are found is strikingly typical of many other like depressions in this rugged mountainous region. It is a fact that in these basins occur many of Arizona's best mines. The reason is because such vicinities have been the centers of repeated uplift and subsidence, with great intrusive activity, with the last intrusive, owing to its nature, (in nearly all instances a quartz diorite) highly susceptible to erosional activity. This fact, and the crushed mineralized condition thereby caused, rendered such areas particularly attackable by surface influences, with the consequential hewing down and hollowing out of the vicinity involved.

HISTORY:

Walker was at one time a prosperous, thriving mining camp. Lynx Creek being about the first section in which mineral was discovered in Arizona. Early in the sixties very rich placer gravel

deposits within the bed of the creeks were discovered and actively worked and it is claimed that a million dollars or so was thus obtained in and on the upper reaches on the streams. All of this gold came from the numerous veins on both sides of the creek and directly from the vein systems described in this report. The discovery of these placer mines led to the opening of the veins of ore from which the gold was derived.

The ore deposits being found of importance, the Santa Fe Railroad was built into Poland and the Poland Tunnel, 8,400 feet long, was driven through the dividing range to Walker. With the advent of railroad communications, many of the mines became active, were extensively developed and the ores were treated in various mills erected on the ground. The camp became involved in a strike of the miners on the Mudhole Mine, with the result that the property was shut down and the Poland Tunnel (under the control of the Mudhole Mine) was closed, thus prohibiting economical communication, and the camp, although a good one, consequently lapsed into almost absolute quiet. Later on the town thoroughly burnt out by a disastrous fire.

In the mines of Walker, much ore of shipping grade was also always encountered, that is, ore assaying from $25 to $70 per ton, which was sent direct to the smelters. The large milling bodies of ore were, however, of a complex nature, containing gold and silver a value of from $5 to $10 a ton, with double these values in the copper, lead and zinc, occuring in strong permanent veins. Although the mines were able to make money by simple concentration, the process then employed, at least one-third of the values, owing to the complexity of the ores, went down the creek. There was never any lessening of values as depth was gained, nor narrowing or pinching of the veins. Today, by the flotation process at least 85% of the values can be saved, and furthermore the different metals, gold, silver, lead, copper and zinc can be classified individually, a feature of significant and far-reaching importance.

During the past year the Poland Tunnel has been re-opened. Several of the old mines of Walker have resumed operation, and it seems probable that an era of new and successful development is dawning for Walker, which will far exceed any yet witnessed there.

VEINS, ORES AND DEVELOPMENT:

The ore deposits of the Sheldon property are principally of one class-replacement occurrences along the lines of fissures and contact veins which can be traced very definitely on the surface the entire length of the property. Uprising solutions under heavy pressure, following the fissure, while the rocks were far below the present level, probably account for the origin of the ore bodies. Descending atmospheric waters have worked great changes in these ore bodies neath the present surface, and depths of several hundred feet must be expected before the primary ores will be found in their normal form. Ore occurrences of the above type offer the best of evidence for going to the deep, in fact, geologists term them deposits of "deep seated origin".

Upon all the properties there has been accomplished in past times about a mile of underground work consisting of various shafts, tunnels and drifts.

The most of this work is now open, but considerable of it on the Sheldon-Fortune-Champion veins in particular, is only partially accessible, although sufficient can be seen of these latter workings to enable one to form a conclusive opinion as to this portion of the property, especially when same is backed up by the old records and maps.

The Sheldon-Fortune-Champion lode system has been opened to an extreme depth of 207 feet, and numerous shafts of intermediate depths and tunnels for a distance of just about one mile. Every few hundred feet or so there are workings of more or less magnitude, which plainly show the remarkable persistency of the veins. Ore of good value has been extracted from all these openings and either milled on the ground or shipped direct to the smelters. The lode system seems to have a width of from 20 to 100 feet in which the ore occurs in a composite fissure (by a composite fissure is meant a series of approximately parallel, interlacing and sometimes interdipping veins) with a rather massive quartz-diorite or fine-grained granite footwall, in contact with a rhyolite or monzonite porphyry hanging wall.

These conditions make for goodly sized ore bodies at the

junction of the fissures on their strikes, and it is probable as depth is gained, that one or more of the apparently interdipping veins may consolidate with the main footwall fissure.

Several points now visible neath the Sheldon shaft show 30 feet or so of oxidized replacement ore, indicating that well down into the ground-water level, (say 300 feet) there will be found a very considerable width of milling ores. Judging by the stopes the high grade ore formerly mined was of a width of from 1½ feet to 5 feet.

The Eureka-Eberhardt lode system while also extensive and intricate, has much less of the contact metamorphic conditions so well exhibited in the Sheldon system. The veins being confined principally to an area of almost wholly dioritic rocks, showing but little alteration. The veins as yet opened in this vicinity are small and tighter than those of Sheldon system.

Leasers are now working in the Eberhardt Tunnel, in which there is considerable available ore to be taken advantage of by this method to the company's benefit.

There are several others, in fact a net-work of veins on the Midnight Snap claim, opened by shallow workings which appear very promising and which are certainly worthy of serious development.

PRODUCTION:

According to available records the combined Sheldon properties have produced about $500,000. As near as can be learned, about one-half of this must be credited to the Sheldon vein itself. The ores of which as they went into the mill contained a value of about $7 a ton in gold and silver, and about 3½ per cent copper. About 60% of the gold and silver was saved, practically none of the copper, or at the most 1%. Today such ores, milled in an up-to-date flotation plant, would yield a saving of $85% or at present metal prices, about $27 per ton, at 15 cents copper they would have a value of $16 per ton.

The Eureka system has a record of producing about $250,000 in shipping ore running in the neighborhood or $50 per ton.

FUTURE:

It is very evident with such veins as those which exist on the Sheldon property, but little or no fear may be felt as to future

results as deeper sinking and development goes ahead. The values of the ores have been well established by past exploration. It remains only necessary now to re-establish a portion of the old workings, with one new working shaft of moderate depth in the vicinity of the old Sheldon shaft itself, in order to put the property when provided with a concentrating flotating mill, on a profitable producing basis.

Considerable revenue will be gained by the shipping of raw ores direct to the smelters, but commercial results of importance can be expected by treating the mine-run ores of the ground. In the opinion of the writer, under the recommendations which follow, there is no question but that the Sheldon property will pay very satisfactory dividends over a long period of years.

Cost of operation on a 100 ton daily basis, inclusive of all expenses such as deterioration, interest, mining, milling, freight, smelting charges, etc., will probably be around $7 per ton. Considerable profit will no doubt accrue from the direct shipment of raw smelting ores and as development goes ahead, the mill tonnage will be increased and expenses per ton thus materially reduced.

RECOMMENDATIONS:

There are three favorable points of attack, where energetic development should quickly throw considerable reserves into sight. These points are indicated on the map as Shaft A, Shaft B, and Shaft C.

Shaft A is most strongly endorsed as the present point of attack, where operations will very probably disclose the most important ore bodies in the property.

Shaft B as a second point of attack has very probably also an important future.

Shaft C although located in a promising vicinity, will probably have a less important future as the veins here seem to diverge and also to narrow. At all three points, however, extensive development is warranted.

Shaft A should be vertical, calculated to strike the Sheldon vein on its dip at about 500 feet in depth. This shaft will be located out on the hanging wall, about 80 feet easterly of the vein outcrop.

From it, at a point 200 feet deep, cross-cutting back to the vein should be taken up and the old working, thus permitting the ready mining of the ores available therein. At regular 100 foot intervals like cross-cuts back to the vein should be made as sinking is carried on.

Shaft B and C will be inclines on the veins proper. They should be sunk 150 feet before any drifting or cross-cutting is taken up.

When Shaft A, from the 200 foot cross-cut, has drained the old workings and the same have been re-opened, then mill operations could begin in a plant to be built just below the shaft, so that the ores from the mine would travel directly into the mill. The tracks of the Poland Tunnel Railroad are at hand, making a very good connection to the Santa Fe Railroad via the Poland Tunnel.

A sum of about $100,000 will be required to equip on the surface, reopen the mine, and install a millat Shaft A of about 100 tons daily capacity.

Under the belief that the Sheldon property contains ore bodies of high commercial importance and that it will eventually resolve into a considerably larger mining proposition than that inferentially drawn in the operation of the above 100 ton mill, the writer endorses the enterprise as a ligitimate mining undertaking and recommends the carrying out of its immediate development on the lines laid down.

Respectfully submitted,

(signed) J. H. SHOCKLEY.

(copy)

December 27, 1916, New York.

Sheldon Mine - No. 2

In the north drift three ore-shoots have been encountered, and the present face is in ore 18 inches wide and of very good grade. This shoot has been continuous for over two hundred feet and is said to average from two to three ft. wide and to contain about $25.00 per ton in gold, silver and copper at the present market.

The first ore-shoot encountered on this level is near the station x-cut and continues up through the 450 ft. level. A raise in this shoot from the 450 ft. level shows the ore to continue 100 ft. above the level. Another raise was driven in ore from the 650 to the 450 ft. level.

No. 2 ore-shoot lies between the above two shoots and on the 650 level it is separated from the others by barren vein material or low grade mill ore from 50 to 75 ft. in length. A winze was sunk 20 ft. on the 650 ft. level at the south end of this ore-shoot. The winze was filled with water at time of visit but I was told that at the bottom of the winze the vein is 7 ft. side and of average grade. Work was stopped on account of excess water. The raise in which most of the water was encountered was driven just south of this winze. The grade of ore in this raise, which is up 65 ft. is better than the average and the width of the vein varies from 2 to 3 ft. This raise is about 550 ft. North of the station x-cut.

Approximately 400 ft. North of the station x-cut a x-cut was driven 60 ft. E into the hanging wall to cut a parallel vein which is believed to be about 60 ft. farther in. No ore was encountered in this x-cut and it has been temporarily abandoned.

No vertical development has as yet been done on the third of North ore-shoot on this level, and this shoot has not been found on the 450 ft. level.

On the 450 ft. level the drift north has been driven about 600 ft. The face of this drift shows a narrow mineralized vein of low grade. Further development will be done here.

Sheldon Mine - No. 3.

Practically all of the stoping is now being done on the second ore-shoot on the 650 level.

The walls are not good and the stopes have to be kept filled with waste to prevent caving of the walls. The waste is obtained be shooting down the foot wall.

In mining, the F.W. waste is shot out first and then the clean ore is broken down on lagging and shoveled into the chutes.

From information obtainable during the short visit no attempt was made to estimate tonnages or values.

As worked at the present time the output of the mine is limited. The hoisting capacity is not sufficient for large production, and the ore must be handled at least three times before loading into Railroad cars at Poland.

There have been shipped a few cars of ore sorted from the dumps and there is considerable ore left in these dumps ~~not~~ but badly diluted.

The ore is being hauled to the west end of the Poland tunnel by means of teams and wagon. It is hauled through the tunnel in 2 ton cars by gasoline motor. About 9 tons per trip are hauled.

The property has promise as a ~~small~~ medium producer of good mill ore. Mining and haulage costs are too high to allow for making a shipping product from such a narrow vein of comparatively low grade ore.

NAME: Sheldon Mine.

DISTRICT: Walker, Arizona.

OWNERS: Sheldon Mining Company, New York.

LOCATION: Fourteen miles south of Prescott.

DATE VISITED: September 11, 1923. . . . . H. S. McKnight.

NOTES: The ore occurs in a mineralized fissure vein in a quartz diorite which is very similar to the Bradshaw granite. The vein strikes N-S and dips toward the east at about 70° from the horizontal. The vein filling consists of a metamorphosed quartz diorite laminated and crushed. The width of the ore varies from a few inches to seven feet and the average width of the ore shoots is from 2 to 3 ft. The ore consists of pyrite, chalcopyrite, grey-copper, galena, sphalerite, gold and silver. The average of assay returns on a number of shipments of run of mine ore is as follows:-

Au = 0.20	Ag = 6.0	Cu = 2.0%	Insol= 55.0%
Fe = 13.0%	CaO= 1.0%	Pb = 2.0%	Zn = 2.0 %

The mine is developed by an inclined shaft 650 ft. deep with four levels at 150, 250, 450 and 650 ft. depths.

Only the Sheldon vein has been developed but there are other veins to the east having approximately the same strike as that of the Sheldon but dipping more nearly vertical. Present showings would indicate that with continuous uniform dups these veins would converge at about 1000 feet below the surface.

Small ore pockets have been cut at the 450 and 650 ft. levels but are not being used at present. The ore and waste are dumped directly from the cars into the one ton skip.

The shaft was sunk in the footwall of the Sheldon vein and x-cuts driven from the stations to the vein.

On the 650 ft. level a drift has been driven south on the vein about 550 ft. and north about 850 ft. South of the station x-cut no great amount of commercial ore was found. The vein continues however, and there is some ore in the face of the drift.

2/8/21

SHELDON MINE, WALKER, ARIZONA.

Visited January 27th with Russell Ackerman, Supt.

Work now being carried on from the new shaft which is 600 ft. north and east of the old shaft. On 150 ft. level they have made connection with the 100 ft. level from the old shaft and a good vein of ore shows in the old drift which is said to carry $50. per ton gold, silver and copper values.

On the 250 ft. level from the new shaft, they have got two veins of ore each about 6 ft. wide said to carry $23. in values. Shaft is now 418 ft. deep and the management intends to go to the 450 ft. level and then crosscut for the veins.

There are eight veins which show on the surface and which appear to be approaching each other with depth. Casey, the foreman who did the work in the old shaft in 1898 and 1899, thinks that all these veins will come together and that there should be only one vein or two on the 450 ft. level. Also that primary sulphides will be found at this point. Some fairly good sulphides are now showing in the bottom of the shaft. Hanging ~~in~~ and foot wall consists of quartz diorite and ~~following that~~ filling in largely quartz with sulphides and oxides in the upper levels.

This appears to be a promising little prospect with good equipment and being economically operated. The next six months should prove whether or not it will become a profitable producer; if ore is found on the 450 level a very considerable tonnage will be indicated and it will probably pay to mill the sulphide ore and ship the oxide. Eventually the property, if it develops favorably, will require a concentrator and will need to have the old Poland tunnel opened up.

G.M.COLVOCORESSES.

GMC:EWM
2-8-21

May 12th. 1921

Ackermans says that on 450' level they have now developed ore 135' long (on face still good) 12' wide & assays gross about $6.00 au, 11,00 % ag & 10% cu. Figure they now have 20,000 t % ore developed, flow & continue laterally & in depth.

2/8/21

Buckler

SHELDON MINE, WALKER, ARIZONA.

Visited January 27th with Russell Ackerman, Supt.

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G.M.COLVOCORESSES.

GMC:EWM
2-8-21

CONDENSED DATA ON SHELDON MINE

(from report by G. M. Colvocoresses - Dec. 1930)

The Sheldon Mine is a replacement deposit in a fissure zone and now partially developed down to a depth of 1250'. It is completely equipped for mining and milling from 150 to 200 tons of ore per day.

Incomplete records show a production of about 30,000 tons of ore prior to 1920 when the present management took control of operations, since which date about 110,000 tons have been mined, the greater part of which was treated in the Sheldon Mill erected in 1924.

The developed ore now represents a tonnage of about 75,000 tons with probable reserves above the 1250' level of an additional 50,000 tons and excellent chances that these reserves will extend both laterally and to a great depth. The average grade of the ore developed shows a net recoverable value in concentrates of $8.30 per ton based on the prices of metals assumed at the outset of this report. These values are in gold, silver and copper, the small amount of lead being neglected since it is doubtful if it will pay in future to make a separate lead concentrate.

Additional development is clearly indicated and some of the drifts on the upper levels are close to the point where extensions of the ore body should be found and thereby substantially increase the tonnage of ore in reserve. For the purpose of completing this development and putting the mine and mill in firstclass shape for operation it is essential that about $35,000 should be expended prior to actually resuming operations, and this work should result in proving up an additional tonnage of 50,000 or more. When operation is resumed it should be on the basis of 150 tons per day which is considered the economical production of the mine and by maintaining a proper ratio of development it is expected that this production can be maintained over a long period. Under such conditions the working costs should be approximately $7.10 per ton based on present prices for labor and material, leaving a net profit of $1.20 per ton on the ore mined.

SHELDON MINE.

Note by G. M. Colvocoresses November, 1937.

The Sheldon operated quite extensively until 1930 and in 1929 the Sheldon Co. purchased the controlling interest in the Southwest Metals Co. and a large amount of money was spent to recondition the Southwest Co.'s smelter at Humboldt which was only operated for about four months in 1930 before the drop in the price of metals forced the closing down of both smelter and Sheldon Mine.

During the ensuing depression the management of this company became entirely discouraged and sold off the smelting plant, also the mine and mill equipment at theSheldon which has since been idle except for some small operations by lessees.

The last development in the lower levels of the Sheldon had been very disappointing and there is little reason to hope for any continuance of the higher grade of ore below the 900' level, but there is a considerable quantity of fair grade material left in the upper workings and there are several showings in outlying sections of the property which would seem to merit further exploration particularly where the veins seem likely to carry an appreciable quantity of gold and silver.

If the price of copper should appear likely to hold up to 14¢ or better at any time in the future I believe that this situation would pay to investigate and it is probable that very favorable terms could be made with the owners.

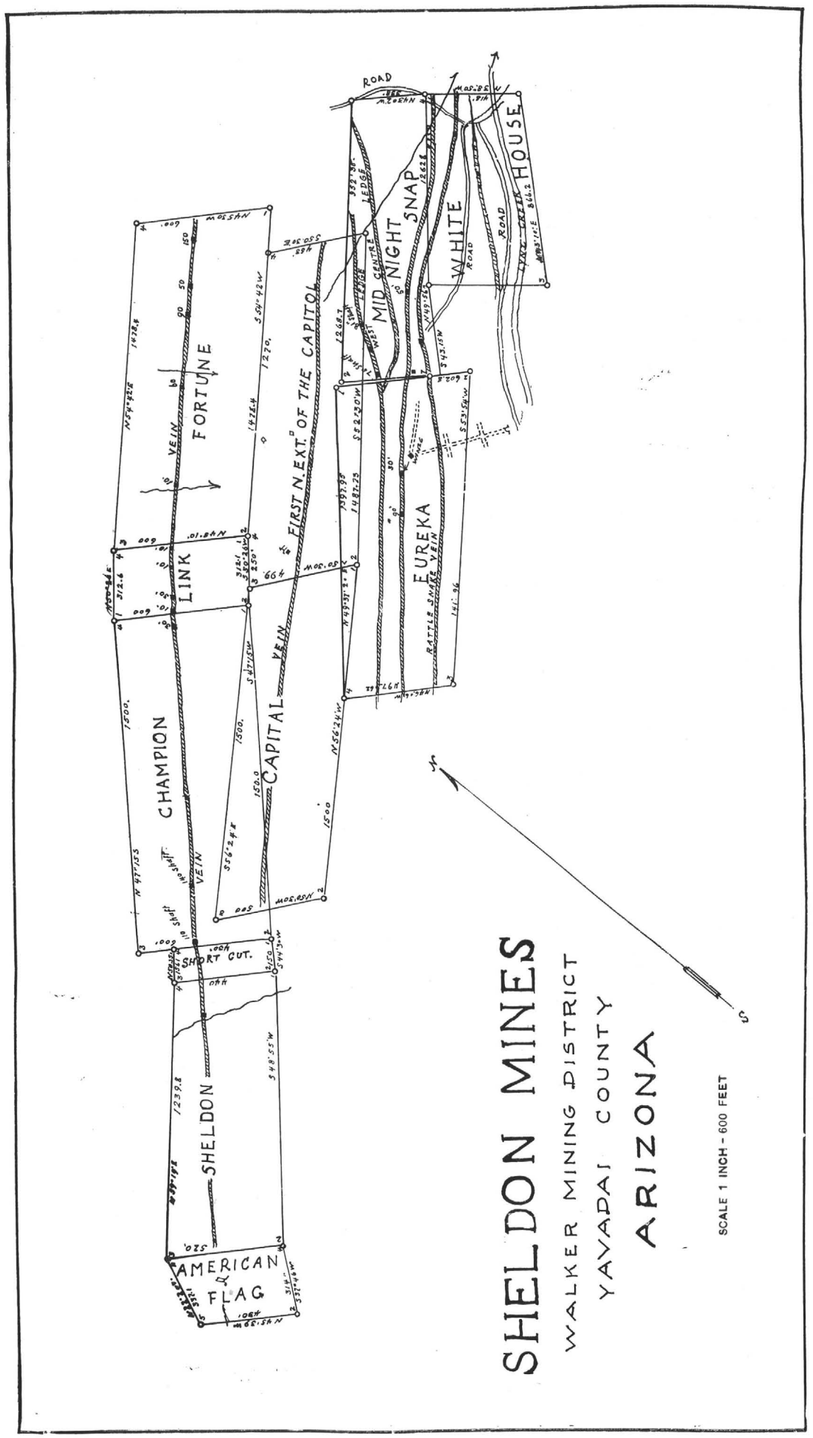
R

S. M. C.

SHELDON MINING COMPANY

WALKER, ARIZONA

YEAR 1922



ADDENDA

June 15, 1922.

Since January 1st, work has progressed steadily. The shaft was completed early in the year to a depth of 675 feet. At 643 feet a station was cut and fully equipped. Development work on this level is rapidly adding to the ore reserves.

ORE SHIPMENTS

It is planned to commence shipments of ore to the smelter of the Southwest Metals Co. at Humboldt within the next sixty days.

POLAND TUNNEL

Successful negotiations have recently been completed for the purchase by the Company, in fee simple, of the Poland Tunnel, from Walker to Poland, 8400 feet, where trans-shipment of ore from the mine to the Santa Fé Railroad will take place. The ownership of this tunnel is a very valuable asset.

The following are excerpts from recent reports of our Consulting Engineer, Mr. W. V. DeCamp, E. M.:

From report dated April 22, 1922:

"I beg to submit the following report on conditions at your Sheldon Mine, as of April 20, 1922.

"On the 650-foot level, station work, installation of pump, pump sump and pocket work had been completed and a crosscut driven to the east 150 feet. At a point 125 feet from the shaft this crosscut encountered the Sheldon Vein. Forty feet of drift had been completed and timbered on the Sheldon Vein equally divided between the north and south. Crosscutting to the east for the purpose of cutting the Capitol Vein had reached a point 20 feet from the Sheldon Vein.

"The drift to the north continued to improve and for the entire distance showed from three to five feet of good ore. The face of the drift at a point 20 feet from the crosscut showed three feet of ore, a careful sample of which gave the following returns:

Width	*Gold Oz.*	*Silver Oz.*	*Copper %*	*Lead %*	*Value*
36"	*.56*	*13.16*	*2.9*	*4.1*	*$34.50*

"Previous to cutting the vein on this level we were in doubt as to the rake of the ore shoot encountered on the 450 level, and in fact, rather expected that the cross cut on the lower level would hit the vein to the south of the orebody, provided same extended to this level. There is a very apparent roll in the vein on the 450 level about 40 feet south of the crosscut and on the 650 level a similar roll occurs approximately 15 feet south of the crosscut. From the character of the rock on both hanging and foot wall, it is quite probable that this roll is the same as the one encountered on the upper level and that the ore encountered on this level is the south end of the ore shoot developed on the 450 level.

"I consider the present development work on the 650 level very satisfactory, and the next thirty to sixty days' work in the north face should give us a very good idea of the size and grade of this orebody on the 650 level.

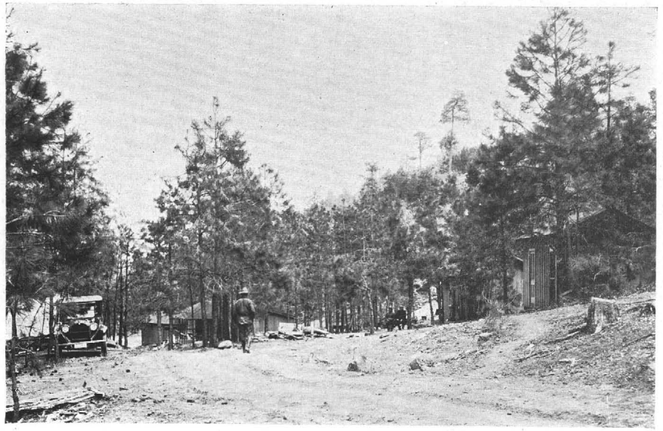
"The plant is in splendid condition and development work should proceed rapidly, and although the new level is making considerable water, the pumping plant is able to stand a much larger increase.

"Sampling of all development faces is done regularly and ore extracted is placed on a separate dump."

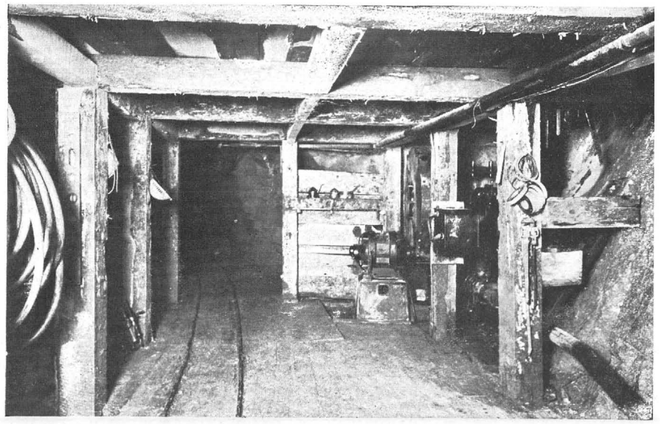
From report dated May 11, 1922:

"From a careful examination of the orebody on the 650 level, it is evident that this is the same orebody encountered on the 450 level, and apparently the values on the lower level are the equivalent of those on the level above with the possible exception that there has been a decrease in copper content and an increase in gold content.

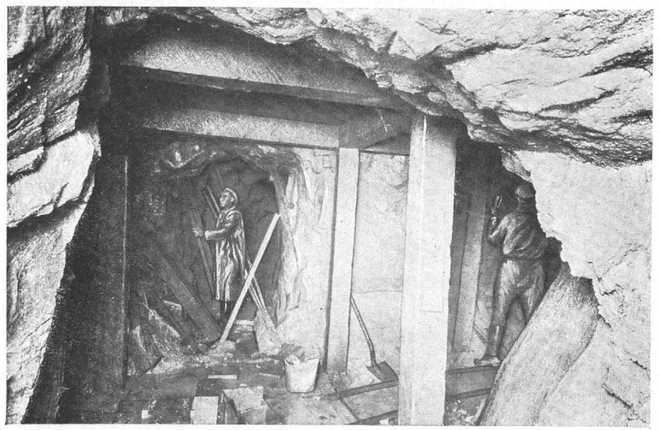
"In conclusion, I may state that so far the developments on the 650 level are satisfactory, and that rapid development to the north on this level as now being carried on, will enable us to decide on our future policy."



Lower Section of Camp.



Station 643' level.



Crosscutting and Drifting 643' level.

SHELDON MINING COMPANY

Main Office and Mines
WALKER, ARIZONA.
New York Office
110 BEEKMAN STREET.

JANUARY 1, 1922.

Transfer Agents
Registrar and Transfer Co.
7 Dey Street
New York

ORGANIZED UNDER THE LAWS OF THE STATE OF ARIZONA

AUTHORIZED CAPITAL STOCK 1,500,000 SHARES, PAR VALUE ONE DOLLAR EACH, ALL ISSUED NON-ASSESSABLE

THE SHARES HAVE ALL BEEN UNDERWRITTEN BY A GROUP OF STOCKHOLDERS, WHICH INSURES THE PROVISION OF FUNDS AS NEEDED FOR THE DEVELOPMENT OF THE PROPERTY.

The Company has no liabilities outside of its capital stock, except for supply items at the mine, which are paid for monthly. There is no bonded or other indebtedness of any character.

LOCATION

The Sheldon Mining Company property is located at Walker, Arizona, about 14 miles Southeast of Prescott, Arizona, at an elevation of 6500 feet. It is two miles from Poland and the Santa Fe R.R., which in turn connects it with the nearest smelter at Humboldt, 15 miles distant.

CLAIMS

The property consists of the following connected patented mining claims, outlined and sketched on attached map:

AMERICAN FLAG
SHELDON
SHORT CUT
CHAMPION
LINK
CAPITAL
NORTH EXTENSION CAPITAL
EUREKA
MIDNIGHT SNAP
WHITEHOUSE
FORTUNE

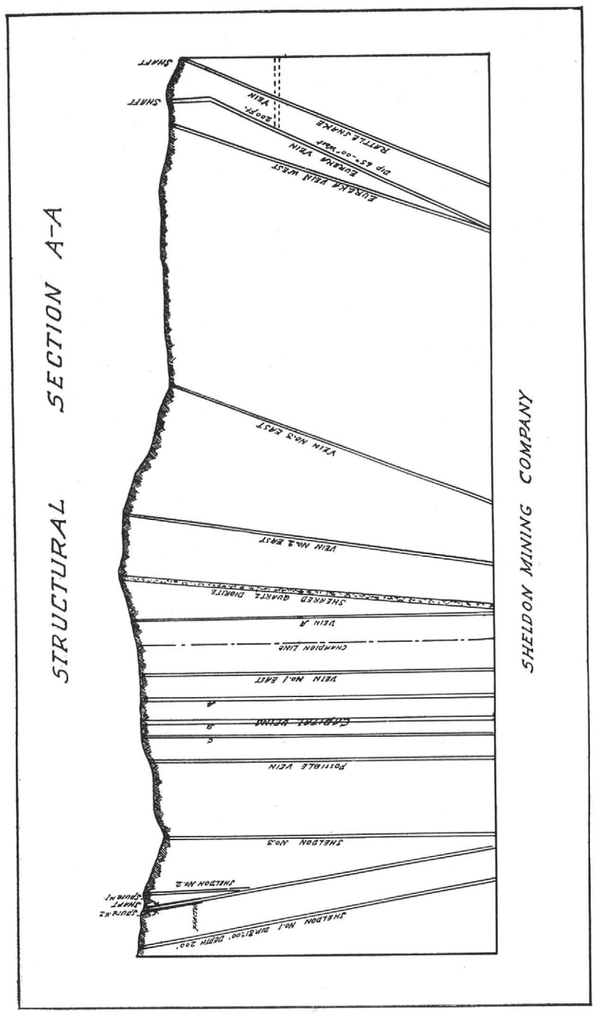
Also the Goliah Mill-site, located one half mile north of the above group.

ACREAGE

Approximately 140.

GEOLOGY

The rocks of the Walker District in the immediate vicinity of Walker consist of a great mass of Quartz Hornblende Diorite, which has intruded the older sediments, locally known as Yavapai Schist, and consisting of sediments, old intrusives, etc., which have been greatly sheared and metamorphosed until their original identity has been destroyed. The Quartz Diorite is at this point about a mile wide, and is bounded on the East and West by Schist, and to the North gradually feathers out into alternate bands of Diorite and Schist.



Results of development since above section A-A was approximated in May, 1920, have shown that the various veins are dipping at a greater angle at depth than sketched above as the ore bodies on the 443' level are no doubt a result of the junctions of the veins already taking place.

MILL

Although the large quantity of ore already developed could be shipped direct to the smelter at a profit, very little of it being strictly mill ore, it is of an exceptionally adaptable character for crushing and milling. It also contains sufficient lead to warrant this separation. It has been decided, therefore, that it will be more economical to mill most of the ore before shipping and sell the resulting concentrates, thereby reducing the transportation cost and enabling a more economical mining of the ore, and it is the intention of the management to shortly erect a well equipped modern mill to handle the output of the mine.

ORE TRANSPORTATION

Shipping facilities are excellent, the short distance to the Santa Fe Railroad aiding materially to reduce transportation costs to a minimum. A short haul of approximately three-quarters of a mile from the No. 2 shaft over a new road to a tunnel connecting with the Santa Fe Railroad solves this problem. The road is completed and arrangements to utilize the tunnel can be provided. Under this arrangement, the ore can be transported to the railroad at an operating cost not exceeding 80 cents per ton.

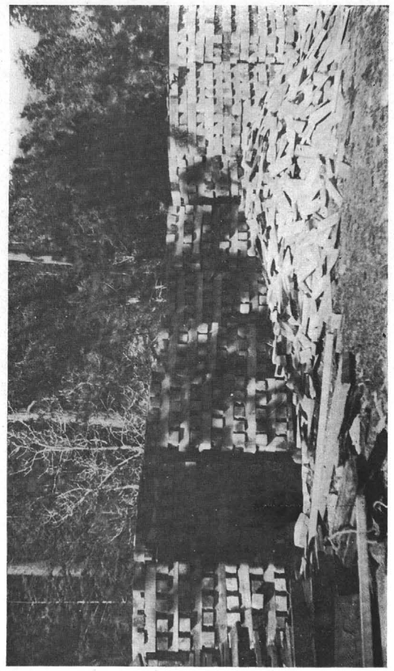
CONCLUSION

Development to date has shown that above the 443′ level several veins have come together which produced the marked improvement in values and size of the ore bodies, and in line with the geological foundation upon which was based these successful results and along which the company is now working, there is every reason to believe that there will be still greater improvement on the lower levels when they are reached and developed. The result of the development work has been so satisfactory that at the present time the management feels justified in stating that the prospect stage has been passed, and that it is only a question of additional development to materially increase the ore reserves and size of the mine, such procedure being the basis of development of all "long-lived" properties.

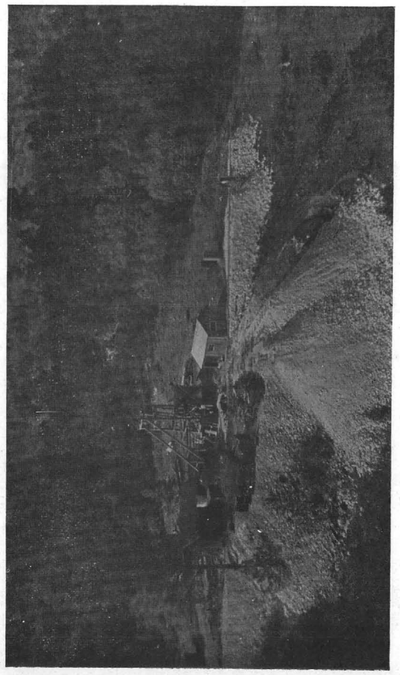
All the officers and directors of the Company are financially heavily interested in the company. No compensation of any kind is being paid to any of the officers, nor are there any office expenses or other overhead charges in the East to handicap the development of the property. Those in immediate charge of the work at the mine are receiving very moderate salaries, having an interest in the property themselves and looking largely to that for their future compensation.

The latest report of our consulting engineer, W. V. DeCamp, E.M., dated December 10, 1921, *concludes as follows*:

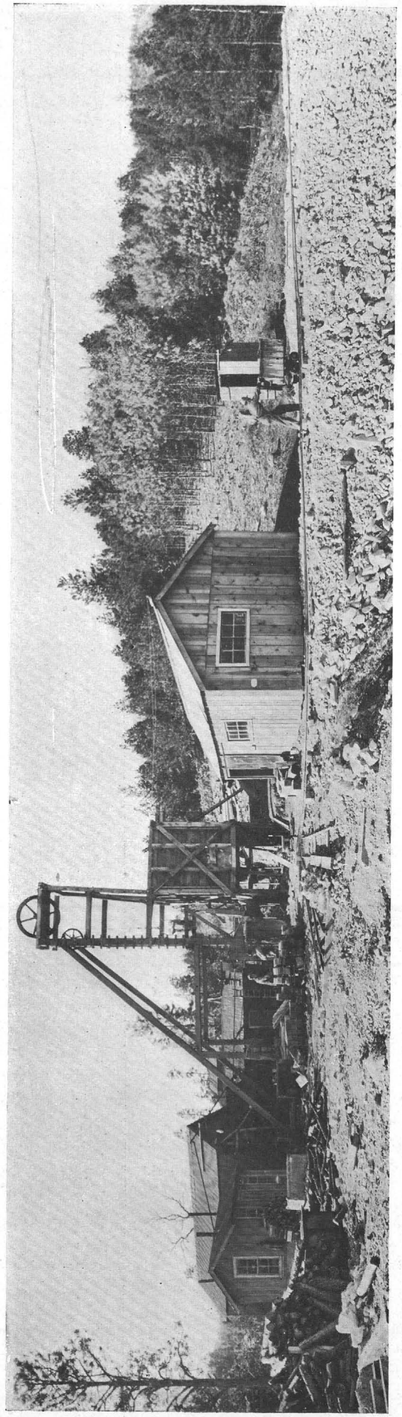
"The present work on the 443 *foot level has indicated* 270 *feet of drift out of a total of* 500 *was in pay ore. This is approximately* 54 *per cent of commercial ground and I consider it extremely encouraging. In the event that the balance of the drifting on the Sheldon vein indicates as high a percentage of pay ground as this the future of the property is assured."*



Railroad ties and wedges cut on the property.



No. 2 Shaft and ore dumps.



Collar of shaft, ore dump, in foreground and (on right) dump from shaft sinking to 650' level.

After the intrusion, and during the period of cooling and contraction, the Diorite was intruded by fine grained acid dikes locally called Rhyolite, but in reality of the same composition as the Diorite, though lacking in Ferro-Magnesium minerals. Subsequent to the acid intrusives, the Diorite was again fractured generally in a north south direction as well as laterally by smaller fractures connecting the main fractures, or breaking away from one main fracture and later joining another either at depth or along its length at some point several hundred feet distant. This series of fractures has later been mineralized by ascending aqueous igneous solutions, and zinc, iron, copper, and lead deposited as sulphides. The gold and silver being associated with the sulphides, considerable silification has also taken place and the veins, where exposed at depth, show bands of mineral alternating with bands of Quartz. Oxidation of the sulphides at the surface has resulted in leaching out of the base metals and has left the gold and some of the silver in the oxidized Quartz.

GEOLOGICAL CONCLUSION, MAY, 1920

The veins of the Sheldon group in every case observed are filled fissures deriving their contained minerals from aqueous igneous solutions deep seated in their origin, which probably derived their mineral content from the deeper portions of the Quartz Diorite Batholith in which they occur. The fissures are undoubtedly the result of cooling and contracting of the igneous mass and the solutions following the line of least resistance have ascended along these fractures, and have deposited their minerals as a result of the change in pressure and temperature which took place when the upper portions of the mass were reached. The fact that the property shows veins of varying dip (see structural section A-A) tends to indicate that frequent junctions of veins of variable dip will be encountered, and there is every reason to believe that this will result in a lesser number of veins at depth of greater width, and without any decrease in value, all of which would tend to make mining and development operations more simple, as well as to decrease the cost of operation, and there is the possibility almost amounting to a probability that greater depth on the Sheldon Vein will result in bodies of ore, not only of greater width but of much better grade.

Note: (The above theory of the engineers upon which the company is working has proved thus far to be well founded. See DEVELOPMENT and CONSTRUCTION.)

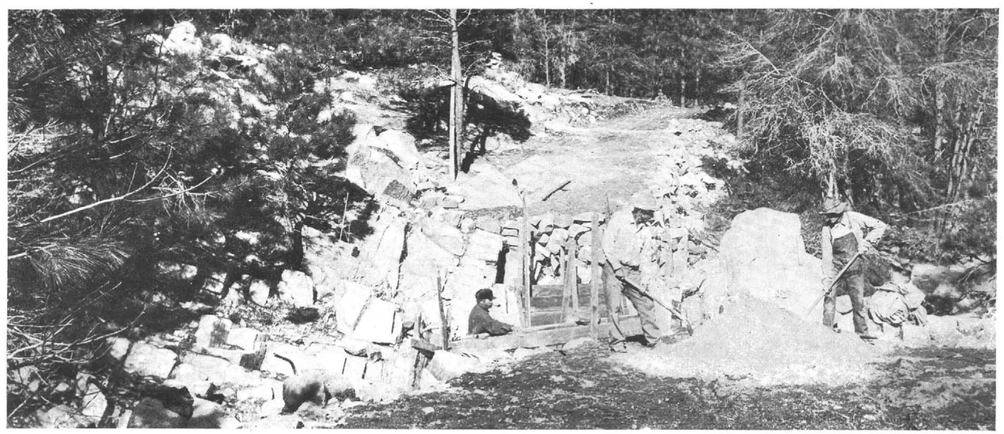
PREVIOUS PROSPECTING

Various shafts ranging in depth from 10 feet to 140 feet were sunk by early prospectors who crudely extracted ore ranging in values from $24 up to $100 per ton, a 110 foot shaft on the Champion Claim yielding 250 tons of $24 ore; but owing to the shallow depth of these shafts, no ore bodies of any size were developed. The Sheldon Company has proved that they actually exist as the substantial ore bodies now being blocked out were encountered at depth. In addition to the above shafts, hundreds of feet of prospecting consisting of cuts, tunnels, etc., was done, in every case yielding values.

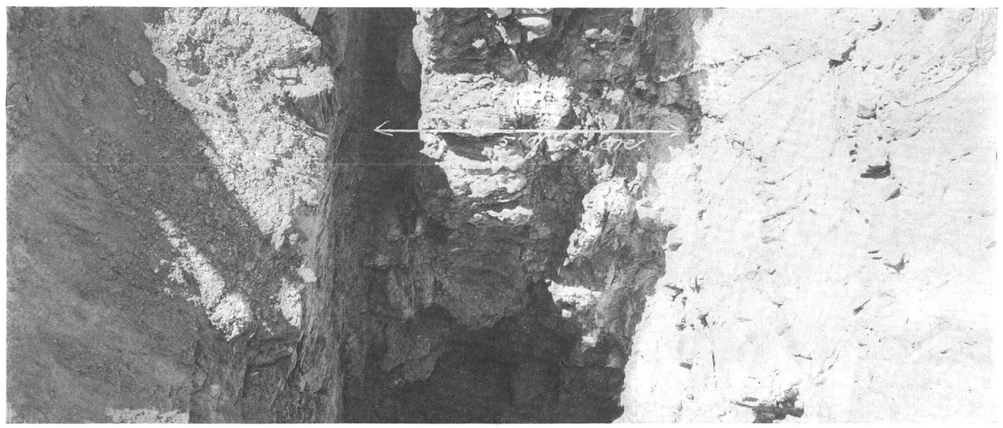
The above data combined with the thorough geological determination of the property formed the basis for the present continuous activity, started in the fall of 1919.

During the past two and a half years the Sheldon has operated continually and considerable work has been done on the property, particularly on the Sheldon group of veins, which show well defined outcroppings the full length of the property, namely, a mile, on the surface.

Bridge on Company road across Lynx Creek.



Bridge under construction and new grade on road to Prescott.



Showing five feet of ore and part of drift in 110′ Champion shaft.

SHAFT No. 2

This is the main or operating shaft, located 550 feet north of No. 1 shaft, and has reached a depth of 675 feet. It is 4½ feet by 9 feet in the clear, having an incline of 81 degrees to the horizontal and dips toward the East. It has two compartments, is fully timbered and protected in the most permanent and workmanlike manner. It is equipped with air and water lines, light and power lines, skip with automatic dumping device at the collar and everything necessary for continued development and extraction of ore.

UNDERGROUND

Total workings developed through and including No. 1 shaft total approximately 900 feet, this development being done by former operators employing crude methods. However, a large tonnage of ore was mined, milled and shipped, the proceeds paying for all costs including new development. Due to the poor facilities for milling, wherein all the copper was lost, and the lack of funds needed for proper equipment for additional sinking, the mine was shut down. Total workings developed to date through the new No. 2 shaft are as follows:

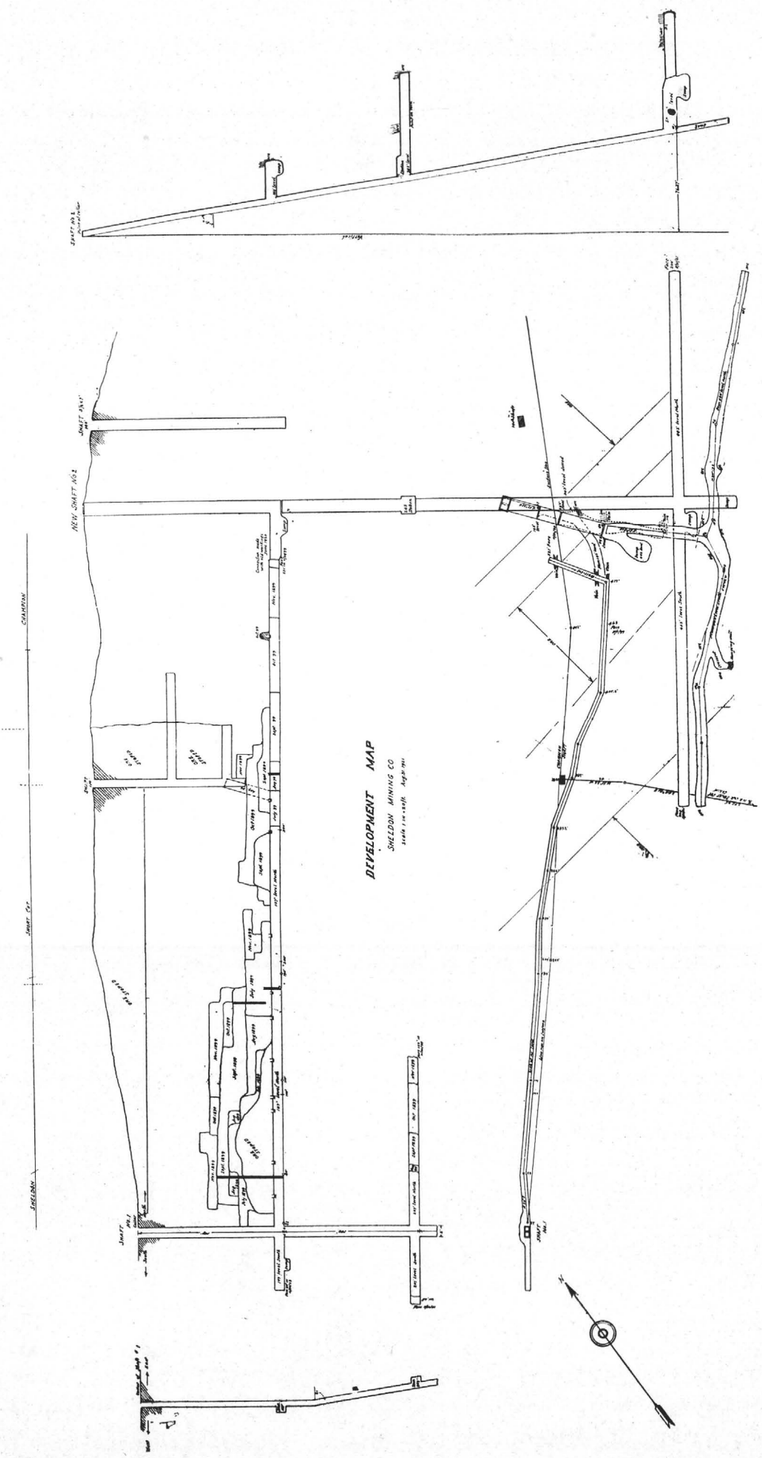
Shaft	675′
Crosscut and station 143′ level and drifting to connect with 100′ level of old workings	52′
Crosscut and station on 243′ level	70′
Crosscut and station on 443′ level	90′
Pump station and sump on 443′ level, equivalent	40′
Ore Pocket on 443′ level	15′
Drifts north and south on 443′ level	500′
Crosscut to hanging wall in south drift 443′ level	20′
Total development through № 2 shaft	1562′

Drifting in ore 443′ level south.

The Sheldon vein has been tapped on the 143′, 243′ and 443′ levels, giving values on the 143′ level as high as $37. On the 243′ level the crosscut passed through a small stringer of good ore and cut the vein 70′ in, at which point it was badly broken up and values leached out of it, assay returns showing only $11 in gold.

On the 443′ level, the vein was tapped at a distance of 90′ in toward the East. Primary calchopyrite, grey copper, calcocite, and some bornite, all carrying fine gold, silver and copper values, was encountered in commercial quantities, assay returns from samples showing values as high as $113. The breasts 500 feet apart are showing very high commercial values at the present time. At the point of cross cut, the vein showed 26 feet between the walls. The ore bodies now appear to be permanent, a slight leaching on the 443′ level is evidence that the ore below will at least maintain the present values.

The next 200 foot lift has been completed and the crosscut on the 643′ level is steadily approaching the ore bodies found on the 443′ level. This will permit the levels above to be used for ore extraction and facilitate the development of additional ore reserves below.



SURFACE FACILITIES

A mile of graded road, including a permanent bridge across Lynx Creek, all built by the Sheldon Company, serves to connect the property with the county road now under extensive repair, to Prescott, providing a means of communication with that city throughout the year. A Post Office at Walker provides for the delivery of mail three times a week, a stage line operates regularly for the transportation of passengers, freight, etc., and a store at Walker supplies food and such other articles needed by the community.

TIMBER

There is an abundance of timber on the property notwithstanding the fact that 90,000 feet has been cut and utilized for building and mine purposes. A sawmill, capable of turning out 2000–3000 feet per day, is available at all times, producing excellent lumber at a cost approximating one-third the local market price.

WATER

The mine at present is making approximately 60,000 gallons per day. The next level below should produce a like amount and Lynx Creek, which is within a thousand feet of the property, carries an abundance of water eight months of the year, all of which will supply ample water for a reduction plant. Various wells and springs supply an adequate amount of excellent drinking water.

SAFETY AND SANITATION

Every effort has been made to protect and provide for the employees. Safety precautions have been taken to reduce the accident hazard to a minimum on all construction and development. Safety devices have been installed on all machinery where there presents any danger. Stretchers and blankets are kept at the shaft and First Aid Kits are distributed at different points on the property. The Change-room is provided with hot and cold shower baths, the food supplied is the best obtainable and prepared in a first-class manner with modern equipment. Strict sanitation is observed and provided for throughout the camp and mine.

INSURANCE

Liability insurance is carried by the Company covering its entire personnel.

CAMP

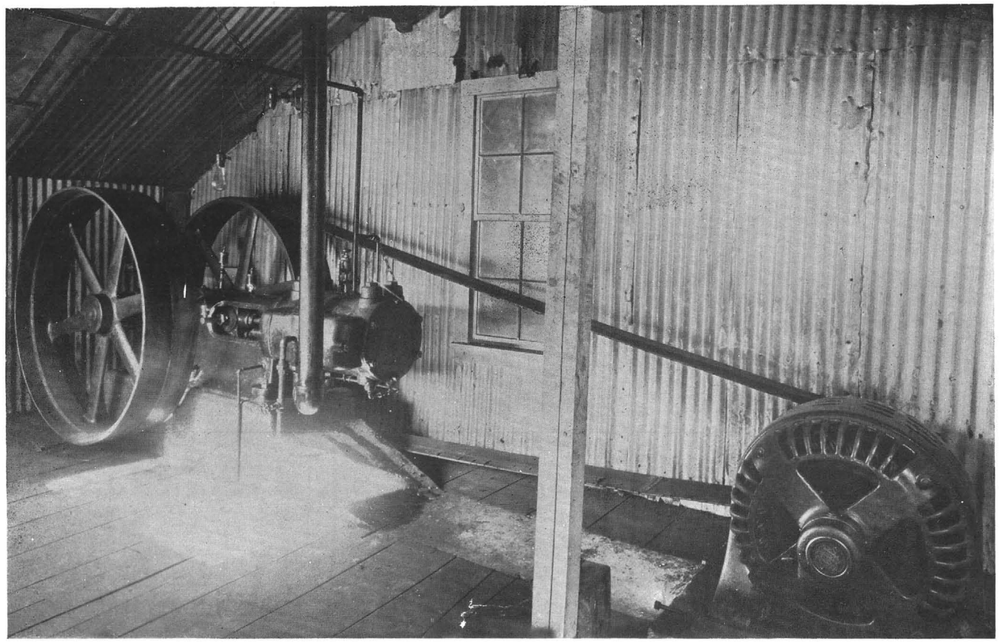
The camp, situated among the pines, is approximately a quarter of a mile from the shaft works. It consists of seven buildings, providing housing and accommodations for thirty men, including comfortable bunkhouses, a well equipped boarding house, office, garage, etc. All buildings are permanently constructed, painted, heated, electrically lighted, and every effort has been made to facilitate comfort. Telephone communication is installed which also provides Western Union Telegraph service.

TRANSPORTATION

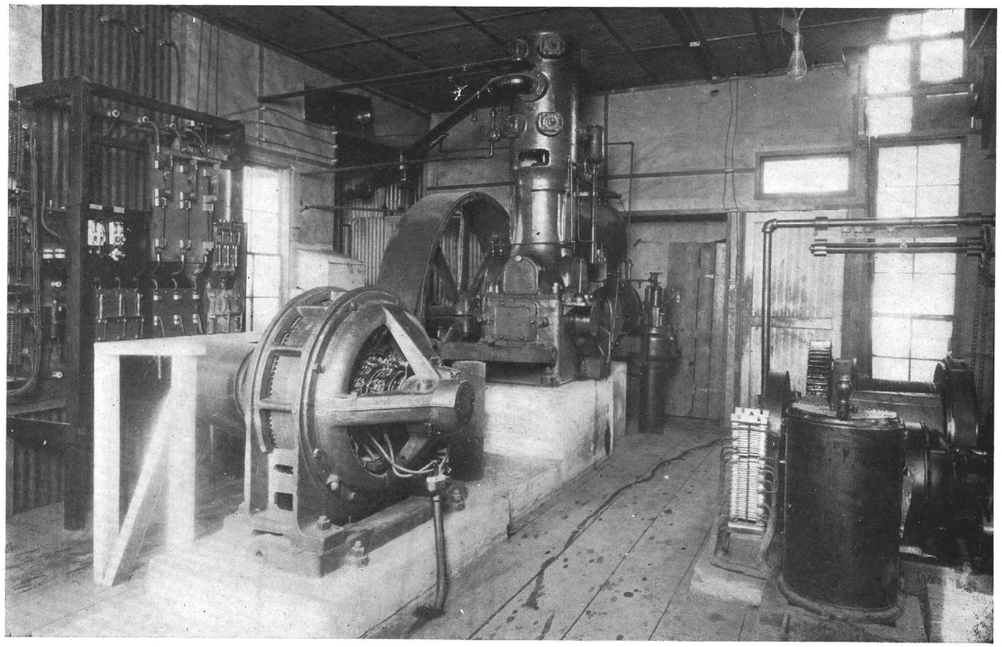
A one and a half ton Republic truck carries supplies and material to the camp and mine. A Dodge touring car is used for such other purposes as necessary.

MINE EQUIPMENT BUILDINGS

Seven buildings consisting of Hoist House, Blacksmith's Shop, Change-room, Warehouse, Timber House, Transformer House, etc., are situated at the new No. 2 shaft, and are also constructed with a view toward permanency. A 40-foot gallows frame with ore bin stands at the collar of the shaft.



300-foot compressor.



Hoist-Room.

MACHINERY, ETC., INSTALLED

Two compressors, one of 300 cubic feet and one of 700 cubic feet, of the latest type, giving a total available capacity of 1000 cubic feet of air per minute, at 100 pounds pressure, and a hoist suitable for an operating depth of 1000 feet are installed. A No. 7 Cameron Sinker and a Triplex 100 gallon per minute station pump provide for the handling of the water on the 443′ level. An Aldrich Ydrange electric-triplex 175 gallon per minute pump is ready for installation on the 643′ level. A Leyner drill sharpener, with complete set of dies and dollies, provides for the sharpening of the steel. Miscellaneous machinery such as a power pump for supplying fresh drinking water, fresh air blower, etc., is installed at various places. Machinery is electrically driven by three phase, slip ring motors, each having its separate controller. A suitable switchboard mounting a main switch and selector switches for each motor, is conveniently placed in the hoist room, the N. E. Code being observed in all installation of motors and wiring and automatic cutouts are provided where necessary. An arrangement of the pumps provides for a permanent disposal and in addition an emergency disposal of the mine water should the main pumps fail temporarily to perform the work.

The following equipment is installed:

800′ 8″ galv. iron air pipe
700′ 3 wire lead covered power conduit
300′ № 4 insulated power cable
800′ electric light line, in conduit
800′ electric light line, insulated
1400′ № 12 rail in shaft for skip
1400′ № 20 rail in workings and on dump
100′ 4″ pipe
500′ ¾″ water line
700′ 4″ water column
700′ 3″ water column
1200′ 2″ air line
1 15 cu. ft. skip in shaft
4 15 cu. ft. mine cars
1 72″ sheave wheel
1 36″ sheave wheel
2 4′ x 8′ air receivers
2 1000 gal. galv. iron tanks
1 500 gal. galv. iron tank
850′ ¾″ hoisting cable
4 DP-33 Rotators, complete with mounts and bars

Miscellaneous drill steel, tools and mine equipment too numerous to mention, but necessary to the successful operation of a mine, are at hand. In addition, a full supply of machine drill parts, belting, valves, pipe, pipe fittings, rails, cable, timber, oils, greases, shovels, picks, single and double jacks, compressor parts, etc., are kept in the warehouse at all times.

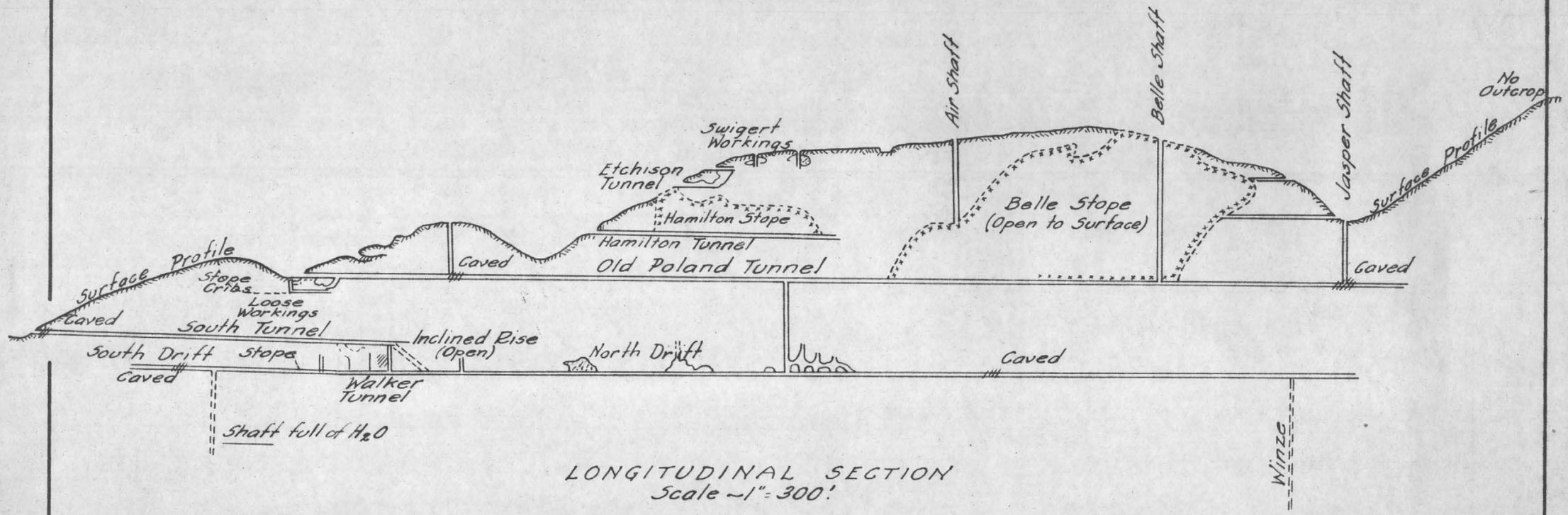
In fact, all machinery, parts, etc., and equipment necessary for the successful development of the mine is either installed or at hand.

POWER

Electric Power, supplied by the Arizona Power Company, is run to the mine at 12,000 volts, where it is transformed to 440 volts and run to the main switchboard. Transformer and main switch capacity is sufficient for a load far in excess of the present demand.

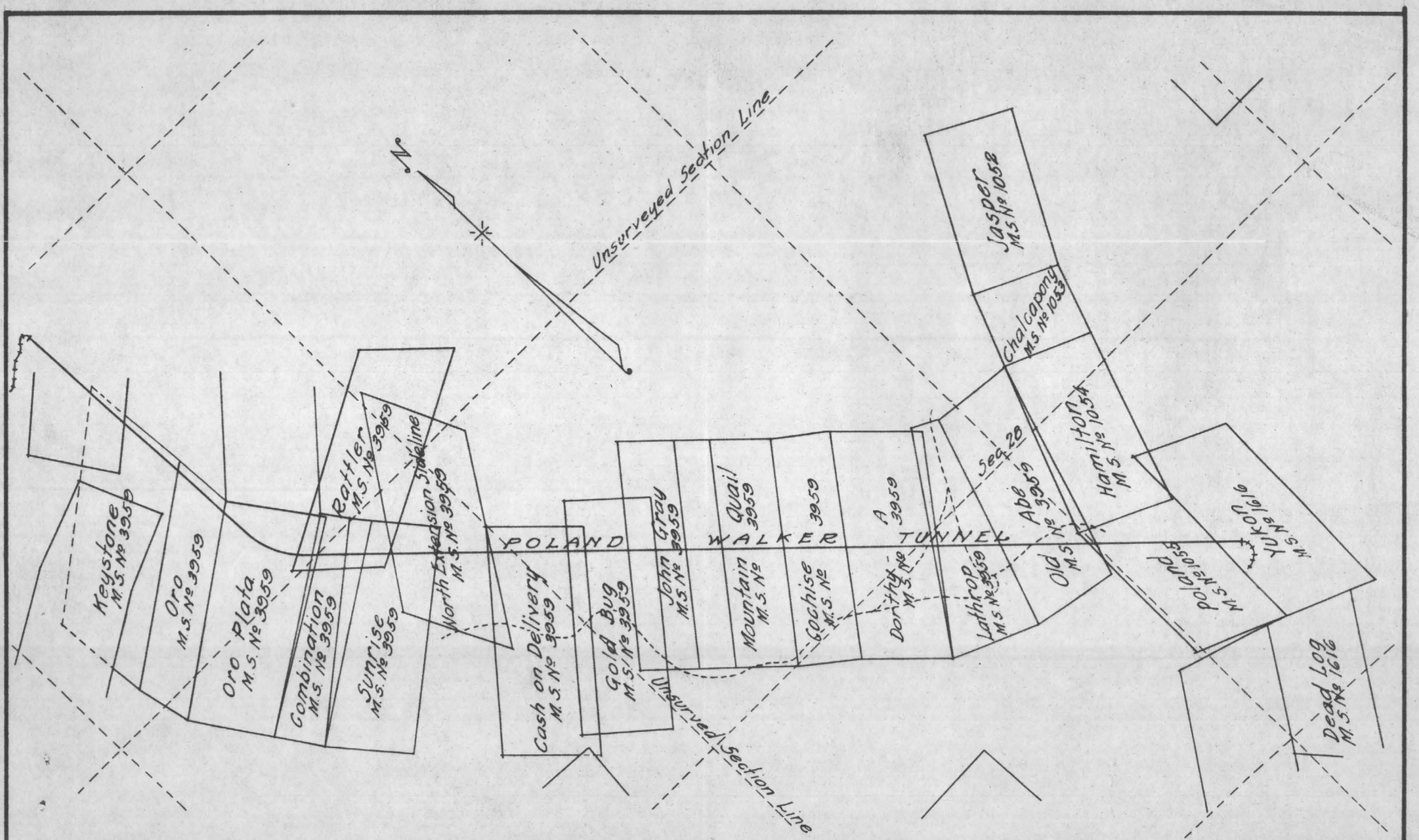
DEVELOPMENT SHAFT No. 1

This shaft (vertical for a depth of 135 feet and then 81 degrees to the east) has a depth of 207 feet. Valuable ore was taken from it and also from the workings on the 100 foot and 200 foot levels, 521 feet of drifting being done on the 100 foot level and approximately 200 feet on the 200 foot level. Under the present plan of development this shaft will be used as an air shaft, for which purpose it is admirably located in relation to the present new workings.



LONGITUDINAL SECTION
Scale ~1" = 300'

POLAND MINE.



POLAND PROPERTY

Scale ~1" = 800'

No Date

SHELDON MINING COMPANY (NEW)

Authorized Capital $1,000,000 par value of Convertible Preferred Stock or Notes and 5,000,000 shares of Common Stock with par value of $1.00 per share.

Common Stock to be distributed as follows:

Outstanding Sheldon Stock	1,800,000	
To be issued to Sheldon Note Holders (about)	600,000	
To be issued to Southwest Stockholders "	115,000	
Reserved for conversion of Preferred Stock	1,000,000	3,515,000
Bonus to purchasers of Preferred Stock		500,000
		4,015,000
Balance in Treasury		985,000
TOTAL		5,000,000

CASH, to be obtained from sale of Preferred Stock -		$1,000,000
To be expended as follows:		
To Col. Thompson as per option	$285,000	
" Preliminary Expense	15,000	
" Sheldon creditors	200,000	
" Repairs Humboldt Plant	100,000	
" Development Sheldon Mine & Additional equipment	150,000	
	750,000	
Reserve for working capital	250,000	$1,000,000

Property Account of New Company

Sheldon Mine -- Estimated ore reserve, 250,000 tons @ 15.00 gross value, net profit estimated @ 5.00 per ton	$1,250,000
Sheldon Equipment (replacement value)	250,000
Bluebell & De Soto Mines, estimated ore reserve 200,000 tons @ 8.50 per ton, net profit est. @ 2.50 p.t.	500,000
Humboldt plant & mining equipment (replacement value)	1,400,000
TOTAL	$3,400,000
Cash to be expended for mine development, repairs new equipment and working capital	500,000
	$3,900,000

CONDENSED DATA ON SHELDON MINE

(from report by G. M. Colvocoresses - Dec. 1930)

The Sheldon Mine is a replacement deposit in a fissure zone and now partially developed down to a depth of 1250'. It is completely equipped for mining and milling from 150 to 200 tons of ore per day.

Incomplete records show a production of about 30,000 tons of ore prior to 1920 when the present management took control of operations, since which date about 110,000 tons have been mined, the greater part of which was treated in the Sheldon Mill erected in 1924.

The developed ore now represents a tonnage of about 75,000 tons with probable reserves above the 1250' level of an additional 50,000 tons and excellent chances that these reserves will extend both laterally and to a great depth. The average grade of the ore developed shows a net recoverable value in concentrates of $8.30 per ton based on the prices of metals assumed at the outset of this report. These values are in gold, silver and copper, the small amount of lead being neglected since it is doubtful if it will pay in future to make a separate lead concentrate.

Additional development is clearly indicated and some of the drifts on the upper levels are close to the point where extensions of the ore body should be found and thereby substantially increase the tonnage of ore in reserve. For the purpose of completing this development and putting the mine and mill in firstclass shape for operation it is essential that about $35,000 should be expended prior to actually resuming operations, and this work should result in proving up an additional tonnage of 50,000 or more. When operation is resumed it should be on the basis of 150 tons per day which is considered the economical production of the mine and by maintaining a proper ratio of development it is expected that this production can be maintained over a long period. Under such conditions the working costs should be approximately $7.10 per ton based on present prices for labor and material, leaving a net profit of $1.20 per ton on the ore mined.

Red

SHELDON MINING COMPANY

NEW YORK OFFICE:
116 BEEKMAN STREET
NEW YORK CITY

WALKER, ARIZONA, March 5, 1925 192

Mr.G.M.Colvocoresses,General Mgr.,
Southwest Metals Company,
Humboldt,Arizona.

Dear Mr. Colvocoresses:

I wish to acknowledge receipt of your letter of February 18th.As you requested,Iam sending you the average analysis of our concentrates for the past month.Due to the fact that we have not been assaying for zinc,we had to send a composite sample of smelter pulps to Hawley & Hawley, at Douglas.This has been the cause of my delay in answering your request.The complete analysis is as follows:

	Au.	Ag.	Cu.	Pb.	Zn.	Fe.	Insol.	S.
Cu.Conc.	0.40oz.	18.2oz.	7.3%	3.2%	11.0%	32.6%	9.5%	40.4%
Pb. "	3.01	30.3	1.7	30.5	14.1	26.0	1.7	

Our present head tonnage is about 100 tons per day,and we are making from 22 to 25 tons of copper concentrates a day.The lead concentrate tonnage will run from 90 to 100 tons per month.I note in your letter of February 18th to Mr.Lathrop,that you expect to give us notice some time this month,that you will be able to take our concentrates within thirty days.I sincerely hope that you will be able to do this very soon.

Yours very truly,

Geo. D. French

Superintendent.

Estia Copy

December 8-1922

NOTES REGARDING SHELDON SITUATION

-1922

Visited Poland with J. L. White, December 6th.

Found Santa Fe Railway from Poland Junction to Poland apparently in good condition and entirely passable for trains. At Poland the Sheldon Company have constructed an ore bin estimated to have 120 tons capacity but I doubt if it will contain more than 100. Construction is flimsy and not particularly good and ore chutes are small, which will make loading railway cars a slow matter.

Two foot gauge track is not yet run out over top of bins and aprons are not yet placed on chutes. This work could be completed in two days time, without difficulty.

From Poland Terminal, narrow gauge railway runs approximately 8000 ft. through Poland Tunnel to loading bins at Walker. The tunnel is now timbered up and track is laid and entirely passable for locomotive and cars. There do not appear to have been any serious caves in the tunnel and only a small amount of timber has been necessary - much less than I thought from reports which had been received at Humboldt. Should be no difficulty in maintaining the tunnel in workable condition.

The track is of 20 lb.new rails but it is poorly laid, ties being too short and spaced too far apart. The entire track needs ballasting and extra ties, otherwise there will be derailments almost continually and expense of operating will be heavy. Also the flow of water should be taken out from between the rails in part of the tunnel and run through a proper ditch.

All of this work can and should be carried on while operations continue and in the very near future. In some places the tunnel was too narrow to allow the passage of the locomotive and cars but this difficulty had been entirely corrected and the men working in the tunnel advised that they were cleaning up the last of the rubbish and the locomotive could operate at once.

A good gas line locomotive, three tons weight was in the tunnel and eight ore cars with a capacity of approximately 1½ tons each were on hand at Poland but not yet mounted. The Management states that the ore cars have a capacity of three tons but I am sure this will be found to be a mistake.

The ore bins at the Walker end of the tunnel required about two days work to complete and should easily be finished and put in service by tomorrow. These bins have a capacity of about 75 tons. They are also of light construction and I am afraid will settle and cause some difficulty after they have been used for a little while.

From the Walker ore bins to the bins of the mine is just about a mile and ore will be hauled by truck. An eight ton truck was expected to arrive yesterday but I understand got stuck in the mud and has not yet reached Walker. Even if the eight ton truck does not arrive there is no reason why a small truck could not be used for hauling the ore from the mine bins to the tunnel. The road from the mine to the tunnel is probably too narrow to

permit passage of the big truck and should have been widened out in advance. This will probably have to be done after the truck arrives and gets into trouble .

Considering the whole situation, I can see no good excuse for the long delay in shipments from this property. The tunnel was purchased last summer and it could all have been timbered up and sufficiently widened to permit passage of the locomotive and cars back in August and September. The ore bins at both ends could have been constructed at the same time. The road could have been widened from the mine to the ore bins and ore could have been put in the bins at the Walker end.

It was not possible to haul through the tunnel until the rails arrived and could be placed, but the Management advised that the rails arrived on or about Sept.11th and it should not have required more than two weeks to place these rails. I believe the ore cars were purchased secondhand and could have been secured some time ago and there has been no reason to wait for the arrival of the locomotive as the ore could have been hauled through by mules, pending the arrival of this machine.

In actually operating the equipment of the Sheldon I am afraid trouble will be experienced through the flimsy construction of the bins and because of the poor way in which the track is laid down. I anticipate

also that the load which the ore cars will take will be considerably below expectations and that it may be necessary to run the locomotive and cars two shifts instead of one if 70 tons per day are to be hauled through the tunnel. All of these difficulties can be remedied without serious delay and there will be no valid excuse for the Sheldon if they do not ship their full tonnage during the course of a month or six weeks, at the most.

The snow on the Walker road may bother the truck from time to time, but a snow plow can easily keep this clean.

The bins at the mine are full of ore and there is a large tonnage on the dump.

The underground work, I understand, is progressing steadily and the mine workings are said to look very good. I did not visit this yesterday as one of our engineers had been on the property a short time ago and there is really no question but that the mine has plenty of ore to ship and it only remains to exercise due diligence and skill in shipping this ore with speed and economy.

I feel that I am justified in making these criticisms because of the fact that we have loaned a large sum of money against the ore and shipments of the Sheldon and if these shipments do not materialize as expected we shall have to look to the Sheldon Company to pay up the notes, as they mature, which I understand would be undesirable from both their standpoint and our own.

Yours very truly,

~~GENERAL MANAGER~~

GMC:D
GM

March 26th, 1945

Mr. Henry R. Lathrop
436 Clinton Avenue
Brooklyn 5. New York

Re: Sheldon

-file

Dear Lathrop:

I was glad to receive your letter of March 6th and to learn that you had established communication with Guise, and that he in turn was obtaining information from French. As I previously wrote you, I know very little concerning Guise and nothing regarding the people whom he may be representing, but he appeared to be scouting around and gathering data concerning properties which might be acquired on advantageous terms at present and profitably operated in the future. I hope that something may come of his investigation of the Sheldon, which I told him was certainly worth looking into.

If nothing comes of your negotiations with Guise, I will later mention the Sheldon to other parties with whom I am in contact, and as you say, I have pretty complete data concerning the production and the underground workings in the main ore-body, but I know very little about the other showings on the property, particularly the gold ore which you mention as occurring about a mile away from the main shaft. If necessary I will get in touch with French, but for the time being I do not believe that I could be helpful.

The prospect for the increased price of gold is something that is of particular interest to many of the mining companies, but so far our expectations in that regard seem to be nothing more than wishful thinking, and while I believe that the price should and probably will be advanced, I am afraid that nothing of this nature can be expected until after the war in Europe is finally over and the end of the war with Japan is pretty well in sight. Meantime there will doubtless be some developments in respect to the base metals, and some parties are rather optimistic believing that the Government will maintain the present ceiling prices of copper, lead and zinc, altho personally I can see no justification for such an opinion.

I hope that you have long since been restored to perfectly normal health, and that you and Mrs. Lathrop are enjoying a pleasant spring, also that you have good news from all of the younger members of your family who are in service.

R

R

My boy is still with General Hodges' First Army, and I am looking forward to some interesting letters telling of their recent progress, altho he has not been very communicative and I suppose is not permitted to go into any detail concerning military matters.

Very best regards to you all,

Sincerely,

GMC/b

Tucson, Arizona, January 22, 1924.

Mr. H. R. Lathrop, President,
Sheldon Mining Company,
116 Beekman Street, New York, N.Y.

Dear Sir:

In accordance with the outline covering a general investigation of the Sheldon Mining Company's property, contained in your letter to me of Jan. 3d, I made an examination of the Sheldon Mine during the period January 8th to 12th, inclusive.

Your instructions placed certain limitations on the time to be employed in the examination as well as on the amount of sampling to be done. Therefore, I cannot accept full responsibility for the calculated average value of the ore exposed in the mine workings. Your record of shipments, involving approximately seven thousand tons, and my scattered sampling strongly indicate, however, that the values shown on the company's assay plans are substantially correct:

I beg to submit the findings of my examination as follows:

S u m m a r y.

The ore deposit of the Sheldon Mine is of the vein type and occupies a fissure in quartz-diorite. Sulphides of iron, lead, copper, and zinc comprise the mineralization, and the chief values are gold, silver, copper, and lead.

Development work has been accomplished from an incline shaft 680 ft. deep, with the principal levels at 443 and 643 ft., respectively. The lateral drifting along the vein on the 443 ft. level is 1035 ft. and on the 643 ft. level is 1415 ft., or a total for the two levels of 2450 ft. Excluding one ore shoot of doubtful commercial value, approximately 50% of the work on these two main levels has been in ore of workable grade. Based largely on the sampling by the Sheldon Mine engineers (which my check samples indicate to be substantially correct), I estimate the reasonably assured and probable tonnage to be fifty-four thousand (54000) tons, with an average grade of 0.23 Oz. gold; 7.45 Ozs. silver; 2.36% copper; and 2.40% lead. Should the three ore shoots on the 650-level continue to the 800-level with same dimensions and grade, 20400 tons would be added to the ore reserves. Concentration tests indicate that satisfactory lead and copper concentrates can be produced and sold to leave a favorable outcome. There is nothing at present to indicate a change in values or character of mineralization of the vein. It is reasonable to expect, therefore, that the present values will extend to considerably greater depths than yet attained. If competently managed and properly equipped, your property should yield the profits shown

elsewhere in this report, and enjoy a reasonably long productive life.

Geology and Mineralization.

The Sheldon Group embraces an intrusive stock of quartz-diorite which has invaded the Yavapai Schist formation near its original contact with the Bradshaw granite. This rock being of less resistance to weathering than the adjoining formations, occupies a basin traversed in a northeast direction by Lynx Creek and the adjoining shallow washes on either side of it. The claims are situated in the extreme southwest part of the quartz-diorite area. Fissuring and fracturing has taken place in a northeast-southwest direction, and the major fissures were filled (probably in post-Carboniferous time) with well defined banded quartz veins. The veins strike from N. 45 deg. to 55 deg. E., and dip to the southeast 70 deg. to 75 deg. from the horizontal. Altho the surface outcrops are not very prominent, the veins are structurally quite Strong and exhibit unusual persistence for the length of the claims, approximately 4500 ft. The veins are of narrow average width (2 ft. to 4 ft.) and are separated from the walls by several inches of clay gouge.

The vein material is chiefly white quartz with banded structure. The sulphide mineralization, also banded and rather coarsely crystalline, makes up about 35% by weight of the vein and is composed of pyrite, chalcopyrite, galena, sphalerite, tetrahedrite, and probably argentite. The valuable constituents of the Sheldon ore are gold, silver, copper, and lead, and occur almost entirely in the sulphide form or included therein.

Within the plane of the vein the successive ore shoots have a lenticular cross-section connected with a narrow streak of vein or mineralized matter in the fissure. So far as could be observed, there appears to be no regular interval between ore shoots or any recognizable system on which to predict their reoccurrence.

Ore Bodies and Tonnage Estimates.

450-Level.

Ore Body No.1 (Tonnage reasonably assured).

Extends from a point 30 ft. southwest of survey station in the shaft cross-cut to a point 350 ft. northeast of same, giving a length of 380 ft. The average width is 4.0 ft. and the average grade is as follows:

Au. Ozs.	Ag. Ozs.	Cu.%
0.22	6.58	2.16

b From this shoot above the level has been stoped 1963 tons. The stope warrants an upward extension of 120 ft. for the first 210 ft. of this ore shoot, while the remaining 170 ft. is given an upward extension of 50 ft. In addition, the back of the stope approximately 60 ft. long is figured to reach the floor of the 250-Level. The area of this small block is 3600 sq.ft. The net estimated tonnage for Ore Body No.1 is therefore 11,600 tons.

Ore Body No.2 (Probable Tonnage).

Extends from a point 555 ft. northeast of survey station in shaft cross-cut to a point 645 ft. from same, giving a length of 90 ft. The average width is 3.3 ft. and average grade is as follows:

Au. Ozs.	Ag. Ozs.	Cu. %
0.38	9.25	2.95

An upward extension of 50 ft. is estimated for this ore, giving a tonnage of 1350 tons.

Ore Body No.3 (Probable Tonnage).

Extends from a point 695 ft. northeast of survey station in shaft crossecut to a point 750 ft. from same, giving a length of 55 ft.

The average width is 1.7 ft. and the average grade is as follows:

Au. Ozs.	Ag. Ozs.	Cu. %
0.37	10.40	2.45

An upward extension of 50 ft. is estimated for this ore, giving a tonnage of 425 tons. The back of small stope in this shoot is assumed to extend upward a sufficient distance to offset small tonnage stoped out.

Ore Body No. 2-A (Tonnage reasonably assured).

This ore body represents the downward extension of Shoot No.2 a distance of 100 ft. - warranted by stope and corresponding values on the 650-Level. The length of this ore body is 90 ft. and the average width is 3.3 ft.

The tonnage estimated is 2700 tons of the following average grade:

Au.Ozs.	Ag. Ozs.	Cu.%
0.38	9.25	2.95

Ore Body No. 3-A.

This ore body represents the downward extension of Shoot No.3 a distance of 100 ft. - warranted by stope and corresponding values on the 650-Level. The length is 55 ft. and the average width 1.7 ft. The estimated tonnage 850 tons with the following average grade:

Au.Ozs.	Ag.Ozs.	Cu.%
0.37	10.40	2.45

Ore Body in Southwest Drift.

Extends from a point 95 ft. southwest from survey station in shaft cross-cut to a point 225 ft. from same, giving a length of 130 ft. The average grade of this ore body is:

Au. Ozs.	Ag.Ozs.	Cu.%
0.14	5.32	1.81

This area will doubtless become available as tonnage at some future date, but is left out of present estimates because of its questionable commercial value under the conditions assumed herein for costs and outcome.

650-Level

Ore Body No.1 (Tonnage reasonably assured).

Extends from Survey station in shaft cross-cut to a point 180 ft. northeast, making length of ore shoot on 650-Level, 180 ft. The average width of ore is 3.6 ft., and the average grade is as follows; based on ore bodies Nos. 1 and 2 on 650-Level and No.1 on 450-Level:

Au.Ozs.	Ag.Ozs.	Cu.%
0.21	6.87	2.20

The upward extension of this ore body 200 ft. to the 450-Level is proven by a stope. The stoped area is 16,200 sq.ft. on the plane of the vein and the average width, 3.8 ft. A deduction of 5596 tons is therefore

made from the calculated tonnage of this ore shoot. (Note - The factor used to convert cubic feet to tons in place is 11). The net estimated tonnage in this block is 6186 tons.

Ore Body No.2 (Tonnage reas onably assured).

Extends from a point 245 ft. northeast of survey station in the shaft cross-cut to a point 475 ft. from same, giving a length of 230 ft. The area stoped from this shoot is 2625 sq. ft., and the average width is 2.9 ft. A deduction of 692 tons is made from the total estimated for this shoot, the average grade of which, based on Ore Bodies Nos. 1 and 2 of 650-Level and No.1 of 450-Level, is as follows:

Au. Ozs.	Ag. Ozs.	Cu. %
0.21	6.87	2.20

The upward extension of this ore body 200 ft. to the 450-Level is pretty well established by the sampling on the upper level and the stope raises. The net tonnage estimated is 13,381 tons. 12,000 tons left.

Ore Body No.3 (Tonnage reasonably assured).

Extends from a point 580 ft. northeast of survey station in the shaft cross-cut to a point 880 ft. from same,,giving a length of 300 ft. A deduction of 1291 tons is made from this shoot for account of the volume stoped out in No.5 stope. The average width of this ore shoot on this level is 3.1 ft.,and the average grade,as follows:

Au. Ozs.	Ag. Ozs.	Cu. %
0.24	7.69	2.62

The upward extension of this ore 100 ft. is warranted by the fact that the 450-Level third ore shoot extends over part of this area and the condition of the 450-Level Northeast face.

The net tonnage estimated for this ore body is 7,164 tons.

Ore Body No. 1-A (Probable Tonnage).

This ore body represents the extension downward of shoot No.1 for a distance of 50 ft., With a length of 180 ft., a width of 3.8 ft., and an average grade as follows:

Au. Ozs.	Ag. Ozs.	Cu. %
0.20	5.76	2.13

Tons estimated for this block is 3,110.

Ore Body No.2-A (Probable Tonnage).

This ore body represents the extension downward of shoot No.2 for a distance of 50 ft., with a length of 230 ft., a width of 2.9 ft., and an average grade as follows:

Au.Ozs.	Ag.Ozs.	Cu.%
0.20	8.67	2.36

Tons estimated for this block is 3,032.

Ore Body No.3-A (Probable Tonnage).

A downward extension of 50 ft. is assumed for shoot No.3, with a length of 300 ft., a width of 3.1 ft., and av average grade of:

Au.Ozs.	Ag.Ozs.	Cu.%
0.24	7.69	2.62

The tonnage estimated for this block is 4,227.

Summary of Estimated Tonnages and Average Grade.

Ore Body No.	Tons	Au.Ozs.	Ag.Ozs.	Cu.%	Total Ozs.Au.	Total Ozs. Ag.	Total Tons Cu.
No.1, 450-Lev.	11600	0.22	6.58	2.16	2552.0	76328.	250.56
No.2, 450-Lev.	1350	0.38	9.25	2.95	513.0	12487.	39.83
No.3, 450-Lev.	425	0.37	10.40	2.45	157.2	4420.	10.41
No.2A,450-Lev.	2700	0.38	9.25	2.95	1026.0	24975.	79.65
No.3A,450-Lev.	850	0.37	10.40	2.45	314.5	8840.	20.82
No.1, 650-Lev.	6186	0.21	6.87	2.20	1299.0	42497.	136.09
No.2, 650-Lev.	13381	0.21	6.87	2.20	2810.0	91927.	294.38
No.3, 650-Lev.	7164	0.24	7.69	2.62	1719.3	55091.	187.69
No.1A,650-Lev.	3110	0.20	5.76	2.13	622.0	26963.	73.39
No.2A,650-Lev.	3032	0.20	8.67	2.36	606.4	26287.	71.55
No.3A,650-Lev.	4227	0.24	7.69	2.62	1014.5	32505.	110.75
TOTALS - - -	54025				12633.9	402320.	1275.14
AVERAGEW - -		0.23	7.45	2.36			

In June,1922, your company sent a sample to the General Engineering Company at Salt Lake City for testing purposes and I give herewith a brief summary of their Test No.9 which appears to give the best results:

TEST No. 9

Ore crushed to -35 mesh and tabled for lead. Table tailing ground to 100 mesh with 1/10 lb. thio carbanilid and floated, using 1/20 lb. aldol per ton. Flotation concentrate tabled making a lead concentrate and a copper concentrate. This lead concentrate was combined with the original table lead concentrate. The flotation tailing was tabled making an iron concentrate #1 and iron concentrate #2.

Case #1 shows the table iron concentrate #1 combined with the lead concentrate, and the table iron concentrate #2 combined with the copper concentrate.

Case #2 shows table iron concentrate #1 and #2 combined with the copper concentrate.

Treatment Products	Tons per 100	Assay of Products Au.	Ag.	Pb.	Cu.	Zn.
Heads		0.241	11.88	2.47	3.25	3.5
Lead concentrates	7.80	2.482	54.45	27.33	0.94	0.76
Case #1 Copper Concts.	26.50	0.166	23.62	1.28	11.08	13.41
Tailing	65.70	0.005	2.10	None	0.364	0.30
Lead Concentrates	4.60	3.820	80.6	44.3	1.31	0.93
Case #2 Copper Concts.	29.70	0.208	22.89	1.46	9.93	12.0
Tailing	65.70	0.008	2.10	None	0.354	0.30

Based on above Test #9 of the General Engineering Company (Case #2) and using my calculated average assay for the mine, following Pb. and Cu. concentrates would be produced:

	% Wt.	Au.	Ag.	Pb.	Cu.	Extraction % Au.	Ag.	Pb.	Cu.
Heads,Mine Avg.	100.0	0.23	7.45	2.4*	2.36				
Lead Concts.	5.0	3.36	46.2	39.4	0.85	73.0	31.0	82.0	1.8
Copper Concts.	30.0	0.19	14.0		7.09	25.5	57.0	17.5	91.0

*Estimated from my samples and those by the mine management.

Outcome on Copper Concentrates if shipped to Humboldt Smelter under schedule now in effect:

Assume metal market as follows: Silver-----$0.60 per Oz. at New York.
Copper-----$0.14 per Lb. at New York.

Payments:

Au. 0.19 Oz. @ $19.00	3.61
Ag. 14.00 Ozs. x .95 @ (60-2)	7.71
Cu. 7.09% or 141.8-12 Lbs. @ 14-3.25¢	13.95
	$25.27

Deductions:

Treatment	$5.00
Frt. plus 10% moist.	.88
	5.88

$19.39 per ton concentrates.

$5.88 per ton crude ore @ 3.3 into 1.

Outcome on Copper Concentrates if shipped to Hayden Smelter with same metal market:

Payments:

Au. 0.19 Oz. @ $19.50	$3.71
Ag. 14.00 Ozs. @ 95% of $0.60	7.98
Cu. 7.09% or 141.8, 90% @ 14-2.75¢	14.36
	$26.05

Deductions:

Treatment	$3.10
Frt and Moisture	5.28
	8.38

$17.67 per ton concentrates.

$5.35 per ton crude ore @ 3.3 into 1.

Outcome on Copper Concentrates at Varying prices for Silver and Copper:

Silver Market:	$0.60	$0.62	$0.64	$0.65
Copper Market:	$0.14	$0.15	$0.16	$0.17
If Shipped to Humboldt Smelter-				
Val.per T.Concts.-	$19.39	$20.85	$22.42	$23.85
Val.per T.Crude Ore	$5.88	$6.32	$6.76	$7.23
If Shipped to Hayden Smelter-				
Val.per T.Concts.-	$17.67	$19.06	$20.58	$21.98
Val.per T.Crude Ore	$5.35	$5.78	$6.24	$6.66

Outcome on Lead Concentrates if Shipped to El Paso Smelter.

Assume metal market as follows: Silver------$0.60 per Oz. at New York.
Copper------$0.14 per Lb. at New York.
Lead--------$0.05 per Lb. at New York.

Payments:

Au. 3.36 Ozs. @ $20.00	$67.20
Ag. 46.2 " @ 95% of $0.60	26.33
Pb. 39.4%-1.5 is 37.9%; 90% @ 5-1.4¢	24.56
	$118.09

Brot ford- Payments - - - - - - - - - - - - - - - - - - $118.09

Deductions:

Treatment	$3.50	
Excess for value	$1.50	
Sulphur, maximum	$3.00	
Frt and Moisture	$12.21	20.21

$97.88 per ton concentrates
$4.89 per ton crude.
@ 20 into 1.

Outcome on Lead Concentrates at Varying Prices for Silver and Lead.

Silver Market:	$0.60	$0.62	$064	$0.65
Lead Market:	$0.05	$0.06	$0.07	$0.08
Val.per ton Concts.	$97.88	$105.58	$113.28	$120.54
Val.per T. Crude Ore.	4.89	5.28	5.66	6.03

Total operating costs are estimated as follows (Details attached):

Mining	$3.50	per ton of ore
Development	$1.70	" " " "
Milling	$2.50	" " " "
Aerial Tram(Concts)	$0.15	" " " "
Poland Tunnel Transpn.	$0.25	" " " "
TOTAL COST F.O.B. Cars -	$8.10	

Estimated net profit per ton of ore milled at varying market prices for silver, copper, and lead:

Silver Market:	$0.60	$0.62	$0.64	$0.65
Copper Market:	$0.14	$0.15	$0.15	$0.17
Lead Market:	$0.05	$0.06	$0.07	$0.08
Val.per ton Ore Milled -	$10.77	$11.60	$12.42	$13.26
Total cost per ton of ore milled - - -	$8.10	$8.10	$8.10	$8.10
Estimated net profit per ton of ore milled- -	$2.67	$3.50	$4.32	$5.36

Possibilities Based on Surface and Underground Conditions.

Because of the apparently unsystematic occurrence of the ore shoots and their lenticular shape, it is not to be expected that the surface outcrops reflect the vein conditions immediately beneath them. The ratio between development work and ore exposed, as now established, is sufficiently attractive to warrant further lateral and vertical work. The surface continuity of the fissures along the surface gives promise that additional ore shoots will be encountered. A consideration of these possibilities suggests the following program for future work:

Exploration and Development Program.

The following work is recommended to be done in the immediate future in order that the mine will be in a position to deliver without trouble or interruptions at least 100 tons per day to the proposed mill. The order in which this work is taken up will be influenced to some extent by local conditions, but the shaft sinking plan should be carried out as soon as the mill building project is decided upon, and unless the winze on the 650 level encounters conditions which would warrant a change of program.

(1) The Main or No.2 working shaft should be sunk to the 800-Level, or 157 ft. below the 650-Level. (150 ft. as an interval between workings is considered as large as compatible with economy in mining and the development ratio.)

(2) The winze now being sunk at a point 705 ft. northeast of the shaft crosscut on the 650-Level should be continued to a depth of 100 ft., with a short crosscut to the footwall at a depth of 50 ft. below the level.

(3) In the event that the 705 winze on the 650-Level does not definitely establish the continuity of values or satisfactory vein condition, a winze should be sunk on ore body No.1 in the northeast drift of the 650-Level at a point approximately under No.1, raise.

(4) The mine has reached a position in its development where another connection with the surface seems imperative for ventilation and safety and for the further reason that it is required by law. Therefore, it is recommended that the southwest drift on the 450-Level be driven ahead about 120-ft. and a raise put thru to the 200-Level of the old No.1 shaft on the Sheldon Claim. This project is predicated on an investigation of the condition of the No.1 shaft and the feasibility of putting it in shape as a manway and secondary exit at a reasonable cost. In the event this scheme proves too expensive, a raise to the surface is recommended to start at a point near the present northeast face of this level in the No. 3 ore body.

Underground Operating Conditions.

The general physical condition of the underground workings is satisfactory and in accordance with modern practice in mines of this size and character.

In the future, laying of underground track, I would suggest that no rail lighter than 12-Lb. (and preferably 16-Lb.) be used.

The skip pockets at the 450-Level and 650-Level should be enlarged if necessary to hold from thirty to forty tons and properly equipped with suitable chutes, gates, and chute-aprons.

A study of the various stoping methods applicable to this type of deposit indicates that the cut-and-fill method will ensure safe and efficient mining and avoid a dilution of the values with waste, owing to the tendency of the walls to cave-in after the ore is broken.

Satisfactory hanging and foot wall conditions will doubtless be met in