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GOLCONDA: -

At Mineral Park, owned by New Golconda Mining Co. (Mr. Rose)

Not operating. A report made by Chas. Wanvig last ^{Superintendent} ~~September~~ of old mine states that in the Old Golconda workings the vein is 3' to 6' wide and 60,000 tons of ore may be estimated between the 1100 and 1400' levels:

CG

	Assay	
	A. Wanvig	B. Rose.
Au.	0.4 oz.	0.1 oz.
Ag.	2.0 oz.	7.0 oz.
Cu.	-	1.0%
Pb.	2.0 %	2.0%
Zn.	10.0 %	15.0%

B. Ore would yield shipper \$7.30 per ton at mine (with \$1.00 cost to haul to railroad and it is estimated that working cost should not exceed \$5.00 per ton. If opened up might ship in 6 to 8 months from 50 to 75 tons per day.

Don't know how it will work by flotation but should be O.K.

G. M. Colodocrosses
visited Raymond Christ with
A. B. Young - Sept 20, 1956

PROPERTY: Goldonda Mining Co. - Middle Golconda Workings.
DISTRICT: Wallapai Mining District, Mohave County, Arizona.
OWNERS : Golconda Mining Co., - a corporation, Mr. Black, President.
VISITED : February 2 and 3, 1926, by D. F. Reed.

LOCATION.

The property of the Golconda Mining is situate in the Wallapai Mining district of Mohave County, Arizona, three and one-half to four miles west of the station of Mineral on the Chloride branch of the A. T. & S. F. Ry., twenty-six miles North of Kingman and seven miles South of Chloride by good auto road.

CLAIMS.

The property consists of twenty-four claims of which five, The Golconda, Tub, Prosperity, Verginia and Little Jimmy, are patented and owned outright by the company, seventeen are unpatented and held by annual assessment work, and two, the Silver and Big Bethel, both patented are held by the company under an agreement to purchase from the Highland or Middle Golconda Mining Co.

A copy of this agreement is attached to this report. It calls for a purchase price of \$85,000 on the two claims, payments to be made periodically with interest at 6% on overdue payments. There is no forfeiture clause. It also requires a payment of a royalty of 5% of net smelter returns on all ore extracted from the claims, said royalty not applying on the purchase price. Judge Krook advises me that that this agreement is a very faulty instrument and one which is likely to cause litigation.

This is important as all present operating stopes and also all of the ore in which the Southwest Metals Co. is now interested and the only outlet for these ores, lie on these claims. The Golconda Company will not acquire deed nor title to these claims until they are fully paid for and therefore no lien could be obtained on this ore as security for any loan made to them.

MINERALIZATION.

Most of the ore deposits in the Middle Golconda workings carry a high percentage of zinc with little or no copper or iron.

On the South end of the Silver claim, in what is known as the

West Branch of the Tub vein, is a shoot of ore carrying lower values in zinc, with some value in copper, some iron and gold and about ten ounces of silver per ton. On the Primrose claim is another vein, also carrying values in copper, gold, silver and zinc.

The veins are fissure veins, with walls of granite. The vein filling is quartz and the mineralization Pyrite, Chalcopyrite, Sphalerite and the silver probably in the form of argentite.

MINE.

All of the ore here considered, lies above an adit level known as the Big Bethel cross-cut. At the time of my visit there had been no attempt to prospect or develop any ore below this tunnel although the ore shoots undoubtedly have a downward extension.

Very little work would be necessary in the mine to put production on the basis of 100 tons per day. The only necessary work on the Tub vein would be a connection between the top of an existing raise and the bottom of an existing winze (about 50 feet) for ventilation. All of the drifts and stopes are open and in good shape and mining could be started at once.

On the Primrose vein, another ventilation raise would be necessary, this about 85 feet in length. Here the stope floors would have to be lagged and chutes built.

The total cost of all preliminary underground work should not exceed \$2000 or, if the Primrose vein is not considered, less than half of that.

ORE RESERVE.

I estimate probable tonnage and values as follows:

Tub vein, West Branch, above 100 level.

Sample No.	Width	Au.	Ag.	Cu.	
49	5.5	.01	7.93	.50	
107	4.0	.04	1.86	Tr	
108	4.0	.04	9.82	Tr.	
112	4.0	.02	4.72	.60	
113	5.0	.02	18.24	2.90	
114	4.0	.02	23.60	3.10	
115	2.5	.02	0.02	.75	
H10	3.5	.02	17.08	.83	
8	32.5	.19	92.27	8.68	
Average	4.06	.024	10.28	1.08	Zn. 3.5% to 4%.

$$\frac{81 \times 220 \times 4}{12} = 5400 \text{ Tons.}$$

Between 100 level and 200 level.

Sample	No.	Width	Au.	Ag.	Cu.	Zn.
	H.1	2.3	.02	12.88	.46	
	H.2	2.5	Tr	2.16	.41	
	H.3	5.0	.02	10.74	.45	
	H.4	5.7	.02	12.18	.66	
	216	2.0	.12	5.84	.39	
	H.5	3.4	Tr	5.72	.91	
	H.6	5.3	.01	5.72	.91	
	H.7	4.3	.02	18.08	.62	
	8	30.5	.21	73.30	4.81	
	Average	3.8	.026	9.16	.60	Zn 5.0%

$$\frac{162 \times 90 \times 4}{12} = 4860 \text{ Tons}$$

Total on West branch of Tub vein

5400
4860
10260 Tons

Average grad Au. .025, Ag. 9.72, Cu. 0.84%, Zn. 4.5%

The approximate net value of this ore at smelter is \$70,000.

Primrose Vein, Above 100 level.

Sample	No.	Width	Au.	Ag.	Cu.	Zn.
	629	2.5	.06	16.00	.45	9.06
	628	3.0	.04	11.19	.32	8.17
	625	2.0	.12	6.16	.83	5.09
	626	2.0	.08	6.12	.67	4.91
	627	1.8	.05	12.00	1.20	4.59
	608	1.0	.08	7.00	.20	4.14
	609	1.0	.12	4.60	Tr	4.14
	607	2.8	.12	7.20	.80	5.64
	605	1.5	.02	4.84	.40	8.38
	9	17.6	.69	75.11	4.87	54.12
	Average	1.96	.08	8.35	.54	6.00

$$\frac{80 \times 80 \times 2}{12} = 1066 \text{ Tons}$$

Between 100 level and 200 level

Sample	No.	Width	Au.	Ag.	Cu.	Zn.
	605	2.5	.02	4.54	.40	8.38
	607	2.8	.12	7.20	.80	5.64
	608	1.0	.08	7.00	.20	4.14
	609	1.0	.12	4.60	Tr	4.14
	221	1.5	.02	16.00	1.80	3.45
	222	1.0	.18	26.40	1.10	4.14
	219	3.5	.18	4.32	.19	3.56
	223	2.5	.08	4.00	1.50	4.94
	8	14.8	.80	74.56	5.99	38.29
	Average	1.9	.10	9.32	0.75	4.8

$$\frac{80 \times 95 \times 1.9}{12} = 1200 \text{ tons}$$

Total on Primrose Vein

1200
1066
2266 Tons

Average Grade Au. .09; Ag. 8.8; Cu. 0.65%; Zn. 5.4%

The approximate net value of this ore at smelter is \$18,000.

Thus the total of these two ore-shoots in

10260	\$70,000
<u>2266</u>	<u>18,000</u>
12526 Tons, Net value at Smelter,	\$88,000.

In addition to these two ore-shoots, Mr. Jacobson estimates as positive and probable ore on these two claims, 37,000 tons with a net value of \$272,000; also a further tonnage which I would list as "Possible ore", and on which no estimates of value is made.

TREATMENT

Tests have shown this ore to be amenable to differential flotation, Mr. Jacobson in fact making this separation into two products for a short period of operation. Owing to the fact that his equipment was inadequate, he was unable to make a clean separation or to handle the separate products and therefore changed to a collective flotation, making only one concentrate. Typical results during this period he gives as follows:

	Au.	Ag.	Cu.	Zn.	Fe.	Ins.	Pb.
Heads	.02	4.16	Tr	9.80	5.4	-	0.32
1st Conct.	.15	27.17	0.86	7.60	28.9	16.4	3.75
2nd Conct.	.05	4.21	Tr.	35.70	17.4	18.9	Tr.
Tails	.005	0.67	Tr.	2.36			Tr.

The low copper content is explained by the fact that only the ore with high zinc and practically no copper content, was being mined.

The old Middle Golconda or Highland company which operated this property in 1923 made such a separation, and an average of sixteen carload lots of concentrates, shipped to this smelter ran:

Au.	Ag.	Cu.	Fe.	Ins.	CaO.	S.	Zn.
.158	43.2	3.38	26.1	21.2	Tr	30.1	9.1

Mr. Jacobson estimates that with a mine production of 100 tons per day, there would be produced 250 tons of copper iron concentrate which would carry 75% of the precious metal values, and 300 to 350 tons of zinc concentrate each month.

MILL.

Before a selective product could be made, some changes and additions would be necessary in the milling plant. To handle 100 to 120 tons per day would necessitate the addition of a 5 x 5 Ball Mill, a 5' Oliver filter, three small flotation machines, two Dorr mechanisms for 8 foot tanks and the rearrangement of the existing machinery. Mr. Jacobsons private estimate of the cost of this was \$8000 to \$10,000.

COSTS.

I estimate production costs as follows:

Mining	\$2.00
Milling	2.25
Haul	.25
Freight	.50
Miscellaneous	<u>.25</u>
	\$5.25 per ton

Necessary expense preliminary to operation

Mine	\$ 2,000.00
Mill	10,000.00
Back payments on claims	9,500.00
Interest on back payments to May 1, 1926,	170.00
Payment due May 1st, 1926,	3,000.00
Lien on property	6,000.00
Back taxes	<u>1,000.00</u>
	\$31,670.00

SUMMARY.

50,000 tons ore net value		\$360,000.
Preliminary	\$ 31,670.	
Royalty	18,000.	
Production	262,500.	
Payment due Jan. 1, 1927	<u>20,000.</u>	<u>332,170.</u>
Profit		\$ 27,830.

Considering only the ore in the two copper bearing shoots the summary of costs is thus

12,526 Tons, net value,		\$ 88,000.
Preliminary	\$31,670.	
Royalty	3,500.	
Production	<u>62,761.</u>	
	\$97,931.	
	<u>88,000.</u>	
	\$ 9,931.	

CONCLUSIONS.

From Mr. Jacobson's very comprehensive report and my own examination, there would appear to be some 50,000 tons of ore on the Silver, Big Bethel and Primrose claims, all lying above the Big Bethel adit. The net value of this ore, or rather, the concentrates which would be produced from this ore, would be approximately \$360,000.

Under competent management this would be extracted and marketed before January 1, 1928, producing a profit of some \$28,000. At that date there would still be owing on the Silver and Big Bethel claims, \$50,000.

It becomes at once apparent that the purchase price of \$85,000. for these claims is excessive.

The future possibilities of the property lie in the development of

the downward extension of the orebodies on these two claims and in the reopening of the old Golconda workings through a drift from the Big Bethel tunnel. I refer you to Mr. Jacobson's report, a copy of which is attached hereto.

The officers and directors of the present company are men who are unfamiliar with mining and the company is financially so involved that I believe they have small chance of operating successfully.

Inasmuch as a capital of \$30,000 would be necessary to secure an uninterrupted operation for at least a year and the present company seems to be without funds, a loan of \$5000 or even \$10,000 would not be sufficient.

There is no apparent way in which the Southwest Metals Co. could be secured on any loan which they might make to this Company.

GOLCONDA

Note by G. M. Colvocoresses,
October, 1937.

The attempt by Peach to reopen this old mine proved to be entirely unsuccessful and involved a heavy loss.

I doubt very much if enough pay ore is left to justify any similar procedure in the future.

NOTES ON GOLCONDA MINE

Location: Union Basin, Mohave County, Arizona.
Owners: Copperconda Mining Co., R.O. Gruwell, Gen'l Mgr.
Property: Consists of old Golconda, Middle Golconda and Ora Plata Groups of claims.

Date Visited: September 5, 1929 - by G. J. Harbauer.

Development: Deep tunnel known as Peach Tunnel crosscuts four veins at a depth 200 feet below lowest Golconda workings. A drift on the Ora Plata vein from this tunnel has opened up an ore chute 150' long from which ore is being shipped to Midvale, Utah, two cars per week. Drifts will be continued to Golconda workings some 2000 or 3000' east. There will be 400' of ground above this drift in the Golconda ore body that is unmined.

Production: The ore being shipped is the coarse ore and assays \$50 which includes 15% Pb and 15% Zn. The fine ore is left on the dump and over 1000 tons of \$20 ore have accumulated in this way.

A mill of 100 tons capacity is to be built soon to treat the ore mined and also to handle old mine dumps and jig tailings left from former operations.

With a closer market for lead-zinc ores this mine could produce at least 25 tons of crude ore per day and with a 100 ton flotation mill on the ground would produce at least 10 tons of lead concentrate and 15 tons of zinc concentrate.

A possible ore reserve of 60,000 tons was left in the old Golconda mine and the new development work through the Peach tunnel should develop several times that amount of commercial ore.

G. J. Harbauer.

Los Angeles, California

March 28th, 1919.

Mr. C. B. Bell,
Chloride
Arizona

Dear Mr. Bell:

Re: Sale of Golconda Mine.

In accordance with our conversation of March 26th, I am handing you herewith data on the Golconda Mine, with statements of our operations and mine and property maps.

As shown on the first statement, the Golconda Mine produced thirty-one million pounds of zinc, with gold and silver values, during the three years we operated it, for which we were paid \$2,117,433.00 and received \$1,761,126.00 net from the smelter after deducting freight and smelting charges. You will note a great increase in the residue (gold and silver) values; during 1915 we received \$34,765.78 for residues in 13,513 dry tons shipped, an average of \$2.57 per ton, and in 1917 we received \$111,003.02 for residues in 11,735 dry tons shipped, an average of \$9.46 per ton. This high precious metal value is a factor of great moment in the operation of a zinc mine.

A statement of our 1917 operations giving the tonnage mined, milled and produced is also attached, so that you may have actual data of our last operations up to the time of the destructive fire, which destroyed the entire milling plant and mine bins on October 4th, 1917. We immediately engaged mill designers and proceeded to draw up plans and specifications for a new mill, but after nearly three months' time, in which these plans were practically completed it was finally decided not to rebuild the plant at that time, due to the very greatly increased cost of labor, machinery and materials brought about by the war, the uncertainty of equipment deliveries and consequent unusual length of time it would take to rebuild the plant under the extraordinary conditions at that time, the uncertainty of the smelter market and the high cost of producing smelter. It was not considered likely that mine operations would be resumed until after the war and before conditions were again normal, which it was then believed would require four or five years' time; and we, therefore, dismantled the entire mine plant and disposed of the

equipment with the idea of resuming mine operations with a plant at the 500 tunnel level, instead of at the collar of the shaft, and with new and more modern equipment suitable for our mine operations.

Regarding ore reserves, we did not make any detailed estimate, owing to the fact that development work had not been sufficiently advanced, and the mine is not in shape for any one to estimate actual ore reserves. Perhaps you will understand this better if I mention that during the high price of zinc, we made every effort to produce every pound the mine could stand, sacrificing development work for the momentarily high prices of zinc, and at the time of the fire the development work was just reaching a stage where we would be able to block out larger areas than had ever been done in the history of the mine. By referring to the stope map, you will note that the shaft is below the 1400 level, thus making available 300 feet of ground below the 1100 level and we were just ready to start drifting on the 1400 level when the fire terminated operations.

In line with former ore estimates, we based our conclusions of ore reserves on the continuance of the ore zone and past operations of the mine, which had been borne out by our results. The Golconda vein has produced about 20,000 tons of concentrating ore for each 100 feet of depth along the vein. Below the 1100 level, there should be 60,000 tons of concentrating ore in the stoping zone along the Golconda vein above the 1400 level. The Tub vein also offers attractive possibilities, and while it is true that we did not work along this vein during the last year of our operations, our final study of this vein (when we had more time for such investigations after the fire) lead us to believe that the Tub workings of the 700 level were unattractive due to being in a fault zone which closely follows in dip and strike the course of the Tub vein.

Further development of this vein will undoubtedly show a continuance of the large ore-bodies opened above, also an extension of the Golconda vein southward beyond the intersection with the Tub fault shown on the 700, 800, 900, 1000 and 1100 levels.

As far as ore reserves are concerned, when we took over the property we estimated slightly over 5000 tons of concentrating ore as actually blocked out - not much more than one months' operations,

but this did not discourage us as we were well aware of the previous history of the mine as far as ore reserve was concerned, and it is a fact that we mined at the rate of more than 4000 tons a month for nearly three years after taking over the property.

The results of development work so far on the 1200 level - the lowest level in the mine - were disappointing but not altogether discouraging as we had seen similar conditions on practically every one of the lower levels, such as the 900, 1000 and 1100 levels, and yet obtained our full quota of ore from the stoping areas above these levels. It is a singular fact that development headings all told at Golconda were rarely attractive or conducive of any great expectations of ore returns, and yet the mine has produced fully 70,000,000 pounds of zinc with gold and silver values. Against the unattractiveness of the 1200 level drifts is the fact that about 15 feet below the 1200 level a body of high grade was entered in the shaft which opened to a width of 6 feet of solid high grade ore and continued for about 60 feet in depth. This exemplifies a condition which is found throughout the mine, and the fact that these ore bodies are usually continuous in the ore zone and have only local pinches, is the reason that the entire ore zone is eventually stoped out in the operations above each level.

On the property map attached, the Virginia, Tub, Golconda and Prosperity claims are already patented. we are awaiting patent papers on the Little Jimmie claim, and the other claims have all been surveyed for patent and are now in process of being patented.

yours very truly,

(signed) JOHN WANVIG, JR.
Supt. Union Basin Mining Company,
Chloride, Arizona

SMELTER RETURNS AND PRODUCTION
OF UNION BASIN MINING COMPANY.

	1915	1916	9 mo. 1917	TOTAL
Am't paid for zinc shipped	\$684,486.83	\$718,640.90	\$488,958.66	1892086.39
Am't paid for Residues "	34,765.78	79,578.12	111,003.02	225346.92
Total paid for metals	719,252.61	798,219.02	599,961.68	2117433.31
HR Frt. to smelters	130,486.82	126,708.76	99,111.34	256306.92
Net Smelter returns	\$588,765.79	\$671,510.26	\$500,850.32	1761126.39

TWO YEARS NINE MONTHS WORK

PROPERTY: Golconda Mining Co. - Middle Golconda Workings.
DISTRICT: Wallapai Mining District, Mohave County, Arizona.
OWNERS: Golconda Mining Co., - A corporation, Mr. Black, President
VISITED: February 2 and 3, 1926, by D. F. Reed.

LOCATION: The property of the Golconda Mining is situated in the Wallapai Mining district of Mohave county, Arizona, three and one-half to four miles west of the station of Mineral on the Chloride branch of the A.T & S.F. Ry., twenty-six miles North of Kingman and seven miles South of Chloride by good auto road.

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MINERALIZATION: Most of the ore deposits in the Middle Golconda workings carry a high percentage of zinc with little or no copper or iron.

On the South end of the Silver claim, in what is known

as the West branch of the Tub vein, is a shoot of ore carrying lower values in zinc, with some value in copper, some iron and gold and about ten ounces of silver per ton. On the Primrose claim is another vein, also carrying values in copper, gold, silver and zinc.

The veins are fissure veins, with walls of granite. The vein filling is quartz and the mineralization Pyrite, chalcopyrite, Sphalerite and the silver probably in the form of argentite.

MINE: All of the ore here considered, lies above an adit level known as the Big Bethel cross-cut. At the time of my visit there had been no attempt to prospect or develop any ore below this tunnel although the ore shoots undoubtedly have a downward extension.

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Tub vein, west Branch, above 100 level.

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H10	3.5	.02	17.08	.83	
8	32.5	.19	92.27	8.68	
Average	4.06	.024	10.28	1.08	Zn. 3.5% to 4%

81 x 220 x 4 = 5400 tons.

Between 100 level and 200 level.

Sample No.	Width	Au.	Ag.	Cu.	Zn.
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H.6	5.3	.01	5.72	.91	
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626	2.0	.08	6.12	.67	4.91
627	1.8	.05	12.00	1.20	4.59
608	1.0	.08	7.00	.20	4.14
609	1.0	.12	4.60	Tr	4.14
607	2.8	.12	7.20	.80	5.64
605	1.5	.02	4.84	.40	8.38
9	17.6	.69	75.11	4.87	54.12
Average	1.96	.08	8.35	.54	6.00

$$\frac{80 \times 80 \times 2}{12} = 1066 \text{ tons}$$

Between 100 level and 200 level

Sample No.	Width	Au.	Ag.	Cu.	Zn.
605	2.5	.02	4.54	.40	8.38
607	2.8	.12	7.20	.80	5.64
608	1.0	.08	7.00	.20	4.14
609	1.0	.12	4.60	Tr	4.14
221	1.5	.02	16.00	1.80	3.45
222	1.0	.18	26.40	1.10	4.14
219	3.5	.18	4.32	.19	3.56
223	2.5	.08	4.00	1.50	4.94
8	14.8	.80	74.56	5.99	38.29
Average	1.9	.10	9.32	0.75	4.8

$$\frac{80 \times 95 \times 1.9}{12} = 1200 \text{ tons}$$

Total on Primrose Vein

1200
1066

2266 Tons

Average Grade Au. .09; Ag. 8.8; Cu. 0.65%; Zn. 5.4%

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<u>2266</u>	<u>18,000</u>
12526 Tons, Net value at Smelter,	\$88,000

In addition to these two ore-shoots, Mr. Jacobson estimates as positive and probable ore on these two claims, 37,000 tons with a net value of \$272,000; also a further tonnage which I would list as "Possible ore", and on which no estimates of value is made.

TREATMENT: Tests have shown this ore to be amenable to differential flotation, Mr. Jacobson in fact making this separation into two products for a short period of operation. Owing to the fact that his equipment was inadequate, he was unable to make a clean separation or to handle the separate products and therefore changed to a collective flotation, making only one concentrate. Typical results during this period he gives as follows:

	Au.	Ag.	Cu.	Zn.	Fe.	Ins.	Pb.
Heads	.02	4.16	Tr.	9.80	5.4	-	0.32
1st Conct.	.15	27.17	0.86	7.60	28.9	16.4	3.75
2nd Conct.	.05	4.21	Tr.	35.70	17.4	18.9	Tr.
Tails	.005	0.67	Tr.	2.36			Tr.

The low copper content is explained by the fact that only the ore with high zinc and practically no copper content, was being mined.

The old Middle Golconda or Highland company which operated this property in 1923 made such a separation, and an average of sixteen carload lots of concentrates, shipped to this smelter ran:

Au.	Ag.	Cu.	Fe.	Ins.	CaO.	S.	Zn.
.158	43.2	3.38	26.1	21.2	Tr	30.1	9.1

Mr. Jacobson estimates that with a mine production of 100 tons per day, there would be produced 250 tons of copper iron concentrate which would carry 75% of the precious metal values, and 300 to 350 tons of zinc concentrate each month.

MILL: Before a selective product could be made, some changes

and additions would be necessary in the milling plant. To handle 100 to 120 tons per day would necessitate the addition of a 5 x 5 Ball Mill, a 5' Oliver filter, three small flotation machines, two Dorr mechanisms for 8 foot tanks and the rearrangement of the existing machinery. Mr. Jacobson's private estimate of the cost of this was \$8000 to \$10,000.

COSTS: I estimate production costs as follows:

Mining	\$2.00
Milling	2.25
Haul	.25
Freight	.50
Miscellaneous	<u>.25</u>
	\$5.25 per ton

Necessary expense preliminary to operation

Mine	\$ 2,000.00
Mill	10,000.00
Back payments on claims	9,500.00
Interest on back payments to May 1, 1926	170.00
Payment due May 1st, 1926	3,000.00
Lien on property	6,000.00
Back taxes	<u>1,000.00</u>
	\$31,670.00

SUMMARY:

50,000 tons ore net value		\$360,000.
Preliminary	\$ 31,670.	
Royalty	18,000.	
Production	262,500.	
Payment due Jan.1,1927	<u>20,000.</u>	<u>332,170.</u>
Profit		\$ 27,830.

Considering only the ore in the two copper bearing shoots the summary of costs is thus

12,526 Tons, net value		\$ 88,000.
Preliminary	\$ 31,670.	
Royalty	3,500.	
Production	<u>62,761.</u>	
	\$ 97,931.	
	<u>88,000.</u>	
	\$ 9,931.	

CONCLUSIONS:

From Mr. Jacobson's very comprehensive report and my own examination, there would appear to be some 50,000 tons of ore on the Silver, Big Bethel and Primrose claims, all lying above the

Big Bethel adit. The net value of this ore, or rather, the concentrates which would be produced from this ore, would be approximately \$360,000.

Under competent management this would be extracted and marketed before January 1, 1928, producing a profit of some \$28,000. At that date there would still be owing on the Silver and Big Bethel claims, \$50,000.

It becomes at once apparent that the purchase price of \$85,000 for these claims is excessive.

The future possibilities of the property lie in the development of the downward extension of the orebodies on these two claims and in the reopening of the old Golconda workings through a drift from the Big Bethel tunnel. I refer you to Mr. Jacobson's report, a copy of which is attached hereto.

The officers and directors of the present company are men who are unfamiliar with mining and the company is financially so involved that I believe they have small chance of operating successfully.

Inasmuch as a capital of \$30,000 would be necessary to secure an uninterrupted operation for at least a year and the present company seems to be without funds, a loan of \$5000 or even \$10,000 would not be sufficient.

There is no apparent way in which the Southwest Metals Company could be secured on any loan which they might make to this Company.

R E P O R T

PROPERTY: GOLCONDA MINING COMPANY.
LOCATION: KINGMAN, ARIZONA.
DATE: JANUARY 20, 1926.
BY: R. C. JACOBSON.
TO: PRESIDENT & DIRECTORS OF COMPANY.

- - - - -

Briefly:

I find your property well situated in one of the strongest vein systems of a very productive mineral district, and reasonably close to railroad transportation. The mines of the Big Bethel and Primrose groups are but superficially developed yet, but 200 feet of vertical development and lateral development over a length of almost 1000 feet, shows practically a continuous shoot of ore. The future possibilities of the Golconda ore zone, below the 1200 level, added to the prospective possibilities of the Tub, Blackfoot and Gold Reserve surface showings, make a very attractive mining venture and one of large extent. The Golconda vein on good authority has produced over 70 million pounds of zinc above the 1100 level, whereas they showed but \$2.00 to \$3.00 above that level. The Golconda workings are underwater below the 700 level, and no amount of minable ore may be presumed to remain in the ore zone above; the expense of rehabilitation will be in the neighborhood of \$75,000.00. Nevertheless, I find fairly in sight over 34,000 tons of concentrating ore outside of the Golconda vein already prepared for mining (with the exception of two short raises) which should yield over \$100,000.00 profit at the present market, when the mill is arranged to make a double product. This improvement to the mill will cost about \$16,000.00, leaving therefore a good surplus with which to begin development on the 1400 level of the Golconda.

The ore estimates and valuation have been carefully prepared during a three months operation of the property. The maps and stope charts are the result of carefully checked surveys and sampling. My report in detail follows:

The property of the Golconda Mining Company is situated in the Union Basin and Todd Basin sections of the Wallapai Mining District of Mohave County, Arizona, and consists of 24 mining claims; more particularly situated in Sections 5 and 6 in Township 22 North, and section 31 in Township 23 North, both in Range 17 West of the G. & S. R. Base and Meridian. Five claims, the Golconda, Tub, Prosperity, Virginia and Little Jimmy, are patented and owned outright by your company; 17 are held by location and annual assessment; two others, the Silver and Big Bethel, both patented, have recently been acquitted by your company. The titles to all appear clear on the Books of the County Recorder.

The principal mine openings are $3\frac{1}{2}$ to 4 miles West of the Station of Mineral on the Chloride Branch of the A.T. & S.F. Ry., and the same are 26 miles North of Kingman, and 7 miles South of Chloride, by good auto road. Kingman is the County seat and wholesale supply center of Northwestern Arizona.

Mr. F. C. Schrader, in U.S.G.S. Bulletin No. 397, says of the Wallapai Mining District, "Located in the middle part of the Cerbat Mountains, extending from a point just south of Stockton Hill and Cerbat to a point north of Chloride, a distance of about 12 miles. The rocks of this portion of the mountains are essentially of the pre-Cambrian complex, and consist of gray granite, gneissoid granite, and dark schists. They are intruded by distinctly younger masses of granite porphyry. Furthermore, they are locally cut by dikes of pegmatite, aplitic granite, vogesite, minette, and rhyolite. The deposits are well defined fissure veins, of which there are two main sets, one striking N. 10° to 30° W. and the other N. 45° to 70° W., usually with steep dips. According to Comstock, there is also a not generally recognized (this was written in 1907) but important older latitudinal or East-West auriferous vein system, whose veins, usually not prominent or not apparent at the surface, have been encountered in some of the deeper mines and have contributed handsomely toward the enrichment of the ores of these veins. The veins are more or less clearly associated with younger intrusions of granite porphyry and some of them follow dikes of vogesite, minette, or aplite. The

veins are straight and some of them are long. Many of the ore shoots coincide with intersections or forking of veins."

The above covers nearly all the local conditions found on the Golconda vein system. The veins strike on an average of about N. 40° W. and dip to the northeast about 55°. The country rock is without question the pre-Cambrian granite complex. Dikes of granite porphyry, diabase, and rhyolite, are intruded extensively throughout the property and the veins with but one exception seem to have been formed afterward, and follow these lines and fork or intersect, forming, I believe, the principal ore-bodies. The Golconda vein cuts the granite and diabase alike. The Tub vein and Golconda vein are almost in contact at the southeast extremity of the property, and I believe, if traced through to the Oro Plata, would be found in even closer contact; while midway on the 700 level they are upwards of 700 feet apart. This condition is due perhaps to the intrusion of a block of granite of pre-mineral date and the veins followed the outer edges of the uplift. The Tub vein was opened above the 500 level of the Golconda shaft for about 1000 feet northwest, and on the Little Jimmy end line appears in contact (at the surface) with a wide dike of intrusive post-mineral rhyolite, almost identical in strike and dip to the vein, butting in from the north-west and seemingly in close contact for 500 feet, or more, to the southeast. From the Little Jimmy end line north, the vein appears to split again and forms in the Big Bethel and Silver ground, two, and in places, three distinct parallel veins, that are lost in the gulch debris on the Oro Plata ground. The Golconda vein is true in dip and makes a bend in the strike to the east. It is opened by an incline shaft on the dip to the 1400 level, some 1100 feet vertical difference in elevation. On the 600 level, the vein is opened for a lateral distance of about 850 feet southeast, and 2400 feet northwest, through the Prosperity Tunnel to the surface. The main ore shoot seems to have been about 1200 feet long and to extend about equal distances north and south from the shaft. Reports indicate the ground to have been mined above the 1100 level, the showing on the 1200 not so promising, but the shaft to the 1400

and station on this level are reported to expose better and wider ore than in the upper workings.

Authentic reports show that exceptionally fine ore of wide width was mined, also, from the Tub vein, from the 500 level to the 300 level, but below, the Dike as mentioned so broke the vein, for several hundred feet on the trace of the strike, as to prevent mining, the same condition maintains (to my knowledge) on the 700 level. No crosscutting has been done below the 700. At the northwest corner of the Big Bethel a crosscut tunnel cuts the Tub veins, the Golconda, and the Primrose veins at about the 700 level, or a little below. Drifts extend about 750 feet southwest toward the Little Jimmy and about 200 feet northwest along the two larger veins of the Tub system. The broken and faulted condition of the veins is marked as they near the Dike on this level, but the ore seems to be about 600 feet in length on the surface, and I judge will extend below and rake to the North about the same distance.

At the Golconda crossing the vein is true and of good width, and I believe presents an excellent opportunity to open a nice ore shoot by drifting to the north about 100 feet. To the south about twice that distance may open good zinc ore. 110 feet east of the Golconda, the Primrose crossing exposes a good vein several feet in width which carries about 18 inches of higher grade copper silver than in any of the other workings, to my knowledge. Drifting here is certain to open a nice ore shoot of about the width mentioned. It is possible that it will widen to the north. The strike of the Primrose is about the same as the Golconda but in dip it appears much steeper in the 250 feet of elevation now opened, so it is possible that the two veins may converge below, and an extensive enrichment would likely result. To the east of the Primrose lies the Blackfoot, reported to have produced exceptional values in silver, gold, and copper, and to have given away to zinc in the winze below the tunnel levels. East again is the Gold Reserve. It may be that the Primrose has joined the Golconda in strike to the south, and so accounts for the Golconda ore shoot. If such a condition exists, the dip would bring the intersection

of the two veins nicely under the Big Bethel Tunnel, at not too great a depth to reach by sinking. No crosscutting has been done from the deeper levels of the Golconda shaft, either to the Tub or to these two other veins, and much data and more than likely two very profitable ore shoots will result.

Production reports of the Union Basin Mining Company show conclusively that the precious metal content increased about 100% below the 800 level, and Mr. Wanvig draws a similar conclusion to that mentioned by Mr. Comstock, and a parallel to the enrichment of gold silver value in the Tennessee mine below the 1000 foot level; that without question the per cent of precious metal content to the sulphide metal content increases enormously with good depth. Also, observing the dump of ore, reported to have come from the 1400 level of the Golconda, I note the increase of lead and copper values in the primary ore, and do not hesitate to state, that deeper prospecting will prove profitable, on both the Tub and Golconda veins.

No attempt will be made in this report to deal with the Golconda Mine proper, except to say that there are over 15,000 linear feet of workings on 12 levels, that the Union Basin Mining Company milled about 500 tons daily for over two years and received over \$2,000,000.00 return for the product. Report says that mill heads never ran below 14% Zn; and I herewith enclose a copy of a letter written by the Manager of the Union Basin Mining Company that is self explanatory. The mine at present is filled with water to just below the 100 level. The shaft above that level is not useable and access is gained through the long Prosperity tunnel, the workings are rapidly giving away and without attention soon will not be a great expense, providing proper and adequate equipment is more available. And I judge the block of ground between the 1200 and the 1400 levels will be mineable, also that the shaft will be found to need very little repair below the 800 level. As mentioned above the Tub and Blackfoot veins should be prospected from the 1400 level.

The Tub vein, or its branches, outcrop on the Silver

claim for almost its entire length of 1500 feet at southeast end of the claim the two forks are but the width of the dike apart about 40 ft., while in the Big Bethel crosscut they show about 150 ft. apart. They are called the West Vein and the East Vein.

The wide vein has been opened on the south end line by the Little Jimmy shaft, incline on the vein for a depth of 112 feet. There is a nice width of zinc ore at the 112 level about 6 feet in width, and stringers of high grade zinc show above in a short side drift. The East vein is opened again, beginning 22 North of the L. J. Shaft by a series of open cuts and shallow shafts and pits for a further distance of 250 along the outcrop. In the west vein about 400 feet north of L. J. Shaft is an old shaft, reported from 200 to 300 feet in depth, caved to the collar, sunk on the dip, and called the U.S. Shaft. Considerable zinc ore carrying copper shows on the dump. 400 feet south of this shaft and about 110 feet below the collar, both the East and West veins are cut by the Upper Tunnel of the Big Bethel. On this level the two veins are about 140 ft. apart. The East Vein appears to be in two sections with a horse of altered and Schisted granite between. Drifts extend south to the L. J. end line about 800 feet on the east section of the East Vein, and for 400 to the south the west section has been opened as well. Short drifts extend north from the crosscut. The West vein has been drifted on to the South for about 200 feet. The dike has been encountered in both South faces of the East vein, and stoping above on the East section has encountered bad ground, so diluting the ore as to make it poor pay. The back of the drift in the West section is in very nice ore from $3\frac{1}{2}$ to 5 feet in width and the silver and copper values of this block are most inviting. The east section has been stoped for about 300 feet south of the crosscut and the dumps which we are not milling, show that this series of stopes must have produced some very fine zinc ore. The backs of the stopes are fairly well up toward the surface and present little or no mill ore. Bottoms where sampled show a continuation of the shoot downward. The West Vein at the crosscut has been stoped for about 140 feet in length and still shows good zinc ore in the back

with some galena. For about 60 feet North of the crosscut, the East Vein has been opened and we are now stoping from two to three and a half feet of mill ore. We call this stope 100A. Widths and values are shown on the stope map. A short distance to the North of the crosscut on the West Vein a shaft opens to the surface about 90 feet above.

From the northwest corner of the Big Bethel claim and about 120 feet below the upper Tunnel. The Big Bethel crosscut tunnel is driven eastward some 1500 feet, cutting all the vein system except the Blackfoot and Gold Reserve. The West Vein is cut some 470 feet in, and a drift extends about 170 North, and about 150 feet south a raise is opened to the upper Tunnel. Above this stope is carried some 40 feet south of the raise and extending about 80 feet north, up about an average 35 feet above the floor of the drift. Some very good zinc ore shows in the back averaging about 18 inches in width. About 630 feet in from the portal the crosscut cuts the east vein some 160 feet from the west vein. Drifts extend 100 feet north and 560 feet south. About 460 feet south a crosscut to the west cuts an immediate vein and the west vein and runs on some 15 feet into the dike. Drifting has carried the work on this section 70 feet south and 220 north and all the backs are in good ore. Stopes have been started and two raises begun. This block of ground presents the best showing in the mine for immediate production. A raise in up about 25 feet and a winze has been sunk some 35 feet immediately above it. This connection will have to be completed for ventilation, about 60 feet, before stoping can begin. I estimate over 12,000 tons can be mined to blocks 200D and 100D. This work should be done at once, if mine production is to continue.

The crosscut tunnel cuts the Primrose vein 750 feet East of the East vein and a little drifting has been done North and South, and some stoping done. The Golconda's vein is also cut at a point 640 feet in the same point. Values are shown on the stope maps. The crosscut is run on East about 90 feet, but shows nothing

of interest beyond a good cross-section of the wall rock.

From the 600 level of the Golconda Shaft a drift tunnel has been driven to the surface near the North end of the Prosperity claim, about 2300 feet. This is called the Prosperity Tunnel. Two ore shoots are exposed, see Map, that can be easily opened from the Big Bethel crosscut. Some 600 feet south of the Prosperity portal, a crosscut is driven to the Primrose vein, and some drifting has been done in either direction exposing two shoots of ore of very good value, but of rather narrow width. The Primrose also has been opened from the gulch by two tunnels and a shaft reported over 100 feet deep. A winze some 44 feet below the tunnel level comes within 20 feet of the drift from the Prosperity level.

(Balance of report not in file.)

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R E P O R T

PROPERTY: GOLCONDA MINING COMPANY+
LOCATION: KINGMAN? ARIZONA+
DATE : JANUARY 20, 1926.
BY : R. C. JACOBSON+
TO : PRESIDENT & DIRECTORS OF COMPANY+

R. C. Jacobson

Briefly:

I find your property well situated in one of the strongest vein systems of a very productive mineral district, and reasonably close to railroad transportation. The mines of the Big Bethel and Primrose groups are but superficially developed yet, but 200 feet of vertical development and lateral development over a length of almost 1000 feet, shows practically a continuous shoot of ore. The future possibilities of the Golconda ore zone, below the 1200 level, added to the prospective possibilities of the Tub, Blackfoot and Gold Reserve surface showings, make a very attractive mining venture and one of large extent. The Golconda vein on good authority has produced over 70 million pounds of zinc above the 1100 level, and the gold silver values were in excess of \$9.00 per ton below the 900 level, whereas they showed but \$2.00 to \$3.00 above that level. The Golconda workings are underwater below the 700 level, and no amount of minable ore may be presumed to remain in the ore zone above; the expense of rehabilitation will be in the neighborhood of \$75,000.00. Never-the-less, I find fairly in sight over 34,000 tons of concentrating ore outside of the Golconda vein already prepared for mining (with the exception of two short raises) which should yield over \$100,000.00 profit at the present market, when the mill is arranged to make a double product. This improvement to the mill will cost about \$16,000.00, leaving therefore a good surplus with which to begin development on the 1400 level of the Golconda.

The ore estimates and valuation have been carefully prepared during a three months operation of the property. The maps and stope charts are the result of carefully checked surveys and sampling. My report in detail follows;

B G

NOTES ON GOLCONDA MINE

Location: Union Basin, Mohave County, Arizona.
Owners: Copperconda Mining Co., R. O. Gruwell, Gen'l Mgr.
Property: Consists of old Golconda, Middle Golconda and Ora Plata Groups of claims.

Date Visited: September 5, 1929 - by G. J. Harbauer.

Development: Deep tunnel known as Peach Tunnel crosscuts four veins at a depth 200 feet below lowest Golconda workings. A drift on the Ora Plata vein from this tunnel has opened up an ore chute 150' long from which ore is being shipped to Midvale, Utah, two cars per week. Drifts will be continued to Golconda workings some 2000 or 3000' east. There will be 400' of ground above this drift in the Golconda ore body that is unmined.

Production: The ore being shipped is the coarse ore and assays \$50 which includes 15% Pb and 15% Zn. The fine ore is left on the dump and over 1000 tons of \$20 ore have accumulated in this way.

A mill of 100 tons capacity is to be built soon to treat the ore mined and also to handle old mine dumps and jig tailings left from former operations.

With a closer market for lead-zinc ores this mine could produce at least 25 tons of crude ore per day and with a 100 ton flotation mill on the ground would produce at least 10 tons of lead concentrate and 15 tons of zinc concentrate.

A possible ore reserve of 60,000 tons was left in the old Golconda mine and the new development work through the Peach Tunnel should develop several times that amount of commercial ore.

G. J. Harbauer.

May 3rd '43.

Judge Ballinger of Kingman has taken a lease & hopes to get a Ford Lanza operate. I don't think he has succeeded.

Authentic reports show that exceptionally fine ore of wide width was mined, also, from the Tub vein, from the 500 level to the 300 level, but below, the Dike as mentioned so broke the vein, for several hundred feet on the trace of the strike, as to prevent mining, the same condition maintains (to my knowledge) on the 700 level. No crosscutting has been done below the 700. At the northwest corner of the Big Vether a crosscut tunnel cuts the Tub veins, the Golconda, and the Primrose veins at about the 700 level, or a little below. Drifts extend about 750 feet southwest toward the Little Jimmy and about 200 feet northwest along the two larger veins of the Tub system. The broken and faulted condition of the veins is marked as they near the Dike on this level, but the ore seems enriched, especially in copper-silver content. The zone of contact seems to be about 600 feet in length on the surgee, and I judge will extend below and rake to the North about the same distance.

At the Golconda crossing the vein is true and of good width, and I believe presents an excellent opportunity to open a nice ore shoot by drifting to the North about 100 feet. To the South about twice that distance may open good zinc ore. 110 feet East of the Golconda, the Primrose crossing exposes a good vein several feet in width which carries about 18 inches of higher grade copper silver than in any of the other workings, to my knowledge. Drifting here is certain to open a nice ore shoot of about the width mentioned. It is possible that it will widen to the North. The Strike of the Primrose is about the same as the Golconda but in dip it appears much steeper in the 250 feet of elevation now opened, so it is possible that the two veins may converge below, and an extensive enrichment would likely result. To the East of the Primrose lies the Blackfoot, reported to have produced exceptional values in silver, gold, and copper, and to have given away to zinc in the winze below the tunnel levels. East again is the Gold Reserve. It may be that the Primrose has joined the Golconda in strike to the South, and so accounts for the Golconda ore shoot. If such a condition exists, the dip would bring the intersection of the two veins nicely under the Big Bethel Tunnel, at not too great a depth to reach by sinking. No crosscutting has been done from the deeper levels of the Golconda Shaft, either to the Tub or to these two other veins, and much data and more than likely two very profitable ore shoots will result.

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No attempt will be made in this report to deal with the Golconda Mine proper, except to say that there are over 15,000 linear feet of workings on 12 levels, that the Union Basin Mining Company milled about 300 tons daily for over two years and received over \$2,000,000.00 return for the product. Report says that mill heads never ran below 14% Zn; and I herewith enclose a copy of a letter written by the Manager of the Union Basin Mining Co. that is self explanatory. The mine at present is filled with water to just below the 100 level. The shaft above that level is not useable and access is gained through the long Prosperity tunnel, the workings are rapidly giving away and without attention soon will be lost entirely. The shaft from the 700 down is reported to be a very much better piece of work than above, with good stations, and wide pillars separate it from the stopes. I hope this portion of the mine can be rehabilitated and reopened without delay. The actual unwatering will not be a great expense, providing proper and adequate equipment is more available. And I judge the block of ground between the 1200 and the 1400 levels will be mineable, also that the shaft will be found to need very little repair below the 800 level. As mentioned above the Tub and Blackfoot veins should be prospected from the 1400 level.

The Tub vein, or its branches, outcrop on the Silver claim for almost its entire length of 1500 feet at southeast end of the claim the two forks are but the width of the dike apart about 40 ft, while in the Big Bethel crosscut they show about 150 ft. apart. They are called the West Vein and the East Vein.

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the Union Basin and Todd Basin sections of the Wallapai Mining District of Mohave County, Arizona, and consists of 24 mining claims; more particularly situated in Sections 5 and 6 in Township 22 North, and Section 31 in Township 23 North, both in Range 17 West of the G. & S. R. Base and Meridian. Five claims, the Golconda, Tub, Prosperity, Virginia and Little Jimmy, are patented and owned outright by your company; 17 are held by location and annual assessment; two others, the Silver and Big Bether, both patented, have recently been acquired by your Company. The titles to all appear clear on the Books of the County Recorder.

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Mr. F. C. Schrader, in U.S.G.S. Bulletin No. 397, says of the Wallapai Mining District, "Located in the middle part of the Cerbat Mountains, extending from a point just South of Stockton Hill and Cerbat to a point North of Chloride, a distance of about 12 miles. The rocks of this portion of the Mountains are essentially of the pre-Cambrian complex, and consist of gray granite, gneissoid granite, and dark schists. They are intruded by distinctly younger masses of granite porphyry. Furthermore, they are locally cut by dikes of pegmatite, aplitic granite, vogesite, minette, and rhyolite. The deposits are well defined fissure veins, of which there are two main sets, one striking N. 10° to 30° W. and the other N. 45° to 70° W., usually with steep dips. According to Comstock, there is also a not generally recognized (this was written in 1907) but important older latitudinal or East-West auriferous vein system, whose veins, usually not prominent or not apparent at the surface, have been encountered in some of the deeper mines and have contributed handsomely toward the enrichment of the ores of these veins. The veins are more or less clearly associated with younger intrusions of granite porphyry and some of them follow dikes of vogesite, minette, or aplite. The veins are straight and some of them are long. Many of the ore shoots coincide with intersections or forking of veins."

The above covers nearly all the local conditions found on the Golconda vein system. The veins strike on an average of about N. 40° W. and dip to the northeast about 55°. The country rock is without question the pre-Cambrian granite complex. Dikes of granite porphyry, diabase, and rhyolite, are intruded extensively throughout the property and the veins with but one exception seem to have been formed afterward, and follow these lines and fork or intersect, forming, I believe, the principal ore bodies. The Golconda vein cuts the granite and diabase alike. The Tub vein and Golconda vein are almost in contact at the southeast extremity of the property, and I believe, if traced through to the Oro Plata, would be found in even close contact; while midway on the 700 level they are upwards of 700 feet apart. This condition is due perhaps to the intrusion of a block of granite of pre mineral date and the veins followed the outer edges of the uplift. The Tub vein was opened above the 500 level of the Golconda Shaft for about 1000 feet northwest, and on the Little Jimmy end line appears in contact (at the surface) with a wide dike of intrusive post mineral rhyolite, almost identical in strike and dip to the vein, butting in from the north-west and seemingly in close contact for 500 feet, or more, to the southeast. From the Little Jimmy end line North, the vein appears to split again and forms in the Big Bether and Silver ground, two, and in places, three distinct parallel veins, that are lost in the gulch debris on the Oro Plata ground. The Golconda vein in true in dip and makes a bend in the strike to the East. It is opened by an incline shaft on the dip to the 1400 level, some 1100 feet vertical difference in elevation. On the 600 level, the vein is opened for a lateral distance of about 850 feet southeast, and 2400 feet Northwest, through the Prosperity Tunnel to the surface. No faults or breaks occur to my knowledge in this distance. The main ore shoot seems to have been about 1200 feet long and to extend about equal distances North and South from the shaft. Reports indicate the ground to have been mined above the 1100 level, the showing on the 1200 not so promising, but the shaft to the 1400 and station on this level are reported to expose better and wider ore than in the upper workings.

The wide vein has been opened on the South end line by the Little Jimmy shaft, incline on the vein for a depth of 112 feet; crosscuts show the vein and dike at 45 feet and 112 feet. There is a nice width of zinc ore at the 112 level about 6 feet in width, and stringers of high grade zinc show above in a short side drift. The East vein is opened again, beginning 22 North of the L.J. Shaft by a series of open cuts and shallow shafts and pits for a further distance of 250 along the outcrop. In the West vein about 400 feet North of L.J. Shaft is an old shaft, reported from 200 to 300 feet in depth, caved to the collar, sunk on the dip, and called the U.S. Shaft. Considerable zinc ore carrying copper shows on the dump. 400 feet South of this shaft and about 110 feet below the collar, both the East and West veins are cut by the Upper Tunnel of the Big Bethel. On this level the two veins are about 140 ft. apart. The East Vein appears to be in two sections with a horse of altered and Schisted granite between. Drifts extend south to the L.J. end line about 800 feet on the East section of the East Vein, and for 400 to the South the West section has been opened as well. Short drifts extend North from the crosscut. The West Vein has been drifted on to the South for about 200 feet. The dike has been encountered in both South faces of the East Vein, and stoping above on the East section has encountered bad ground, so diluting the ore as to make it poor pay. The back of the drift in the West section is in very nice ore from 3 1/2 to 5 feet in width and the silver and copper values of this block are most inviting. The east section has been stoped for about 300 feet south of the crosscut and the dumps which we are not milling, show that this series of stopes must have produced some very fine zinc ore. The backs of the stopes are fairly well up toward the surface and present little or no mill ore. Bottoms where sampled show a continuation of the shoot downward. The West Vein at the crosscut has been stoped for about 140 feet in length and still shows good zinc ore in the back with some galena. For about 60 feet North of the crosscut, the East Vein has been opened and we are now stoping from two to three and a half feet off mill ore. We call this stope 100A Widths and values are shown on the stope map. A short distance to the North of the crosscut on the West Vein a shaft opens to the surface about 90 feet above.

From the northwest corner of the Big Bethel claim and about 120 feet below the upper Tunnel. The Big Bethel crosscut tunnel is driven eastward some 1500 feet, cutting all the vein system except the Blackfoot and Cold Reserve. The West Vein is cut some 470 feet in, and a drift extends about 170 North, and about 15 feet South a raise is opened to the upper Tunnel. Above this stice is carried, some 40 feet South of the raise and extending about 80 feet North, up about an average 35 feet above the floor of the drift. Some very good zinc ore shows in the back averaging about 18 inches in width. About 630 feet in from the portal the crosscut cuts the East vein some 160 feet from the West vein. Drifts extend 100 feet North and 560 feet south. About 460 feet South a crosscut to the West cuts an immediate vein and the West Vein and runs on some 15 feet into the dike. Drifting has carried the work on this section 70 feet South and 220 North and all the backs are in good ore. Stopes have been started and two raises begun. This block of ground presents the best showing in the mine for immediate production. A raise in up about 25 feet and a winze has been sunk some 35 feet immediately above it. This connection will have to be completed for ventilation, about 60 feet, before stoping can begin. I estimate over 12,000 tons can be mined to blocks 200D and 100D. This work should be done at once, of mine production is to continue.

The crosscut tunnel cuts the Primrose vein 750 feet East of the East Vein and a little drifting has been done North and South, and some stoping done. The Colconda's vein is also cut at a point 640 feet in the same point. Values are shown on the stope maps. The crosscut is run on East about 90 feet, but shows nothing of interest beyond a good cross-section of the wall rock.

From the 600 level of the Colconda Shaft a drift tunnel has been driven to the surface near the North end of the Prosperity claim, about 2300 feet. This is called the Prosperity Tunnel. Two ore shoots are exposed, see Map, that can be easily opened from the Big Bethel crosscut. Some 600 feet south of the Prosperity portal, a crosscut is driven to the Primrose vein, and some drifting has been done in either direction exposing two shoots of ore of very good value, but of rather narrow width. The Primrose also has been opened from the gulch by two tunnels and a shaft reported over 100 feet deep. A winze some 44 feet below the tunnel level comes within 20 feet of the drift from the Prosperity level. ~~This connect-~~

Belen reports not in file

GEORGE M. COLVOCORESSSES
1102 LUHRS TOWER
PHOENIX, ARIZONA

November 9, 1949

File Golconda

Mr. Woodruff Ball
306 Federal Building
Salt Lake City, Utah

Dear Mr. Ball:

Your letter of November 1st is hereby acknowledged. I regret to inform you that my father, to whom you wrote, died last December. As I am also a mining engineer, I have taken over my father's affairs and have his complete files.

Regarding the Golconda I have considerable data, consisting of the following:

1. Letter dated March 28, 1919 by John Wavvig, Jr., including a description of the mine, production record and estimate of reserves.
2. Report dated January 20, 1926 by R. G. Jacobson for the Golconda Mining Company. This report is not complete but contains a rather complete history, geology and description of the property, together with production figures and tonnage estimates of reserves.
3. Report dated February 2 and 3, 1926 by D. F. Reed for the Southwest Metals Co. This report supplements that by Mr. Jacobson, from which a good deal of data was taken. This report includes over 30 sample assays and contains detailed data of the various ore bodies, although no maps are included.
4. Short report dated September 5, 1929 by G. J. Harbauer, probably for the Southwest Metals Co. This report summarizes conditions at the mine and the ten proposed development work.

Since 1929 I have no formal data on the property, but I cannot find any record of production since that date and rather doubt if it was ever a producer since 1929. In 1937 and 1943 my father made notes relative to some more recent work done there, also expressing his opinion on the property as a whole.

I believe that the above listed data would be of real value to anyone considering the property. I retain all original reports, but will be glad to furnish you with exact copies of the above listed data, as well as a copy of my father's notes. I consider a fair price for the above data to be \$75.00.

Very truly yours,

Alden P. Colvocoresses

306 Federal Bldg
Salt Lake City- Utah.

November, 1, 1949.

Mr. George M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona.

Dear Mr. Colvocoresses;

Am in receipt of letter from Mr. T.O. Evans, Mining Engineer for the Santa Fe R.R.; In which he states that at one time your father had filed with him a list of Arizona mines that he had examined and reported on.

In said list was the old Golconda Mine in the Wallapai Mining District of Mohave county.

Would greatly appreciate it, if you could advise me as to the date of said examination and report, and for whom made?

Also should copy of report be desired, could you furnish same?

Thanking you for the courtesy of a reply at your early convenience, I am

Yours very truly

Woodruff Ball
Woodruff Ball

At above address.

Los Angeles, California,
March 28th, 1919.

Mr. C. B. Bell,
Chloride, Arizona.

Dear Mr. Bell: Re: Sale of Golconda Mine.

In accordance with our conversation of March 26th, I am handing you herewith data on the Golconda Mine, with statements of our operations and mine and property maps.

As shown on the first statement, the Golconda Mine produced thirty-one million pounds of zinc, with gold and silver values, during the three years we operated it, for which we were paid \$2,117,433.00 and received \$1,761,126.00 net from the smelter after deducting freight and smelting charges. You will note a great increase in the residue (gold and silver) values; during 1915 we received \$34,765.78 for residues in 13,513 dry tons shipped, an average of \$2.57 per ton, and in 1917 we received \$111,003.02 for residues in 11,735 dry tons shipped, an average of \$9.46 per ton. This high precious metal value is a factor of great moment in the operation of a zinc mine.

A statement of our 1917 operations giving the tonnage mined, milled and produced is also attached, so that you may have actual data of our last operations up to the time of the destructive fire, which destroyed the entire milling plant and mine bins on October 4th, 1917. We immediately engaged mill designers and proceeded to draw up plans and specifications for a new mill, but after nearly three months' time, in which these plans were practically completed, it was finally decided not to rebuild the plant at that time, due to the very greatly increased cost of labor, machinery and materials brought about by the war, the uncertainty of equipment deliveries and consequent unusual length of time it would take to rebuild the plant under the extraordinary conditions at that time, the uncertainty of the spelter market and the high cost of producing spelter. It was not considered likely that mine operations would be resumed until after the war and before conditions were again normal, which it was then believed would require four or five years' time; and we, therefore, dismantled the entire mine plant and disposed of the equipment with the idea of resuming mine operations with a plant at the 500 tunnel level, instead of at the collar of the shaft, and with new and more modern equipment suitable for our mine operations.

Regarding ore reserves, we did not make any detailed estimate, owing to the fact that development work had not been sufficiently advanced, and the mine is not in shape for any one to estimate actual ore reserves. Perhaps you will understand this better if I mention that during the high price of zinc, we made every effort to produce every pound the mine could stand, sacrificing development work for the momentarily high prices of zinc, and at the time of the fire the development work was just reaching a stage where we would be able to block our larger areas than had ever been done in the history of the mine. By referring to the stope map, you will note that the shaft is below the 1400 level, thus making available 300 feet of ground below the 1100 level and we were just ready to start drifting on the 1400 level when the fire terminated operations.

In line with former ore estimates, we based our conclusions of ore reserves on the continuance of the ore zone and past operations of the mine, which had been borne out by our results. The Golconda vein has produced about 20,000 tons of concentrating ore for each 100 feet of depth along the vein. Below the 1100 level, there should be 60,000 tons of concentrating ore in the stoping zone along the Golconda vein above the 1400 level. The Tub vein also offers attractive possibilities, and while it is true that we did not work along this vein during the last year of our operations, our final study of this vein (when we had more time for such investigations after the fire) lead us to believe that the Tub workings of the 700 level were unattractive due to being in a fault zone which closely follows in dip and strike the course of the Tub vein.

Further development of this vein will undoubtedly show a continuance of the large ore-bodies opened above, also an extension of the Golconda vein southward beyond the intersection with the Tub fault shown on the 700, 800, 900, 1000 and 1100 levels.

As far as ore reserves are concerned, when we took over the property we estimated slightly over 5000 tons of concentrating ore as actually blocked out - not much more than one months' operations, but this did not discourage us as we were well aware of the previous history of the mine as far as ore reserve was concerned, and it is a fact that we mined at the rate of more than 4000 tons a month for nearly three years after taking over the property.

The results of development work so far on the 1200 level - the lowest level in the mine - were disappointing but not altogether discouraging as we had seen similar conditions on practically every one of the lower levels, such as the 900, 1000 and 1100 levels, and yet obtained our full quota of ore from the stoping areas above these levels. It is a singular fact that development headings all told at Golconda were rarely attractive or conducive of any great expectations of ore returns, and yet the mine has produced fully 70,000,000 pounds of zinc with gold and silver values. Against the unattractiveness of the 1200 level drifts is the fact that about 15 feet below the 1200 level a body of high grade was entered in the shaft which opened to a width of 6 feet of solid high grade ore and continued for about 60 feet in depth. This exemplifies a condition which is found throughout the mine, and the fact that these ore bodies are usually continuous in the ore zone and have only local pinches, is the reason that the entire ore zone is eventually stoped out in the operations above each level.

On the property map attached, the Virginia, Tub, Golconda and Prosperity claims are already patented. We are awaiting patent papers on the Little Jimmie claim, and the other claims have all been surveyed for patent and are now in process of being patented.

Yours very truly,

(Signed) John Wanvig, Jr.
Supt. Union Basin Mining Company,
Chloride, Arizona.

**SMELTER RETURNS AND PRODUCTION
OF UNION BASIN MINING COMPANY**

	<u>1915</u>	<u>1916</u>	<u>9 mo. 1917</u>	<u>TOTAL</u>
Am't paid for Zinc shipped	\$684,486.83	\$718,640.90	\$488,958.66	1,892,086.39
Am't paid for Residues "	<u>34,765.78</u>	<u>79,578.12</u>	<u>111,003.02</u>	<u>225,346.92</u>
Total paid for Metals	719,252.61	798,219.02	599,961.68	2,117,433.31
RR Frt. to Smelters	<u>130,486.82</u>	<u>126,708.76</u>	<u>99,111.34</u>	<u>256,306.92</u>
Net Smelter returns	\$588,765.79	\$671,510.26	\$500,850.32	1,761,126.39

TWO YEARS NINE MONTHS WORK

GOLCONDA

Note by G. M. Colvocoresses,

October, 1937.

The attempt by Beach to reopen this old mine proved to be entirely unsuccessful and involved a heavy loss.

I doubt very much if enough pay ore is left to justify any similar procedure in the future.

King

PROPERTY: Goldonda Mining Co. - Middle Golconda Workings.
DISTRICT: Wallapai Mining District, Mohave County, Arizona.
OWNERS : Golconda Mining Co., - a corporation, Mr. Black, President.
VISITED : February 2 and 3, 1926, by D. F. Reed.

LOCATION.

The property of the Golconda Mining is situate in the Wallapai Mining district of Mohave County, Arizona, three and one-half to four miles west of the station of Mineral on the Chloride branch of the A. T. & S. F. Ry., twenty-six miles North of Kingman and seven miles South of Chloride by good auto road.

CLAIMS.

The property consists of twenty-four claims of which five, The Golconda, Tub, Prosperity, Virginia and Little Jimmy, are patented and owned outright by the company, seventeen are unpatented and held by annual assessment work, and two, the Silver and Big Bethel, both patented are held by the company under an agreement to purchase from the Highland or Middle Golconda Mining Co.

A copy of this agreement is attached to this report. It calls for a purchase price of \$85,000 on the two claims, payments to be made periodically with interest at 6% on overdue payments. There is no forfeiture clause. It also requires a payment of a royalty of 5% of net smelter returns on all ore extracted from the claims, said royalty not applying on the purchase price. Judge Krook advises me that that this agreement is a very faulty instrument and one which is likely to cause litigation.

This is important as all present operating stopes and also all of the ore in which the Southwest Metals Co. is now interested and the only outlet for these ores, lie on these claims. The Golconda Company will not acquire deed nor title to these claims until they are fully paid for and therefore no lien could be obtained on this ore as security for any loan made to them.

MINERALIZATION.

Most of the ore deposits in the Middle Golconda workings carry a high percentage of zinc with little or no copper or iron.

On the South end of the Silver claim, in what is known as the

West Branch of the Tub vein, is a shoot of ore carrying lower values in zinc, with some value in copper, some iron and gold and about ten ounces of silver per ton. On the Primrose claim is another vein, also carrying values in copper, gold, silver and zinc.

The veins are fissure veins, with walls of granite. The vein filling is quartz and the mineralization Pyrite, Chalcopyrite, Sphalerite and the silver probably in the form of argentite.

MINE.

All of the ore here considered, lies above an adit level known as the Big Bethel cross-cut. At the time of my visit there had been no attempt to prospect or develop any ore below this tunnel although the ore shoots undoubtedly have a downward extension.

Very little work would be necessary in the mine to put production on the basis of 100 tons per day. The only necessary work on the Tub vein would be a connection between the top of an existing raise and the bottom of an existing winze (about 50 feet) for ventilation. All of the drifts and stopes are open and in good shape and mining could be started at once.

On the Primrose vein, another ventilation raise would be necessary, this about 85 feet in length. Here the stope floors would have to be lagged and chutes built.

The total cost of all preliminary underground work should not exceed \$2000 or, if the Primrose vein is not considered, less than half of that.

ORE RESERVE.

I estimate probable tonnage and values as follows:

Tub vein, West Branch, above 100 level.

Sample No.	Width	Au.	Ag.	Cu.	
49	5.5	.01	7.93	.50	
107	4.0	.04	1.86	Tr	
108	4.0	.04	9.82	Tr.	
112	4.0	.02	4.72	.60	
113	5.0	.02	18.24	2.90	
114	4.0	.02	23.60	3.10	
115	2.5	.02	0.02	.75	
H10	3.5	.02	17.08	.83	
8	32.5	.19	92.27	8.68	
Average	4.06	.024	10.28	1.08	Zn. 3.5% to 4%.
$\frac{81 \times 220 \times 4}{12} = 5400 \text{ Tons.}$					

Between 100 level and 200 level.

Sample	No.	Width	Au.	Ag.	Cu.	Zn.
	H.1	2.3	.02	12.88	.46	
	H.2	2.5	Tr	2.16	.41	
	H.3	5.0	.02	10.74	.45	
	H.4	5.7	.02	12.18	.66	
	216	2.0	.12	5.84	.39	
	H.5	3.4	Tr	5.72	.91	
	H.6	5.3	.01	5.72	.91	
	H.7	4.3	.02	18.08	.62	
	8	30.5	.21	73.30	4.81	
	Average	3.8	.026	9.16	.60	Zn 5.0%

$$\frac{162 \times 90 \times 4}{12} = 4860 \text{ Tons}$$

Total on West branch of Tub vein

$$\begin{array}{r} 5400 \\ 4860 \\ \hline 10260 \text{ Tons} \end{array}$$

Average grad Au. .025, Ag. 9.72, Cu. 0.84%, Zn. 4.5%

The approximate net value of this ore at smelter is \$70,000.

Primrose Vein, Above 100 level.

Sample	No.	Width	Au.	Ag.	Cu.	Zn.
	629	2.5	.06	16.00	.45	9.06
	628	3.0	.04	11.19	.32	8.17
	625	2.0	.12	6.16	.83	5.09
	626	2.0	.08	6.12	.67	4.91
	627	1.8	.05	12.00	1.20	4.59
	608	1.0	.08	7.00	.20	4.14
	609	1.0	.12	4.60	Tr	4.14
	607	2.8	.12	7.20	.80	5.64
	605	1.5	.02	4.84	.40	8.38
	9	17.6	.69	75.11	4.87	54.12
	Average	1.96	.08	8.35	.54	6.00

$$\frac{80 \times 80 \times 2}{12} = 1066 \text{ Tons}$$

Between 100 level and 200 level

Sample	No.	Width	Au.	Ag.	Cu.	Zn.
	605	2.5	.02	4.54	.40	8.38
	607	2.8	.12	7.20	.80	5.64
	608	1.0	.08	7.00	.20	4.14
	609	1.0	.12	4.60	Tr	4.14
	221	1.5	.02	16.00	1.80	3.45
	222	1.0	.18	26.40	1.10	4.14
	219	3.5	.18	4.32	.19	3.56
	223	2.5	.08	4.00	1.50	4.94
	8	14.8	.80	74.56	5.99	38.29
	Average	1.9	.10	9.32	0.75	4.8

$$\frac{80 \times 95 \times 1.9}{12} = 1200 \text{ tons}$$

Total on Primrose Vein

$$\begin{array}{r} 1200 \\ 1066 \\ \hline 2266 \text{ Tons} \end{array}$$

Average Grade Au. .09; Ag. 8.8; Cu. 0.65%; Zn. 5.4%

The approximate net value of this ore at smelter is \$18,000.

Thus the total of these two ore-shoots in

10260	\$70,000
<u>2266</u>	<u>18,000</u>
12526 Tons, Net value at Smelter,	\$88,000.

In addition to these two ore-shoots, Mr. Jacobson estimates as positive and probable ore on these two claims, 37,000 tons with a net value of \$272,000; also a further tonnage which I would list as "Possible ore", and on which no estimates of value is made.

TREATMENT

Tests have shown this ore to be amenable to differential flotation, Mr. Jacobson in fact making this separation into two products for a short period of operation. Owing to the fact that his equipment was inadequate, he was unable to make a clean separation or to handle the separate products and therefore changed to a collective flotation, making only one concentrate. Typical results during this period he gives as follows:

	Au.	Ag.	Cu.	Zn.	Fe.	Ins.	Pb.
Heads	.02	4.16	Tr	9.80	5.4	-	0.32
1st Conct.	.15	27.17	0.86	7.60	28.9	16.4	3.75
2nd Conct.	.05	4.21	Tr.	35.70	17.4	18.9	Tr.
Tails	.005	0.67	Tr.	2.36			Tr.

The low copper content is explained by the fact that only the ore with high zinc and practically no copper content, was being mined.

The old Middle Golconda or Highland company which operated this property in 1923 made such a separation, and an average of sixteen carload lots of concentrates, shipped to this smelter ran:

Au.	Ag.	Cu.	Fe.	Ins.	CaO.	S.	Zn.
.158	43.2	3.38	26.1	21.2	Tr	30.1	9.1

Mr. Jacobson estimates that with a mine production of 100 tons per day, there would be produced 250 tons of copper iron concentrate which would carry 75% of the precious metal values, and 300 to 350 tons of zinc concentrate each month.

MILL.

Before a selective product could be made, some changes and additions would be necessary in the milling plant. To handle 100 to 120 tons per day would necessitate the addition of a 5 x 5 Ball Mill, a 5' Oliver filter, three small flotation machines, two Dorr mechanisms for 8 foot tanks and the rearrangement of the existing machinery. Mr. Jacobson's private estimate of the cost of this was \$8000 to \$10,000.

COSTS.

I estimate production costs as follows:

Mining	\$2.00 <i>low</i>
Milling	2.25 <i>low</i>
Haul	.25
Freight	.50
Miscellaneous	<u>.25</u>

\$5.25 per ton

Necessary expense preliminary to operation

Mine	\$ 2,000.00
Mill	10,000.00
Back payments on claims	9,500.00
Interest on back payments to May 1, 1926,	170.00
Payment due May 1st, 1926,	3,000.00
Lien on property	6,000.00
Back taxes	<u>1,000.00</u>
	\$31,670.00

SUMMARY.

50,000 tons ore net value		\$360,000.
Preliminary	\$ 31,670.	
Royalty	18,000.	
Production	262,500.	
Payment due Jan. 1, 1927	<u>20,000.</u>	<u>332,170.</u>
Profit		\$ 27,830. <i>too small</i>

Considering only the ore in the two copper bearing shoots the summary of costs is thus

12,526 Tons, net value,		\$ 88,000.
Preliminary	\$31,670.	
Royalty	3,500.	
Production	<u>62,761.</u>	
	\$97,931.	
	<u>88,000.</u>	
	\$ 9,931.	

Loss

CONCLUSIONS.

From Mr. Jacobson's very comprehensive report and my own examination, there would appear to be some 50,000 tons of ore on the Silver, Big Bethel and Primrose claims, all lying above the Big Bethel adit. The net value of this ore, or rather, the concentrates which would be produced from this ore, would be approximately \$360,000.

Under competent management this would be extracted and marketed before January 1, 1928, producing a profit of some \$28,000. At that date there would still be owing on the Silver and Big Bethel claims, \$50,000.

It becomes at once apparent that the purchase price of \$85,000. for these claims is excessive.

The future possibilities of the property lie in the development of

the downward extension of the orebodies on these two claims and in the reopening of the old Golconda workings through a drift from the Big Bethel tunnel. I refer you to Mr. Jacobson's report, a copy of which is attached hereto.

The officers and directors of the present company are men who are unfamiliar with mining and the company is financially so involved that I believe they have small chance of operating successfully.

Inasmuch as a capital of \$30,000 would be necessary to secure an uninterrupted operation for at least a year and the present company seems to be without funds, a loan of \$5000 or even \$10,000 would not be sufficient.

There is no apparent way in which the Southwest Metals Co. could be secured on any loan which they might make to this Company.