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Anaconda Copper Mining Company

GEOLOGICAL DEPARTMENT

REPORT

of

WALKER MINING COMPANY

at

THE SPECIAL STOCKHOLDERS' MEETING

Held

At Phoenix, Arizona

May 3, 1923

Preliminary Annual

REPORT

of

WALKER MINING COMPANY

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WALKER MINING COMPANY

To The Stockholders:

In view of the proposed increase in capitalization of the Walker Mining Company for the purpose of building a new mill, and for adding to the mine and camp equipment, it is fitting that you should be given a short review of the operations of the Company for the last few years, and the reasons that have prompted your directors to ask for this expenditure at this time.

At the beginning of the year 1918, the Walker Mine was developed by a two compartment vertical shaft having a total depth of 220 feet. There were three levels, one at 55 feet, one at 125 feet and the lowest one at 210 feet depth. The 55 foot level was developed by 340 feet of drifting on the vein. The 125 foot level had 360 feet of drifts and a crosscut tunnel connecting with the surface. On the 210 foot level there were approximately 1200 feet of drifts and crosscuts and from this a winze 80 feet deep was sunk. The total depth attained in the mine was 290 feet.

The tonnage of ore blocked out at this date was 40,000 tons and a further amount of probable ore of 40,000 tons, making a total of 80,000 tons that had an assay value of copper 3.32%, silver 1.35 oz., gold .02 oz. per ton.

The ore all had to be hoisted and transferred by aerial tram to the mill situated about 5000 feet away and 835 feet lower than the collar of the shaft.

The mill had a capacity of 100 tons and the con-

concentrates were hauled 19 miles to Gulling, the nearest available shipping point. The average cost of this hauling was \$10.00 per ton.

Wood was used to generate power both at the mine and mill plant, and the cost for power was excessive, and amounted to 50¢ per ton for mining and 92¢ per ton for milling.

Since 1918 there was a period from October, 1920, to May, 1922, when mining and milling operations were suspended, due to the low price of copper. Development work in the mine on a small scale was steadily prosecuted during this time. At the present, total development is shown as follows:

The third level has been extended and opened up. It now has 1500 feet of drifts along the vein and 185 feet of crosscuts.

Below this, four new levels have been driven, opening up and developing an ore body to the tunnel level. This main tunnel is 855 feet vertically below the collar of shaft and enters and explores the vein at a point approximately 960 feet below its apex. It was started as a crosscut from a point near the mill, and on a level with the ore bins. At about 4000 feet from its portal, it enters and follows the vein for a distance of 1500 feet.

Four raises from this tunnel level connect the levels above and develop, block out and prove the ore body.

In all there are more than 15,000 feet of development by drifts and crosscuts.

The tonnage shown by development is conservatively placed at more than 900,000 tons of ore, with an average value of 4.20% copper and \$2.50 in gold and silver. The ore body is now opened up and ready for economical mining. At the present time there is a reserve of broken ore of more than 91,000 tons in the stopes.

A power line has been built and electric power is now installed throughout the mine and mill. Two electric trolley locomotives with the necessary cars and a track with 35# steel rails have been added to the main haulage equipment.

The completion of the tunnel level permitted the removal of the mine camp and its consolidation with the mill camp. At the camp we now have ore bins of 600 tons capacity, well equipped and well lighted shops, mine office, commissary, cook house, two bunk houses, sixteen modern cottages, and a well equipped hospital.

A tailings dam large enough for the storage of

mill tailings for several years has been built.

An aerial tramway 8.2 miles in length from the mill to Spring Garden, a station on the Western Pacific, was completed in 1920, and has been in operation since. In the six months ending 1922, the tramway handled approximately 20,000 tons of concentrates and crude ore successfully and in addition 500 tons of back freight.

The actual costs per ton for tramming to Spring Garden for the nine months ending February 28, 1923, were as follows:

June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
\$.70	\$.82	\$.90	\$1.17	\$.81	\$1.18	\$1.51	\$1.13	\$1.01

or an approximate cost of \$1.00 per ton. When it is recalled that the cost of hauling by team prior to this installation was \$10.00 per ton, the saving is readily seen.

A reduction in freight rates has been effected during the past year which has resulted in a material saving.

Upon the tonnage shipped since this new rate went into effect, the saving in freight over the old rates has been more than \$70,000.00.

From a rating of 100 tons per 24 hours in 1918, the mill capacity has been increased to somewhat more than 300 tons per day.

Below is a table showing the results of mill operation during the ten months ending February 28, 1923:

	<u>Days</u>	<u>Tons</u>	<u>Heads</u>	<u>Tails</u>	<u>Concts.</u>	<u>Recovery</u>	<u>Ratio of</u> <u>Concn</u>	<u>Lbs. Cu</u> <u>Produced</u>	<u>Cost</u> <u>Per Lb.</u> <u>FOB New York</u>
May, 1922	9	1333	7.96	0.47	23.565	95.35	3.104	202,346	
June	30	4575	6.57	0.382	21.346	95.94	3.475	576,625	
July	31	6224	5.65	0.336	21.95	95.49	4.067	571,897	\$.0953
Aug.	31	6572	5.65	0.336	21.00	95.58	3.94	687,538	.0882
Sept.	30	4866	5.784	0.345	21.12	95.563	3.848	537,967	.0985
Oct.	31	5308	5.18	0.315	20.512	95.461	4.171	524,948	.1055
Nov.	30	4856	4.684	0.288	19.985	95.337	4.492	433,486	.12547
Dec.	31	5118	4.935	0.257	20.555	95.93	4.36	483,415	.11067
Jan. 1923	31	5390	4.555	0.355	22.622	95.86	5.439	450,603	.11006
Feb.	28	5136	4.204	0.198	21.38	96.225	5.433	404,169	.10022

The cost of repairs has been abnormally high and it has been impossible to keep the mill running steadily for any extended period. Shutdowns have been frequent amounting to as much as one-sixth of the total days in any one month, resulting in high milling costs. Milling costs for the nine months ending February, 1923, were as follows:

Milling per ton ore	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
	\$2.12	\$1.53	\$2.16	\$2.03	\$2.46	\$4.06	\$3.06	\$2.95	\$2.86

This lack of efficiency has been due largely to insecure foundations and in part to faulty design and inadaptability to the needs of the ore. However, it was thought inexpedient to

replace it with a new mill until such time as the mine showed sufficient ore in sight to justify the expenditure. Your directors believe that such a time has come.

With the ore in sight, - that already broken in the stopes and that ready to break - besides the probable new tonnages that may be developed, the pressing need is for an up-to-date efficient mill capable of a greatly increased tonnage.

This new mill will enable the Company not only to reduce its milling costs, with a consequent increase in profits, but will place it in a position to reduce its indebtedness in the shortest possible time, thus eliminating the payment of interest. It will hasten the time when dividends will be realized.

The mining costs have been high, due to the fact that the last few years have been a period of development. Actual mining costs per ton ore for the nine months ending February, 1923, were as follows:

Mining	per ton	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
ore -	-	\$3.98	\$4.66	\$3.03	\$4.15	\$3.68	\$5.49	\$2.83	\$2.53	\$2.13

A large portion of the ore produced and milled has been taken from the drifts, raises and crosscuts run primarily for the purpose of exploration and development. In the future, ore will be largely produced by stoping, and the cost per ton of mining will be much reduced.

With mining costs lower, with an efficient mill to reduce the ore to concentrates at probably one-half the present cost of concentrating, with a tramway capable of delivering from mill to the railroad, the cost of laying down a ton of concentrates at the shipping point will be reduced to a minimum. To do this it will be necessary to have a new mill, and make mine and camp improvements. Below is the estimated cost of these improvements:

Crushing Plant and Concentrator	\$268,942.00
Moving boilers and installing heating plant	6,000.00
Compressor Plant	55,000.00
Additional Transformers and Steel Transformer House	10,000.00
New Shop and Equipment	25,000.00
Addition to Warehouse, moving oil tanks, etc.	8,000.00
New Bunk House	12,000.00
Twelve New Three Room Cottages	12,000.00
New fire hydrants and changes in lines	6,000.00
Total - - -	\$382,942.00

OTHER DEVELOPMENT:

In addition to the ore body now being mined, there is a shoot to the north in the same vein which has been developed on the third level by a drift for a distance of about 800 feet. In this interval its grade exceeds 5% in two spots for a total length of about 100 feet, while for a distance of 500 feet the average copper content is 2%, the

remaining portion being lower than this. A north drift on the sixth level recently penetrated this shoot, showing across a 50-foot width a $1\frac{1}{2}\%$ grade that corresponds to a similar grade on the third level immediately above this point.

While the third level showing does not give much promise of rich ore in this shoot, there is the possibility that it will come in below this level as was the case in the main shoot.

Wherever it has been developed to the south, the main ore shoot has become lean and remains so for a distance of 800 to 1000 feet. However, the southernmost point on the tunnel level indicates an improvement in grade south of the lean material and points to the possibility of the existence of another ore body south of the present workings.

WALKER MINING COMPANY

Balance Sheet

December 31, 1922

ASSETS

Mines and Mining Claims	\$1,331,924.98	
Plant and Equipment	1,021,813.91	
Supplies	127,269.66	
Ore Inventories	177,421.66	
Expenses Paid in Advance	3,556.51	
Accounts Receivable	19,433.64	
Cash	29,674.20	\$2,711,094.56

LIABILITIES

Capital Stock	\$1,350,000.00	
Notes Payable	833,086.85	
Accounts Payable	841,419.58	
Reserve for Depreciation	40,698.75	
Reserve for Depletion	413,081.87	
Profit and Loss	768,192.49	\$2,711,094.56

WALKER MINING COMPANY

Detail of Plant/Equipment Accounts
December 31, 1922

Buildings and Improvements	\$126,508.03
Mine Machinery and Equipment	51,212.36
RockHouse Machinery and Equipment	12,974.59
Mill - Machinery, etc.	
Buildings	41,000.00
Machinery, etc.	118,217.46
Electric Power Equipment	18,877.14
Saw Mill Equipment	7,503.37
Tunnel and Equipment	343,453.79
Spring Garden Tramway	211,086.03
Railroad Spur at Spring Garden	2,133.39
Railway Survey	2,176.70
Livestock and Stable Equipment	2,554.56
Office Equipment	430.02
Assay Office Equipment	188.11
Hospital Equipment	1,889.05
Dam	37,858.60
Equipment - Plant Facilities for Employees	5,421.29
Aerial Tramway - Mine to Mill	16,520.31
OreBins	2,137.93
Flume	1,534.10
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	\$1,003,676.83
Electric Power Pole Line - To be refunded by the Great Western Power Company by credits on power purchased	
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	18,137.08
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	\$1,021,813.91