

NOTES ON ANNUAL STOCKHOLDERS MEETING

OF

MOUNTAIN CITY COPPER COMPANY

AT

SALT LAKE CITY, APRIL 4th, 1938

By Jay A. Carpenter

-0-

According to my notes, President Elton reported as follows:

None of the 11 $\frac{2}{3}$ million pounds of copper on hand on January 1st, 1938 has been sold, or none of the production of January, February and March, leaving on hand to date about 17 $\frac{1}{2}$ million pounds.

The bank loans of \$450,000, remain as on January 1st, but the indebtedness to International Smelting & Refining Co., has been increased from \$302,314.34 to \$618,000.00 at the present time, or a total of the two of \$1,068,000.00. The bank loan is at a 2% rate, and the International at 2 $\frac{1}{2}$ %.

In March there was produced 2.3 million pounds, but April production will be cut to 0.7 million pounds, operating 5 days a week.

The hauling charge on ore and concentrate to Mountain Home, Idaho, the only road open, is now \$3.75 a ton for the 117 miles. The road to Elko, if the new cut off is completed, will be but 82 miles and should reduce present hauling costs to \$3.00, as 10 ton trucks can be contracted on about a \$3.00 an hour basis.

The present trucking contract has 24,000 tons yet to be hauled. Our advance of \$80,000 to the contractor to be repaid at \$1.00 a ton, has but \$4,000 yet unpaid.

The recent raise in freight rates of 10% will increase the freight rate from Ely to Salt Lake from \$2.00 to \$2.20 and the rate on blister copper from Salt Lake to the East from \$12.50 to \$13.75 a ton, therefore the need of a lower trucking rate to the railroad.

At the mine the scale of pay is 50¢ a day under the Butte scale, which varies with the price of copper. The peak pay last year for miners was \$5.50, and it is now \$4.75. There is no union and most of the labor comes from Idaho farm districts and is trained to underground work by the Company. An apprentice method is used. After 6 months at mucking, the man is advanced to an apprentice miner, and after 6 months more to a miner at miner's pay. At one time only 12 men in the mine had ever worked at any other mine.

The men are contented, especially the married men, who rent the new 3 room apartments for \$15.00^{a month} and pay but 1.0¢ a kw. hr. for electricity for lighting, cooking, refrigeration, etc.

There are no new capital investments of any size contemplated at the mine this year.

When questioned as to the late development work on the 700 Level, and the present ore reserves, he asked the stockholders to interview Ton Lyons, geologist and director, and see the mine model.

When asked about various costs at the property he said the cost records were all available.

The minutes of the last Director's meeting were read, and Mr. Elton stated the record of all of the past year's meetings were open to the stockholders.

A vote of thanks was given the management by those present, and the same Directors were reelected without opposition.

My Notes on Mr. Tom Lyon's Statement;

The Company has drifted for over 300 ft. on the new 700 Ft. Level under the "600 Ft. Level Ore Body" in low-grade vein material. Near the end of this drift, a raise to the 600 Level encountered abruptly at 50 ft. up, the 600 Level copper sulphide ore body of milling grade, and was still in it at 25 ft. above the 600 Level. Development work will, in time, tell whether the vein becomes impoverished at the 700 Level, or if another flat fault may have displaced the continuation of the 600 Ft. ore body with depth.

Notes on the Minutes of the Director's Meetings.

The Directors in April, 1937, approved a contract with the International Smelting & Refining Co., for the smelting of its ore and concentrate; and for the refining and sale of the copper.

The main points of this contract, as attached to the Director's minutes, are as follows:

The contract is from April 1, 1937 to March 31, 1939, and thereafter until canceled by one year's notice.

The gold content to be paid for if over 0.02 oz. per ton, at 91% recovery, at U. S. price; the silver content at 95% recovery at U. S. price; the copper content at 97½% recovery less 5 lbs. per ton ore, at sale price obtained. The copper content is to be determined by wet assay method, and the copper is to be turned over to the

Anaconda Sales Co., as electrolytic copper within 100 days from receipt of ore. The average assay is to be taken if the difference does not exceed 0.01 oz. gold, 0.10 oz., silver, or 0.1% copper.

The base smelting rate is to be \$3.90 a dry ton of ore (ore or concentrate) based upon 50¢ an hour for common labor at the smelter, and upon liquid gas as fuel at 10¢ to 12¢ per one million Btu.

For each 10¢ increase in hourly wage, 50¢ is to be added to the smelting rate, with fractions in proportion. This cost per labor hour is to include actual wage, plus all overhead cost of labor, such as accident compensation, hospital, old age, unemployment, vacations, etc.

For each 2¢ raise or drop in fuel prices, 10¢ is to be added or subtracted from the smelting charge.

(Note: With a 50¢ base for labor, and 50¢ increase for each 10¢ variation, indicates the base is predicated on 5 hours labor charge per ton smelted, or \$2.50 a ton, likewise the fuel charge is figured at 5 million Btu. or 50¢ a ton.)

This smelting charge is just to the form of matte, as there is a separate converting charge to blister, of 0.4¢ per lb. of metal copper produced.

To refine the blister, at the Perth Amboy, New Jersey plant, the charge is that of freight from Salt Lake, being \$12.50 a ton in April, 1937, and a rate of \$20.00 per ton of refined copper, based on labor at 52.5¢ an hour, with a 15¢ variation per ton for each 1.0¢ variation in labor cost, and based on coal of 14,000 Btu. at \$4.48 a ton with a 40¢ variation for each \$1.00 variation in cost per ton, or on fuel oil of 18,500 Btu. at 2.86¢ a gallon, with a 70¢ variation for each 1¢ variation in cost per gallon.

(Note: This indicates a labor cost of 15 hrs. per ton of copper for refining, and 800 lbs. of coal, or of \$7.90 for labor and \$1.80 for fuel.)

The rate is to be determined for each calendar month, and to be applied the following month.

The Anaconda Sales Co. is made the sales agent at a commission of \$1.50 per ton of copper sold to the American Brass Co., (a subsidiary of Anaconda) or \$2.50 if sold to others. (The average amounts to 0.1¢ per lb. of copper)

The above contract is a treatment, not a purchase contract, and the Company assumes all cost of reduction to metal, requiring a 100 day period, before sale of the copper can be made. Previously a direct sale had been made to the International Smelter at Salt Lake.

In the April, 1937 meeting, a resolution was passed giving authority to issue quarterly to each stockholder, a concise statement showing the balance sheet and income account. (This has never been carried out.)

At a May 15th, 1937, meeting, the contract with International Smelting was formally ratified, and arrangements confirmed to list the stock on the New York Curb.

At a September 1st meeting, the President reported a production of 13 million pounds under the new contract of April 1st, with 0.5 million pounds unsold, and estimated at 13¢ a pound value.

At a September 30th meeting, it was announced that with the price of copper falling to 12¢ production rate would be cut 20%.

It was stated that during the last two years the Company had spent \$45,000.00 on the Idaho roads, and an authorization was given to advance up to \$5,000.00 a month for 4 months for Nevada road construction.

At a September 30th meeting the mine production under the new contract was given at 2.8 million pounds in April, 3.0 million in May, 3.0 in June, 2.2 in July, 3.7 in August and 2.3 in September, or 17 million pounds total, (later figures were 2.8 in October, 1.7 in November, and 1.7 in December). Of the 17 million, 7.45 million had been sold for \$1,000,000.00 (13.3¢ a lb.), with 5 million contracted for at \$725,500.00 (14.5¢), and with 4.5 million pounds unsold.

The profit for the year from January 1st to August 31st was given as \$848,000.00 with \$23,000.00 to be deducted for depreciation and \$210,000.00 for depletion, leaving \$615,405.00 from which would be deducted \$91,000.00 for Federal Income Tax, leaving a net balance of \$524,405.00. However, due to the uncertainty of the copper market, no dividend was thought advisable.

At a meeting on December 2nd, the President stated that the expenditure for the year in fixed assets would total \$345,000.00 which included new buildings, tailing disposal, payment on Black Rock claims, patenting claims, water supply, etc.

It was estimated that by the end of the year there would be accumulated 11.2 million pounds of unsold copper at a cost of \$895,000.00 (8¢ a lb.).

A resolution was passed as follows: "Whereas the surplus profits are now in excess of \$600,000.00 and by December 31st will greatly exceed this, therefore a 25¢ per share dividend is declared payable December 23d, 1937, and the President is

instructed

directed to borrow the necessary cash needed, paying up to 4% interest."

At a December 27th meeting the President reported a loan of \$450,000.00 at 2% rate, with \$150,000.00 each at the Continental and First National Banks of Salt Lake, and \$100,000.00 at the Walker Bank of Salt Lake, and \$50,000.00 at the Anglo-American at San Francisco, with also, \$145,000.00 from the International Smelting.

On March 25th, 1938, the annual report for 1937 was presented, and a statement made that to date there was now 16 million pounds of copper unsold, and the loan from the International Smelting Co. had been increased to \$618,484.00.

The salient features of the annual report can be stated as follows:

The year's production is given as 26,148 tons of direct shipping ore (assaying about 26% copper) and 130,222 tons of milling ore assaying 8.264% copper. From the milling ore there was produced 45,480 tons of concentrate assaying 22.435% copper. These figures show a concentrating ration of 2 7/8 tons of mill ore into one ton of concentrate, with a saving of 94 2/3% of the copper content.

Practically all this tonnage of crude ore and concentrate was shipped out, giving a net production of 33 million pounds of copper, with an almost negligible content of silver and gold.

The company in April, 1937 changed from the policy of selling direct to the smelters, to that of paying all costs of shipping, smelting and refining, and selling the copper through the Anaconda Sales Company. At the end of the year there was about 11 2/3 million pounds of copper unsold, or 3 months production, which is valued "at cost", or \$969,271.85, indicating a cost of 8.3¢ a lb. Adding to this valuation, that of \$2,700,000.00 for copper sold, gives a production valued at \$3,680,000.00 for the year. This gives a value of about \$23.80 a ton of ore mined, at a selling cost of 11.15¢ per pound of copper.

The cost of mining and milling is given as \$1,120,820.43, with a slightly greater cost of \$1,228,863.64 for smelting, refining and transportation, giving a total cost of \$15.07 a ton for these items. In addition to these items are, among others, "Federal income taxes," estimated at \$137,743.88, and "Depreciation" set at \$134,608.73. The "Net Income without deduction for mine depletion" is given as \$1,059,298.67, or \$6.80 a ton on the 156,000 tons mined. This amounts to about 29% of the gross, which is an excellent margin of profit on a 11.15¢ copper market.

A dividend of 25¢ per share on the 2,371,427 shares of stock accounted for \$592,631.75 of this Net Income, and a long list of improvements made during the year is given, which probably accounted for much of the balance of it. For instance, "an addition to the flotation department increased the capacity of the mill from 300 tons to approximately 450 per day.

Current liabilities are high, totaling \$1,030,489.98, because of loans made on unsold copper, but the current assets including this unsold copper, total \$1,401,480.91, or an excess over current liabilities of over a third of a million, or 14¢ a share.

No statement is made as to ore reserves. As to development work on the lowest, or 700 Level, the report states: "The vein was cut December 1st. By January 1st 200 feet of drifting had been accomplished. The vein developed to that date was low grade and similar in appearance to the vein developed on the 600 Level above. The drift, however, had not quite reached a point far enough westward to be beyond the projected position of the ore body as developed on the 600 Level."

Cost Data for the 1937 Operations.

From the cost sheets I took the following data:

Mine Operation:-

Square set stoping of 135,789 tons, gave a cost to chutes on mine levels of: "Labor, \$1.39; Supplies 66.6¢; 'Expenses' 50¢;" totaling \$2.52, being the direct cost. Another breakdown was \$2.34 for operating, with 18¢ for repairs, or \$2.52. Of the \$1.39 labor, 64¢ was for miners, 60¢ for muckers, 3¢ for shop labor, 5¢ for superintendence, etc. The indirect cost for stoping, or "Miscellaneous" is given as 78¢ which added to \$2.52 gives \$3.31 total, or \$450,000.

Development work; to find ore and prepare for mining it :-

On the "200 Level" ore body"	\$210,000.00	Tons ore produced	24,839
On the "600 Level " " "	44,000.00	" " "	30
By Shaft Sinking (260 Ft. @ \$131)	34,000.00	" " "	none
By Top Slice Preparation on 200 Level			
200 Level	1,600.00		

\$229,600.00 being both direct and indirect

charges. (Footage of headings driven on "200 and 600 Ore Bodies" development was not given in feet, as usual in most reports, but expressed only in tons of ore produced from the work.)

This expenditure of \$289,600 on the total 160,000 tons of ore mined, gives a development cost of \$1.80 a ton.

Under the head of "Producing Ore" is given, evidently, the total expenditure to deliver the broken ore from chutes or faces to the surface ore bins. The cost per ton is divided into "Labor, 11¢, Supplies, 3¢; 'Expenses' 53¢; and Miscellaneous, 20¢"; totaling 88¢. (Based on the 160,000 tons of ore from stoping and development, the total cost per ton figures out at \$5.50 a ton, delivered on the surface with about one-third of the cost for development and two-thirds for mining.)

The rather unusual charge termed "Expense" is the pro-rata charge of some 18 "Redistributable Charges" such as Shops, Electric Power, Hoisting, Steel Sharpening, Air Compression, Motor Haulage, Pumping, Ventilation, Sampling, Assaying, Safety, etc. The total cost of "Electric Power" was given as \$61,000.00 for the year, with \$53,207.00 to the Idaho Power Co. (This for 160,000 tons, gives a total cost for power for all mining, milling, and surface plant use, of 38¢ a ton. A power bill for one month, gave a cost of slightly under 1.0¢ per kw. hr. used.)

The total cost of "Pumping" was given as \$18,416.00 divided into labor, \$3,432.00; electric power, \$5,680.00; repairs, \$5,600.00; etc. (In shaft sinking over 300 gallons a minute was pumped to the surface.)

The total cost of "Hoisting and Lowering" was given as \$62,023.00, with labor at \$42,000; power at \$9,750.00; repairs at \$8,000.00; etc. (This is a high cost of nearly 40¢ per ton of ore)

Direct costs of milling, under "Mill Operation" are divided into Labor, 35.6¢; Supplies, 36.4¢; and "Expenses", 33.6¢, or a total of \$1.06 per ton for the 130,222 tons milled.

Of the "Expenses", 21.4¢ was for power, 3.6¢ for heating, 3.7¢ for laboratories, etc.

Another division given was 92.4¢ for operating and 13.3¢ for repairs and replacements.

Another labor division indicated a total crew of 24 men, including repair, shop, and superintendence. This for 360 tons a day is 1 man, or 1 shift, for 15 tons milled.

Of the supplies, reagents cost 18¢ a ton, steel balls 9¢, repair parts 5.2¢, etc.

The indirect, or "Miscellaneous" charge for milling amounted to 30¢, giving a total milling charge of \$1.06 plus 30¢ or \$1.36. The mill ore averaged

8.26% copper, 0.266 oz. silver, and 0.0058 oz. gold, with an insoluble content of 50.5%; iron, 16.5% and sulphur 18.62%. The tailings assayed 0.825% copper; 72.7% insoluble; 9.82% iron and 9.36% sulphur.

The metal loss in concentrating was 5.4% of the copper, 26.67% of the silver, and 37.27% of the gold.

The "Miscellaneous" account totaled \$214,000.00, or \$1.34 per ton of ore mined. Some of the subdivisions of this account were:

Salt Lake Office, Salaries, accounting, purchasing, etc.	\$19,000
Mine office at mine	19,000
Engineers office at mine	7,263
Managers office at mine; Salaries, Labor, Auto	15,102
Camp maintenance	27,815
Roads	27,000
Insurance, fire, group	2,400
Taxes	33,312
Administration;—Reports auditing, advertising, director's fees	2,230
Listing Stock, certificates, transfer fees	13,318
Capital stock tax	20,000

"This "Miscellaneous" cost was pro-rated back, giving approximately to "square set stoping and development", 76¢, to "producing" 20¢ and to "milling", 35¢.)

Expenditures charged to capital account totaled \$393,000.00, divided into New Buildings, \$152,734.00; Camp Equipment, \$55,000.00; Mine Equipment, \$65,000.00; Mill Construction, \$47,000.00; Tailings Disposal, \$16,000.00; and Black Rock (an adjoining group of claims) option \$52,844.00.

The 26,000 tons of ore shipped without milling averaged about 26.35% copper, 0.4 oz. silver, and .0066 oz. gold. The 44,619 tons of concentrate, 22.6 % copper, 0.52 oz. silver and .01 oz. gold. The crude ore as shipped, contained 2.94% moisture and the concentrate 8.5%.

In the "Years Cost of Sales"; the total cost of hauling is	
given as	\$289,000.00 or \$4.10 a ton
and the total cost of freight to the smelter	<u>169,000.00</u> or \$2.68 a ton
	\$478,000.00
Smelting, freight, refining, selling and delivery	<u>749,398.00</u>
	\$1,227,398.00

Cost of Mining and Milling (without Depreciation or Depletion) \$1,017,000.00

(This shows a greater cost to market a 22.5% copper product, than to produce the same at the mine!)

In the "Cost per Pound of Copper Produced"-

Mining and Milling	5.08¢)	4.5¢
Transportation to Smelter	1.42¢	(
Depreciation(\$208,000)		at	.63¢
Smelter Treatment			1.50¢
Freight and Refining			<u>1.67¢</u>
		Total	8.10¢
Less Gold and Silver Credit			<u>.013¢</u>
(Selling cost is about .1¢ additional)		Net	8.073¢

(The annual statement gives the cost of the 11 2/3 million pounds on hand as

8.30¢)

Comments on Costs and Profits.

The annual report shows a production of:

26,148 tons of direct shipping ore and

130,222 " " milling ore.

156,370 tons total.

The "Net Production" is given as 33 million pounds of copper, or 210 lbs. per ton or an average of 10.5% copper.

This is a very rich copper ore compared with the ores mined in Ely averaging 1.0 to 1.5% copper!

The total costs of 2 1/3 million dollars, amounts to about \$15.00 a ton, - a very high cost compared with \$1.50 to \$2.00 at Ely!

Even at 10¢ copper, the 10.5% ore would net \$21.00, leaving over a 25% margin of profit, or at the rate of over a 35¢ dividend a year.

However the 26,148 tons of shipping ore produced 40% of the copper, while the 130,222 tons of milling ore (or 5 times this tonnage) but 60%. It took 3 tons of milling ore to produce the same number of pounds of copper as 1 ton of the shipping ore. At the cost of \$5.50 per ton delivered to the surface, and \$1.35 for milling, the 3 tons of mill ore converted into concentrate of the same copper content as the shipping ore, would entail an expense of 3 times \$6.85, or \$20.55, while the shipping ore's only expense was mining, or \$5.50 a ton. This saving in cost of \$15.00 a ton on the 26,000 tons, or 16 2/3 of the ore mined, can be credited for about 40% of the million dollar profit for the year.

Another viewpoint, is that the total cost, without income taxes, depreciation and depletion, per ton mined for 1937, was \$2,349,684.00 for 156,370 tons, or \$15.00 a ton.

To have had the same copper content if all the ore had been of the milling grade, 8.26% copper, there would have had to be mined 52,000 more tons at \$5.50 and 78,000 more tons milled at \$1.35, at a total cost of approximately \$391,000.00 more. This would have increased the total cost to approximately \$2,736,000.00 and lowered the profits about \$400,000.00. With 33 million pounds of copper, this would have increased the cost to 10¢ per pound of copper.

A drop to an average 6% copper ore, which is in general a very high copper content mill ore, would have reduced the net copper production to 19 million pounds of copper, and with last year's expenses, giving a cost of 14.3¢ per pound of copper, which would have been more than last year's average price.

Of course in times of adversity expenses could be reduced, and likewise last year's high development costs lowered, but the necessarily high mining costs, and the high transportation and marketing costs due to the low concentrating ratio, and distance from markets, will always keep the total costs per ton of ore mined at a high relative figure.

The annual report failed to give the most important figure, that of tons of ore in "sight". An outside engineer, J. J. Beeson, reporting in March, 1937, for listing on the New York Curb, estimated the proved, probable and possible ore at that time, at 663,720 tons of 11% copper content. Roughly, based on last year's costs, sale prices and profits, this ore would indicate close to five million profit, or \$2.00 a share in 4 years time.

This estimate included the "600 Ore Body" which is below the enriched zone of secondary deposition from surface leaching, or in the primary sulphide ore. This ore body will probably break a mill ore of 5% to 6% copper content.

This is the type of ore to be expected if found below the 600 Level, or with greater depth. Since the development work on the "600 Ore Body" in 1937, which probably included the new 700 Level work, (costing \$44,000.00, or a possible 2,200 feet at \$20.00 a foot) produced but "30 tons of mill ore", there was probably no additional tonnage developed over Beeson's estimate, and with the 700 Level barren to date. On the 200 Ore Body there was probably a considerable tonnage developed,

but the annual report states that the development of the main ore body on the 200, 300 and 400 Levels was completed during the year, and todate the 700 Level has developed no ore. Taking the above into consideration along with the length and grade of pay ore decreasing with depth, there are signs that the life of the mine will be limited to less than a decade at the present rate of plant capacity of 400 tons a day, unless the unexpected happens, as is so frequently related of mines, but which occurs so infrequently.