ANALYSIS OF COST SHEETS, EXPLAINING INCREASE OR DECREASE IN VARIOUS ACCOUNTS BETWEEN YEARS 1918 - 1917.

### GENERAL EXPENSE

Engineering,

Acct. 27, Year 1918, \$1909.79 Cost per Ton .007
Year 1917, 2589.63 " .010
Decrease 1918, 679.84 " .003

Decrease in this account is due to less engineering work necessary during last year as compared with 1917.

Analysis,

Acct. 28, Year 1918, \$7609.44 Cost per Ton .026
Year 1917, 6421.18 " .024
Increase 1918, 1188.26 " .002

Increase in this account over 1917 is due principally to increase in wages and cost of chemicals and other laboratory supplies.

Personal Injury,

Acct. 30, Year 1918, \$4107.10 Cost per Ton .014
Year 1917, 2261.69 " .008
Increase 1918, 1845.41 " .006

The increase for this year as compared with 1917 is due to increased compensation to Doctors and our proportion of loss in operating Ishpeming Hospital.

Mine Office,

Acct. (a). Year 1918, \$4218.98 Cost per Ton .015
Year 1917, 3447.37 " .013
Increase 1918, 771.61 " .002

The increase in this account is due to the increase in salaries.

District Office,

Acct. (b), Year 1918, \$12117.75 Cost per Ton .042
Year 1917, 10826.36 " .041
Increase 1918, 1291.39 " .001

The increase in this account is due to the increase in salaries.

## SUMMARY GENERAL EXPENSE.

Year 1918, \$30648.09 Cost per Ton .106 Year 1917, 25620.78 " .096 Increase 1918, 5027.31 " .010

The increase in General Expense is principally due to increase in salaries and compensation to Doctors and Ishpeming Hospital.

MORRIS LLOYD MINE.

## MAINTENANCE

Tracks & Yards,

Acct. 125,	Year 1918,	\$2193.41	Cost per Ton	.008
	Year 1917,	1498.61	11	.006
	Increase 1918.	694.80	11	.002

The increase in this account is due to the new ruling of the Railroad administrator in having the mines pay for the maintenance of side tracks around the mines.

Docks, Trestles and Pockets,

with a controlly				
Acct. 126,	Year 1918,	\$408.17	Cost per Ton	.001
	Year 1917,	298.18	11	.001
	Increase 1918.	109.99	11	

During the year it cost more to maintain the pockets in the shaft house than the year previous but did not effect the cost per ton.

Buildings,

Acct. 127,	Year 1918,	\$420.81	Cost per Ton	.002
	Year 1917,	370.83	11	.001
	Increase 1918.	49.98	11	.001

The increase this year is due to repairs made on Section 6 Shaft House.

Shop Machinery,

Acct. 128,	Year 1918	\$277.73	Cost per Ton	.001
	Year 1917	162.32	18	.001
	Increase 1918.	115.41	11	

The increase in this account is due to the purchase of 4 sets of pipe dies for pipe cutter in machine shop.

Heating Plant.

Tromagraph & Toursal				
Acct. 129,	Year 1918,	\$144.78	Cost per Ton	.001
	Year 1917,	271.75	H	.001
	Decrease 1918.	122.97	11	-

The cost this year represents only the usual repairs to Heating Plants, the increase cost for 1917 being for considerable repairs made on the Section 6 heating boiler.

Hoisting Mach'y,

Acct. 130,	Year 1918,	\$7297.41	Cost per Ton	.025
	Year 1917,	4656.75	11	.017
	Increase 1918,	2640.66	11	.008

The increased cost this year is due to putting on 4-1700' new hoisting ropes at the Morris Shaft, and 3-1300' new ropes at the Lloyd Shaft, also 403' of 12" counterweight pipe at the Morris. The charges at the Morris were due to sinking the shaft an additional 400 feet. A new gear and pinion was placed on the Lloyd Hoist during the present year at a cost of \$584.68. A new Top Shieve was also installed at a cost of \$159.60

## MAINTENANCE (CONTINUED)

Compressor & Power Drills,

Acct. 131, Year 1918, \$ 50.75 Cost per Ton .000
Year 1917, 918.08 " .003
Decrease 1918, 867.33 " .003

The decrease this year is due to the fact that very few repairs have been necessary on our compressors and no new equipment purchased.

Pumping Mach'y,

Acct. 132, Year 1918, \$8789.90 Cost per Ton .03 Year 1917, 3539.12 " .013 Increase 1918, 5250.78 " .017

The increase in this account is for 2 new Herring bone gear and pinions for the large Prescott Pumps in Morris mine, costing \$3145.30 and also the cost of raising up from Morris shaft under the sump. This raise is used to run out the mud that accumulates in bottom of sump. The entire pumping plant on the 6th level also was moved and a new sump for same cut in 1918.

Top Tram Eng. and Cars,

<u>Acct. 133</u>, Year 1918, \$4389.24 Cost per Ton .015 Year 1917, 1496.68 " .006 Increase 1918, 2892.56 " .009

The increase in this account is due to the purchase of one 50 H.P. Motor for Morris Mine and 3400 ft. 5/8" Wire Rope, also for rewinding armatures repaired at the Hard Ore Shops.

Skips and Skip Roads,

Acct. 134, Year 1918, \$1404.80 Cost per Ton .005
Year 1917, 987.40 " .004
Increase 1918, 417.31 " .001

The cost for 1918 represents only the usual repairs necessaryin the operation of Skips & Cages. The increase in wages is about the only factor that accounts for the increase.

Undg. Tracks and Cars,

Acct. 135. Year 1918, \$2381.26 Cost per Ton .008
Year 1917, 3123.30 " .012
Decrease 1918, 742.04 " .004

The account again shows a decrease over the preceeding year. The cost representing only the general upkeep of this equipment. No new rail was used during the year.

# MAINTENANCE (CONTINUED)

Electric Tram Plant.

Acct. 136,	Year 1918,	\$10079.82	Cost per Ton	.035
	Year 1917,	8057.18	11	.030
	Increase 1918.	2022.64	11	.005

The increase in this account is due mainly to locomotives. It was almost impossible to get the proper grade of material that would stand the hard wear that this part of the equipment is put to especially armatures and wheels and numerous renewals were necessary. Increase in wages, also, helps to increase this account.

Tel. & Safety Devices,

Acct. 137,	Year 1918 Year 1917	\$974.53 468.17	Cost per Ton	.003
	Increase 1918.	506.36	n	.001

The increase in this account is due to repairs to lighting system in mine, telephones, ladderways, etc.

# MINING EXPENSE.

Air Pipes,				
Acct. 150,	Year 1918	\$2303.71	Cost per Ton	.008
	Year 1917	1995.81	11	.007
	Increase 1918,	307.90	n .	.001

The increase in wages accounts for the increase in this cost over 1917. Only the regular maintenance of branch lines has been necessary during the past year.

Compressors.

Acct. 151,	Year 1918,	\$25595.25	Cost per Ton	.088
	Year 1917,	15458.69	Ħ	.058
	Increase 1918,	10136.56	n	.030

The increase in this account is due to wage increase and increase of 50% in the cost of electric current from .01 per K.W.H. in 1917 to .01 $\frac{1}{2}$  in 1918.

Hoisting,

Acct. 152,	Year 1918,	\$20798.22	Cost per Ton	.072
	Year 1917,	16829.69	n	.063
	Increase 1918.	3968.53	11	.009

The increase in this account is due to wage increase and increase of 50% in the cost of electric current from .01 per K.W.H. in 1917 to .01 $\frac{1}{2}$  in 1918.

# MINING EXPENSE (CONTINUED)

Pumping,

Acct. 153, Year 1918, \$21249.00 Cost per Ton .073
Year 1917, 16000.42 " .060
Increase 1918, 5248.58 " .013

The increase in this account is due to wage increase and increase of 50% in the cost of electric current from .01 per K.W.H. in 1917 to  $.01\frac{1}{2}$  in 1918.

Sinking & Shaft Repairs,

Acct. 154, Year 1918, \$21139.06 Cost per Ton .073
Year 1917, 15878.85 " .059
Increase 1918, 5260.21 " .014

During this year the 400 ft. lift in the Morris shaft was completed, level cut and storage pocket installed on the bottom level.

Rock Drifting,

Acct. 155, Year 1918, \$5323.08 Cost per Ton .019
Year 1917, 7170.68 " .027
Decrease 1918, 1847.60 " .008

Very little development work was done this year due to a shortage of labor. The amount of rock drifting done during the year was only to develop the known ore bodies.

Breaking Ore,

Acct. 156, Year 1918, \$190938.42 Cost per Ton .66
Year 1917, 161849.95
Increase 1918, 29088.47 " .056

The increase in this account is due to the increase in wages and material over 1917. It is still low for 1918 as we mined 58,020 tons from open pit which was low in cost as some of it was mined and cast into mills by steam shovel.

Tramming,

Acct. 157, Year 1918, \$48660.44 Cost per Ton .169
Year 1917, 41494.40 " .155
Increase 1918, 7166.04 " .014

Increase in this account is due to wage increases during the year.

Timbering,

Acct. 159, Year 1918, \$76374.01 Cost per Ton .264
Year 1917, 67580.91 " .252
Increase 1918, 8793.10 " .012

The increase in this account is due to the increase in wages. There is a decrease in the amount of mine timber used amounting to \$3946.88. The ore from open pit, 58,020 tons, was mined without the use of timber which accounts for the cost per ton being so close to the 1917 cost.

# MINING EXPENSE (CONTINUED)

Captain & Bosses,

Acct. 160. Year 1918, \$17938.30 Cost per Ton .062
Year 1917, 13550.06 " .051
Increase 1918, 4388.24 " .011

The increase this year is due to wage advances.

Dry House,

Acct. 161, Year 1918, \$8511.48 Cost per Ton .029
Year 1917 6019.89 " .023
Increase 1918, 2491.59 " .006

Increase in this account is due to increase in wages and increase in price of coal over year 1917.

Top Landing & Tramming,

Acct. 162, Year 1918, \$7649.80 Cost per Ton .027 Year 1917, 5954.74 " .022 Increase 1918, 1695.06 " .005

Increase this year is due entirely to wage advances.

Stocking Ore,

Acct. 163, Year 1918, \$2108.19 Cost per Ton .007
Year 1917, 1494.05 " .005
Increase 1918, 614.14 " .002

The increase in wages this year accounts for increase in this account over last year.

Stripping,

Acct. 165, Year 1918, \$14192.53 Cost per Ton .049
Year 1917 \_\_\_\_\_
Increase 1918, 14192.53 " .049

During this year we closed off the balance for stripping Section 6 open pit.

Cave In,

Acct. 166, Year 1918, \$105.44 Cost per Ton .000
Year 1917, 27.82 " .000
Increase 1918, 77.62 " --

The increase in this account is due to small cave of sand in working above 2nd level in Lloyd Mine.