

WADE AND HELMER MINES

ANNUAL REPORT FOR 1922.

The Wade-Helmer Mines were idle during the entire year. The properties were closed May 28th, 1921, and no further mining activities have been undertaken since that time.

The average analysis and ore in stockpile as of January 1st., 1923, is the same as reported January 1st., 1922, and is as follows:

	<u>Tons</u>	<u>Fe.</u>	<u>Phos</u>	<u>Mn.</u>	<u>Si.</u>
Wade Ore in Stock Jan. 1st. 1923---	77,271	57.22	.064	1.27	7.50
Helmer Ore in Stock Jan.1st.1923---	<u>20,354</u>	<u>56.48</u>	<u>.066</u>	<u>1.35</u>	<u>10.03</u>
TOTAL AND AVERAGES- - - - -	97,625	57.07	.064	1.29	8.03

Wade-Helmer Mines
Bond

MADE IN U.S.A.

WADE MINE ORE ESTIMATE OF JANUARY 1ST. 1923

As no ore was mined from any of the Wade deposits during the year, the estimates remain the same as on January 1st., 1922. These figures are based on a factor of 13 cubic feet per ton and a 10% deduction is made to cover mining loss in the case of the underground ores.

The tonnage and average grade of ore in the several deposits as of January 1st. 1923, follows:

	<u>Tons</u>	<u>Fe.</u>	<u>Phos</u>	<u>Mn.</u>	<u>Sil.</u>	<u>Mois.</u>
West Deposit-----	1,365,000	57.90	.074	1.05	6.79	13.25
East Deposit-----	1,515,000	56.91	.075	1.83	7.44	13.50
Deacon Deposit---	80,000	56.65	.045	1.16	8.04	12.50
" " ---	95,000	55.77	.053	.42	8.43	12.50

Following are the tonnages and grades of ore in the West Deposit above and below the main haulageway:

	<u>Tons</u>	<u>Fe.</u>	<u>Phos</u>	<u>Mn.</u>	<u>Sil.</u>
Above Main Level---	1,179,000	57.65	.074	1.33	6.40
Below Main Level---	186,000	56.11	.073	.74	7.03

The total ore by forty acre tracts as of January 1st., 1923, is as follows:

	<u>Tons</u>	
SE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Section 12, 58-19-----	305,000	Non-Bessemer
NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of " 13, 58-19-----	1,305,000	" "
NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of " 13, 58-19-----	80,000	Bessemer.
NW $\frac{1}{4}$ of NW $\frac{1}{4}$ of " 13, 58-19-----	1,365,000	Non-Bessemer.

HELMER MINE ORE ESTIMATE OF JANUARY 1ST. 1923

As no ore was mined from the Helmer deposit during the year, the estimates remain the same as on January 1st., 1922. These figures are based on a factor of 13 cubic feet per ton and a 10% deduction is made for mining loss in the case of underground ore, 20% for rock in the open pit and 25% for rock in the scam ore.

The Helmer tonnage in sight January 1st., 1923, follows:

	<u>Tons</u>
Open Pit-----	15,000
Scram Ore-----	26,000
Underground Ore----	<u>68,000</u>
 TOTAL- - - - -	 109,000

There is no indication that any additional ore will be developed in the Helmer, in fact, due to the low grade and restricted mining conditions underground, we are apprehensive that this total tonnage cannot be mined at a profit.

The average analysis of the ore in sight January 1st., 1923, follows:

<u>Tons.</u>	<u>Fe.</u>	<u>Phos</u>	<u>Mn.</u>	<u>Sil.</u>	<u>Mois.</u>
109,000	56.00	.070	<u>1.35</u>	9.50	12.50

Of the ore remaining in the Wade-Helmer Mines, 576,000 tons will be mined by the open pit method, 26,000 tons by scam to pit and 2,562,000 tons from underground operations.

ESTIMATE OF PRODUCTION FOR 1923

Our estimate of production for 1923, provided operations are resumed May 1st., and continued to November 15th, is as follows:

	<u>Tons</u>	<u>Fe.</u>	<u>Phos</u>	<u>Mn.</u>	<u>Sil.</u>	<u>Mois.</u>
Wade Open Pit Ore-----	100,000	58.50	.060	.75	7.00	12.50
Wade Underground Ore--	61,000	57.50	.061	.95	8.13	12.50
Helmer Ore-----	<u>10,000</u>	<u>56.00</u>	<u>.070</u>	<u>1.30</u>	<u>10.25</u>	<u>12.50</u>
 TOTAL AND AVERAGES----	 171,000	 58.00	 .061	 .85	 7.59	 12.50

While our estimated production shows an average of 58% iron, both our Wade and Helmer stockpiles are under grade, and the season's shipments, provided all the stockpiles and our estimated production were forwarded, would be approximately a half point below the average.

GENERAL SURFACE

A day and night watchman have been employed at the Wade-Helmer Mines throughout the year. No irregularities were reported.

During February a contract was let for the cleaning of all the out-houses in the location. This work was completed in March, at a cost of \$205.00. Some repair work was also done from time to time during the year on the cess-pools and sewers. This work, however, was not extensive.

The mine and location premises were cleaned of an accumulation of rubbish several times during the summer months and maintained in a neat condition. The roofing on four of the old houses moved to the Wade location from the Helmer Mine, was renewed during the month of October.

All the mines in the Kinney District have been either closed entirely or operating only on a small scale. As a result, most of our old men have drifted away. There are only eight families now living in the location. The labor conditions in the Kinney District have never been favorable and should we resume operations this summer, we anticipate that some difficulty will be experienced in building up an efficient organization.

The hoist, compressor, gasoline locomotives and miscellaneous supplies moved from the Meadow Mine, were unloaded and stored near the Wade shaft during December. The Meadow warehouse was torn down and shipped to the Wade and will be used as a housing to store the machinery and supplies transferred from that property.

MADE IN U.S.A.

UNDERGROUND OPERATIONS

Three pumpmen were employed on eight hour shifts. Except during the spring break-up and the rainy period of April and May, pumping conditions at the Wade-Helmer properties were normal. At no time, however, was our pumping capacity taxed to the limit. The normal amount of water pumped is approximately 600 gallons per minute.

The motor on the centrifugal pump has failed three times during the past several months. The trouble is due to an accumulation of moisture and coils burning out. Although the motor has been housed in and is run each day with the idea of keeping it dry, a third coil burned out about the middle of November. Temporary repairs were made and the pump is in service. We intend to make such repairs to this pump as will correct this trouble.

Inspections of the underground workings had to be discontinued in February on account of poor air in the sub-level workings.

The bulk of the water draining from the open pit into the Wade Mine, seeps through the ore and enters the drift some distance back from the pit portal. There is some seepage, however, in the vicinity of the open pit and a solid block of ice formed, shutting off all ventilation. The result was that the air was very poor in the mine and it was impossible to make inspections of the workings until June. It would be quite expensive to keep this drift free of ice and so no attempt was made to chop it out until April, when it started to melt. Even after the drift was open it was sometime before the air had cleared sufficiently to permit an inspection of the workings.

The June inspection found the main tramways and working places in much better condition than we had anticipated. Although the lagging had broken down in several places, there was no evidence of weight. No material change was noticed until an inspection early in September. At this time the main tramways were found in very good condition, but a great change had taken place in the sub-level drifts. The timbering and lagging had become covered with a heavy fungus growth and had broken down in a number of places, due to a dry rot.

A crew of six miners was sent from the Crosby Mine, as it was impossible to secure men in the Kinney District for this short job. These six men were employed during the entire month of October and up to November 25th, when the repair work on the 1390, 1400 and 1420 Foot Sub-Levels was completed.

On the 1390' Sub-Level, lining sets and new lagging were placed in all the main cross-cuts and the tops of the raises repaired where necessary. On the 1400' and 1420' Sub-Levels the repairs were less extensive, as the timber here did not show any considerable deterioration. This no doubt is due to the better circulation of air through the upper sub-levels, where there evidently are openings to the surface caves. All the working places should remain in good condition for the next five or six months. Should mining be resumed at the Wade Mine within this time, it will be possible to start producing ore from twelve places after a few days preliminary work.

The Helmer portal has been blocked by the wash from the open pit banks. Before resuming underground work here, it will be necessary to do quite a little cleaning with the Model "36" steam shovel in the open pit, as well as remove such sand and clay as has washed into the main drift.

We had several very heavy rains during May and the wash from the sides of the pit was quite considerable along the north and west sides of the Helmer stockpile.

It looked for a time as though we would make some shipments from the Wade and Helmer stockpiles during the later part of the summer. When the steam shovel crew completed stockpile loading at the Boeing in August, they were sent to the Wade Mine to get the pit equipment (the "36" Marion and Lima Locomotive) in shape and start clean-up work along the sides of the Helmer stockpile. This work had only been in progress four days when word was received that no shipments were to be made during 1922. All repair and clean-up work was discontinued and the shovel crew sent to the Hill-Trumbull Mine. There is no use to do any further clean-up work in the Wade-Helmer pit until we are ready to move the pile, as the surface material would again wash down.

HELMER-WADE MINE

AVERAGE MINE ANALYSIS ON OUTPUT FOR YEAR 1922.

GRADE	IRON	PHOS.	SILICA	MANG.
Helmer,				(No Production)
Wade,				(No Production)

AVERAGE ANALYSIS ON STRAIGHT CARGOES FOR YEAR 1922.

GRADE	IRON	PHOS.	SILICA	MANG.
Helmer,				(No Shipments)
Wade,				(No Shipments)

ORE STATEMENT - DECEMBER 31ST, 1922.

	HELMER	WADE	TOTAL	TOTAL LAST YEAR
On hand January 1, 1922,	20,354	77,271	97,625	28,103
Output for Year,	-	-	-	69,522
Total, Shipments,	20,354	77,271	97,625	97,625
Balance on Hand,	20,354	77,271	97,625	97,625
Decrease in Output,			69,522	

1922 -- Mine Idle during Year.

1921 -- 2-8 Hour Shifts, Jan. 1st to May 28th, 1921.
Mine closed May 27th, 1921.

WADE-HELMER MINE

COMPARATIVE MINING COST FOR YEAR

	1 9 2 2	1 9 2 1	INCREASE	DECREASE
PRODUCT	0	69,522		
Underground Costs		1.908		
Surface Costs		.191		
General Mine Accounts		.182		
Total		2.281		
Plant Account		.120		
Equipment		.003		
Taxes		.216		
Central Office		.068		
Contingent Expense		.008		
Idle Expense		.779		
Cost Adjustment		.211		
Cost on Stockpile		3.686		
Loading, & Shipping				
Misc. Debits & Credits		.038		
Total Cost on Cars		3.724		
No. Days Operating		125		
No. Shifts & Hours		2-8hr		
Avg. Daily Product		556		
<u>COST OF PRODUCTION</u>				
Labor		1.492		
Supplies		.789		
Total		2.281		

Mine closed May 28, 1921.
Not operated in 1922.

WADE-HELMER MINE

COMPARATIVE WAGES AND PRODUCT

	1 9 2 2	1 9 2 1	INCREASE	DECREASE
PRODUCT	-	69,522		69,522
No. Hours & Shifts		2-8hr		
AVG. NO. MEN WORKING				
Surface	2	13		11
Underground	5	51		46
Total	7	64		57
AVG. WAGES PER DAY				
Surface	5.15	5.62		.47-9%
Underground	4.19	5.43		1.24-22%
Total	4.50	5.47		.97-17%
WAGES PER MO. OF 25 DAYS				
Surface	128.75	140.50		11.75
Underground	104.75	135.75		31.00
Total	112.50	136.75		24.25
PRODUCT PER MAN PER DAY				
Surface		17.88		
Underground		4.48		
Total		3.58		
LABOR COST PER TON				
Surface		.314		
Underground		1.212		
Total		1.526		
AVG. PRODUCT PER 'G & TRM'G		6.25		
" WAGES CONTRACT MINERS		5.67		
" " " TRAMMERS		5.67		
TOTAL NO. OF DAYS				
Surface	762 $\frac{1}{4}$	3889		3126- $\frac{3}{4}$
Underground	1622 $\frac{1}{2}$	15506		13883- $\frac{1}{2}$
Total	2384- $\frac{3}{4}$	19395		17010- $\frac{1}{4}$
AMOUNT FOR LABOR				
Surface	3927.90	21837.15		17909.25
Underground	6796.32	84239.98		77443.66
Total	10724.22	106077.13		95352.91

Proportion of Surface to Underground Men:

1922 - 1 to 2.50
 1921 - 1 to 3.92
 1920 - 1 to 2.84
 1919 - 1 to 3.14
 1918 - 1 to 3.59

Mine closed May 28, 1921.