

AUSTIN MINE.

The Austin Mine was not operated in 1918. The mine was closed down on Dec. 31st, 1917, on account of being flooded with water from the Stephenson Mine.

Shipments from stockpile in 1918 were as follows:

Austin Bessemer	3054 tons
Austin	740 "
Austinport or No. 2	<u>4739</u> "
Total	8533 "

The following is the estimate of ore in sight at the Austin Mine on Dec. 31st, 1917:

	Austin Bessemer	Austin	Austin No.2	Total
Above 1st Level	14,700	2,000	8,300	25,000
" 2nd "	36,800	5,200	20,900	62,900
" 3rd "	30,000	4,200	17,100	51,300
" 4th "	10,520	1,490	5,990	18,000
" 5th "	<u>4,890</u>	<u>680</u>	<u>2,770</u>	<u>8,340</u>
TOTAL TONS	96,910	13,570	55,060	165,540

The estimate of 1917 is included in this report as the mine did not operate during 1918.

Pumps have been operated in this shaft during the past year and also some work has been done on No. 2 shaft. It had been expected that the water would be lowered sufficiently to permit of operating the three upper levels of the mine during the summer of 1918; this unfortunately was not possible, but there is now hopes that some ore may be obtained from this property in 1919. At the close of the year the water was down to the back of the second level, so that it would require a gain of less than 200 feet to permit of operating this mine.

The following is the record of the work done at this property during 1918.

No. 2 Shaft.

The work of enlarging and retimbering No. 2 shaft from surface down to the first level was started the last of December 1917. A tripod was set up over the old timber raise, or No. 2 shaft as it is now called, and a small

AUSTIN MINE.

engine house constructed near by to house the hoist. A crew of men under Capt. Bone started this work, at first on two 8-hour shifts and later on three. It was realized that this work would have to be done at some future time and the decision to do it at this time was influenced largely by the fact that employment had to be provided for the men released from the Austin and Stephenson Mines, all of whom it was not possible to employ immediately in the other mines in the district. By the end of January the old timber raise had been enlarged and retimbered to a point nearly 100 feet below surface. This work was completed early in February, the connection being made to that portion of the shaft which had already been enlarged. In 1917 this shaft had been raised from the third to the second level and the work of enlarging the old timber raise from the second level to surface started. At the time the mine was flooded this work had reached a point about seven feet below the first level, to which point a connection was made in February 1918. This completed all underground work which could be done on account of the mine being filled with water.

The timber for the headframe for No. 2 shaft was framed early in the year and the headframe was erected the latter part of the year.

In order to handle the water, which was pumped from this shaft, it was necessary to build a launder about 300 feet in length and to open up the old ditch which conveyed the water from this point to the Escanaba River. A 500 gallon Prescott Sinker Pump, operated by steam, was installed in the shaft early in January. In April a 1000 gallon Electric Centrifugal Pump was also installed, and these two pumps have been operated steadily throughout the balance of the year. Before the electric pump was installed a 200 gallon steam pump was also operated for a short period in conjunction with the 500 gallon steam pump.

In April it was noticed that there had been a settlement of ground near the Austin shaft due to mining operations of 1917. A small cave appeared on surface, 250 feet north of the shaft, and from this cave a crack extended some 300 feet to the south-east. This crack passed about 30 feet back of the shaft, on the footside. There have been no change in conditions here

AUSTIN MINE.

during the balance of the year, but it is evident that it will not be safe to use the present shaft for future mining operations. There has evidently been a settlement of ground, which has extended back of the shaft, and any further mining operations would probably result in the shaft moving out of line to the west.

From present indications it will be necessary to sink No. 2 shaft to the fifth level and handle the ore remaining in the mine through this shaft.

During the past summer the ore stocked in 1917 has all been shipped. The new stocking trestles, which were erected during the fall of 1917, were partly dismantled to permit of loading out this ore. There were 7464 tons of ore in stock at the time the mine was flooded; shipments in 1918 totaled 8533 tons, the overrun from ore stocked being 1069 tons. This large overrun was due to cleaning up the old stockpile grounds which yielded several hundred tons.

AUSTIN MINE

AVERAGE ANALYSIS ON STRAIGHT CARGOES FOR YEAR 1918.

GRADE

Austin Bessemer, All mixed
 Austin, " "
 Austinport, " "

ORE STATEMENT - DECEMBER 31ST, 1918.

	AUSTIN BESSEMER	AUSTIN	AUSTINPORT	TOTAL	TOTAL LAST YEAR
On hand Jan. 1st, 1918,	3,368	0	4,096	7,464	225
Output for Year,					51,672
Transferred,	740	740			
Stockpile Overrun,	426		643	1,069	
Total,	3,054	740	4,739	8,533	51,884
Shipments,	3,054	740	4,739	8,533	44,420
Balance on Hand,	0	0	0	0	7,464

1918 - Mine idle account water

1917 - Mine idle January 1st to April 23rd
 1-8 Hr. Shift April 23rd to December 31st

SHIPMENTS FOR YEAR - 1918.

	POCKET	STOCKPILE	TOTAL	TOTAL LAST YEAR
Austin Bessemer,	0	3,054	3,054	25,216
Austin,	0	740	740	3,347
Austinport,	0	4,739	4,739	15,857
Total,	0	8,533	8,533	44,420
Total last Year,	44,208	212	44,420	
Decrease - 81%			35,887	

AUSTIN MINE.

AUSTIN MINE.

COMPARATIVE MINING COST FOR YEAR.

	1 9 1 8.	1 9 1 7.	INCREASE.	DECREASE.
PRODUCT	1,069	51,659		
General Expense		.145		
Maintenance		.148		
Mining Expense		1.228		
Cost of Production		1.521		
<u>DEPRECIATION.</u>				
Plant Account		0		
Total Depreciation				
Taxes		.045		
Central Office		.061		
Miscellaneous		.008		
Idle Expense		.031		
Sundry Expense		.014		
Cost on Stockpile		1.680		
Loading & Shipping		.029		
Total Cost on Cars		1.719		
<u>COST OF PRODUCTION.</u>				
Labor		1.119		
Supplies		.402		
Total		1.521		
No. Days Operating		112		
No. Shifts and Hours		1-8hr		
Avg. Daily Product		257		

Mine closed account of flood.
 Production for 1918 as shown is stockpile overrun.

AUSTIN MINE.

COMPARATIVE WAGES AND PRODUCT.

	1918.	1917.	INCREASE.	DECREASE.
PRODUCT	1,069	51,659		
No.Shifts and Hours	1-8hr	1-8hr		
AVERAGE NUMBER MEN WORKING				
Surface	3	11		8
Underground	1	35		34
Total	4	46		42
AVERAGE WAGES PER DAY				
Surface	3.92	3.50	.42	
Underground	5.22	4.36	.86	
Total	4.23	4.15	.08-2%	
WAGES PER MONTH OF 25 DAYS				
Surface	98.00	87.50	10.50	
Underground	140.00	102.00	38.00	
Total	105.75	103.75	2.00	
PRODUCT PER MAN PER DAY				
Surface	-	14.86		
Underground	-	4.99		
Total	-	3.74		
LABOR COST PER TON				
Surface	-	.235		
Underground	-	.873		
Total	-	1.108		
AVG.PRODUCT BRK'G & TRM'G	-	7.54		
" WAGES CONTRACT MINERS	-	4.41		
" " " TRAMMERS	-	4.61		
" " " LABOR	-	4.45		
TOTAL NUMBER OF DAYS				
Surface	1,010 $\frac{3}{4}$	3,466 $\frac{1}{4}$		2,455 $\frac{1}{2}$
Underground	321	10,344		10,023
Total	1,331 $\frac{3}{4}$	13,810 $\frac{1}{4}$		12,478 $\frac{1}{2}$
AMOUNT FOR LABOR				
Surface	3,956.42	12,160.53		8,204.11
Underground	1,674.68	45,089.69		43,415.01
Total	5,631.10	57,250.22		51,619.12

Proportion surface to Underground Men:
1918 - 1 to 3.2

Not producing in 1918 on account of flood.
Production as shown is stockpile overrun.