

SPIES VIRGIL MINE
ANNUAL REPORT
YEAR 1936

1. GENERAL

The Spies Virgil Mine remained idle during all of 1936 with the exception of pumping.

Pumping was wholly on the day shift with the Mine Clerk acting as hoisting engineer and the former underground foreman and pumpman as operators. The mine worked on a staggered basis.

The idle expense for the year amounted to \$25,317.81; Operating Expense \$6,551.10; Taxes \$8,976.50; Supply Inventory adjustment \$6.84, making the total cost for the year \$40,852.25 as compared with \$31,841.34 for 1935. The difference in the idle expense was due to overhauling of hoist, compressor, motor generator sets, boiler repairs and replacement of pipe lines and general building repairs, etc. The operating expense was increased due to more shipments from stockpiles.

In 1935 the mine shipped 64,792 tons at a cost of .0372 per ton for analysis and shipping. In 1936, 121,255 tons were shipped at a cost of .053 per ton. The increased cost was due to small quantities of ore being loaded whenever called for and the necessity of shifting from pile to pile to try to meet the silica guarantee.

2. PRODUCTION
SHIPMENTS &
INVENTORIES

b. Shipments

<u>Grade of Ore</u>	<u>Stockpile Tons</u>
Virgil Crushed	121,255
Total 1935	64,792
Increase over 1935	56,463
Total shipments to Jan. 1, 1936	610,689
Shipments during 1936	<u>121,255</u>
Total shipments from mine to 1-1-37	731,944
Sherwood stockpile shipments, 1936	1,292

Stockpile loading was from both the main pile and the east side of the north pile. There was no difficulty with the phosphorus guarantee as experienced in 1935 but there was continual trouble

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2. PRODUCTION
SHIPMENTS &
INVENTORIES (Cont.)

due to high silica. The average analysis of the pile when stocked showed 7.04 silica whereas the past season's loading averaged 8.33. Particular care was taken in sampling and it is evident that the stockpile analysis carried on the books is too low in silica and will be corrected to the figure obtained in last year's shipments, as it represents a good average sample of the two main piles.

c. Stockpile Inventories

<u>Grade</u>	<u>Tons in Stock</u>
Virgil Crushed	126,598
Virgil Crushed (Hi-Sulphur)	<u>8,879</u>
Total	135,477

f. Ore Statement

	<u>Virgil</u> <u>Ore</u>	<u>Virgil</u> <u>Hi-Sulphur</u>	<u>Total</u>	<u>1935</u>
On hand Jan.1,1936	247,853	8,879	256,732	321,524
Shipments	<u>121,255</u>	0	<u>121,255</u>	<u>64,792</u>
Balance 12-31-36	126,598	8,879	135,477	256,732

1935 - Idle except pumping throughout the year.

1936 - " " " " "

3. ANALYSIS

<u>Grade</u>	<u>Tons</u>	<u>Iron</u>	<u>Phos.</u>	<u>Sil.</u>	<u>Mn.</u>	<u>Al.</u>	<u>Lime</u>	<u>Mag.</u>	<u>Sul.</u>	<u>Loss</u>	<u>Moist.</u>
Virgil Crushed											
Dried 212° F.	126,598	56.30	.424	8.33	.19	1.84	.60	.21	.074	6.50	
Natural		52.35	.394	7.75	.18	1.70	.56	.19	.069	6.05	7.00
Virgil Hi-Sulphur											
Dried 212° F.	8,879	57.41	.424	4.09					.369		
Natural		53.10	.392	3.78					.341		7.50

4. ESTIMATE
OF ORE
RESERVES

As there was no mining or development in 1936 the ore reserves remain the same as reported as of December 31, 1935.

a. Developed Ore

Assumption: 12 cu. ft. equals one ton.
10% deduction for rock.
10% deduction for loss in mining.

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4. ESTIMATE OF ORE
RESERVES (Cont.)

a. Developed Ore (Cont.)

<u>Virgil Ore</u>	<u>Available</u> <u>Tons</u>	<u>Unavailable</u> <u>Tons</u>	<u>Total</u> <u>Tons</u>
Revised estimate developed ore above 6th Level, Dec.31,1936	41,008	507,718	548,726
Estimate of developed ore between 6th and 8th Levels, Dec.31,1936	167,318	95,712	263,080
Total Developed Ore, Dec. 31,1936	208,326	603,430	811,756

b. Prospective Ore

Between 6th and 8th Levels	409,151	278,755	687,906
Total all ore, Dec. 31, 1936	617,477	882,185	1,499,762

We estimate we will recover between 25% and 33%, in our last mining operations, of the ore above the 6th Level tied up in pillars and shown unavailable.

c. Estimated Reserve Analysis

	<u>Iron</u>	<u>Phos.</u>	<u>Sil.</u>	<u>Mng.</u>	<u>Alum.</u>	<u>Lime</u>	<u>Mag.</u>	<u>Sul.</u>	<u>Loss</u>	<u>Moist</u>
Dried	57.50	.425	7.00	.16	1.64	.60	.30	.119	7.35	
Natural	51.75	.382	6.30	.15	1.48	.55	.26	.107	6.60	10.00

5. LABOR
AND
WAGES

a. Comments

As the mine was idle during the entire year, the only regular crew was that employed in pumping which consisted of 12 men and the Mine Clerk. With the exception of the Clerk, they were for the most part on a staggered basis. The total time worked was 789 shifts more than in 1935, of which 725 were on surface and 54 underground.

The extra surface work was stockpile loading and general repairs, the underground, to pump, discharge column and shaft repairs. There was a change in wage schedule on November 15 which amounted to an increase of 6¢ per hour or slightly over 10%.

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5. LABOR
AND
WAGES (Cont.)

b. Comparative Statement of Wages and Product

	<u>1936</u>	<u>1935</u>	<u>Increase</u>	<u>Decrease</u>
PRODUCT	0	0		
NUMBER OF SHIFTS & HOURS	Idle 12 Mos.	Idle 12 Mos.		
<u>AVG. NO. MEN WORKING</u>				
Surface	8	7		
Underground	4	5		
Total	12	12		
<u>AVG. WAGES PER DAY</u>				
Surface	4.00	3.78	.22	
Underground	4.20	4.10	.10	
Total	4.06	3.91	.15	
<u>WAGES PER MONTH</u>				
Surface	48.00	45.36	2.64	
Underground	50.40	49.20	1.20	
Total	48.72	46.92	1.80	
PRODUCT PER MAN PER DAY	None	None		
LABOR COST PER TON	None	None		
AVG. PRODUCT BRK. & TRAM.	None	None		
<u>TOTAL NUMBER OF DAYS</u>				
Surface	2,021	1,296-9/16		
Underground	961-3/4	897-4/16		
Total	2,982-3/4	2,193-13/16		
<u>AMOUNT FOR LABOR</u>				
Surface	8,074.08	4,900.95	3,173.13	
Underground	4,040.07	3,675.45	364.62	
Total	12,114.15	8,576.40	3,537.75	
IDLE DURING 1935				
IDLE DURING 1936				

6. SURFACE

a. Building Repairs
1. Buildings - Mine

Repairs for the year were as follows: Applied roof dressing to power house roof; repaired mine office and shops and iron and steel shed; fixed doors and windows; general repairs to floors, windows and stairs in shaft house. Cost: Labor \$148,60; Supplies \$98.67, Total \$247.27.

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6. SURFACE (Cont)

a. Building Repairs (Cont.)

2. Buildings - Location

Repairs were for houses and sheds. The latter had been neglected for several years.

<u>Labor</u>	<u>Supplies</u>	<u>Total</u>
\$ 164.98	135.22	298.20

7. UNDERGROUND

d. Timbering

No repairs were made to underground drifts during the year.

h. Ventilation

The main level drifts are bratticed near the shaft on all levels except the 6th and 8th to prevent the mine air, deficient in oxygen, from entering the Spies shaft. Air is blown down the 6" air line from surface to the 3rd and 8th Level pump stations and part of this, with a little natural ventilation, passes through the 6th and 8th Levels up through the old Virgil shaft. A recent inspection of the 6th level found the ventilation so bad that carbide lights would not burn in the main drift 1500' in from the shaft. Arrangements are being made to install a blower on the 8th Level which will probably improve conditions greatly.

i. Pumping

Both the 3rd and 8th Level pumps were operated throughout the year on one eight hour shift.

The water pumped for the year amounted to 89,770,200 gallons or 173.9 gallons per minute as compared with 86,439,900 gallons or 164 per minute in 1935, an increase of 9 gallons per minute

10. TAXES

Following is a comparative statement of taxes paid by the Company in Iron County for the years 1936 and 1935:

<u>Description</u>	<u>1936</u>		<u>1935</u>	
	<u>Valuation</u>	<u>Taxes</u>	<u>Valuation</u>	<u>Taxes</u>
Iron River Township				
NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec.24,43-35, 40 acres				
SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec.24,43-35, 40 acres				
Spies Dwellings.....	5,000	96.15	5,000	103.30

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10. TAXES (Cont.)	<u>1936</u>		<u>1935</u>	
	Valuation	Taxes	Valuation	Taxes
<u>SPIES VIRGIL (a)</u>				
E $\frac{1}{2}$ of NW $\frac{1}{4}$ of Sec.24,43-35 (Spies).....				
SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec.24,43-35 (Virgil)...	100,000	1,923.00	100,000	2,066.00
Stockpile, Supplies & Equipment.....	310,000	5,961.30	370,000	7,644.20
Total Spies Virgil.....	410,000	7,884.30	470,000	9,710.20
(a) Total Iron River Township.....	415,000	7,980.45	475,000	9,813.50
Rate.....		1.923		2.056
<u>RAVENNA PRICKETT</u>				
<u>City of Crystal Falls</u>				
W $\frac{1}{2}$ of SE $\frac{1}{4}$ of Sec. 19,43-32.....	1,100	29.09	1,100	32.03
Rate.....		2.645		2.91
<u>Crystal Falls Township</u>				
<u>Ravenna Prickett</u>				
SW $\frac{1}{4}$ of Sec.19,43-32	65,500	1,309.35	66,000	1,514.70
SW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec.19,43-32.....	200	4.00	200	4.59
SE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Sec.19,43-32.....	200	4.00	200	4.59
SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec.19,43-32.....	200	4.00	200	4.59
SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec. 19,43-32.....	200	4.00	200	4.59
Total.....	66,300	1,325.35	66,800	1,533.06
Rate.....		2.00		2.295
Total Ravenna Prickett.....	67,400	1,354.44	67,900	1,565.09
*Includes NE of SE of Sec.24,43-33 for 1935.				
<u>Distribution of Charges</u>				
C.C.I.Co. Proportion.....	51,025	1,027.10	51,400	1,186.42
Michigan Mineral Lands, 25% of SW of 19-43-32.....	16,375	327.34	16,500	378.67
(a) The mineral valuation is not divided between the Spies and Virgil, and the surface of the Spies is included in the mineral assessment of the Virgil.				
<u>Village of Mineral Hills</u>				
<u>Spies Lease</u>				
SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec.24,43-35.....				
NE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec.24,43-35.....				
Dwellings.....	5,000	13.32	5,000	8.22
<u>Virgil Mine Lease</u>				
(a) SW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Sec.24,43-35.....	100,000	266.40	100,000	164.17
Stockpile, Supplies & Equipment.....	310,000	825.80	370,000	607.42
Total Opt. Spies Virgil.....	410,000	1,092.20	470,000	771.59
Total Mineral Hills.....	415,000	1,105.52	475,000	779.81
Rate.....		.2665		.16417

The Village of Mineral Hills is in Iron River Township. The valuations as shown here are the valuations shown by Iron River Township and are omitted in the recapitulation and distribution.

(a) The valuation of 100,000 includes both Spies and Virgil descriptions noted above for the year 1936 and 1935. Not divided by tax appraiser and any division would be arbitrary.

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14. MAINTENANCE
AND REPAIRS

When the mine shut down in 1933 no repairs were made to plant or equipment. To be ready to open the mine with the least possible delay, such maintenance repairs as were imperative were made throughout the past year.

Surface

a. Hoist

The gear and shaft were removed and sent to the Lake Shore Engine Works for repairs at a cost of \$865.87. Repairs to switchboard and idler sheaves cost \$33.89 or a total of \$899.76.

b. Compressors

Repaired compressor and circulating pumps, cleaned out cylinders; cleaned motor and installed thermostat and safety plugs, total cost \$277.32.

c. Heating Plant Boiler

New stack and breeching, repaired hot water tank, pipe line covered with asbestos, cost \$468.32.

d. Top Tram Equipment

Repairing larry cars, total cost \$230.82.

e. Docks, Trestles & Pockets

Repairing rock and ore trestle, cost \$506.78.

f. Safety Devices

Fencing at old Virgil shaft, cost \$52.37.

Underground

g. Pump Machinery

Repairing pump bearings, replacing pump poles, relining pump shaft, repairing pot heads for underground cable, repairing 8" water column, total cost \$1,565.97.

h. Electric Tram Plant

Repairing Goodman Locomotive, cost \$251.23, repairing underground cars, cost \$1,506.05, total cost \$1,757.28.

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14. MAINTENANCE
AND REPAIRS (Cont.)

i. Shaft

Repairing skip roads and guides, cost \$229.21

17. CONDITION
OF
PREMISES

Only absolutely necessary repairs were made during the year to the mine and location buildings. The latter need painting badly.

18. NATIONALITY
OF
EMPLOYEES

<u>Americans</u>	<u>Percent</u>	<u>Parentage</u>
2	.17	Americans
1	.08	English
2	.17	Irish
1	.08	Sweden
1	.08	Dane
1	.08	French
<u>Foreign Born</u>		
3	.26	English
1	.08	Croatian
12	100.00%	