

AND DEPARTMENT

STOCK REPORT

For the ~~Month~~ of Year 1904

RECEIVED  
JAN 11 1905

EDGEWORTH STOCKS  
DO  
STOCK

**BELLEVUE FARM--Dairy Report for the Month of..... Y...E...A...R.....1904.**

WEEK.	Lbs. Milk Received	Lbs. Cream Separated	Lbs. Butter Made	Lbs. Butter Sold	Lbs. Cream Sold	Gals. <b>LBS.</b> Buttermilk Sold <b>Milk Sold</b>	Lbs. Skim Milk	Buttermilk Made
Dec. 03.	11235	2422	267.5	99.75	1493		8385	669
Jan. 04	11940	2250	43.25	145	1887	1129	7984	110
Feb.	11463	1998	38	84.75	1827	1697	7281	110
Mch.	10091	1694			1538	2151	5774	
Apr.	12928	1938	61	8	1526.7	1694	7685	205
May	15526	2094	131	45	1217	1654	8747	375
June	18324	2903	146	30.5	1833	1191	12008	395
July	18907	3083	55	59	2754	1114	11768	120
Aug.	17725	2662	50	98	2365	1296	7238	180
Sep.	13853	1882	62	22	1662	1114	10610	160
Oct.	14182	1336			1309	2973	5451	
Nov.	9717	1056		20	1078	2861	4574	
<b>TOTAL</b>	<b>165941</b>	<b>25318</b>	<b>853.75</b>	<b>662</b>	<b>20289.7</b>	<b>18874</b>	<b>97505</b>	<b>2324</b>

Annual Report\_Mining\_MS86100\_2077\_1904\_1 of 2\_249.tif

H A T Y

		.881					
		PLOS JIM					
100	888	801	87.00	888	8811	80	888
101	1007	701	881	888	8101	80	888
102	1007	701	87.50	888	8101	80	888
103	888	801	8	888	8101	80	888
104	888	801	8	888	8101	80	888
105	888	801	8.00	888	8101	80	888
106	888	801	80	888	8101	80	888
107	888	801	80	888	8101	80	888
108	888	801	80	888	8101	80	888
109	888	801	80	888	8101	80	888
110	888	801	80	888	8101	80	888
111	888	801	80	888	8101	80	888
112	888	801	80	888	8101	80	888
113	888	801	80	888	8101	80	888
114	888	801	80	888	8101	80	888
115	888	801	80	888	8101	80	888
116	888	801	80	888	8101	80	888
117	888	801	80	888	8101	80	888
118	888	801	80	888	8101	80	888
119	888	801	80	888	8101	80	888
120	888	801	80	888	8101	80	888

RECEIVED  
 JAN 1 1905

THERE IS NO SECTION OF THE COUNTRY WHERE INTENSIVE WORK IS SURE OF BETTER SUCCESS THAN THE UPPER PENINSULA OF MICHIGAN.

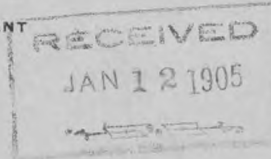
# The Cleveland-Cliffs Iron Co.

MUNISING RAILWAY, MARQUETTE & SOUTHEASTERN RAILWAY, LAKE SUPERIOR & ISHPEMING RAILWAY.  
LAND DEPARTMENT.

FACTS ABOUT MUNISING  
AND VICINITY:

MUNISING, FINEST HARBOR ON THE LAKES.  
FREE MANUFACTURING SITES AT MUNISING.  
HARDWOOD TIMBER FOR SALE.  
FARM LAND FOR SALE ON EASY TERMS.  
THE SOIL WONDERFULLY PRODUCTIVE.  
AN UNSURPASSED HOME MARKET.  
CITY LOTS FOR SALE.

SAMUEL REDFERN,  
LAND AGENT



INCLUDING LANDS OF

THE CLEVELAND-CLIFFS IRON CO.  
CLEVELAND IRON MINING CO.  
IRON CLIFFS CO.  
PIONEER IRON CO.  
EXCELSIOR IRON CO.  
AMERICAN IRON MINING CO.  
MICHIGAMME CO.  
MUNISING CO.  
MUNISING R'Y CO.

NEGAUNEE, MICH. January 10th. 1905. 190

Mr. R. C Mann, Auditor,  
Cleveland, Ohio.

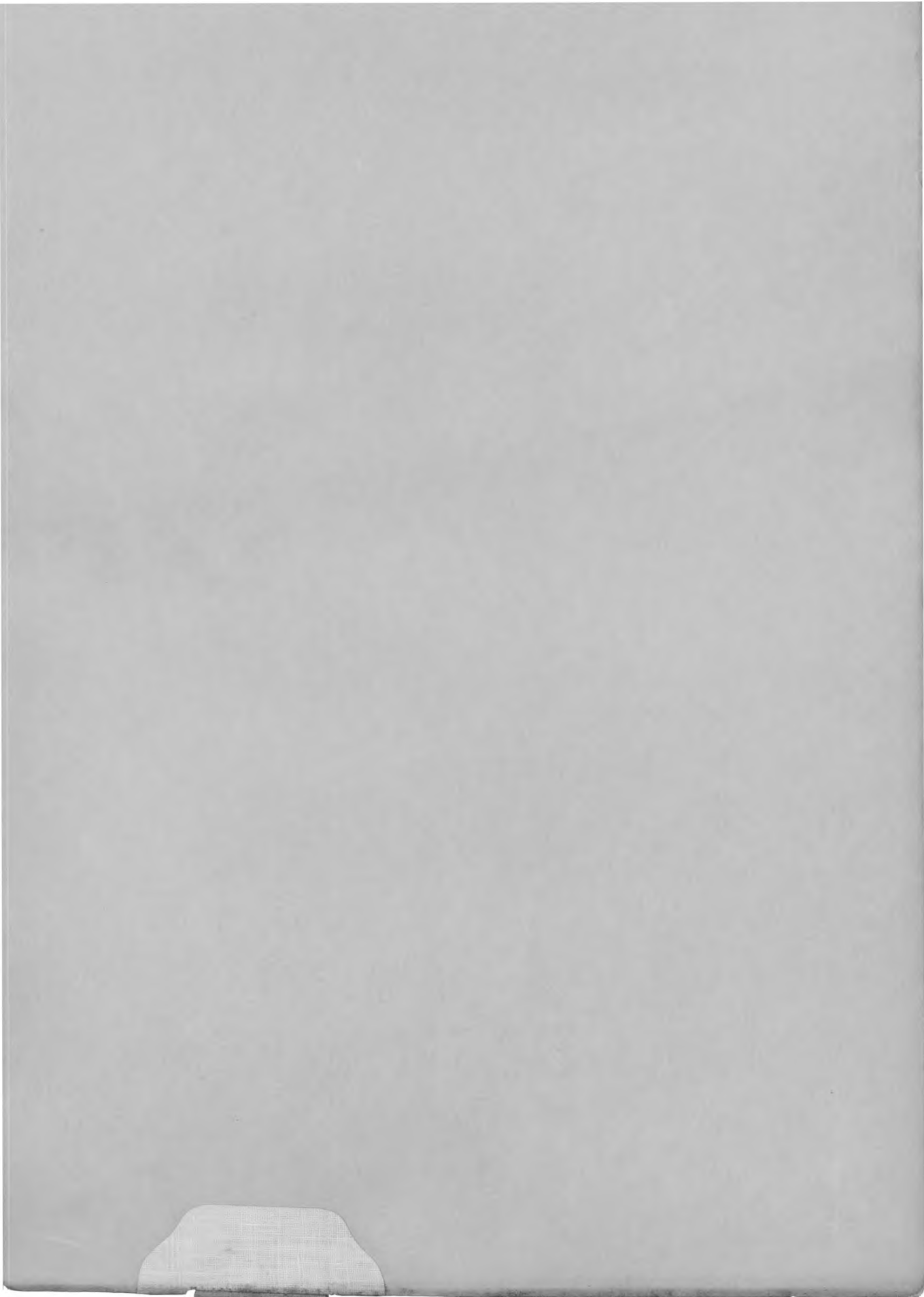
Dear Sir:-

Replying to yours of the 6th. The donations of the Land Department for the year 1904 amounted to \$6.00 which was a donation to the "Negaunee Volunteer Fire Department".

Yours truly,

A handwritten signature in cursive script that reads "C. R. Townsend".

Assistant Land Agent.



3

+++++  
+++++  
+:  
+: CLEVELAND IRON MINING COMPANY. :+  
+: :+  
+: ISHPEMING, MICHIGAN. :+  
+: :+  
+: AGENT'S ANNUAL REPORT :+  
+: :+  
+: F O R :+  
+: :+  
+: YEAR ENDING NOVEMBER 30th., 1904. :+  
+: :+  
+++++  
+++++

RECEIVED  
JAN 26 1905

I N D E X.

MORO.....	1	
Estimate of ore in sight.....	1	
Ore statement November 30th., 1904.....	2	
HARD ORE LOCATION.....	2	
LAKE MINE.....	3	- 21
Statement of mining cost.....	3	
Division of Mining cost for the year.....	4	
Ore Statement November 30th., 1904.....	5	
Average wages and product.....	5	
Average analysis of Mine Samples.....	6	
Ore shipments for 1904.....	6	
Average analysis cargo samples.....	6	
Statement of comparative wages.....	7	
Statement of timber used for the year 1904.....	7	
Statement of explosives used for breaking ore.....	8	
Estimate of ore in sight.....	8	
Comparative statement of Maintenance accounts.....	9	
Comparative statement tracks and yards.....	10	
Comparative statement of joint track expense.....	10	
Comparative statement of cost on various buildings.....	10	
Electric Tram Plant.....	11	
Statement of comparative cost for motors and extraordinary repairs.....	12	
Statement of expenditure for Tracks and Cars.....	12	
Lake Angeline Drainage,Launders,.....	12	
Cost per ton for Maintenance of electric tram plant.....	13	
Statement of Drifting and Raising.....	13	
Work in different parts of the mine.....	14	- 16
Detail of cost No.4 shaft.....	17	- 20
Surface.....	20	
Fatal accidents.....	21	
Lake Angeline Drainage.....	21	

CLEVELAND IRON MINING CO.

Ishpeming, Michigan.  
1st December 1904.

Mr. Wm. G. Mather, President,

Cleveland, Ohio.

Dear Sir:

I beg to submit herewith my annual report of the operations and present condition of the mines of this Company.

The statements, inventory and book of maps to which this report refers have been sent you.

MORO MINE.

This mine was closed December 1st., 1903, and has not been operated during the past year. The mine, has, however, been kept unwatered.

Before starting again the shaft and the skip road will have to be repaired. The following estimate of ore in sight was made by the Engineering Department when the mine shut down.

Location.	Floors	Pillars Around "J" Shaft	Stopes and Partly Developed	Probable	Totals
1st.level		2,000			2,000
3rd.level	6,000	6,000	2,000	5,000	19,000
5th to 9th		5,000			5,000
6th level	3,000		1,500		4,500
8th level	2,000				2,000
10th level	3,000	2,000			5,000
11th level	20,000		2,000		22,000
12th level	35,000		37,500		72,500
13th level + Below 13th level			10,000	30,000	40,000
				50,000	50,000
Totals	69,000	15,000	53,000	85,000	222,000 ✓

+ Estimated on basis of a 60 foot level. Pillars necessary to hold up the walls are not included.

Moro.



MORO MINE.

ORE STATEMENT NOVEMBER 30th, 1904.

	SCOTCH	LAST YEAR.	
On hand December 1st, 1903,	84,786	86,445	
Output for year,		70,782	
Total,		157,227	
Shipments,	1,993	72,441	
Balance in stock November 30th, 1904,	82,793	84,786	

SHIPMENTS DIVIDED IN GRADES AS FOLLOWS;

	Lump Cliffs Shaft	Crushed Cliffs Shaft	Total	
Coarse Scotch,	1,359		1,359	
Fine Scotch,		634	634	
Total,	1,359	634	1,993	

HARD ORE LOCATION.

The usual spring cleaning was done at the Location. Next year it will be advisable to repair the streets, as in places they are in bad condition. The houses have been kept in repair. On account of their age, and cheap original construction, the cost of maintenance is high.

LAKE MINE.

298,684 tons of ore were mined from this property at the following cost:

	1904	1903	Increase	Decrease
<u>PRODUCT</u>	298,684	476,821		178,137
General Expense,	.028	.020	.008	
Maintenance,	.048	.041	.007	
Mining Expense,	.717	.768		.051
Cost of Production,	.793	.829		.036
<u>EXPLORATORY,</u>	.001	.003	.002	
<u>DEPRECIATION.</u>				
Improvement,	.012		.012	
New Construction,		.004		.004
New NO.4 shaft,,	.245	.191	.054	
Fire Loss,	.003		.003	
Total,	.260	.195	.065	
Less Credits,				
Inventory,	.001			.001
Total Depreciation,	.259	.195	.064	
Taxes,	.057	.045	.012	
Central Office,	.059	.031	.028	
Cost on stockpile,	1.169	1.103	.066	
Loading and Shipping,	.019	.016	.003	
Total Cost,	1.188	1.119	.067	

Owing to the heavy depreciation, due to New Construction, no comparison of the "Total Cost on Cars" for 1903 and 1904 can be made. Taking, however, the "Cost of Production" as a basis, the cost for 1904 was .036 lower than in 1903. Considering the reduced output, this is certainly a very gratifying result.

LAKE MINE.

DIVISION OF MINING COST FOR THE YEAR ENDING NOVEMBER 30, 1904.

	AMOUNT	COST	DIV. OF PRODUCT	LAKE BESS.	LAKE	SILICA	TOTAL
General Expense	8292.50	.028	South Deposit	84342	20780	7167	112289
Maintenance	14325.37	.048	2nd Level	808	12041		12849
Mining Expense			3rd level		166037		166037
Air pipes,	745.24	.003	4th level				
Compressors	8117.51	.027	Overrun	7509			7509
Hoisting	5402.07	.018	Total,	92659	198858	7167	298684
Steam Pumps	10605.56	.035	For year 03,	150607	317472	8742	476821
Skgs. & Shift Rprs	10637.64	.036	Increase				
Ming. Capt. & Bsses	5093.61	.017	Decrease	57948	118614	1575	178137
Dry House	564.86	.002					
Tp. Lndg & Trmg	3268.33	.011					
Stocking ore	1924.10	.006					
L.A. DR. Pmp. Exp,	4835.79	.016					
Total,	73812.58	.247					
Year 1903,	89574.78	.188					

	South Deposit		2nd level		3rd level		4th level		Total 1904		Total 1903	
	112289 Tons		12849 Tons		166037 Tons		No Tons		298684 Tons		476821 Tons	
	Amount	Cost	Amount	Cost	Amount	Cost	Amount	Cost	Amount	Cost	Amount	Cost
Driftg,	2564.60	023	1511.23	118	8256.17	050	8190.15		20522.15	069	35428.90	074
Brkg. O,	36873.67	328	4468.48	348	55912.86	337			97255.01	325	186349.08	391
Trang,	5426.68	048	620.58	048	8014.40	048			14061.66	047	28981.65	061
Fillg,			79.04	006	627.69	004			706.73	002	1447.90	003
Timbrg	10181.69	091	1597.50	124	18559.99	112			30339.18	102	53274.00	112
Cave in			265.80	021					265.80	001	153.54	000
	55046.64	490	8542.63	665	91371.11	551	8190.15		163150.53	546	305635.07	641
1903	136491.82	605	28354.60	672	131265.96	635	9522.69			641		
Cost above accts,	247			247		247				247		
Cost of Prod,	737			912		798				793		
Do. 1903,	793			860		823				829		
Increase				052								
Decrease	056					025				036		

LAKE MINE.

DIVISION OF MING COST, Continued.

SUMMARY,	1904	1903.
Mining Cost,	546	641
Genl.Exp.items,	247	188
Total,	793	829
Decrease,	036	

ORE STATEMENT NOVEMBER 30th, 1904.

	BESSEMER	LAKE	LAKE BESS.SIL.	TOTAL	TOTAL LAST YEAR
On hand December 1st, 1903,	4,651	166,879		171,530	151,223
Output for year,	85,150	206,367	7,167	298,684	476,821
Total,	89,801	373,246	7,167	470,214	628,044
Shipments,	87,228	305,280	7,167	399,675	456,514
Balance in stock,	2,573	67,966		70,539	171,530
Decrease in ore in stock,				100,991	
Decrease in product, 37%				178,137	

Note:-

1904--One ten hour shift during year.

1903--Three eight hour shifts to October 1st.

Two ten hour shifts October 1st to December 1st.

AVERAGE WAGES AND PRODUCT.

	SURFACE		UNDERGROUND		TOTAL	
	1904	1903	1904	1903	1904	1903
Product, 1904, 298,684 tons.						
Product, 1903, 476,821 tons.						
Average number men working,	81	101	202	418	283	519
Average wages per day,	1.97	1.95	2.27	2.22	2.18	2.16
Average wages per Mo, 25 days,	49.25	48.75	56.75	55.50	54.50	54.00
Average product per man per day,	12.00	15.48	4.91	3.96	3.48	3.15
Labor cost per ton,	.164	.126	.463	.559	.627	.685
Difference in labor cost per ton,	+.038	+.020	-.096	-.022	-.058	-.003
Average Product breaking & Trimming,			8.16	6.35		
Average wages for Miners,			2.30	2.26		
Average wages for trammers,			2.30	2.26		
Average wages for Contractors,			2.30	2.26		
Lake.						

LAKE MINE.

The higher wages per day on surface are due to the number of mechanics, who were employed on new construction. The comparison of product per man per day on surface is valueless, on account of the "Extraordinary Labor" on the new plant. For the same reason the total product per man per day is misleading. It is therefore only in the underground labor that we find a true comparison. From this it appears that the production per man per day was .95 tons greater than in 1903, or 23.99%. This result could not have been obtained working two shifts, on account of the half shift Saturday night, which is paid for but not worked.

AVERAGE ANALYSIS OF MINE SAMPLES.

	Iron	Phos.
Lake Bessemer,	63.70	.037
Lake,	60.26	.102
Lake Bessemer Silica,	46.98	.042

ORE SHIPMENTS FOR 1904.

	POCKET	STOCKPILE	TOTAL	TOTAL LAST YEAR.
Lake Bessemer,	40,086	47,142	87,228	145,956
Lake,	142,325	163,125	305,280	301,816
Lake Bessemer Silica,	7,167		7,167	8,742
Total,	189,578	210,267	399,675	456,514
Total last year,	303,182	153,332	456,514	
Decrease, 12%,			56,839	
Shipments Lake Ore from Mine Stockpile,			132,823	
Shipments Lake Ore from Presque Isle Stockpile,			30,302	
Total,			163,125	

AVERAGE ANALYSIS CARGO SAMPLES.

	Iron	Phos.
Lake Bessemer cargoes,	63.18	.040
Lake,	59.85	
Lake Silica,	46.77	.040

Lake.

LAKE MINE.

STATEMENT OF COMPARATIVE WAGES.

	1904	1903	Increase or Decrease for 1904.
<u>SURFACE</u>			
Total number days,	24,892 $\frac{3}{4}$	30,796	
Average rate,	1.97	1.95	Increase .02
Amount,	48,941.04	60,043.97	
<u>UNDERGROUND</u>			
Total number days,	60,859 $\frac{3}{4}$	120,422 $\frac{3}{4}$	
Average rate,	2.27	2.22	Increase .05
Amount,	138,238.81	266,830.72	
Total Days,	85,752 $\frac{1}{2}$	151,218 $\frac{3}{4}$	
Average rate,	2.18	2.16	Increase .02
Total amount,	187,179.85	326,874.69	

STATEMENT OF TIMBER USED FOR THE YEAR 1904.

STULL TIMBER.

SIZE	LINEAL FEET	AVG. PRICE	AMOUNT 1904	AMOUNT 1903	FT. BD. MEASURE
6" to 8"	38254	.02	765.08	2161.40	49730
8" to 10"	112406	.0354	3978.13	6557.32	146128
10" to 12",	91158	.0525	4785.80	5239.17	275297
12" to 14"	10996	.0675	741.57	2203.00	54980
14" to 16"	1990	.0900	179.10	778.86	14955
16" to 18"	892	.0900	80.28	231.84	9366
Total,	255696	.041	10529.96	17171.59	550456
Total 1903,	455004	.038	17171.59	18039.66	962207
Decrease for 04,			868.07		
<u>LAGGING.</u>					
5 foot,	678125	.56	3797.50	4269.90	
7 foot,	45315	.59	265.76	1659.00	
Poles,	24696	.01	246.96	954.40	
Total,	748136	.576	4310.22	6883.30	
Total for 1903,	1163971	.591	6883.30		
Decrease 04,			2573.08		

Lake.

LAKE MINE.

STATEMENT OF TIMBER, Continued.

	1904	1903
Feet of timber per ton of ore,	.856	.954
Feet of lagging per ton of ore,	2.422	2.441
Feet of lagging per foot of timber,	2.83	2.56
Cost per ton for timber, lagging and poles,	.050	.050
Equivalent of Stull timber to Board Measure,	550456	962207
Feet Board measure per ton of ore,	1.84	2.02
Total product,	298684	476821

STATEMENT OF EXPLOSIVES USED FOR BREAKING ORE.

KIND	QUANTITY	AVG. PRICE	AMOUNT	AMOUNT 1903.
40% Powder	17200	.105	1806.00	4488.75
50% Powder	34667	.12	4160.04	5168.94
Fuse	139075	4.06	564.66	979.26
Caps	47600	5.84	278.03	472.72
Total,			6808.73	11109.67
Product,			298684	476821
Pounds powder per ton ore,			.173	.180
Cost per ton for explosives,			.0228	.023

The following estimate of ore in sight was made by our Engineering Department.

<u>Old Mine.</u>			<i>Last year.</i>
Above 1st level, shaft pillars,	50,000	50,000	<i>50,000.</i>
Above 2nd level, N E Shaft pillar,	150,000		
N W	155,000	305,000	<i>309,000</i>
Above 3rd level, 271' sub S E	13,000		
290' sub	76,000		
3rd level, East of 7 room,	32,000		
7 room E to 7 room W,	631,000		
West end,	712,000	1,454,000	<i>1,533,000</i>
Above 4th level, same as last year,	150,000	150,000	<i>150,000</i>

Lake.

LAKE MINE.

ESTIMATE OF ORE IN SIGHT, Continued.

South Side Deposit.			
Above 300' level West,	46,000		
Above 3rd level East,	42,000		
Above 3rd level West,	39,000		
Below 3rd level East, (Probable),	70,000	197,000	<i>152,000</i>
Total,		2,156,000	<i>2,194,000</i>
Total 1903,		2,194,000	
Decrease,		38,000	

You will note that the total Bessemer ore estimated is only 197,000 tons, of which 70,000 tons is "Probable". After next year's output this deposit will be practically exhausted.

COMPARATIVE STATEMENT OF MAINTENANCE ACCOUNTS.

	1904	1903	Increase	Decrease	
Tracks and Yards,	2620.23	3306.25		686.02	
Docks, Trestles and Pockets,	211.05	511.36		300.31	
Buildings,	65.82	58.80	7.02		
Shop Machinery,	0	0			
Boilers,	117.87	388.85		270.98	
Hoisting Machinery,	286.63	549.58		262.95	
Comp, Recvrs & Air pipes,	1354.47	1350.37	4.10		
Steam Pumps,	857.45	373.55	483.90		
Top Tram Engine & Cars,	984.83	1087.25		102.42	
Skips and Skip roads,	497.28	1086.65		589.37	
Underground tracks and cars,	1519.36	1812.58		293.22	
Electric Tram Plant,	4626.50	9025.79		4399.29	
Lake Angeline Drainage, Launderers,	1183.88		1183.88		
Total,	14325.37	19551.03	1678.90	6904.56	
Cost per ton,	.048	.041			
Decrease for 1904,				5225.66	
Increase cost per ton,	.007				

Lake.



LAKE MINE.

Following is itemized statement of the various accounts under Maintenance.

TRACKS AND YARDS. Decrease \$686.02

Comparative Tracks and Yards Account.

	1904	1903	Increase	Decrease
Side tracks,	728.91	1129.10		400.19
Surface,	1891.32	2177.15		285.83
Total,	2620.23	3306.25		686.02
Cost per ton,	.009	.007		

The following is comparative joint track expense as per bills rendered by the  
C & N W Ry Co.

	1904	1903	Increase	Decrease
Repairs and Renweals,	1676.69	1485.96	190.73	
Moving tracks,		503.08		
Total,	1676.69	1989.04		
Our proportion 1/3,	558.90	663.01		104.11

The increase in Repair account is due to replacing new ties in track East of No.1 pocket.

DOCKS, TRESTLES AND POCKETS. Decrease, \$300.31

The decrease is mainly due to the decreased working force and the smaller quantity of rock hoisted.

BUILDINGS. Increase \$7.02 No extraordinary repairs were made during year, as the present plant is to be changed to the new one.

B-U-I-L-D-I-N-G-S.

	1904	1903	Increase	Decrease
Office	.88	4.89		4.01
Warehouse	00	00		
Shops	4.62	4.10	.52	
Shaft House	16.67	1.80	14.87	
Engine House	3.20	12.69		9.49
Dry House	16.44	35.32		18.88
Miscellaneous	12.07		12.07	
Fire Protection	11.94		11.94	
Total,	65.82	58.80	39.40	32.38
Lake Net Increase,			7.02	

LAKE MINE.

SHOP MACHINERY. No purchases made during year.

BOILERS. Decrease \$270.98. No extraordinary repairs and no renewals of grate bars during year.

HOISTING MACHINERY: Decrease \$262.95. No extraordinary repairs. Purchased 1122 feet 1 $\frac{1}{4}$ " hoisting rope in September. Cost \$266.48.

COMPRESSORS, RECEIVERS AND AIR PIPES: Increase \$4.10  
Purchased during year six No. 3 $\frac{1}{2}$  Rand Drills cost \$695.58. 1800 feet 4" pipe, \$525.60 for line to No. 5 shaft. Compressor valves \$41.60. Sundry repairs etc., \$91.69.

STEAM PUMPS: Increase \$483.90. The chief items of expense during year was for 1001 feet 4" pipe for steam line from new plant to No. 1 for mine pumps. Cost \$618.28, Labor \$184.70, balance ordinary repairs.

TOP TRAM ENGINE AND CARS: Decrease \$102.42. The principal item for year being cost of installing new tram plant, which cost, exclusive of machinery, \$392.98, removal of same to new shaft \$98.17. New belting \$68.59. Wire rope \$138.47, and new car wheels \$45.00. Miscellaneous items \$141.62.

SKIPS AND SKIP ROADS: Decrease \$589.37. No extraordinary repairs during year. Expense being for repairs and new wheels.

UNDERGROUND TRACKS AND CARS: Decrease \$293.22. New tracks and car repairs are less than for previous year due partly to decreased output.

ELECTRIC TRAM PLANT: Decrease \$4399.29.

Following is detailed statement of the various items making up this account, and the comparative cost with 1903.

	1904	1903	Increase	Decrease
Engine		38.85		38.85
Dynamos		88.90		88.90
Motors,	2317.26	5089.90		2772.64
Wiring	382.69	522.78		140.09
Tracks and cars,	1926.55	3285.36		1358.81
Total,	4626.50	9025.79		4399.29
Net Decrease,				4399.29

LAKE MINE.

The comparative cost for each motor is as follows:

	1904	1903	Increase	Decrease
Motor No.1	100.41	717.95		617.54
Motor No.2	528.02	701.97		173.95
Motor No.3	203.73	795.83		592.10
Motor No.4	380.74	1145.16		764.42
Motor No.5	434.36	888.99		454.63
General expense, Electrician etc.,	670.00	840.00		170.00
Total,	2317.26	5089.90		2772.64

Motor No.1: No extraordinary repairs during year.

Motor No.2: Refilling two commutators \$110.60. Steel for new axles \$39.59. Balance ordinary repairs.

Motor No.3: Ordinary repairs only.

Motor No.4: Repairs due to collision \$120.39. Steel for new axles \$12.89.

Motor No.5: Refilling one commutator \$61.50, 35 coils \$39.95. One gear \$21.32, balance ordinary repairs.

WIRING: Decrease \$140.09. The main expense for year was for wiring down new shaft, and through main drift, cost \$280.54. No extensive repairs of old plant.

TRACKS AND CARS: Decrease \$1358.81.

The detail of this account is as follows:

	1904	1903	Increase	Decrease
Tracks,	765.59	1093.83		328.24
Cars,	1160.96	2191.53		1030.57
Total,	1926.55	3285.36		1358.81

TRACKS: Decrease \$328.24. Have only one man looking after tracks this year, while last year there were two men a greater part of the time.

CARS: Less repairs necessary to old cars also to new cars, owing to less tonnage mined.

LAKE ANGELINE DRAINAGE: LAUNDERS: The cost for 1903 was \$1864.33 as compared with \$1183.88 for 1904. This covers construction and repairs of launders, and was previous to January 1st, 1904, carried under Mining Expense, together with the Pumping Cost.

12

Lake.

LAKE MINE.

The following statement shows the cost per ton for Maintenance, and Operating Electric Tram Plant, as compared with 1903.

Product 1904, 298684 tons.	1904		1903		Decrease	
	Amount	Per ton	Amount	Per ton	Amount	Per ton
Product 1903, 476821 tons.						
Engine			38.85	000		
Dynamo			88.90	000		
Motors	2317.26	.008	5089.90	.011		
Wiring	382.69	.001	522.78	.001		
Tracks and Cars	1926.55	.006	3285.36	.007		
Total,	4626.50	.015	9025.79	.019	4399.29	.004
Operating,	12553.76	.042	25259.51	.053	12705.75	.011
Grand Total,	17180.26	.057	34285.30	.072	17105.04	.015

The drifting and raising for the year has been as follows:

OLD MINE	DEVELOPMENT		MINED IN STOPES	
	Feet	Feet	Feet	Feet
117' sublevel,	24		311½	
Second level	55			
271' sublevel	323		819	
290' sublevel	504		634	
308' sublevel	88			
Third level	354½		25	
Fourth level	553			
		1901½		1789½
SOUTH SIDE				
265' sublevel	37			
280' sublevel	76		12	
300' sublevel	21			
Third level	144			
402' sublevel	119			12
		397		
		2298½		
NO. 4 SHAFT.				
Sinking,	80½			
Coal tunnel	382		462½	
NO. 5 Shaft,				
Sinking,	64			
Pocket,	10		74	
Total,		2835		1801½
Grand Total,		4329		3751
				7540
				4636½

Lake.

LAKE MINE.

Work in the different parts of the mine has been as follows:

The tinted portions of the map show the work done for the year, and the numbers indicate the present location of the corresponding contracts.

The 120 sublevel in the shaft pillar, which we had just started to open at the beginning of the year, has been completed.

East of the shaft, contracts No's 28 and 64 are stoping from the Eastern limits of the pillar towards the West.

Contract No.52 is stoping in the West end of the sublevel, taking the ore from foot to hanging. As soon as No.1 shaft is abandoned mining will be vigorously pushed at this point.

On the first level two hanging wall drifts have been driven East and West through the shaft pillar. Contracts No.s 57 and 59 are now drifting from foot to hanging West of the shaft, opening this level preparatory to mining when the ore above is exhausted.

SECOND LEVEL.

All ore above this level has been mined, except the shaft pillar.

271' sublevel N W and S W.

This level is exhausted with the exception of two small pillars, which are now being taken out by contracts No's 10 and 34.

271' sublevel N E and S E.

All the ore in the North East part of this level is exhausted. In the South East 3,000 or 4,000 tons remain on the foot. Contracts 32, 33, 42 and 63 are now mining this.

290' sublevel N W and S W.

North West of the 7th room all the ore has been mined except a few small pillars which are now being removed by contracts 2, 16, 38, 53 and 40. South West of the 7th room contracts 22, 37, 54, 56 and 58 are stoping from foot to hanging. There still remains quite a large tonnage of ore at this point. Very little work has been done on the South East and North East. At the East end a single drift has been driven 500 feet West. At present contract No.47 is drifting West to connect with the South West workings. Contract No.4 is drifting East. Contract No.21 is drifting South from No.2 raise, while contract No.46 is drifting North from the same raise.

Lake.

LAKE MINE.

308' sublevel North West.

During the year this sub has been opened 350 feet West of the 6th room, and 400 feet East from the boundary.

Contract No.24 is drifting West, while No.31 is drifting East. Contract No.23 is cross cutting the deposit from North to South. Contract No.43 is cross cutting from the top of their raise. Contract No.26 is drifting East to connect with No.9 raise. West of the 7th room Contract No.19 is drifting West. Contracts 14 and 55 are stoping from foot to hanging. Contract No.20 is drifting North to reach the line of the timber drift on the 2nd level, and when this is reached will put up a raise to facilitate the handling of timber on this sublevel.

The exact location of all these contracts on November 30th., is shown on the maps.

THIRD LEVEL.

The only work done on this level was driving a cross cut to connect the main North West and South West drifts to facilitate tramping to the new shaft, and the widening and extending of the main drift to the shaft.

FOURTH LEVEL.

During the year the cross cut from the winze to No.4 shaft was completed, and it is now being widened near the shaft to permit of laying a double track. The East drift to No.1 shaft has been extended 350 feet, and contract No.29 still has 150 feet to go before reaching the line of the shaft.

SOUTH DEPOSIT.

All the ore above the 2nd level has been mined, except a small amount in "B" raise pillar. Contract No.61 is now taking this out.

265' sublevel.

Only a few thousand tons of ore remain on this level. South of "B" raise Contract No.15 is stoping, taking the ore to the hanging. Contracts No.27 and 36 are stoping East of the line of the main South drift 3rd level.

280' sublevel.

East of No.3 shaft the ore is exhausted. West of the shaft about two thirds of the ore has been mined. Contracts No's 15, 13 and 65 are working at this point.

15

Lake.

LAKE MINE.

300' sublevel.

This level has been exhausted East of the 3rd level South drift. West of this it has been opened to the limits of the ore body, but no mining has yet been done.

Contract No.51 is drifting South East across the ore body.

312 foot sublevel.

This level has been exhausted East of the 3rd level South drift. To the West the ore has been mined for 150 feet under the hanging.

324' sublevel.

Contracts No's 3 and 17 are stoping what ore is left on this level, East of the 3rd level South drift. West of this the ore has been mined 125 feet West and 150 feet North of the boundary.

336' sublevel.

East of the line of the 3rd level South drift, this sub has been opened the entire length of the deposit. Contracts 5, 25, 18, 44, 50 and 60 are stoping the ore from the hanging towards the foot.

THIRD LEVEL.

Contract No.41 has just started at the extreme East end of the deposit to stope North from the boundary.

NO.5 SHAFT.

As stated in the last annual report, the amount of ore below the 3rd level does not warrant drifting from the North deposit on the 4th level. For this reason an auxilliary shaft was sunk 120 feet North of the <sup>boundary</sup> line on the 3rd level South drift. It was put down at an angle of 70° to the South, to a vertical depth of 59 feet, which will take the deepest ore shown by the diamond drill hole. From the bottom No.9 contract has started a drift South East, and have driven it for a distance of 65 feet, but has not yet reached the ore.

NO.4 SHAFT.

During the year this shaft has been completed to the 4th level.

The cost of the shaft and equipment to date has been as follows:

LAKE MINE.

DETAIL LAKE NO.4 SHAFT.

Drifting to line of shaft,	16,712.63	16,712.63
Sinking and Raising to 3rd level,	21,126.80	
Timbering shaft,	3,598.37	
Timber drift,	1,966.84	
Making road,	262.37	
Temporary Compressor plant,	719.28	
Rental of equipment,	340.00	
Skip road and guides,	1,602.87	
<u>Total,</u>		29,616.53
<u>Engine and Boiler House.</u> ✓		
Excavating,	1,794.33	
Foundation,	1,498.68	
Building,	15,570.90	
<u>Total,</u>		18,863.91
<u>Shaft House.</u> ✓		
Foundation,	778.62	
Building,	8,022.23	
Guides, chutes etc.,	480.84	
<u>Total,</u>		9,281.69
<u>Coal Dock.</u> ✓		
Moving timber,	430.80	
Excavating,	349.06	
Abutment,	150.94	
Dock to hold 5,000 tons,	7,407.91	
Trestle dock to boiler house,	372.74	
Tunnel Engine House to dock,	2,132.79	
Tracks,	913.21	
<u>Total,</u>		11,757.45



## LAKE MINE.

Office, Warehouse and Shops,		
New Dry, Excavating,	74.35	
Permanent trestles around shaft house,	4,341.34	
Pulley stands and carriers,	823.50	
Moving Carpenter Shop and Captain's Office,		
<u>Total,</u>		5,239.19
<u>Boiler Plant.</u>		
Cost of Boilers,	5,425.00	
Moving and Erecting,	6,768.16	
Breeching and connections,	1,053.59	
Fuel Economizer and Installing,	3,777.94	
Smoke stack and erecting,	6,096.89	
Murphy stokers,	5,081.33	
Ash bins and Machinery,	1,714.39	
Removing old boilers,		
Covering pipe Engine & Boiler House,	704.88	
Coal Machinery,	1,284.64	
<u>Total,</u>		31,906.82
<u>Compressor Plant.</u>		
Compressor,	17,014.68	
Air receiver and piping,	217.80	
Cooling tower, Compressor,	2,360.67	
Steam and Air pipe in shaft,	2,902.29	
Changing air pipe to Hard Ore,	107.52	
Removing present compressor,		
Erecting Compressor and condenser,	3,241.10	
Condenser,	1,715.00	
<u>Total,</u>		27,559.06
<u>Hoisting Plant.</u>		
New Hoist complete,	14,138.68	
Piping boilers to engines,	2,770.31	
Cage, skips and ropes,	1,453.59	
Removing present hoist,		
Freight and erecting,	2,024.29	

<u>Hoisting Plant, Continued.</u>		
Head sheaves and carriers,	615.65	
<u>Total,</u>		21,002.52
<u>Electric Plant.</u>		
<u>Moving and Erecting Engine and Generator,</u>		
<u>Top Tram Plant.</u>		
Cost of plant,	2,320.00	
Removing rock tram plant,	147.17	
Freight,	80.82	
Foundation,	239.53	
Building,	539.71	
<u>Total,</u>		3,327.23
<u>Pumping Plant.</u>		
Moving Dean pump to 4th level.		
Covering steam pipe.		
<u>Steam Heating Plant.</u>		
Piping.		
<u>Machinery Foundations.</u>		
Compressor foundation,	2,485.31	
Hoisting foundation,	2,092.38	
Electric foundation,	539.35	
<u>Total,</u>		5,117.04
<u>New Dry House Building.</u>		
Excavating,	34.65	
Lockers set up,	1,053.60	
Launders for waste water,	82.50	
12 shower baths,	285.61	
Heating system,	549.69	
Wash troughs,	226.85	
Water heater with coils,	73.68	
Steam pipe from Engine house,	109.45	
Water supply from main,	156.04	
Clothes drying racks,	88.10	
Ventilating hoods and vents,	15.80	
<u>Total,</u>		7,815.17

LAKE MINE.

Miscellaneous.

Temporary Heating Cost,	964.08	
Stockpile Dock, Ext. West end,	1,960.13	
Testing Machinery Plant,	318.58	
Water tank,	240.50	
New bell lines,	265.77	
Launder from Engine House,	877.11	
<u>Total,</u>	4,626.17	
<u>Grand Total,</u>		\$192,825.41

188 738 111

4087

It is unnecessary to refer here to the Surface Equipment, as the Master Mechanic's Report goes into this matter in detail.

SURFACE.

When the old plant is abandoned the boilers will be moved to the Cliffs Shaft Mine, to replace the old boilers at that property, which have been condemned by the Boiler Inspector.

The Corliss engine which has been driving the dynamo will be used for the Crusher plant at the same mine. The engine at present used is an old slide valve affair, which is consuming at least 60 lbs of steam per hour, and the substitution will easily cut the fuel consumption in half, and more than pay for the engine in one year.

The hoisting engine will be taken out and stored in the brown stone engine house at the Hard Ore Mine. The drum is cracked, and will have to be replaced when the hoist is again used. It will probably be advisable, however, as recommended by our Master Mechanic, to put a second high pressure cylinder on this engine, and use the low pressure cylinder for compounding the compressor at the Ashland Mine.

The old Engine House is to be moved opposite No.4 shaft, and converted into a blacksmith shop, machine shop, carpenter shop and Mine Office. The cost will be less than erecting new buildings, and the arrangement much more convenient. The Captain's Office will be moved to a point 200 feet West of the Engine House.

A Dry, 30' x 206', similar in design to that at the Cliffs Shaft Mine, has been built. It is located within sixty feet of the shaft, which makes it very convenient for the men. There is no doubt but what conveniences of this sort tend to improve the class of men employed, as the miners appreciate the accommodations furnished them, and we can get the best men from our neighbors.

LAKE MINE.

The dining room feature at the Cliffs Shaft Mine has not proven a success, and was not tried at the Lake Mine.

FATAL ACCIDENTS.

There have been no fatal accidents during the year.

LAKE DRAINAGE.

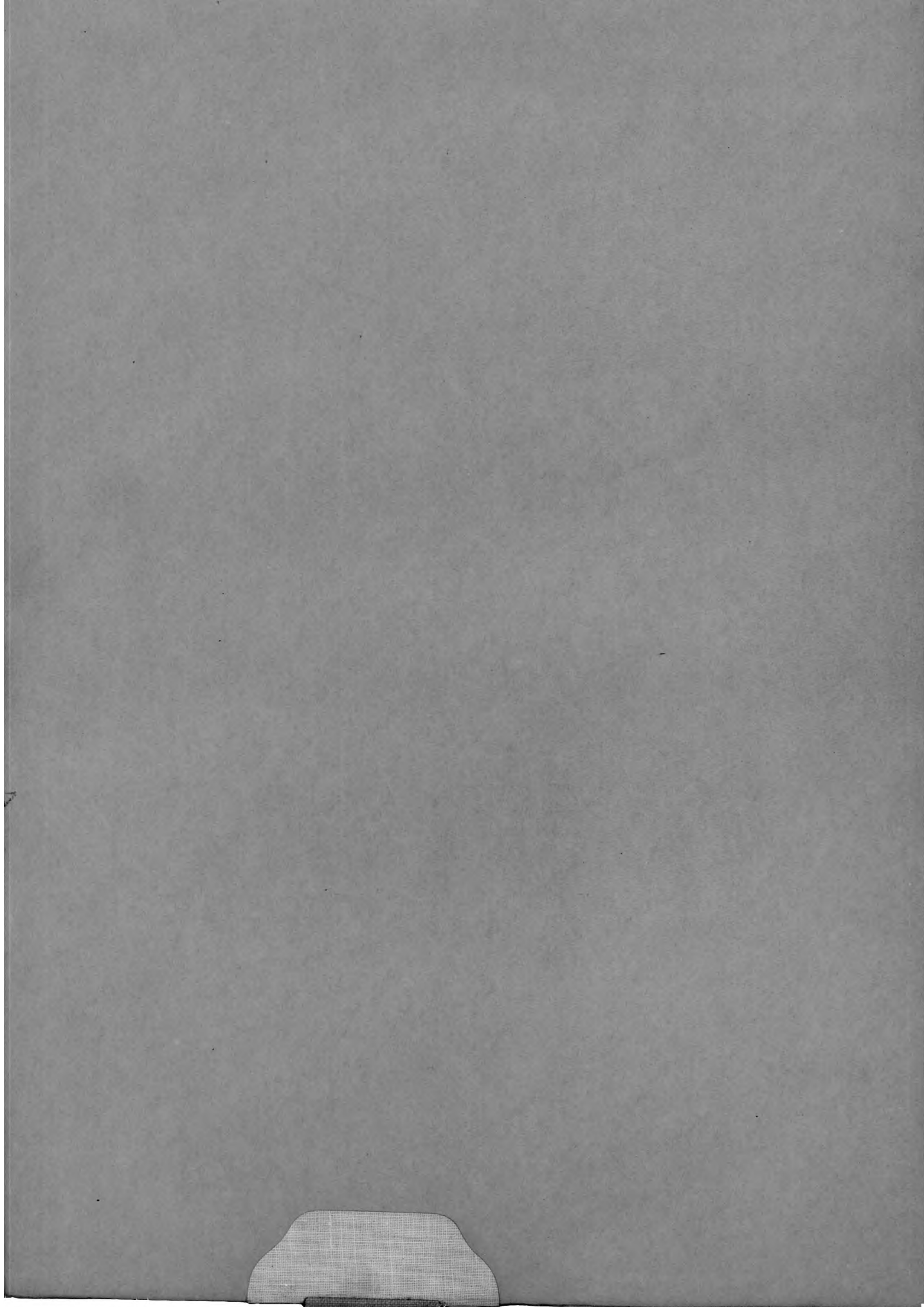
The launder referred to in the last annual report has been built. That part of it on the North side of the cave is likely to be permanent, but the ground over which it crosses to the South will be caved in the future, but can probably be maintained for another year.

When the Pittsburgh & Lake Angeline Iron Co., start to mine near the quarter post, "Our South West corner", they will undoubtedly draw the drift which now carries the water over their land. By that time it is expected that the Lake Superior Iron Co., will have mined out all the ore in the South West part of their mine, so that the launder can be safely carried over their old caves on trestles, or a suspension bridge made of old wire rope. This seems to be a problem which can best be met when the occasion requires. The methods suggested last year were found by investigation to be so expensive, and none of them of an absolutely permanent nature, that it was not thought advisable to recommend any of them.

Respectfully submitted,



Agent.



CLEVELAND IRON MINING COMPANY

MISCELLANEOUS DATA

- 1 Lake Mine Cost Sheet
- 2 Hard Ore Mine Cost Sheet
- 3 Analysis of Improvement and New Construction
- 4 Division of Mining Cost, Lake Mine
- 5 Operating and Maintaining Electric Haulage Plant
- 6 Expense at President's Cottage and Agent's Residence
- 7 Charges to Hard Ore Location
- 8 Cost of Work at Hard Ore Shops
- 9 Laboratory statement
- 10 Cost for Analysis, Including Sampling and Crushing for Each Mine
- 11 Fire Insurance on Mine Buildings and Dwellings
- 12 Operating Steam Shovel No. 4
- 13 Rented Houses, Showing Rents Received, Cost of Repairs, etc. Hematite Mine
- 14 " " " " " " " " " Hard Ore Location
- 15 " " " " " " " " " Second Addn. Location
- 16 Charges to Dwellings Not Rented
- 17 - Charges to Land Improvement
- 18 Details of Accounts Receivable
- 19 Detail of Accounts Payable
- Comparative Statement of Taxes (See C.C.I.CO. Miscel Data File )
- Delays from Various Causes "
- Statement of Barn Expense "
- General Expense Statements "
- 20 Expense of Pumping at Lake Angeline
- Ore Statements "

THE CLEVELAND-CLIFFS IRON CO.

Cost of Production for the Month of *Years* 1904 and 1903.

Main table with columns for Month, Labor, Supplies, Total, 12 months of Labor, 12 months of Supplies, Total, and 1903. Rows include GENERAL EXPENSE, MAINTENANCE-Repairs of, MINING EXPENSE, and LOADING AND SHIPPING.

Table with columns for Accts, not sunk off, Mos, and comparative cost. Includes rows for SINKING, DRIFTING, and COMPARATIVE COST.

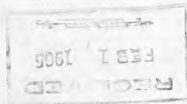
REMARKS:

(1) Repairs and addition to Lander. In 1903 similar expense is shown in L. A. Drainage under Mining Expense, the amount for 1903 was \$72.27
(2) Detail of Improvement and New Construction is shown on form No. 7
(3) New Shaft. See in Lading file
Mine working on 10 ft shaft during year from Dec 1st 1903. (on Dec 1st 1903 changed from 8-8 ft to 2-10 ft. on Dec 1st changed to 1-10 ft shaft.)

ANALYSIS OF LABOR.

Labor as per Cost Sheet,
Other Charges,
Total,
As per Labor Statement,
General Pay Roll,
Total,

THE CLEVELAND-CLIFFS IRON CO.	COST OF SUPPLIES		COST PER TON		
	Mine.	Month	Year	For	For
	Product.			Mo.	Year
General Supplies,					
Iron and Steel,					
Oil, Grease and Candles,					
Machinery Supplies,					
Building Material,					
Explosives,					
Mine Timber,					
Fuel,					
Barn,					
Sundries,					
Total Supplies,					
Miscellaneous,			1		
Total,					
<b>SUMMARY</b>					
As per Cost Sheet,					
Improvement,					
New Construction,					
Other Charges,					
Total,					



H. Niedecken Co., Mfg. Stationers, Milwaukee, 89/951.

Trans 1904 by 1905

Cost Sheet for the Month of

MINE: *Lake*

The Cleveland-Cliffs Iron Co.



# THE CLEVELAND-CLIFFS IRON CO.

Cost of Production for the Month of Years 1904 and 1903

## HARD ORE

Mine	Month of <u>12 months of 1904</u> Tons.						<u>12 months of 1903</u>		<u>70,782 Tons</u>					
	LABOR		SUPPLIES		TOTAL		Labor		Supplies		Total			
	Amount	Cost Per Ton	Amount	Cost Per Ton	Amount	Cost Per Ton	Amount	Cost Per Ton	Amount	Cost Per Ton	Amount	Cost Per Ton		
<b>GENERAL EXPENSE,</b>														
Insurance,			263 65		263 65			403 96	006		403 96	006		
Engineering,	275 07				275 07		467 35	006		467 35	006			
Analysis,			3 75		3 75			168 04	002		168 04	002		
Relief Fund,			159 00		159 00			615 00	009		615 00	009		
Mine Office,	1488 68		215 13		1703 81		2301 86	033		323 42	004	2625 28	037	
Total,	1763 75		641 53		2405 28		2769 21	039		1510 42	021	4279 63	060	
<b>MAINTENANCE—Repairs of</b>														
Tracks and Yards,	2 91		4 08		6 99		24 80	000		41 00		25 21	000	
Docks, Trestles and Pockets,							145 02	002		351 15	005	496 17	007	
Buildings,	296 20		642 83		939 03		162 27	003		307 22	004	469 49	007	
Shop Machinery,								19 44	000		313 4	001	50 78	001
Boilers,	35 31		17 10		52 41		46 77	001		439 38	006	486 18	007	
Hoisting Machinery,							46 97	001		107 46	001	154 43	002	
Compressors and Air Pipes,							43 146	006		779 66	011	1211 12	017	
Cornish and Steam Pumps,	691 68		336 24		1027 92		46 09	001		35 90	001	101 99	002	
Top Tram Engines and Cars,							227 48	003		197 31	003	424 79	006	
Skips and Skip Roads,							615 38	008		520 69	008	1136 07	016	
Underground Tracks and Cars,														
Total,	1076 10		1000 25		2076 35		1765 68	025		2790 52	040	4556 20	065	
<b>MINING EXPENSE,</b>														
Air Pipes,							147 98	002		237 86	003	385 84	005	
Compressors,							168 69	024		447 57	063	616 26	087	
Hoisting,							275 82	039		1491 24	021	4249 48	060	
Pumping,	3307 78		5128 56		8436 34		2428 76	035		4225 76	059	6654 52	094	
Sinking,	413 31		414 07		827 38		39 37	000				39 37	000	
Drifting,							628 77	089		2020 90	028	8305 67	117	
Breaking Ore,							2074 35	293		7116 59	101	27860 11	394	
Tramming,							1255 17	177		784 77	011	13286 51	188	
Filling,														
Timbering,	15 20		4 11		19 31		411 05	006		129 22	002	540 27	008	
Mining Captain and Bosses,	250 00				250 00		2053 00	043				3053 50	043	
Dry House,	1 55		5 3		2 08		630 83	009		681 98	010	1312 81	019	
Top Landing and Tramming,							2019 07	029		335 34	004	2354 41	033	
Stocking Ore,							378 79	005		49 33	001	423 12	006	
Sorting Ore,							2140 27	030				2140 27	030	
Total,	3987 84		5547 27		9535 11		5526 95	781		21498 73	303	76768 28	1084	
Cost of Production, Per Cent.	67 77 69		71 89 05		139 66 74		59 80 44	846		25 79 97	364	85 60 41	1209	
<b>EXPLORATORY,</b>														
Exploring in Mines,							865 26			1156 78		2022 04	029	
Total,							865 26	012		1156 78	017	2022 04	029	
<b>DEPRECIATION, Etc.</b>														
Inventory,					74							948 82	013	
Improvement,							1404 51	020		2425 22	034	3829 73	054	
New Construction,														
Clearing Mine,	29 70		50		30 20									
Unclaimed Ages <i>U.C.</i>					11 82							16 85	000	
Total,	29 70		50		17 64		1404 51	020		2425 22	034	4761 70	067	
Taxes,					3539 10							3539 10	050	
Central Office,							1285 00	018		515 00	007	1800 00	025	
Total Cost on Stock Pile,	6807 39		7189 55		17523 48		63359 21	895		29896 67	422	97726 95	1380	
<b>LOADING AND SHIPPING.</b>														
Steam Shovel, <sup>1904</sup> 13,469 Tons,			19 61		19 61		26 8			495 26		497 91	037	
By Hand, <sup>1903</sup> 23,270 "	306 64		9 10		315 74	158	221 680			95 74		2312 54	099	
At Pocket, <sup>1903</sup> 35,622 "							53 429			82 99		567 28	016	
Sorters (L. E. Dock),							298 05					298 05		
Shipping Expense,	19 92				19 92									
Total,	326 56		28 71		355 27		3051 79	043		623 99	009	3675 98	052	
Total Cost on Cars,	7133 95		7218 26		17878 75		66411 00	938		30520 66	431	101402 73	1432	
Royalty,														
Com. 's and Expense, Cleveland Office,														150
Total Cost,														1582

	..... Mos. ....		..... Mos. ....		SINKING			DRIFTING			COMPARATIVE COST ON Cars			
	Amount	Per Ton	Amount	Per Ton	Feet	Cost	Per Ft.	Feet	Cost	Per Ft.	Year	Mos.	Tons	Cost
New Construction											1900	12	74459	1816
Improvement,											1901	12	76085	1331
Total,								828	830567	10.03	1902	12	76024	1366

**REMARKS:**  
*No ore mined during year, closed Dec 1<sup>st</sup> 1903.  
 Implying and when necessary work only being done*

**ANALYSIS OF LABOR.**  
 Labor as per Cost Sheet,  
 Other Charges,  
 Total,  
 As per Labor Statement,  
 General Pay Roll,  
 Total,

THE CLEVELAND-CLIFFS IRON CO.	COST OF SUPPLIES			COST PER TON	
	Mine.	Month	Year	For	For
	Product.			Mo.	Year
General Supplies,					
Iron and Steel,					
Oil, Grease and Candles,					
Machinery Supplies,					
Building Material,					
Explosives,					
Mine Timber,					
Fuel,					
Barn,					
Sundries,					
Total Supplies,					
Miscellaneous,			2		
Total,					
<b>SUMMARY</b>					
As per Cost Sheet,					
Improvement,					
New Construction,					
Other Charges,					
Total,					

RECEIVED  
FEB 1 1905

H. Niedecken Co., Mfg. Stationers, Milwaukee, Wis. 53211

*Specimen 1904 and 1905*

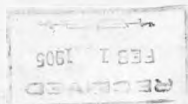
Cost Sheet for the Month of

MINE

*Handwritten signature*

The Cleveland-Cliffs Iron Co.

THE CLEVELAND-CLIFFS IRON CO.	COST OF SUPPLIES			COST PER TON	
	Mine.	Month	Year	For	For
	Product.			Mo.	Year
General Supplies,					
Iron and Steel,					
Oil, Grease and Candles,					
Machinery Supplies,					
Building Material,					
Explosives,					
Mine Timber,					
Fuel,					
Barn,					
Sundries,					
Total Supplies,					
Miscellaneous,			2		
Total,					
<b>SUMMARY</b>					
As per Cost Sheet,					
Improvement,					
New Construction,					
Other Charges,					
Total,					



H. Niedecken Co., Mfg. Stationers, Milwaukee, Wis. 53211

*Specimen 1904 and 1905*

Cost Sheet for the Month of

MINE

*Handwritten signature*

The Cleveland-Cliffs Iron Co.

THE CLEVELAND IRON MINING COMPANY.

ANALYSIS OF IMPROVEMENT & NEW CONSTRUCTION FOR YEAR ENDING NOV. 30 1904.

	Inventory Nov.30.03.		Expendtr For Year		Total		Depreectn. For Year		Inventory Nov.30.04.		Charged L.S.I.Co	
<u>Hard Ore New Const.</u> Additional Shop Room	4795	53	1243	14	6038	67	371	22	5667	45		
<u>Hard Ore Maintenance</u> Repairs to Office Building			425	43	425	43	425	43				
<u>Lake New Construction</u> New No. 4 Shaft			65280	22	65280	22	65280	22				
New Dry House			7815	17	7815	17	7815	17				
<u>Total Lake Shaft</u>			73095	39	73095	39	73095	39				
<u>Lake Improvement</u> Electric Engine			3515	26	3515	26	3515	26				
<u>Miscellaneous</u> Lake Bancroft Road			1146	18	1146	18	1146	18				
<u>Lake Ange Drainage</u> Pumping Expense 12 months			4037	06	4037	06	2927	46			1109	60
Additional Apparatus			1750	72	1750	72	1167	15			583	57
L.S.I.CO. Charges Opt #2 Plant			2566	73	2566	73	1925	06			641	67
<u>Total Drainage Accounts</u>			8354	51	8354	51	6019	67			2334	84
<u>Total C. I. M. CO.</u>	4795	53	87779	91	92575	44	84573	15	5667	45	2334	84
<u>Charged as Follows</u>												
To Shop Earnings Acct Additional Shop Room							371	22				
Hard Ore Maintenance							425	43				
Lake Depreciation							76610	65				
C.I.M.CO. Land Improvement, Lake Bancroft Road							665	60				
Iron Cliffs Co. " " " "							480	58				
Opt. Lake Mine, Maintenance, La Ange Drainage							1183	88				
" " " Mining Exp " " "							4835	79				
<u>Total</u>							84573	15				
<u>Summary Lake Depreciation</u>												
Improvement Acct. Electric Engine							3515	26				
New Construction No. 4 Shaft							73095	39				
Fire Loss, Loss of Mine Timber							952	96	77563	61		
<u>C R E D I T S</u>												
Appreciation of Mine Inventory							107	49				
Unclaimed Wages for Year							21	91	129	40		
<u>Net Depreciation as per Cost Sheet</u>									77434	21		

LAKE MINE.

Division of Mining Cost for the Year ending November 30th 1904.

	Amount		Cost		Division of Product	Lake Bess	Lake	Silica	Total
General Expense	8292	50	028		South Deposit	84342	20780	7167	112289
Maintenance	14325	37	048		2nd Level	808	12041		12849
Mining Expense					3rd Level		166037		166037
Air Pipes	745	24	003		4th Level				
Compressors	8117	51	027		Over-run	7509			7509
Hoisting	5402	07	018		TOTAL.	92659	198858	7167	298684
Steam Pumps	10605	56	035		For the Year 1903	150607	317472	8742	476821
Sinking & Shaft repairs	10637	64	036		Increase				
Mining Capt & Bosses	5093	61	017		Decrease	57948	118614	1575	178137
Dry House	564	86	002						
Top Landing & Trammig	3268	33	011						
Stocking Ore	1924	10	006						
L . A . Dr Pumping expense	4835	79	016						
TOTAL	73812	58	247						
Year 1903.	89574	78	188						

	South Deposit			2nd Level			3rd Level			4th Level			Total 1904			Total 1903		
	112289 Tons			12849 Tons			166037 Tons			No Tons			298684 Tons			476821 Tons		
	Amount	Cost		Amount	Cost		Amount	Cost		Amount	Cost		Amount	Cost		Amount	Cost	
Drifting	2564	60	023	1511	23	118	8256	17	050	8190	15		20522	15	069	35428	90	074
Breaking Ore	36873	67	328	4468	48	348	55912	86	337				97255	01	325	186349	08	391
Trammig	5426	68	048	620	58	048	8014	40	048				14061	66	047	28981	65	061
Filling				79	04	006	627	69	004				706	73	002	1447	90	003
Timbering	10181	69	091	1597	50	124	18559	99	112				30339	18	102	53274	00	112
Cave in				265	80	021							265	80	001	153	54	00
	55046	64	490	8542	63	565	91371	11	551	8190	15		163150	53	546	305635	07	641
For year 1903	136491	82	605	28354	60	572	131265	96	535	9522	69				641			
Cost above Accts			247			247			247						247			
Cost of Production			737			912			798						793			
" " " 1903			793			860			823						829			
Increase						052												
Decrease			056						025						036			

Summary	1904	1903
Mining Cost	546	641
Genl exp items	247	188
TOTAL	793	829
Decrease	036	

LAKE MINE.

Division of Mining Cost for the Year ending November 30th 1904.

	Amount		Cost		Division of Product	Lake Bess	Lake	Silica	Total
General Expense	8292	50	028		South Deposit	84342	20780	7167	112289
Maintenance	14325	37	048		2nd Level	808	12041		12849
Mining Expense					3rd Level		166037		166037
Air Pipes	745	24	003		4th Level				
Compressors	8117	51	027		Over-run	7509			7509
Hoisting	5402	07	018						
Steam Pumps	10605	56	035		TOTAL.	92659	198858	7167	298684
Sinking & Shaft repairs	10637	64	036		For the Year 1903	150607	317472	8742	476821
Mining Capt & Bosses	5093	61	017		Increase				
Dry House	564	86	002		Decrease	57948	118614	1575	178137
Top Landing & Trammig	3268	33	011						
Stocking Ore	1924	10	006						
L . A . Dr Pumping expense	4835	79	016						
TOTAL	73812	58	247						
Year 1903.	89574	78	188						

	South Deposit			2nd Level			3rd Level			4th Level			Total 1904			Total 1903		
	112289 Tons			12849 Tons			166037 Tons			No Tons			298684 Tons			476821 Tons		
	Amount	Cost		Amount	Cost		Amount	Cost		Amount	Cost		Amount	Cost		Amount	Cost	
Drifting	2564	60	023	1511	23	118	8256	17	050	8190	15		20522	15	069	35428	90	074
Breaking Ore	36873	67	328	4468	48	348	55912	86	337				97255	01	325	186349	08	391
Trammig	5426	68	048	620	58	048	8014	40	048				14061	66	047	28981	65	061
Filling				79	04	006	627	69	004				706	73	002	1447	90	003
Timbering	10181	69	091	1597	50	124	18559	99	112				30339	18	102	53274	00	112
Cave in				265	80	021							265	80	001	153	54	00
	55046	64	490	8542	63	565	91371	11	551	8190	15		163150	53	546	305635	07	641
For year 1903	136491	82	605	28354	60	572	131265	96	535	9522	69				641			
Cost above Accts			247			247			247						247			
Cost of Production			737			912			798						793			
" " " 1903			793			860			823						829			
Increase						052												
Decrease			056						025						036			

Summary	1904	1903
Mining Cost	546	641
Genl exp items	247	188
TOTAL	793	829
Decrease	036	

Cleveland Iron Mining Co.

Lake Mine

Division of Mining Cost

For the year ending November 30th 1904.

Total		Level		Over-run		Under-run	
1904	1903	1904	1903	1904	1903	1904	1903
1000	950	800	750	150	100	100	100
2000	1900	1600	1500	300	200	200	200
3000	2900	2400	2300	450	350	300	300
4000	3900	3200	3100	600	500	400	400
5000	4900	4000	3900	750	650	500	500
6000	5900	4800	4700	900	800	600	600
7000	6900	5600	5500	1050	950	700	700
8000	7900	6400	6300	1200	1100	800	800
9000	8900	7200	7100	1350	1250	900	900
10000	9900	8000	7900	1500	1400	1000	1000
11000	10900	8800	8700	1650	1550	1100	1100
12000	11900	9600	9500	1800	1700	1200	1200
13000	12900	10400	10300	1950	1850	1300	1300
14000	13900	11200	11100	2100	2000	1400	1400
15000	14900	12000	11900	2250	2150	1500	1500
16000	15900	12800	12700	2400	2300	1600	1600
17000	16900	13600	13500	2550	2450	1700	1700
18000	17900	14400	14300	2700	2600	1800	1800
19000	18900	15200	15100	2850	2750	1900	1900
20000	19900	16000	15900	3000	2900	2000	2000

L A K E M I N E.

REPORT OF OPERATING AND MAINTENANCE OF ELECTRIC HAULAGE PLANT

FOR THE YEAR ENDING NOVEMBER, 30TH, 1904.

OPERATING.	LABOR		SUPPLIES		TOTAL		COST PER CAR	
							1904	1903
Motor & Brakemen	3993	46	140	53	4133	99	.041	.058
Chutemen	2877	40	335	13	3212	53	.032	.052
Oiling & Repairing Cars	300	50	326	03	626	53	.006	.006
Prop. of Engine House Expense	1144	59	3436	12	4580	71	.046	.035
<u>TOTAL</u>	8315	95	4237	81	12553	76	.126	.151
Cost per Car 1904		083		043		126		
Cost per Car 1903		119		032		151		
<u>915 DIVIDED AS FOLLOWS</u>								
915 cars filling rock	76	15	38	73	114	88	.126	.151
5951 " tramming rock	494	40	251	41	745	81	.126	.151
90959 " " ore	7576	39	3860	60	11436	99	.126	.151
2035 " " timber	169	01	87	07	256	08	.126	.151
199860 " Total 1904	8315	59	4237	81	12553	76	.126	.151
167402 " Total 1903	19953	43	5306	08	25259	51	.151	.165
<u>FILLING ROCK 915 CARS</u>								
Prop. of Motor Expense	76	15	38	73	114	88	.126	.151
Expense of Putting away	552	67	39	18	591	85	.647	.676
<u>TOTAL</u>	628	82	77	91	706	73	.773	.827
Tramming Rock 5951 Cars	494	40	251	41	745	81	.126	.151
<u>TRAMMING ORE 298684 TONS (1)</u>								
Prop. of Motor Expense	7576	39	3860	60	11436	99	.038	.049
Tramming & Skip Tending	2527	17	97	50	2624	67	.009	.012
<u>TOTAL</u>	10103	56	3958	10	14061	66	.047	.061
Total Tonnage 298684								
<u>TRAMMING TIMBER 2035 CARS</u>								
Prop. of Motor Expense	169	01	87	07	256	08	.126	.151
<u>GRAND TOTAL</u>	11395	79	4374	49	15770	28	.158	.193
<u>MAINTENANCE OF PLANT</u>								
Electric Engine								.001
Motors	1440	28	876	98	2317	26	.023	.030
Wiring	144	38	238	31	382	69	.004	.003
Main Line Tracks & Cars	1289	27	637	28	1926	55	.019	.020
TOTAL MAINTENANCE COST	2873	93	1752	57	4626	50	.046	.054
TOTAL OPERATING COST	8315	95	4237	81	12553	76	.126	.151
<u>GRAND TOTAL</u>	11189	88	5990	38	17180	26	.172	.205

(1) Includes 7509 Tons Stock File overrun.



(1) Includes 4308 Tons Stockpile Overrun.

	1903	1904	1905
GRAND TOTAL	11182 98	2330 38	11180 88
TOTAL OPERATING COST	8312 32	4523 81	13823 16
TOTAL MAINTENANCE COST	5932 33	1425 24	4038 20
Main line Electric & Cans	1528 54	624 58	1852 52
Wiring	144 38	528 21	285 63
Motors	1440 28	848 88	2314 56
Electric Engine			.001

MAINTENANCE OF PLANT

	1903	1904	1905
GRAND TOTAL	11222 13	4244 43	12440 28
Prod. of Motor Expense	100 01	84 04	322 08
TRAMMING TIMBER 3022 CANS			122 08

Total Tonnage 328994

TOTAL

	1903	1904	1905
TRAMMING & SWP Expense	2252 14	24 80	5224 24
Prod. of Motor Expense	1812 23	2300 60	11422 22
TRAMMING ONE 328994 TONS (1)			.044

TRAMMING HOOP 2221 CANS  
TOTAL

	1903	1904	1905
Expense of putting away	424 40	221 41	442 21
Prod. of Motor Expense	622 25	11 21	102 12
HITTING HOOP 212 CANS			.442

	1903	1904	1905
TOTAL	12622 43	2302 08	23822 21
190405	12622 43	2302 08	23822 21
190320	622 25	4524 21	12222 16

	1903	1904	1905
3022	102 01	24 04	222 08
3022	122 22	222 22	1122 22
3221	424 40	221 41	442 21
212 cans HITTING HOOP	42 12	22 12	112 22
DIVIDED AS FOLLOWS			.122

	1903	1904	1905
Cost per can 1202	112	022	121
Cost per can 1204	022	042	122

	1903	1904	1905
TOTAL	8212 22	4524 21	12222 16
Prod. of engine house expense	1144 22	2422 12	4222 11
Oil and kerosene Cans	300 20	222 02	622 22
Charged	2214 40	222 12	2212 22
Motor & equipment	2222 42	140 22	4122 22

FOR THE YEAR ENDING NOVEMBER 30TH 1904.

STATE OF OHIO, COUNTY OF CUYAHOGA, CITY OF CLEVELAND.

T. V. K. S. M. I. N. E.

CLEVELAND IRON MINING CO.

Lake Mine

Curtis Tram Plant

Year 1904.

RECEIVED

JAN 13 1905

CLEVELAND IRON MINING COMPANY.

SUMMARY OF EXPENSE AT PRESIDENT'S COTTAGE & AGENT'S RESIDENCE  
FOR YEAR ENDING NOVEMBER, 30TH, 1904.

<u>COTTAGE</u>			
General maintenance of Building etc.		211 76	
Improvement to Grounds		2692 38	
<u>Total as per detail attached.</u>			2904 14
<u>SUNDRIES.</u>			
Lighting 12 months @ 3.00		36 00	
Choreman		597 50	
Ice for season		30 00	
Telephone (County)		15 00	
<u>Total Sundries</u>			678 50
<u>Total Cottage and Grounds</u>			3582 64
<u>AGENT'S RESIDENCE.</u>			
General maintenance of Building etc.		1124 95	
Grounds etc.		145 10	
<u>Total as per detail attached.</u>			1270 05

CLEVELAND IRON MINING COMPANY.

DETAIL STATEMENT OF CHARGES TO HARD ORE LOCATION FOR YEAR  
ENDING NOVEMBER, 30th, 1904.

---

---

Fire Insurance on Dwellings	141.52
Taxes	8670.90
Watchman	254.30
Surface Cleaning Etc.	357.37

Total Hard Ore Location

9424.09

Shop Machinery and Shop Buildings  
previously charged to this account are now  
carried at this office, and shop Earnings  
applied.

---

---

141.52  
254.30  
357.37  
-----  
753.19  
3697.64  
-----  
4390.83  
4303.24  
-----  
87.59

CLEVELAND IRON MINING CO:

*Detail Hard Ore Location.*

*Year 1904.*

RECEIVED  
JAN 9 1905

CLEVELAND IRON MINING COMPANY.

ENDING NOVEMBER 30<sup>th</sup>, 1904.  
STATEMENT OF CHARGES TO HARD ORE LOCATION FOR YEAR

Expenses Cleaning Etc.	287 21
Wages	324 30
Expenses	2250 20
Expenses on Buildings	141 23

Total Hard Ore Location

2855 02

Applied.  
Carried at this office, and shop buildings  
previously charged to this account are now  
shop machinery and shop buildings

CLEVELAND IRON MINING COMPANY.

RECORD OF COST OF WORK AT THE HARD ORE SHOPS FOR THE YEAR ENDING  
NOVEMBER 30TH, 1904.

	MACHINE SHOP		BLACKSMITH SHOP		CARPENTER SHOP	
	1904	1903	1904	1903	1904	1903
Average No. of Men,	9	13	3	7	2	3
Total Hours Worked,	26540	40168½	9575	23040	6747½	9482½
Hours on Shop Tools, Hours for various persons & outside Mines,	500½ 5837	411 275	182½ 2798	165½ 92	143 893½	102 13½
Hours for Other Shops, &C	569½	317	626	1196	375½	299½
Hrs. on Mine Accts C.C.I.Co.	19633	39165½	5968½	21586½	5335½	9067½
Total Cost per Hour,	.335	.2875	.272	.2325	.272	.2501
Cost per Hr. on Shop Tools	.335	.2875	.272	.2325	.272	.2501
" " " on various Accts	.342	.2905	.277	.2342	.278	.2528
" " " Other Shops &c	.323	.3187	.265	.2401	.279	.2701
" " " on Mine Accts	.342	.2901	.286	.2340	.279	.2522
Total Labor Cost,	6925.10	9309.61	2116.85	4593.80	1612.33	2103.60
Cost per Hour,	.261	.2318	.221	.1994	.239	.2218
Total Supply Cost,	1968.58	2235.34	483.25	763.39	224.18	267.49
Cost per Hour,	.074	.0557	.051	.0331	.033	.0283
Total Labor & Supply Cost	8893.68	11544.95	2600.10	5357.19	1836.51	2371.09
Profit on work done for various persons & outside Mines other than C.C.I.Co	396.12	67.79	254.48	10.72	65.58	1.53
Average charges per Hour various persons & Mines,	.411	.536	.349	.3495	.346	.3963
Profit per Hour various persons & Mines,	.068	.2465	.091	.1165	.073	.1133
No. Hours charged outside Mines & various persons,	5837	275	2798	92	893½	13½
Rate per Hour charged various persons & Mines,						
Negaunee Mine,	.40	Cost	.35	Cost	.35	Cost
R.R., Land & Furnace Depts	.40	.40	.35	.35	.35	.35
Outside Parties,	.60	.60	.60	.60	.60	.60
<b>SUPPLIES USED AS FOLLOWS:</b>						
General Supplies,	118.39	246.69	185.57	459.91	1.52	38.06
Iron & Steel,	42.02	26.71	4.78	16.25	.31	.75
Oil, Grease & Candles,	127.91	183.21	1.53	3.18	1.28	5.35
Machinery Supplies,	108.05	38.47	33.14	57.83	.30	6.96
Building Material,	2.14	3.72	4.08	.25	.75	
Fuel,	1448.44	1695.94	202.59	219.19	202.59	212.41
Sundries,	121.63	40.60	51.56	6.78	17.43	3.96
Total,	1968.58	2235.34	483.25	763.39	224.18	267.49

8893.68  
2090.10  
1836.51  
13330.29

11544.95  
5357.19  
2371.09  
19293.23  
8

CLEVELAND IRON MINING COMPANY.

LABORATORY STATEMENT, YEAR ENDING NOVEMBER, 30TH, 1904.

COST FOR LABOR & SUPPLIES: NUMBER & COST PER DETERMINATION.

	Labor		Supplies		Total		No. Dets.	Cost Per Det.
December 1903	255	00	286	32	541	32	4188	.12925
January 1904	267	00	18	73	285	73	3713	.07696
February "	255	00	93	86	348	86	3525	.099
March "	255	00	63	48	318	48	3850	.0827
April "	265	00	86	23	351	23	3524	.09964
May "	255	00	188	23	443	23	3823	.1159
June "	260	00	40	70	300	70	3731	.0806
July "	295	25	27	79	323	04	3869	.08349
August "	271	54	108	63	380	17	4413	.0861
September "	331	00	120	31	451	31	4453	.10135
October "	315	65	213	27	528	92	4771	.11085
November "	296	92	34	35	331	27	4617	.0712
Total	3322	36	1281	90	4604	26	48477	.0950
Total 1903	3202	25	993	69	4195	94	41519	.1010

THE WORK DONE FOR THE VARIOUS MINES AND COST PAR DETERMINATION IS

AS FOLLOWS:

	NUMBER DETERMINATIONS	AVERAGE COST PER DETERMINATION	AMOUNT	
Hard Ore	44	.0852	3	75
Lake	11457	.0965	1105	58
Cliffs-Shaft	2505	.0966	242	06
Salisbury	12818	.0948	1214	45
Austin	5542	.0939	520	70
Swanzy	1898	.0930	176	37
Ashland	51	.0892	4	55
Negaunee	13740	.0949	1300	34
Lucy	22	.1118	2	46
Section 13 Exploration	12	.1200	1	44
Section 12 Exploration	8	.0725		58
Special	380	.0840	31	98
Total	48477	.0950	4604	26
Total 1903	41519	.1010	4195	94

CLEVELAND IRON MINING COMPANY.

STATEMENT OF COST FOR ANALYSIS, INCLUDING SAMPLING AND CRUSHING

FOR EACH MINE, YEAR ENDING NOVEMBER, 30TH, 1904.

<u>HARD ORE MINE</u>		NO. DETRS.	PER DETR.	AMOUNT.	
Laboratory Expense		44	.0852	3	75
Sampling Etc.					
	Total	44	.0852	3	75
	Total 1903	1693	.0992	168	04
<u>LAKE MINE</u>					
Laboratory Expense		11457	.0965	1105	58
Sampling Etc.					
	Total	11457	.2152	2466	33
	Total 1903	16167	.1999	3231	68

	<u>NO. DETERMINATIONS</u>	<u>AMOUNT</u>
Total Hard Ore	44	3 75
Total Lake	11457	2466 33
GRAND TOTAL	11501	2470 08
Grand Total 1903	17860	3399 72

CLEVELAND IRON MINING COMPANY.

RECORD OF FIRE INSURANCE ON MINE BUILDINGS AND DWELLINGS

YEAR ENDING NOVEMBER, 30TH, 1904.

	AMOUNT OF INSURANCE CARRIED		PREMIUM ACCRUING FOR 1904		FIRE LOSS PAID 1904
<u>HARD ORE MINE</u>					
Mine Buildings	15850	00	242	56	
Dwellings	28300	00	141	52	
<u>TOTAL</u>	44150	00	384	08	
<u>LAKE MINE</u>					
Mine Buildings	15300	00	300	35	
<u>HEMATITE MINE</u>					
Dwellings	2700	00	13	50	
SECOND ADDITION DWELLINGS	14400	00	13	00	
TOTAL CLEVELAND IRON MINING CO.	76550	00	710	93	

NOTE:--

The Cleveland Iron Mining Company had no Fire Loss during year 1904.



THE CLEVELAND IRON MINING COMPANY

REPORT OF OPERATING STEAM SHOVEL NO. 4, FOR SEASON 1904.

		1904	1903
Number of Days Steam Shovel Worked		145	76
Average Number of Hours Worked Per Day		5.65	4.05
Number of Tons Loaded		287049	101592
Average Tons Per Day Loading		1980	1337
Number of Men working with Shovel		11	11
Average Tons Per Man Per Day		180	122
Average Wages Per Day for Runners		2.51	2.48
Average Wages Per Day for Laborers		1.74	1.73
Labor Cost Per Ton Operating		.013	.017
Supply Cost Per Ton Operating		.002	.003
	TOTAL	.015	.020

	1904	1903	1 9 0 4			1 9 0 3		
	TCNS	TCNS	AMOUNT	COST	AMOUNT	COST		
Hard Ore		2633	2	74	000	74	60	028
Lake	122779	84627	1970	29	016	2224	94	026
Cliffs Shaft	97255	12077	1395	94	014	310	16	025
Salisbury	66003	2255	991	63	015	65	24	029
Negaunee	1012		23	33	023			
	TOTAL	287049	4383	93	015	2674	94	026

<u>OPERATING SHOVEL</u>							
Labor		3659	99	013	1741	77	017
Supplies		617	65	002	354	90	003
	TOTAL	4277	64	015	2096	67	020

<u>REPAIRS TO SHOVEL</u>							
Labor & Supplies		106	29	000	578	27	006
	<u>TOTAL OPERATING &amp; REPAIR COST</u>	4383	93	015	2674	94	026

High Repair Cost for 1903 due to Overhauling & Rebuilding Crane.

CLEVELAND IRON MINING COMPANY.

HEMATITE MINE.

STATEMENT OF RENTED HOUSES, SHOWING RENTS RECEIVED

COST OF REPAIRS ETC. FOR THE YEAR ENDING

NOVEMBER, 30TH, 1904.

HOUSE NO.	PRESENT OCCUPANT	RENT RECEIVED		REPAIRS		INSURANCE.		TAXES	TOTAL EXPENSE	
1	Cyrille Tourville	84	00			5	00		5	00
2	James Pasco	42	00			2	50		2	50
3	Jacob Ooslosnik )	19	50			2	50		2	50
3	Emmanuel Pope (Vacant) )	15	00							
7	Vacant					1	75		1	75
8	Jos. H. Roberts	42	00			1	75		1	75
	<b>TOTAL</b>	202	50	100	79	13	50		114	29
	<b>TOTAL 1903</b>	127	60	10	11	13	50		23	61
						<b>1 9 0 4</b>			<b>1 9 0 3</b>	
	Net Earnings for year					88	21		103	99
	Per Cent Earnings on Ins. Val.					3	6%		3	8%
	Insurance Valuation					2700	00		2700	00

CLEVELAND IRON MINING COMPANY.

HARD ORE LOCATION.

STATEMENT OF RENTED HOUSES, SHOWING RENTS RECEIVED

COST OF REPAIRS ETC. FOR THE YEAR ENDING

NOVEMBER, 30TH, 1904.

HOUSE NO.	PRESENT OCCUPANT	LOT NO.	RENT RECEIVED	REPAIRS	INSURANCE.	TAXES	TOTAL EXPENSE.
1	Xavier Pepin	1	48 75	56 16	2 50		58 66
2	John Seabarg	2	48 00	7 01	1 25		8 26
3	Mat Aho )	13	42 00	7 47	3 00		10 47
3	Chas. Peterson )	13	48 00				
4	John Sandell	15	72 00		2 00		2 00
5	Fred Saunders	16	84 00	25 20	2 50		27 70
8	Louis Farley	17	48 00	30	3 00		3 30
9	Philip Pepin	23	84 00	7 07	4 00		21 07
11	Henry Osier	25	60 00	6 49	2 00		8 49
14	Henry Lerette	28	50 00	8 63	2 00		10 63
15	James Trewick	29	58 00	35 59	2 00		37 59
16	Claus Johnson	30	60 00	59 82	1 50		61 32
17	Chas. Bergquiste	31	49 00	6 86	1 75		8 61
18	John Hennessy	32	60 00	33 52	1 25		34 77
19	Isaac Mass	33	60 00	41 36	1 25		42 61
21	Wm. E. McKee	49	120 00	32 08	7 50		39 58
24	Fred Vogtlin	56	60 00	7 28	2 00		9 28
25	Steve Moyle	57	25 00	17 69	2 00		19 69
26	John Lemin Sr. )	58	66 00	42 46	7 50		49 96
26	John Lemin Jr. )	58	60 00				
27	Jac. Christionson	59	60 00	2 65	2 00		4 65
28	A. P. Peterson	60	60 00	6 87	2 00		8 87
29	Mre. Jno. Nicholls	61		9 41	2 00		11 41
30	Edmond Stephens	62	60 00	8 76	2 00		10 76
31	J.F. Van Brocklin	63	96 00	34 19	4 00		38 19
32	Abe. Cox	64	84 00	8 00	3 00		11 00
33	Geo. Brederson	69	60 00	3 38	2 00		5 38
34	Alf. Bome	70	60 00	21 47	2 00		23 47
35	John Gill	71	55 00	53 51	2 00		55 51
36	M. Eskila S $\frac{1}{2}$ )	72	48 00	81 74	3 00		84 74
36	Wm. Asikamin N $\frac{1}{2}$ )	72	48 00				
37	Fred J. Baker	79	96 00	8 48	9 00	34 32	51 80
38	Alfred Collick	80	96 00	30 08	7 50	30 89	68 47
	TOTAL		2025 75				
	Agents House		240 00				
	TOTAL		2265 75	673 53	89 50	65 21	828 24
	TOTAL 1903		2307 00	681 25	89 50	65 67	836 42
	Net Earnings for year				1 9 0 4		1 9 0 3
	Per Cent Earnings on Insurance Valuation				1197 51		1233 08
	Insurance Valuation				7 %		7 2%
					17100 00		17100 00

CLEVELAND IRON MINE COMPANY.

SECOND ADDITION LOCATION

STATEMENT OF RENTED HOUSES, SHOWING RENTS RECEIVED  
COST OF REPAIRS ETC. FOR THE YEAR ENDING  
NOVEMBER, 30TH, 1904.

HOUSE NO.	PRESENT OCCUPANT	RENT RECEIVED		REPAIRS		INSURANCE.		TAXES	TOTAL EXPENSE.	
1	Vacant			19	33	4	00		23	33
2	James Trembath	120	00	30	39	3	50		33	89
3	Wm. Bekemma	120	00	2	72	3	50		6	22
4	Jos, Mitchell	61	50	21	43	3	50		24	93
5	Chas. Walline	120	00	20	90	3	50		24	40
6	Chas. Erickson	118	00	18	40	3	50		21	90
7	Vacant (Chas. Carlson)	45	50	32	75	3	50		36	25
8	Vacant (Wm. Seuemmens)	40	00	24	67	3	50		28	17
9	W. H. Baldwin	120	00	7	90	3	50		11	40
10	Abram Couch	95	00	21	48	3	50		24	98
11	Mat Tompson	120	00	54	84	3	50		58	34
12	Chas. Carlson	110	00	19	55	3	50		23	05
13	Wm. Luke	120	00	24	60	3	50		28	10
14	Vacant (Jerry Nault)	90	00	17	00	3	50		20	50
15	Frank Velin	33	00	30	00	3	50		33	50
16	Vacant (WM. Russell)	14	40	1	47	4	00		5	47
17	Vacant			1	93	4	00		5	93
18	W. F. Carlson	32	00	19	84	4	00		23	84
19	Gust. Hohngren	118	00	21	60	3	50		25	10
20	John Trace	118	00	8	76	3	50		12	26
	TOTAL	1595	40	399	56	72	00		471	56
	TOTAL 1903	1876	25	1055	74	72	00		1127	74
						1 9 0 4		1 9 0 3		
Net Earnings for year						1123 84		748 51		
Per Cent Earnings on Ins. Val.						7 8%		5 2%		
Insurance Valuation						14400 00		14400 00		

CLEVELAND IRON MINING CO.

STATEMENT SHOWING CHARGES TO DWELLINGS NOT RENTED DURING YEAR  
ENDING NOVEMBER 30TH., 1904.

<u>PRESIDENT'S COTTAGE</u>				
Repairs to doors and windows		34	01	
" " Chimney		17	23	
" " Water Works		16	04	
" " Stove & Heater			77	
" " Roof		2	88	
Electric Bells		7	39	
Kalsomine		4	00	
Repairs to Furniture		6	78	
Rabbit Cage and feed		11	72	
Squirrel Cage and feed		8	22	
Labor and tools			78	
Electric Lights		73	27	
Billiard Room		28	67	
	<u>TOTAL</u>			211 76
<u>AGENT'S RESIDENCE</u>				
Repairs to doors and windows		83	51	
" " Water Works		41	91	
" " Closet and Sewerage		53	84	
" " Furniture		59	69	
" " Stove and chimney		27	32	
" " Barn		19	69	
Ice House and filling		27	88	
New Paper		16	95	
Painting interior		134	21	
Cleaning		4	95	
Rep'g Plaster and kalsomining		6	98	
Gardening		309	27	
	<u>Forward,</u>	786	20	211 76

CLEVELAND IRON MINING CO.

CHARGES TO DWELLINGS NOT RENTED.- Continued.

	Bro't for'd.	786 20	211 76
Labor on Tools		2 77	
Chicken House		261 10	
Yard House		13 22	
Repairs to Root House		2 78	
"    "    Electric Lights		12 19	
"    "    Radiators		8 91	
"    "    Fire Place		15 60	
"    "    Roof		10 50	
Hot Beds		23	
Repairs to floors		7 50	
"    "    Walks		3 95	
	<u>TOTAL</u>		1124 95
	<u>TOTAL DWELLINGS NOT RENTED</u>		1336 71

CLEVELAND IRON MINING COMPANY

STATEMENT SHOWING CHARGES TO LAND IMPROVEMENT  
FOR YEAR ENDING NOV. 30., 1904.

<u>          </u> GROUND S AT CLIFFS COTTAGE				
Manning Bros. bill for professional services, and draughting- Vchr.#10830 covering work done 1903.		1895.	32	
Trees and plants at open pit		132.	38	
Pergola at Bowling Green Vchr.#11566		345.	00	
Professional services a/c same#11568		50.	00	
Dundee Nursery bill for trees		148.	25	
Cost of Pond		50	84	
Lawn Flowers		6	59	
Labor on new road		15	03	
Tree Guards		31	40	
Making Sign Boards		5	02	
Repairing Fence			61	
Cleaning Yard		11	94	
	<u>Total</u>			2692 38
<u>          </u> GROUND S AT AGENT 'S RESIDENCE				
Ploughing out Road		13	30	
Repairing Fence		88	21	
Grading & Draining Yard		27	35	
Cleaning Lawn & Yard		16	24	
	<u>Total</u>			145 10
<u>          </u> GENERAL ACCOUNT LOCATION.				
Prize awards a/c season 1903		174	00	
" " " " 1904		169	00	
" " Childs Art Gallery Photos		166	20	
" " G. A. New tt, Printing		78	40	
Repairing Fences at Location		55	94	
" " near Mine		41	60	
Shop & Office Lawns		22	96	
Jasper Street Walks		4	73	
Division " Trees		1	50	
Propr. Supt. Bebb's Salary 1904		84	59	
Cleaning Yard		1	24	
	<u>Total</u>			800 16
<u>          </u> Total Hard Ore Land Improvement,				3637.64

RECEIVED  
 JAN 9 - 1906

CLEVELAND IRON MINING COMPANY.

DETAIL OF ACCOUNTS RECEIVABLE, NOVEMBER, 30TH, 1904.

REPRESENTATIVE ACCOUNTS RECEIVABLE.

Unearned Premiums Boiler Insurance	261.04	
Unearned Premiums Fire Insurance	277.58	
Lake Ang. Arg. Fuel Account (L.S.I.Co. Estimated Prop.)	<u>542.43</u>	
Total		1081.05

ACCOUNTS RECEIVABLE.

Lake Superior Iron Company	1052.91	
Paymaster Account	10.93	
H. L. Ramsdell, Cashier	500.00	
Negaunee Mine	2844.18	
Iron Cliffs Company	3568.20	
Cleveland-Cliffs Iron Company	4650.73	
L. S. & I. Ry. Co.	246.13	
M. M. Duncan	72.52	
Standard Oil Company	7.60	
Anthony Powder Company	1.80	
D. J. Ryan	23.00	
Iron Cliffs Company, Negaunee	75	
Neg. & Ish. St. Ry. Co.	1.20	
Rev. C. D. Atwell	40.00	
August Bean	92.29	
Geo. J. Maas	80	
Ishpeming Mining Company	1.20	
Various Persons (Coal)	8.09	
Pioneer Iron Company	5.65	
Tompson & Hodgkins	284.65	
Long Distance Telephone Coupons	32.63	
Crew Levick & Company	58.84	
E. J. Eddy	5.33	
J. W. Jochim Hdw. Co.	108.39	
Manning Bros.	72.70	
F. W. Menhenett	8.49	
Munising Paper Mill	14.03	
Peter Finnigan	52	
Kelley, Jones & Company	<u>5.35</u>	
Total		<u>13718.91</u>
<u>Grand Total</u>		<u>14799.96</u>



JAN 9 - 1905

## CLEVELAND IRON MINING COMPANY.

DETAIL OF ACCOUNTS PAYABLE, NOVEMBER, 30TH, 1904.

REPRESENTATIVE ACCOUNTS PAYABLE.

Hard Ore Benefit Fund	3897.14	
Hard Ore Suspense Fund	3897.14	
Lake Benefit Fund	6314.99	
Lake Suspense Fund	6514.99	
General Benefit Fund	895.77	
General Suspense Fund	885.97	
Hard Ore Brass Checks	76.00	
Lake Brass Checks	<u>325.25</u>	
Total		22807.25

VCHR.  
NO.ACCOUNTS PAYABLE.

Accured Taxes Unpaid	31191.01	
Pay-Rolls	18308.59	
Lake Superior Iron Company	1597.97	
C. & N. W. Ry. Co.	<u>51.03</u>	
Total		51148.60

## BILLS AUDITED.

11909	Neg. & Ish. St. Ry. Co.	21.77	
11910	Prize Awards	169.00	
11911	C. & N. W. Ry. Co.	27.61	
11912	D. S. S. & A. Ry. Co.	339.84	
11913	Postal Telegraph Cable Co.	25.68	
11914	American Express Company	32.80	
11915	Western Union Telegraph Co.	22.65	
11916	Western Express Company	6.80	
11939	L. S. & I. Ry. Co.	170.47	
11943	Jas. LeBeau	50	
11944	Mrs. M. McGrath	12.53	
11945	Ishpeming Steam Laundry	1.40	
11946	J.T. Longtine	1.00	
11947	Nels Kekko	4.00	
11948	The Nelson	11.25	
11949	Gill Hodgkins	9.00	
11950	L.S. & I. Ry. Co.	24.90	
11951	F. Braastad & Company	2.50	
11952	L. S. & I. Ry. Co.	6.82	
11953	Garfield Club	24.82	
11954	Cleveland-Cliffs Iron Co. Land Dept.	42.50	
11955	Iron Cliffs Company	27.00	
11956	Ishpeming City Water Works Co.	1.55	
11957	James Pickands & Company	184.09	
11958	A. B. Miner, Cashier	17.00	
11959	Felch & Vandeventer	337.00	
11960	Trembath Bros.	48.30	
11961	Ole Walsette	13.00	
11962	Mining Journal Company	35.50	
11963	L. S. & I. Ry. Co.	885.93	
11964	L. F. Pearce	16.52	
11965	H. F. Heyn	<u>18.87</u>	
	Fordward	2542.60	<u>73955.85</u>

ACCOUNTS PAYABLE.

(Continued)

		2542.60	73955.85
11966	Patrick Lyons	18.50	
11967	August Jacobs	13.20	
11968	Neg. & Ish.St. Ry. & Electric Co.	48.23	
11969	Cons. Fuel & Lumber Co.	40.66	
11970	James Pickands & Company	32.20	
11971	Fred P. Tillson	4.60	
11972	Lake Shore Engine Works	35.16	
11973	C. & N. W. Ry. Co.	27.28	
11974	L. S. & I. Ry. Co.	28.20	
11975	Wm. P. Belden	21.64	
11976	Oliver Iron Mining Company	191.94	
11977	G. Hansen	139.00	
11978	Stenglein Bindery	21.50	
11979	I. E. Swift Company	30.53	
11980	Crosby Steam Gauge & Valve Co.	10.50	
11981	Central Electric Company	15.02	
11982	United State Blue Print Co.	8.30	
11983	A. C. McClurg & Company	2.75	
11984	Eugene Dietzgen Company	15.26	
11985	Western Keeley Steam Spec. Co.	31.50	
11986	Marshall-Wells Hdw. Co.	13.05	
11987	Gregory, Mayer & Thomas Co.	2.15	
11988	The Bristol Company	1.50	
11989	Phila. & Boston Face Brick Co.	26.50	
11990	General Electric Company	37.41	
11991	Marshall-Wells Hdw. Co.	15.00	
11992	Peninsula Record Pub. Co.	10.50	
11993	A. R. Glancy	4.10	
11996	Negaunee Mine	35.16	
11998	Iron Cliffs Company	25.00	
	Total Bills Audited.		<u>3448.94</u>
	Grand Total		<u><u>77404.79</u></u>

CLEVELAND IRON MINING COMPANY & LAKE SUPERIOR IRON COMPANY  
 STATEMENT OF EXPENSE OF PUMPING AT LAKE ANGELINE FROM JANUARY 1ST, 1904  
 TO DECEMBER 31ST., 1904.

Actual Cost of Pumping Expense, Repairs  
 etc. as per copy of itemized statements  
 hereto attached

4134.95

Figured on Basis of Tons Ore Mined during  
 year as follows:

C.I.M.Co. prop.	298914 Tons	62.90%	2600.88	
L.S.I.Co. "	176310 "	37.10%	1534.07	
	475224	100.0%	4134.95	<u>4134.95</u>

Average date of payment made by the  
 Cleveland Iron Mining Co. July 7th.

\$4134.95 at 6% per Annum for 6 Mo. 24 Da. 140.59

L.S.I.Co's Prop. of Interest 52.16

C.I.M.Co's " " 88.43

140.59

L.S.I.Co.'s Prop. of Expense 1534.07

L.S.I.Co.'s " " Interest 52.16

Total Due From Lake Superior Iron Co. \$1586.23

*ASG*

Statement showing the amount of iron ore mined from under the bed of Lake Angeline, as per the map attached, by the Cleveland Iron Mining Co. from January 1st., 1904 to December 31st., 1904. 298,914

Two Hundred ninety eight thousand nine hundred & fourteen tons.

Cleveland Iron Mining Company..

(Signed)

W. W. Dunsen  
Agent.

State of Michigan )  
County of Marquette )

ss

On this 21 day of January 1905.

personally appeared before me, W. W. Dunsen and stated that he is the Agent for the Cleveland Iron Mining Company, and that the above statement is true and correct to the best of his knowledge and belief.

(Signed)

Charles J. Thacker  
Notary Public.

My COMMISSION EXPIRES Nov. 12th, 1908

STATEMENT showing the Amount of Iron Ore mined from under the bed of Lake Angeline, as per the map attached, by the Lake Superior Iron Company from January 1st, 1904, to December 31st, 1904, One Hundred Seventy-six Thousand Three Hundred Ten Tons.

LAKE SUPERIOR IRON COMPANY,

(Signed) W. Johnston Agent

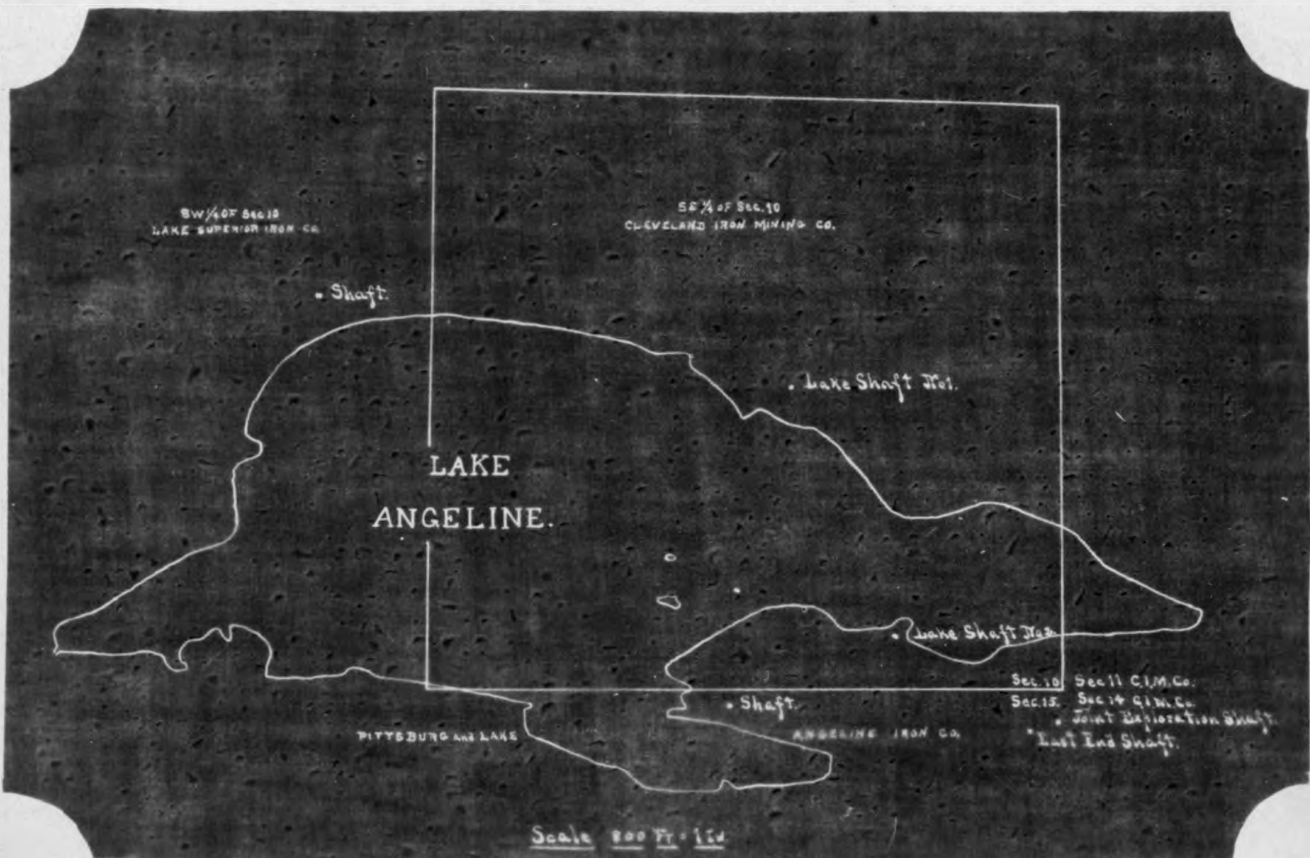
STATE OF MICHIGAN, )  
                                  ) ss.  
COUNTY OF MARQUETTE.)

On this 10th day of January 1905,  
personally appeared before me W. Johnston and stated that he  
is the Agent of the Lake Superior Iron Company, and that the above statement is true  
and correct to the best of his knowledge and belief.

(Signed) David Shroy  
Notary Public.

MAP OF LAKE ANGELINE  
SHOWING EXTENT BEFORE BEING DRAINED.

For use in determining the amount of ore taken out from the land so originally covered by said Lake, owned respectively by the Lake Superior Iron Company and The Cleveland Iron Mining Company.



CLEVELAND IRON MINING CO. AND LAKE SUPERIOR IRON CO.

ACCOUNT LAKE ANGELINE DRAINAGE, PUMPING EXPENSE.

1904.

January 31st.	As per copy attached	160.84
February 29th.	"	187.80
March 31st.	"	368.28
April 30th.	"	243.01
May 31st.	"	167.59
June 30th.	"	149.81
July 31st.	"	149.86
August 31st.	"	137.03
September 30th.	"	139.33
October 31st.	"	165.56
November 30th.	"	141.23
December 31st.	"	144.56
" "	"	1980.00
	TOTAL	<u>4134.95</u>

THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE

FOR MONTH OF JANUARY 1904

<u>LABOR</u>							
2	Pumpman	63 Days @ 2.05	127	10			
1	Machinist	1 @	2	45			
1	Pipeman	1 @	2	10			
3	Laborers	18 @ 1.65	26	40			
		<u>TOTAL</u>			158	05	
<u>SUPPLIES</u>							
6	Gals Cylinder Oil	@ .39	1	74			
7	" Kerosine Oil	@ .15	1	05			
		<u>TOTAL</u>			2	79	
		<u>TOTAL PUMPING EXPENSE</u>					160 84



THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE

FOR MONTH OF FEBRUARY 1904

<u>LABOR</u>							
2	Pumpmen	58	Days @ 2 05	118	90		
1	Machinist	5	@ 2 45	12	25		
2	Pipemen	9	@ 2 10	18	90		
1	Carpenter	1	@	2	30		
1	Carpenter	1	@	2	10		
1	Timberman	1	@	1	80		
	Laborers	8	@ 1 65	13	18		
HO	Machinist Labor	19	Hrs @	4	79		
H O		9	@	2	27		
			<u>TOTAL</u>			176	49
<u>SUPPLIES</u>							
4	Gals. Cylinder Oil		@ 39	1	16		
4	Kerosine		@ 15		60		
1	Lantern		@		40		
1	Lantern Globe		@		05		
6	Lantern Wicks		@		05		
1 1/2	Lbs. C. & J Valves		@ 90	1	35		
8	Valves		@ 80	4	80		
	Shop labor & Tanning			2	90		
			<u>TOTAL</u>			11	31
	<u>TOTAL PUMPING EXPENSE</u>						187 80

THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE LAKE ANGELINE DRAINAGE

FOR MONTH OF MARCH 1904

<u>LABOR</u>								
3	Pumpmen	62 Days	@ 2.05	125	10			
1	Machinist	14½ "	@ 2.45	34	91			
3	Pipemen	30½ "	@ 2.10	64	04			
	Laborers	75	@ 1.65	123	72			
	Laborers	7½	@ 1.45	10	87			
			<u>TOTAL</u>				360	64
<u>SUPPLIES</u>								
6	Gals. Cylinder Oil		@ .59	2	32			
5	Kerosine Oil		@ .15		75			
3	Lbs. Redwood Packing		@ .47		94			
1	15" Wrench		@		75			
5	Gals. Red Oil		@ .15		75			
3½	Lbs. Square Rubber Packing		@ .42	1	47			
12	Colored Waste		@ .05½		66			
			<u>TOTAL</u>				7	64
			<u>TOTAL PUMPING EXPENSE</u>					368.28

THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE.

FOR MONTH OF APRIL 1904.

<u>LABOR</u>							
2	Pumpmen	58	Days @ 2.05	118	90		
2	Pipemen	33	" @ 2.10	69	30		
	Laborers	9	" @ 1.65	14	85		
	Carpenter	1	" @	2	30		
	Carpenter	1	" @	2	10		
			<u>TOTAL</u>			207	45
<u>SUPPLIES</u>							
	Boiler Insurance			17	00		
1	Gal. Red Oil		@	15			
2	Lbs. Rubber Packing		@ .42	84			
13	Colored Waste		@ .05 $\frac{1}{2}$	72			
6 $\frac{1}{2}$	Valves		@ .75	4	87		
33	Gals. Cylinder Oil		@ .29	9	57		
14	Kerosine		@ .15	1	50		
3	Lbs. Flax Packing		@ .22	66			
1	1 Qt. Can		@	25			
			<u>TOTAL</u>			35	56
			<u>TOTAL PUMPING EXPENSE</u>				243 01

THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE

FOR MONTH OF MAY, 1904

<u>L A B O R</u>								
2	Pumpmen	62	Days @ 2.05	127	10			
	Miner	1	" @	2	60			
	Machinist	1	" @	2	45			
	Miner	1	" @	2	35			
2	Pipemen	8	" @ 2.10	16	80			
	Miner	2	" @ 2.10	4	20			
	Laborer	3	" @ 1.65	4	95			
	Teaming	3	Hrs. @	1	01			
			<u>TOTAL</u>			161	46	
<u>S U P P L I E S</u>								
20	Gals. Cylinder Oil		@ 35½	5	05			
1	Red Oil		@		15			
4	Kerosine		@ 14		57			
	Shop Labor & Teaming				36			
			<u>TOTAL</u>			6	13	
			<u>TOTAL PUMPING EXPENSE</u>					167 59

NOTE:-

Extra Labor on Repairs to Launder and Timber in Drift.

THE CLEVELAND IRON MINING COMPANY.

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE

FOR MONTH OF JUNE., 1904.

<u>LABOR</u>					
2	Pumpman	60 Days @ 2.05	123	00	
1	Machinist	1 " @	2	45	
1	Pipeman	4 " @ 2.10	8	40	
	Hard Ore Mach.Shop	2½ Hrs		69	
	Hard Ore Blksmith Shop	3 Hrs.		78	
		<u>TOTAL</u>			135 32
<u>SUPPLIES</u>					
12	Gal. Cylinder Oil	@ .29	3	48	
2	Lbs. Empire Packing	@ .28		56	
12	Wicks	@		10	
3	Gal. Kerosine	@ .15		45	
12	Lbs. Colored Waste	@ .06	1	08	
2	" Asbestos Wicking	@ .18		36	
154	Pt. 10-12 Timber	@ .05¼	8	09	
	Hard Ore Shops			37	
		<u>TOTAL</u>			14 49
		<u>TOTAL PUMPING EXPENSE</u>			149 81

THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE

FOR MONTH OF JULY., 1904.

<u>L A B O R</u>							
2	Pumpmen	62	Days @ 2.05	127	10		
1	Machinist	2	" @ 2.45	4	90		
2	Pipemen	4	" @ 2.10	8	40		
1	Pipeman	2	" @ 1.80	3	60		
			<u>TOTAL</u>			144	00
<u>S U P P L I E S</u>							
14	Gals Cylinder Oil		@ .29	4	06		
1	" Red Oil		@		15		
4	" Kerosine Oil		@ .15		60		
2½	Lbs. Sq. Rubber		@ .40	1	00		
6	Wicks		@		05		
			<u>TOTAL</u>			5	86
			<u>TOTAL PUMPING EXPENSE</u>				149 86

THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE

FOR MONTH OF AUGUST, 1904.

<u>LABOR</u>								
2	Pumpmen	62	Days @ 2.05	127	10			
1	Machinist	1	" @	2	45			
2	Pipemen	2	" @ 2.10	4	20			
			<u>TOTAL</u>			133	75	
<u>SUPPLIES</u>								
8	Gals. Cylinder Oil		@ .29	2	32			
6	" Kerosine Oil		@ .16		96			
			<u>TOTAL</u>			3	28	
			<u>TOTAL PUMPING EXPENSE</u>					137 03

THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE  
FOR MONTH OF SEPTEMBER 1904.

<u>LABOR</u>					
2	Pumpmen	59 Days @ 2.05	120	95	
	Pipeman	4 " @ 2.10	8	40	
	Machinist	1 " @	2	45	
	Carpenter Labor	15 Hrs.	3	30	
		<u>TOTAL</u>			135 10
<u>SUPPLIES</u>					
8	Gale Cylinder Oil	@ .29	2	32	
7	Kerosine	@ 16	1	12	
12	Lbs. Colored Waste	@ .07		84	
		<u>TOTAL</u>			4 28
		<u>TOTAL PUMPING EXPENSE</u>			139 38



THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE

FOR MONTH OF OCTOBER, 1904

<u>L A B O R</u>						
2	Pumpmen	59 Days @ 2.05	120	95		
1	Machinist	3 " 2.45	7	35		
2	Pipeman	8 " 2.10	16	80		
1	Pipeman	3 " 1.80	5	40		
1	Laborer	3 " 1.65	4	95		
	Carpenter Shop	20 Hrs.	4	40		
	Teaming	4 "	1	58		
		<u>TOTAL</u>			161	23
<u>S U P P L I E S</u>						
10	Gals. Cylinder Oil	@ .29	2	90		
1	" Red Oil	@		15		
8	" Kerosine	@ .15	1	20		
1	Lantern Globe	@		08		
		<u>TOTAL</u>			4	33
		<u>TOTAL PUMPING EXPENSE</u>				165 56

*G. K. R. G.*

THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE  
FOR MONTH OF NOVEMBER, 1904.

L A B O R

2 Pumpmen	60 Days	@ 2.05	123 00		
1 Machinist	2 "	@ 2.45	4 90		
1 Pipeman	2 "	@ 2.10	4 20		
1 Laborer	1 "	@	1 65		
Carpenter Labor	2 Days	@ 2.20	4 40		
		<u>TOTAL</u>		138 15	

S U P P L I E S

7 Gals. Cylinder Oil	@ .29	2 03		
7 " Kerosine Oil	@ .15	1 05		
	<u>TOTAL</u>		3 08	

TOTAL PUMPING EXPENSE 141 23

THE CLEVELAND IRON MINING COMPANY

STATEMENT OF PUMPING EXPENSE, LAKE ANGELINE DRAINAGE

FOR MONTH OF DECEMBER, 1904

<u>L A B O R</u>								
2	Pumpmen	62	Days @ 2.05	127	10			
1	Machinist	1	" @	2	45			
1	Pipeman	2	" @ 2.10	4	20			
	Carpenter	1	" @	3	30			
	Carpenter	1	" @	2	20			
			<u>TOTAL</u>			158	25	
<u>S U P P L I E S</u>								
4	Gals Cylinder Oil		@ .29	1	16			
3	" Kerosine Oil		@ .15	1	55			
3½	Hrs Shop Labor repair ing Pump		@ .40	3	60			
			<u>TOTAL</u>			6	31	
			<u>TOTAL PUMPING EXPENSE</u>					164 56

CLEVELAND IRON MINING COMPANY.

STATEMENT OF EXPENSE, LAKE ANGELINE DRAINAGE, MONTH OF DECEMBER, 1904.

PUMPING EXPENSE.

For Coal as per agreement:

50 tons per Month from Jany. 1st. to Dec. 31st. 1904.

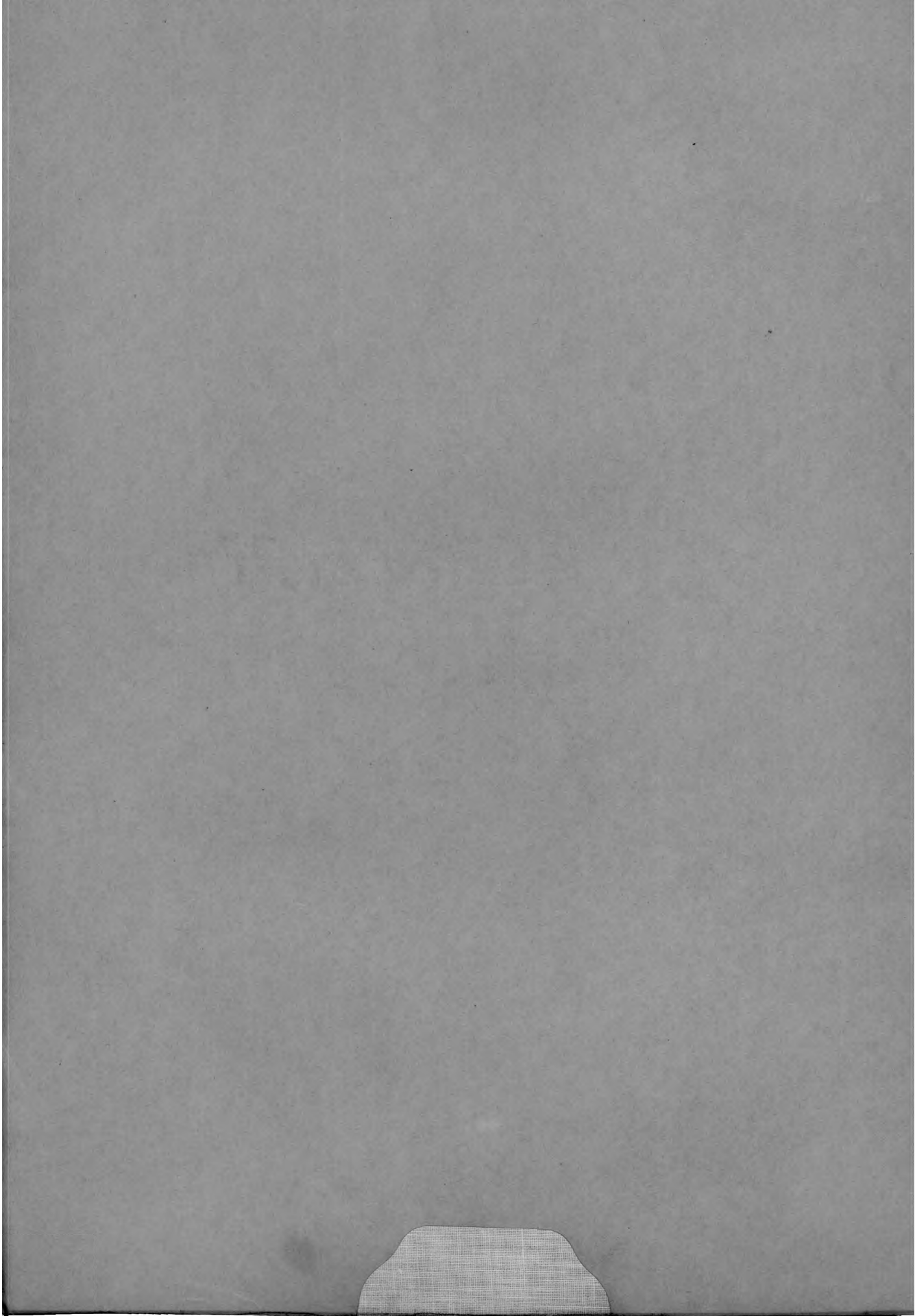
12 Months.

600 tons

at

3.30

\$1980.00



+++++  
+++++  
: : : : :  
: : : IRON CLIFFS COMPANY. : : :  
: : : ISHPEMING, MICHIGAN. : : :  
: : :  
: : : A G E N T ' S   A N N U A L   R E P O R T : : :  
: : :  
: : : F O R : : :  
: : :  
: : : Y E A R   E N D I N G   N O V E M B E R   3 0 t h ,   1 9 0 4 . : : :  
: : :  
+++++  
+++++

**RECEIVED**  
JAN 25 1905

I N D E X.

BARNUM MINE.....	1
CLIFFS SHAFT MINE.....	1
Ore mined from the different levels.....	1
Average analysis of Mine samples.....	2
Ore Shipments for 1904.....	2
Average cargo analysis for 1904.....	2
Ore Statement November 30th., 1904.....	2
Average Wages and Product.....	3
Statement of Explosives used for Breaking Ore.....	4
Statement of Comparative Wages.....	4 - 5
Crusher Plant Statement.....	5
Statement of Mining Cost.....	6
Work in the different parts of the Mine.....	7 -13
Estimate of Ore in Sight.....	13
Fatal Accidents.....	14
Lake Bancroft Location.....	14 —
SALISBURY MINE	
Ore mined from the different levels.....	15
Average analysis of Mine Samples for 1904.....	15
Ore Shipments for 1904.....	15
Average analysis of Cargo Shipments for 1904.....	15
Ore Statement November 30th, 1904.....	15
Average wages and Product.....	16
Statement of explosives used for breaking ore.....	17
Statement of Comparative wages.....	17
Statement of timber used for mining ore.....	18
Statement of mining cost.....	19
Estimate of ore in sight.....	19
Work in the different parts of the Mine.....	20 - 22
Fatal accidents.....	22
Location.....	22
OGDEN MINE.....	22
LEASES.....	22

IRON CLIFFS COMPANY.

Ishpeming, Michigan.  
December 1st, 1904.

Mr. Wm. G. Mather, President,  
Cleveland, Ohio.

Dear Sir:

I beg to submit the following report of the operations of the Mines of this Company, and the present condition of the property.

The maps, statements and inventory have been sent you under separate cover.

BARNUM MINE.

No ore has been mined from this property during the past year. There is still a small tonnage of Castleford grade remaining next the Lake Superior line, which that Company will mine on royalty, when their operations reach that point.

CLIFFS SHAFT MINE.

The following table shows the amount of ore mined from the different levels during the past year:

LEVEL	"A" SHAFT	"B" SHAFT	TOTAL
First sublevel		3,657	3,657
Second sublevel		796	796
Third sublevel		10,647	10,647
First	28,916	1,404 <i>16,504</i>	30,320
Second	14,919	16,014	30,933
Third	15,568	15,298	30,866
Fourth	6,876	1,843	8,719
Fifth	14,721	12,182	26,903
Sixth	13,839		13,839
Seventh	5,955		5,955
Eighth	6,394		6,394
	107,188	61,841	169,029



AVERAGE ANALYSES OF MINE SAMPLES FOR 1904.

	Iron	Phos.	<i>Last year</i>
Cliffs Shaft Ore, Crushed,	62.56	.100	62.50 .103
Cliffs Shaft Ore, Coarse,	63.68	.088	64.21 .097

ORE SHIPMENTS FOR 1904.

	POCKET	STOCKPILE	TOTAL	TOTAL LAST YEAR
Lump Cliffs Shaft	32,340		32,340	39,711 ✓
Crushed Cliffs Shaft	64,475	113,447	177,922	81,904 ✓
Total	96,815	113,447	210,262	121,615 ✓
Last year	99,649	21,966	121,615	
Increase 73%			88,647	

AVERAGE CARGO ANALYSIS FOR 1904.

	Iron	<i>Last year</i>
Cliffs Shaft ore, Crushed,	63.04	62.78
Cliffs Shaft Ore, Coarse,	63.96	63.14

ORE STATEMENT NOVEMBER 30, 1904.

	Lump Cliffs Shaft	Crushed Cliffs Shaft	Total	Total Last Year
On hand December 1st, 1903,		160,810	160,810	21,234
Output for year,	32,340	136,689	169,029	261,191
Total,	32,340	297,499	329,839	282,425
Shipments,	32,340	177,922	210,262	121,615
Balance in stock November 30th, 1904,		119,577	119,577	160,810
Decrease in ore on hand,			41,233	
Decrease in output, 35%,			92,162	

Note:-

1904--One ten hour shift during year.

1903--Two ten hour shifts to October 1st.

One ten hour shift October 1st., to December 1st.

2

CLIFFS SHAFT MINE.

AVERAGE WAGES AND PRODUCT.

Product 1904, 169,029 tons.	SURFACE		UNDERGROUND		TOTAL	
	1904	1903	1904	1903	1904	1903
Product 1903, 261,191 tons.						
Average number men working,	43	65	123	223	166	288
Average wages per day,	1.91	1.87	2.16	2.18	2.09	2.11
Average wages per month, 25 days,	47.75	46.75	54.00	54.50	52.25	52.75
Average product per man per day,	12.71	12.78	4.66	3.81	3.41	2.93
Labor cost per ton,	.150	.146	.465	.572	.615	.718
Difference in labor cost per ton,	+.004	-.002	-.107	-.016	-.103	-.018
Average product, Breaking and Trammig,			6.85	5.45		
Average wages for miners,			2.23	2.39		
Average wages for trammers,			2.09	1.97		
Average wages for Contractors,			2.18	2.25		

The slight increase per day in surface wages is due to the larger percentage of skilled to common labor, on account of the mine working one shift only. The percentage of surface to underground labor rose from 22.57% in 1903 to 31.90% in 1904. This is accounted for by the single shift. There are a certain number of special men, such as mechanics, teamsters etc., who have to be employed whether working on one or two shifts. Owing, however, to the larger production per ten hour shift this year over last, there was practically no difference in the ore per man per day on surface. The product per man per day underground rose from 3.81 in 1903 to 4.66 tons in 1904; an increase over the former year of 22.31%. This satisfactory result is due to the causes mentioned in last year's report, namely:

- First: The selection of the most competent miners when the force was reduced.
- Second: The fact that one gang of men in a stope works to better advantage than two.
- Third: The elimination of the half shifts on Saturday night not worked, but paid for.
- Fourth: The disposition of the men to do an honest day's work, on account of our making no reduction in wages, whereas our neighbors did.
- Fifth: From an observation extending over some years I have come to the conclusion

that men are physically able to do better work when continuously on the day shift. The night shift men rarely get sufficient sleep, and are consequently not fit for hard work at

CLIFFS SHAFT MINE.

night, and when on the day shift are recuperating from the effects of the night shift. The average wages of miners in 1904 was \$2.23 as against \$2.39 in 1903. This result was accomplished by reducing the contracts, but not to such a point as to be noticeable. The average wages of trammers was higher in 1904, because we had more efficient men, and used less of them. As a matter of fact the cost per ton for tramping in 1904 was less than in 1903.

STATEMENT OF EXPLOSIVES USED FOR BREAKING ORE.

KIND	QUANTITY	AVG. PRICE	AMOUNT	AMOUNT 1903.
50% Powder	85,017	.12	10,199.00	14,023.13
Fuse	96,100'	4.01	385.21	579.74
Caps	28,300	5.70	161.40	242.29
Electric Exploders	950	3.15	29.92	44.86
Battery wire,	79#	.30	23.70	33.30
Total			10,799.23	14,923.32
			1904	1903
Product			169,029	261,191
Pounds powder per ton ore,			.50	.45
Cost per ton for explosives,			.064	.059

STATEMENT OF COMPARATIVE WAGES.

	1904	1903	Increase or Decrease for 1904
<u>SURFACE</u>			
Total number days	13,303½	20,445½	
Average rate	1.91	1.87	Increase .02
Amount	25,353.59	38,232.42	
<u>UNDERGROUND</u>			
Total number days	36,306½	68,562½	
Average rate	2.16	2.18	Decrease .02

CLIFFS SHAFT MINE.

STATEMENT OF COMPARATIVE WAGES, Continued.

Amount	1904	1903	Increase or Decrease
	78,540.51	149,299.83	
Total days	49,610	89,007 $\frac{3}{4}$	
Average rate	2.09	2.11	Decrease .02
Total amount,	103,894.10	187,532.25	

CRUSHER PLANT.

The following statement shows the cost of operating the Crusher in 1904 as compared with 03.

	OPERATING COST		REPAIR COST		TOTAL COST		
	Amount	Per ton	Amount	Per ton	Amount	Per ton 1904	Per ton 1903
Operating engines	2,427.01	018	40.20	000	2,467.21	018	018
Operating crushers	1,803.05	013	1,020.91	008	2,823.96	021	022
Total Crushing cost,	4,230.06	031	1,061.11	008	5,291.17	039	040
Tramming to R R Pocket,	1,344.59	010	340.93	002	1,685.52	012	014
Total cost 1904	5,574.65	041	1,402.04	010	6,976.69	051	054
Total cost 1903	9,972.93	045	1,886.40	009	11,859.33	054	049
Labor cost,						029	034
Supply cost						022	020
Total						051	054
Per cent	80%		20%		100%		
Number of men employed,	6 $\frac{1}{2}$						
Product per man per day						47.5	61.4
Tons crushed,	136,689						

5

CLIFFS SHAFT MINE.

The cost of mining 169,029 tons of ore has been as follows:

	1904	1903	Increase	Decrease
<u>PRODUCT.</u>	169,029	261,191		92,162
General expense	.026	.019	.007	
Maintenance	.048	.035	.013	
Mining expense	.799	.892		.093
Cost of Production,	.873	.946		.073
<u>EXPLORATORY</u>	.020	.011	.009	
<u>DEPRECIATION</u>				
INVENTORY,	.001	.002		.003
Improvement,	.001	.006		.005
Total Depreciation		.008		.008
Taxes	.103	.067	.036	
Central Office	.063	.039	.024	
Cost on stockpile	1.059	1.071		.012
Loading and shipping,	.019	.010	.009	
Total cost,	1.078	1.081		.003

While the total cost per ton for the year is only .003 lower than in 1903, the result is very gratifying when it is considered that only 169,029 tons were mined as against 261,191 tons the previous year.

Even lower costs would have been attained had not the mine been closed for a month from March 1st., to April 2nd.

The fixed charges, such as taxes, Central Office, General Expense, Pumping etc., do not vary materially from year to year, and therefore cannot be reduced with the product, consequently the cost per ton is increased. The real comparison is in the Mining Expense, which is .093 cents lower than last year. Even here the pumping cost vitiates the true value of the comparison. It is only by examining each item that the real significance of the lower costs becomes apparent. The reasons advanced for this are given under the head of "average wages and product". No attempt has been made to get low costs at the expense of development. This work has been prosecuted with the same vigor as in former years.

CLIFFS SHAFT MINE.

The estimate of ore in sight shows that the reserves were increased 5,850 tons during the year, and while this cannot be taken as an accurate gauge of the development work, as some ore bodies take more drifting to reach than others, and also vary in size, it is to a certain extent indicative of the work accomplished.

Following is a description of the underground work during the past year: The tinted portions of the map show the extensions for the year, and the numbers indicate the present locations of the corresponding contracts.

"A" SHAFT.

FIRST + LEVEL.

Contract No.4, which at the beginning of the year, started to stope East, 300 feet North of the shaft, holed to the old stope North of them about the middle of February. They were then moved back to the mouth of the rock drift, 125 feet SouthWest, and started following a small vein of ore Northeast, which was 10 feet wide, between jasper walls. After stoping for a distance of 50 feet, the rock turned due North, and 15 feet further they holed to their old stope. When this was finished they started to take the back in the stope, into which they had first holed. They are still working at this point, having taken the 9 feet of ore remaining in the back, for a distance of 200 feet West.

No.5 contract extended their stope 120 feet Southwest, ending in jasper. They raised on the jasper at an angle of about 50°, for a distance of about 30 feet, when the rock came together. They were then moved East 280 feet, and put up a raise following the jasper foot, which at this point is standing at an angle of about 45°. At 45 feet the jasper and slate came together, and the raise was stopped. A second raise was put up, 25 feet West connecting with the first. They then took the 7 feet of ore remaining in the back of the old stope for a distance of 45 feet, and are now raising to the South at this point.

No.29 has taken up the bottom in old No.22 stope for a distance of 180 feet, and also the bottom below the sublevel, on which they were working at the end of last year. They are now taking the ore from the bottom of their old stope. The ore in the back of the old stope where contract No.22 was working at the end of last year, continued 25 feet farther to the West than was anticipated, and they did not complete work at this point until about May 1st. They were then moved 100 feet West, and a raise started to the North following the hanging. At a height of 85 feet, a wall of jasper was encountered, and the raise stopped.  
Cliffs Shaft.

### CLIFFS SHAFT MINE.

The ore in the bottom of the raise was taken out by underhand stoping. From the top of the raise they connected with a stope to the East. They then started stoping West, but as the ore had to be handled twice they were brought down to the level, and are now stoping in the ore in the bottom of the raise. A drift will be driven under the ore to the West and a raise put up so that the ore from the sublevel can be more economically handled.

### SECOND LEVEL.

Contract No.21, which on the date of the last annual report, had just started to stope from the bottom of their raise, drove 85 feet East. For the first 55 feet the ore was 20 feet wide, between the foot and the hanging, and 20 feet high to the slate capping. The last 30 feet, however, only averaged 12 feet wide and 14 feet high. The breast of the stope is now opening out. 35 feet West of the breast, the ore apparently turned to the North, and was followed for 15 feet, when the jasper foot came in. A raise was put up on this to the first level, and this contract is now taking out the ore from the bottom of this level.

### THIRD LEVEL.

Contract No.24 advanced their stope 75 feet East, when the ore was cut out by jasper. They were then moved 30 feet West of the breast, and put up a raise 50 feet high to the North following the hanging. At this point the ore was cut out by jasper. From the top of the raise a sublevel was opened Northeast and Northwest. To the East the ore cut out in 20 feet, but extended 40 feet to the West. They then stoped the ore which was left in the foot of the raise. Opposite the foot of the raise they have stoped 20 feet South. The stope which is 20 feet wide has ore on both sides, but the back is coming down rapidly, the ore only being 12 feet high in the breast. They have now started a raise 24 feet West to connect with the first raise.

Contract No.1, 300 feet Northwest of the shaft finished taking out the floor between the 2nd and 3rd levels, and were then moved to an old stope 240 feet Northwest of the shaft, and mined out 15 feet of ore, which had been left in the back. They are now removing the floor of the 2nd level 225 feet Northwest of the shaft.

### FOURTH LEVEL.

At the date of the last annual report Contract No.3 working NorthEast of the shaft had just struck jasper in the breast of their stope. They were brought back 25 feet West and a stope 25 feet wide and 20 feet high was carried North for a distance of 105 feet, where the footwall was struck. On this they raised to the 3rd level.

### CLIFFS SHAFT MINE.

A stope was then started from the bottom of the raise, and has been extended 35 feet. It is getting badly mixed, and apparently they have reached the limit.

### FIFTH LEVEL.

Contract No.12 after drifting South 60 feet struck the hanging, and were then turned East following it. The stope was carried 25 feet wide and 20 feet high for 50 feet when the slate was struck in the back. This has been dipping gently to the East, and the stope is now but 8 feet high. To the North there ~~was~~ ore. This contract has been moved 15 feet West of the breast, and a stope 20 feet wide and 20 feet high started North.

The stope which contract No.18 had just started at the beginning of last year extended only 35 feet, and was cut out by jasper. A raise was then started 50 feet West, which went up only 15 feet, stopping in slate. This contract was then moved 100 feet West of No.12 contract, and stoped the ore from the bottom of the raise to the 4th level. They have just completed this work, and will now be turned to the East, leaving a pillar 30 feet wide between them and No.12 stope.

### SIXTH LEVEL.

Contract No.10 has advanced their stope 160 feet East, 22 feet wide and 20 feet high. They are following the slate hanging on the South, but have ore on the North and in the back. The stope is now turning to the North East. 260 feet East of the shaft diamond drill hole No.81 was drilled North and at 42 feet struck the ore shown on the levels above. The drill was then brought back 110 feet West, and a hole drilled North East to see if the ore came near<sup>er</sup> the shaft. It was cut at 43 feet.

Contract No.31 then started a drift to reach the ore, which was encountered the first week in November. They have now opened a stope which is 18 feet wide between walls of slate, but is apparently widening slightly as it goes East.

### SEVENTH LEVEL.

During the year No.8 contract have carried their stope 110 feet East. For the last 25 feet it gradually narrowed until at the end of the year, it was but 8 feet wide between slate walls, with jasper 8 feet from the floor. It is probable that the main body of ore corresponding to No.10 on the 6th level lays to the North of the dyke, and this will be tested shortly. Diamond drill hole No.74 which was drilled in February, proved that the ore on the level above came to this depth, and encountered it at a distance of 38 feet. No.9 contract has followed this hole, and is now drifting East in ore, Cliffs Shaft.

9



CLIFFS SHAFT MINE.

carrying their stope 20 feet wide and 20 feet high, with ore on the South and slate on the North. This corresponds with the formation on the 6th level. No work has yet been done to prove the ore occurring on the upper levels North East of the shaft.

EIGHTH LEVEL.

Contract No.27 continued their stope 35 feet South East, following the hanging, but at this point were cut off by the slate. They were then taken to the North East of the stope, and started in a Northeasterly direction. This has developed a fine body of ore, the stope being 22 feet wide and 35 feet high, leaving 15 feet of floor below the 7th level. On the South there is slate, and on the North ore. This corresponds with the deposit on the 7th level. From the breast of the South East stope a diamond drill hole was put South East, and crossed 15 feet of ore at 127 feet. For more particular reference the book of maps is referred to.

175 feet East of the shaft the main drift showed eight feet of ore. Contract No.26 is now following this, but at a distance of 17 feet, it has narrowed down to 2 feet. This will be followed, as it is hoped that it will lead to the main deposit North East of the shaft which has been developed on the 3rd, 4th, 5th and 6th levels.

"B" SHAFT.

Contract No.25-1, on the 3rd sublevel, above the first level, which on the date of the last annual report had stoped 15 feet South, advanced 17 feet, and stopped in jasper. They then turned West following the jasper and holed to their old stope. The ore in the East was taken out for a distance of 10 feet to the jasper. A stope was then started 25 feet East, leaving a 25 foot pillar, and at the end of 35 feet was cut out by jasper. They were then turned West, holing again to their old stope. They then carried a stope 20 x 18' for a distance of 25 feet. At this point the foot turned to the North, and as the ore had to be handled twice, they were brought outside and started to drift from the raise to meet this stope, so that the ore could be more economically handled.

Contract No.25-2 of last year is now called No.14. This contract struck the hanging 5 feet beyond the point at which they were working last year. They then turned West and stoped 25 feet to a connection with their old stope. They were then taken to the first sub, and afterwards stoped out the ore in the bottom. They are now putting up a raise 25 feet East of where contract No.25-1 is working.

CLIFFS SHAFT MINE.

FIRST LEVEL.

Contract No.13, 350 feet South East of the shaft, are taking the small amount of ore left in the back of the old stopes. This will be exhausted within thirty days.

SECOND LEVEL.

Contract No.15, which on the date of the last annual report, was located 400 feet West of the shaft, and had stoped 15 feet North, advanced 25 feet before meeting the jasper footwall. They then raised 35 feet on this, when the foot and hanging came together, cutting out the ore.

During the year contract No.6, 350 feet North of the shaft, has extended their stope 30 feet North and 105 feet East, and still have ore in the breast. The stope is 18 feet wide and 20 feet high, with slate on the North and jasper on the South. The product from this stope has been low grade, not averaging above 57% in iron.

Contract No.19 continued their stope of last year 110 feet West, and ended in jasper. 75 feet West of the breast they put up a raise to the first level "A" shaft, and took out part of the floor of this level. 75 feet West of the breast of No.6 stope they also put up a raise on the jasper foot to the first level "A" shaft. They are now putting up a 3rd raise 25 feet East of this.

THIRD LEVEL.

On April 1st., contract No.2 finished taking out the ore on the footwall of their No.2 raise, and then made connection with No.1 raise at a point 25 feet above the 3rd level. They then started a 3rd raise 75 feet North of No.2 raise, but were only able to reach a height of 35 feet, where the ore was cut out by jasper. They were then moved to the South end of their old drift, and followed a small seam of ore 8 feet wide, a distance of 60 feet when it cut out. They are now working on the 5th level.

Contract No.17 extended their drift 50 feet before starting to raise for the ore shown by diamond drill hole from surface. From the breast of this drift a raise was put up 30 feet to the ore. They then opened a stope 20 feet wide and 20 feet high for a distance of 25 feet East, where it narrowed to 12 feet. After carrying the stope for a total distance of 40 feet, it was temporarily discontinued. 25 feet from the breast a stope 18 feet wide was carried North 35 feet. When the stope reached this point a diamond drill hole had been drilled East from the main level under this point, which showed that the ore came down to the main level. The men were therefore taken down and started to drift toward the ore. They have just reached it and begun to open the stope.

Cliffs Shaft.

### CLIFFS SHAFT MINE.

The ore in the bottom is low grade, but is of better quality in the back. They will soon connect with the sub above, when the ore can be handled much more economically than before.

Contract No.28, which on the date of the last annual report, was opening a sub 25 feet above the main level, connected No.1 and No.2 raises. They then went up 25 feet, and again connected their raises, after which they stripped off the ore on the foot wall of both raises. They are now stoping East on the 25 foot sub.

400 feet West of the shaft contract No.23 drifted 40 feet in jasper to reach the body of ore shown by diamond drill hole No.73. They have opened a stope 20 feet wide and 18 feet high, for a distance of 50 feet. At this point they struck the jasper foot, on which they have raised and connected with the level above. They are now taking the floor of the second level above this raise.

400 feet West of the shaft contract No.20 drifted to the ore found by diamond drill hole No.76, and have opened a stope 20 feet wide and 20 feet high, with jasper on the South, and slate on the North side, but ore still in the back. The breast is still in good ore. This is the same deposit that contract No.23 mined on the level above, and is therefore not expected to be of any size.

### FIFTH LEVEL.

Contract No.30 extended the main drift 30 feet, and struck a deposit of ore, which at this point is 15 feet wide. They started a stope to the South, which gradually widened to 25 feet. When it had reached a distance of 85 feet it was turned East, so as not to undercut the pillar on the level above. It now has ore on both sides. In the South West corner a raise was put up to the 4th level.

Contract No.15 were put to work in the main West drift, and after passing through 7 feet of slate, again struck ore. They have now opened a stope 20 feet wide and 16 feet high. This evidently corresponds with the ore on the 4th level.

From the bottom of the raise put up by contract No.30 last year, contract No.16 drifted 75 feet South West between slate walls; the first 30 feet being only 8 feet wide, and the next 20 feet 12 feet wide. The stope gradually narrowing until finally cut out by the slate walls coming together. They then drifted to develop the ore discovered by diamond drill hole No.80. They opened a stope which in the beginning was 17 feet wide, but narrowed rapidly until at 40 feet it was but 5 feet wide. This is probably the same ore struck in diamond drill hole No.84 and 53 on the 4th level. If this is true a large tonnage will probably be secured from this deposit.

CLIFFS SHAFT MINE.

"B" SHAFT.

"B" shaft has been sunk 68 feet during the year, making the total depth 84 feet below the 5th level. Sinking will be continued until it has reached the depth of the 8th level. Both the 7th and the 8th levels will be deep enough to reach the ore shown by diamond drill hole No.86, which shows a total thickness of 146 feet of ore. This discovery is <sup>of</sup> more than of usual interest as the upper levels of "B" shaft are being rapidly exhausted, and unless some new ore had been discovered, the output from the mine would have been materially reduced. We hope, however, to be able to open this ore in time to take the place of stopes which will shortly be exhausted. As soon as the 8th level is reached sinking will begin in "A" shaft. Owing to the small dimensions of the ore body in the lower levels it will be necessary to sink continuously in order to develop the ore as rapidly as it is mined.

The following estimate of ore in sight was made by our Engineering Department:

	"A" SHAFT	"B" SHAFT	TOTAL	LESS 10% ROCK.
Floors,	749,000	536,000	1,285,000	1,156,500
Pillars	234,500	195,200	429,700	386,730
Partly developed,	48,500	60,000	108,500	97,650
Total,	1,032,000	791,400	1,823,500	1,640,880
In this estimate is included under "Partly Developed" 57,000 tons for back of first level,	32,000	25,000	<i>1823500</i> <i>1641150</i> <i>182000</i>	
As in previous years are deducted,				
Ore to support Lake Bancroft			195,000	175,000
Ore to support Machinery,			380,000	342,000
Ore to support Excelsior Addition,			50,000	45,000
Total to be deducted,				562,000
Total available for mining,				1,078,880
Total available for mining 1903,				1,073,030
Increase,				5,850

CLIFFS SHAFT MINE.

FATAL ACCIDENTS.

It is gratifying to be able to report that no fatal accidents have occurred during the year.

LAKE BANCROFT LOCATION.

During the past year a road has been built around Lake Bancroft, connecting the old Location with the new. In front of the new houses trees have been planted, and it will not be long before this location is one of the most attractive in the city. We found it impossible to keep the houses rented, on account of the high rental. It was therefore decided with your approval to reduce the rents from \$10.00 to \$12.00 per month to \$8.00 and \$10.00 respectively. When the mines start double shift again, there will be no difficulty in filling the houses at this price. When it is considered that the average wages of miners does not exceed \$55.00 a month, it can readily be seen that even this class of labor cannot afford to spend more than \$10.00 per month for rent.

SALISBURY MINE.

The total tons of ore mined from the different levels during the year is as

follows:

<u>LEVEL</u>	<u>TONS</u>	<i>Estimated last year as available</i>
12th	4,441	4,000
17th	20,732	6,000
18th	123,825	304,800
19th	1,328	
<u>Total tons,</u>	150,326	

AVERAGE ANALYSIS OF MINE SAMPLES FOR 1904.

	<u>Iron</u>	<u>Phos.</u>	<i>Last year</i>
Salisbury Bessemer	65.38	.061	64.13 .054
Salisbury	61.95	.116	60.78 .110
Clinton,	64.20	.272	

ORE SHIPMENTS FOR 1904.

	<u>POCKET</u>	<u>STOCKPILE</u>	<u>TOTAL</u>	<u>TOTAL LAST YEAR</u>
Salisbury Bessemer	9,669	23,905	33,574	60,417
Salisbury	46,253	37,898	84,151	80,738
Clinton,	7,178	14,405	21,583	
<u>Total,</u>	63,100	76,208	139,308	141,155
Last year,	91,900	49,255	141,155	
Decrease 1.3%			1,847	

AVERAGE ANALYSIS OF CARGO SHIPMENTS FOR 1904.

Salisbury	Iron 60.83	<i>Last year</i> 59.80
-----------	------------	---------------------------

ORE STATEMENT NOVEMBER 30, 1904.

	<u>BESSEMER</u>	<u>SALISBURY</u>	<u>CLINTON</u>	<u>TOTAL</u>	<u>TOTAL LAST YEAR</u>
On hand December 1st, 1903,	2,949	52,180		55,129	17,954
Output for year,	31,859	89,981	28,486	150,326	178,330
<u>Total,</u>	34,808	142,161	28,486	205,455	196,284
Shipments,	33,574	84,151	21,583	139,308	141,155
Balance in stock,	1,234	58,010	6,903	66,147	55,129
Increase in ore in stock, Decrease in output, 16% Salisbury.		15		11,018 28,004	

SALISBURY MINE.

ORE STATEMENT NOVEMBER 30, 1904, Continued.

Note:-

1904--Two ten hour shifts during year.

1903--Three eight hour shifts to October 1st.

Two ten hour shifts October 1st., to December 1st.

AVERAGE WAGES AND PRODUCT.

	SURFACE		UNDERGROUND		TOTAL	
	1904	1903	1904	1903	1904	1903
Product 1904, 150,326 tons.						
Product 1903, 178,330 tons.						
Average number men working,	38	39	119	169	157	208
Average wages per day,	1.89	1.87	2.24	2.37	2.16	2.28
Average wages per Mo.25 days,	47.25	46.75	56.00	59.25	54.00	57.00
Average product per man per day,	12.98	15.00	4.22	3.52	3.19	2.85
Labor cost per ton,	.146	.124	.531	.674	.677	.798
Difference in labor cost per ton,	+.022	+.001	-.143	+.028	-.121	+.029
Average product breaking and tramng,			6.00	5.09		
Average wages for miners,			2.29	2.53		
Average wages for trammers,			1.99	1.88		
Average wages for contractors,			2.25	2.42		

This year a comparison is possible of the relative efficiency of the eight and ten hour shifts. When the ten hour shifts was inaugurated, it took several months to adjust the wages to the new basis. The price per carona per foot was gradually reduced until the average wages came to the rate of the other mines. There is a decrease in the product per man per day on surface as compared with the previous year, due to the production being less while the number of men required was practically the same. Underground, however, the ore per man per day increased .50 tons or 14.30% over 1903, while the total product per man increased 10.65%. Trammng was done this year by contract instead of Company account, as in 1903. While trammers wages increased 11 cents per day, the cost per ton for trammng decreased. While labor conditions were unusually favorable we had to contend at both the Lake and Salisbury with the dissatisfaction of the men with the change from the eight to the ten hour shift. I therefore think it fair to assume that one condition offset the other, and that the results may be treated as being normal.

Salisbury.

SALISBURY MINE.

STATEMENT OF EXPLOSIVES USED FOR BREAKING ORE.

KIND	QUANTITY	AVERAGE PRICE	AMOUNT	AMOUNT 1903.
40% Powder,	11,750	.105	1233.75	1097.25
50% powder,	4,650	.12	558.00	486.00
Fuse,	53,250	4.01	213.64	216.74
Caps,	18,400	5.70	104.95	107.70
Elec.Exploders,	100	30.10	3.01	
Battery wire,	2#	.30	.60	
Total,			2,113.95	1,907.69
Product,			150,326	178,330
Pounds powder per ton ore,			.108	.081
Cost per ton for explosives,			.014	.0106

STATEMENT OF COMPARATIVE WAGES.

	1904	1903	Increase or Decrease for 1904.
<u>SURFACE</u>			
Total number days,	11,579 $\frac{1}{4}$	11,889 $\frac{1}{2}$	
Average rate,	1.89	1.87	Increase .02
Amount	21,892.94	22,180.09	
<u>UNDERGROUND</u>			
Total number days,	35,596 $\frac{1}{2}$	50,638	
Average rate,	2.24	2.37	Decrease .13
Amount		120,177.36	
Total days,	47,175 $\frac{3}{4}$	62,527 $\frac{1}{2}$	
Average rate,	2.16	2.28	Decrease .12
Total amount,	101,783.51	142,357.45	



SALISBURY MINE.

STATEMENT OF TIMBER USED FOR MINING ORE 1904.

STULL TIMBER.

K I N D	Lineal feet	Avg. Price	Amount	Amount 1903.
4 to 6" timber,				21.46
6 to 8" "	5,768	.02	115.36	173.32
8 to 10" "	31,564	.0333	1050.06	1011.35
10 to 12" "	28,558	.0524	1495.81	1278.80
12 to 14" "	17,690	.0675	1194.07	1940.04
14 to 16" "				50.58
16 to 18" "				9.60
Total,	83,580	.0461	3855.30	4485.15
Total for 1903,	96,358	.047	4485.15	5831.63

LAGGING.

7' Lagging,	17,300	.60	103.80	399.00
5' Lagging,	221,875	.56	1242.48	1142.43
Slabs,				33.25
Poles,	56,674	.01	566.74	598.07
Total,	295,849	.646	1913.02	2172.75
Total 1903,	352,284	.616	2172.75	2081.75

	1904	1903
Feet of timber per ton of ore,	.64	.54
Feet of lagging per ton of ore,	1.59	1.97
Feet of lagging per foot of timber,	2.86	3.65
Cost per ton for timber, lagging and poles,	.039	.040
Equivalent of stull timber to Board measure,	223,226	283,598
Feet, board measure per ton of ore,	1.49	1.59
Total product,	150,326	178,330

SALISBURY MINE.

The cost of mining 150,326 tons of ore has been as follows:

	1904	1903	Increase	Decrease
<u>PRODUCT</u>	150,326	178,330		28,004
General expense,	.029	.025	.004	
Maintenance,	.074	.064	.010	
Mining Expense,	.788	.910		.122
Cost of production,	.891	.999		.108
<u>EXPLORATORY,</u>	.002		.002	
Taxes,	.035	.034	.001	
Central Office,	.047	.037	.010	
Cost on stockpile,	.973	1.070		.097
Loading and shipping,	.015	.016		.001
Total cost on cars,	.988	1.086		.098

The decrease in the "Cost of Production" as compared with last year is .108, and in the "Total Cost of Production" of .098. The results at this mine have fully demonstrated that the ten hour shift is more economical than the eight hour, and that in order to meet competition it is necessary to continue it. No mine on any of the iron ranges is now working the eight hour shift except the Pittsburgh & Lake Angeline Iron Co. The product at this mine is limited by the hoisting capacity.

In February it was necessary to reduce the speed in lowering the skip, on account of the condition of the hoisting drum. This is referred to in the Master Mechanic's report. This was partially overcome by using the cage for hoisting rock. As great a production as in 1903 would have been secured could we have run the skip at the same speed. In view of the fact that our Master Mechanic considers it safe under present conditions of operation, the amount of ore remaining in the mine does not justify the purchase of a new drum.

The following estimate of ore in sight was made by our Engineering Department:

12th Level	4,000 tons.
17th level,	2,000 "
18th level,	268,000 "
19th level	66,000 "

Total available for mining, 340,000 "

1903 Increase 8%  
314,500 25,500