

1. Character of present organization, whether individual, firm, limited partnership, cooperative association, or incorporated company: - - - - -

2. Capital stock, bonds, dividends, and assessments (if an incorporated company):

	BONDS		PREFERRED STOCK		COMMON STOCK	
	NUMBER	TOTAL PAR VALUE	No. OF SHARES	TOTAL P. VALUE	No. OF SHARES	TOTAL P. VALUE
Authorized - - - - -		\$ - - - - -		\$ - - - - -		\$ - - - - -
Issued to the end of the year - - - - -		\$ - - - - -		\$ - - - - -		\$ - - - - -

Dividends and interest, if any, paid during the year:

Common stock, rate - - - - -; amount, \$ - - - - -
 Preferred stock, rate - - - - -; amount, \$ - - - - -
 Bonds, rate - - - - -; amount, \$ - - - - -

Assessments: Total amount levied, if any, since organization of company - \$ - - - - -

C L A S S E S.	AVERAGE No. EMPLOYED DURING THE YEAR	TOTAL AMOUNT PAID IN WAGES OR SALARIES DURING THE YEAR
Above Ground-		
General officers - - - - -		
Superintendents, mgrs, foremen, surveyors, etc - - - - -	1	\$ 392.31
Clerks - - - - -		
Engineers, firemen, machinists, blacksmiths, carpenters, and other mechanics - - - - -	4	785.72
Miners or quarrymen and stonecutters - - - - -	3	562.44
Boys under 16 years - - - - -		
All other employees - - - - -	5	924.63
Below Ground (not for quarries or surface mines)-		
Foremen - - - - -		
Miners - - - - -		
Miners' helpers - - - - -		
Boys, under 16 years - - - - -		
All other employees - - - - -		
T O T A L	13	\$ 2,665. ¹⁰

(Account for all persons employed at the mine or quarry. Give the total salaries and wages paid, which should include board or rent furnished as part compensation. The wages reported for miners or quarrymen and stonecutters should be their net wages, and should not include the cost of supplies furnished by the company and charged to them, such as explosives, lamp oil, etc., and blacksmithing charges. Care should be taken that those employed "above ground" and those "below ground" be reported separately. Stockholders of corporations are not to be reported unless they are salaried officials. Amounts paid for contract work, not done by employees hired directly, and the number employed in such work, must not be included in this inquiry, but be reported in answer to inquiry, 6. The average number employed during the year is the number that would be required, at continuous employment for the twelve months, to produce the quantity of product reported.)

AVERAGE NUMBER OF WAGE-EARNERS AT SPECIFIED DAILY RATES OF PAY.

OCCUPATIONS	Less than	50	75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25
	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	and over
Engineers																	
Firemen							/										
Machinists, blacksmiths, carpenters, and other mechanics							/	/									
Miners or quarrymen & stonecutters							/		2								
Miners' helpers																	
Timbermen & track layers																	
Boys under 16 years																	
All other employees, not includ- ing those on salaries						2	3										

AVERAGE NUMBER OF WAGE-EARNERS EMPLOYED DURING EACH MONTH

MONTH	MEN 16 YEARS AND OVER		BOYS UNDER 16 YEARS		MONTH	MEN 16 YEARS AND OVER		BOYS UNDER 16 YEARS	
January					July		12		
February					August		12		
March					September		12		
April					October		12		
May					November				
June					December				

(Only wage-earners should be reported, including miners working on tonnage and other pieceworkers. Do not include firm members, general officers, superintendents, managers, foremen, clerks, and other salaried employees.)

4. If mining or quarrying is paid for by ton, car, yard, or other unit, give rate paid and character of unit.

Average number of employees engaged in this class of mining

Total amount paid for such work, \$

(The rate paid for mining or quarrying not done by the day should be reported, and the average number of employees engaged in such work and the total amount paid.)

5. Time in operation:

Total number of days in operation during the year, 89 - - - Number of hours in operation per day, 10 - - - Number of shifts of workmen, 1 - - - Number of hours to shift, 10 - - -

6. Contract Work:

Amount paid, if any, for tunneling, shaft sinking, boring, test holes, etc., if not done by employees hired directly by this establishment, \$

Average number of men employed on such work, - - - - -

Number of days employed, - - - - -

7. SUPPLIES AND MATERIAL:

Total cost of supplies and materials of all kinds used during the year, including freight paid on the same, \$ 1,204.21

(The actual cost of all supplies and materials used during the year, including freight paid on the same, must be reported. The cost of the following materials should be reported under this inquiry: Lumber and timber used for repairs, mine supports, track ties, cars, and all other purposes; iron and steel for blacksmithing, rails, frogs, sleepers etc., for tracks and repairs, parts of machinery and tools used for renewals and repairs explosives, water for boilers and other purposes, fuel, illuminating and lubricating oils machinery supplies, etc.)

8. MISCELLANEOUS EXPENSES:

I T E M S.	AMOUNT
Royalties and rent of mine and mining plant - - - - -	\$ - - - - -
Amount paid for rent of offices, taxes, insurance, interest advertising, office supplies, law expenses, injuries and damages, telegraph and telephone service, gas, and all other sundries not reported elsewhere - - - - -	157.48
Total - - - - -	\$ - - - - -

(All items of expense incident to the operation of the mine or quarry, not accounted for under inquiries 8 and 7, must be reported here. Do not include any portion of the freight reported under inquiry 7 as paid on supplies and materials.)

9. PRODUCT:

Total quantity of mineral or stone mined during the year, 4,750 gr tons

Total value at mine or quarry, \$ 3562.50

(Under this inquiry should be reported the quantity and value of all mineral or stone mined during the year, f.o.b. at mine or quarry, as reported to the United States Geological Survey.)

10. POWER:

a. POWER OWNED-

C L A S S.	NUMBER	TOTAL HORSEPOWER
ENGINES:		
Steam - - - - -	✓	✓
Gas and Gasoline - - - - -	✓	✓
Water wheels - - - - -	✓	✓
Electric motors - - - - -	✓	✓
Other power (specify kind) - - - - -	✓	✓

b. POWER SUPPLIED TO OTHER ESTABLISHMENTS, IF ANY-

Horsepower, - - - - - ✓

c. POWER SUPPLIED BY OTHER ESTABLISHMENTS, IF ANY-

Kind of power, - - - - - ✓; horsepower,

name and address of establishment supplying same, - - - - - ✓

(Under this inquiry should be reported all mechanical power employed, either owned or rented, including the number and horsepower of all engines, motors, water wheels etc., used for hoisting, derricks, surface machinery, ventilating, pumping, and all other purposes.)

UNITED STATES CENSUS OFFICE.
Special schedule No. 6
Division of Manufactures.
S.N.D. North, Chief Statistician.

M I N E S A N D Q U A R R I E S.

Name of mine or quarry, - *Imperial (not operated during year)*
Character of mineral, - - - - - *Iron Ore*
Name of company, firm, or individual owner, *The Cleveland-Cliffs Iron Co.*
Location of mine or quarry: State, *Michigan* - - - ; County, *Baraga*
Nearest city or town, *Michiganville* - - - - - Post-office, *Michiganville*
General office at - - - - - *Cleveland, O.* - - - - - *Marquette Co.*

UNITED STATES CENSUS OFFICE,

Washington, D. C., January 2, 1903.

By section 7 of the Act of Congress for the establishment of a permanent Census Office, approved March 3, 1902, the Director of the Census is required to prepare a report on mines, mining, quarries, and minerals and the production and value thereof, including gold in divisions of placer and vein, and silver mines, of the United States and the following schedule has been formulated for that purpose.

For the convenience of producers, the United States Geological Survey will distribute and receive these schedules in connection with the returns for its annual report.

The information returned on this schedule should cover the business year of the establishment most nearly conforming to the year ending December 31, 1902.

All answers will be held absolutely confidential. No publication will be made in the census reports disclosing the names or operations of individual establishments in any particular. Special agents and enumerators of the census are liable to a penalty of \$500, if they disclose any information obtained in their official capacity.

William R. Merriam,
Director of the Census

EXTRACT FROM ACT OF CONGRESS, MARCH 3, 1899:

Section 22 * * * " And every president, treasurer, secretary, director, agent, or other officer of every corporation, and every establishment of productive industry, whether conducted as a corporate body, limited liability company, or by private individuals, from which answers to any of the schedules, inquiries, or statistical interrogatories provided for by this act are herein required, who shall, if thereto requested by the director, supervisor, enumerator, or special agent, willfully neglect or refuse to give true and complete answers to any inquiries authorized by this act, or shall willfully give false information, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not exceeding ten thousand dollars, to which may be added imprisonment for a period not exceeding one year."

C E R T I F I C A T E.

This is to certify that the information contained in this schedule is complete and correct to the best of my knowledge and belief.

- - - - -
(Signature of Special Agent)

Wm. G. Mathew Pres
(Signature and official designation
of the person furnishing the informa-
tion.)

No. 186

CONFIDENTIAL.

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
DIVISION OF MINING AND MINERAL RESOURCES

To be returned PROMPTLY in accompanying franked envelope to JOHN BIRKINBINE, Odd Fellows' Temple, Broad and Cherry Streets, Philadelphia, Pa.

IRON ORE
Statistics of iron ore mined during the year ending December 31, 1902, at the

Imperial
(Give name or designation of mine.)

Located at Near Michigamme

County of Baraga State of Mich

Not operated during year
Information supplied by

Wm G Mather President
Cleveland O

(Sign here, giving name, official position, and Post-office address.)

For use only in the preparation of general statistics for the "Mineral Resources of the United States, 1902," to be published by the United States Geological Survey.

A. Underscore character of iron ore produced, and if more than one of the following classes is mined give amount of each:

- Limonite, brown hematite, or bog ore.
- Red hematite, specular or fossil ore.
- Magnetic ore.
- Carbonate or black band ore.

B. State total amount of marketable iron ore mined or produced during the year ending December 31, 1902.

None gross tons.
(if none, so state.)

Also stock of iron ore on hand at Mine December 31, 1902.

7,509 gross tons.
(if none so state.)

C. Give total value on cars or carts At The Mine of the iron ore produced during the year ending December 31, 1902, royalty, if any, included, but exclusive of hauling to points of shipment or consumption. The gross commercial value of the ore at the mine, NOT the cost or profit, is asked for.

\$ _____

1. Character of present organization, whether individual, firm, limited partnership, cooperative association, or incorporated company: - - - - -

2. Capital stock, bonds, dividends, and assessments (if an incorporated company):

	BONDS		PREFERRED STOCK		COMMON STOCK	
	NUMBER	TOTAL PAR VALUE	No. OF SHARES	TOTAL P. VALUE	No. OF SHARES	TOTAL P. VALUE
Authorized - - - - -		\$ - - - - -		\$ - - - - -		\$ - - - - -
Issued to the end of the year - - - - -		\$ - - - - -		\$ - - - - -		\$ - - - - -

Dividends and interest, if any, paid during the year:

Common stock, rate - - - - -; amount, \$ - - - - -

Preferred stock, rate - - - - -; amount, \$ - - - - -

Bonds, rate - - - - -; amount, \$ - - - - -

Assessments: Total amount levied, if any, since organization of company - \$ - - - - -

C L A S S E S.	AVERAGE No. EMPLOYED DURING THE YEAR	TOTAL AMOUNT PAID IN WAGES OR SALARIES DURING THE YEAR
Above Ground-		
General officers - - - - -		\$ - - - - -
Superintendents, mgrs, foremen, surveyors, etc - - - - -		
Clerks - - - - -		
Engineers, firemen, machinists, blacksmiths, carpenters, and other mechanics - - - - -		
Miners or quarrymen and stoncutters - - - - -		
Boys under 16 years - - - - -		
All other employees - - - - -		
Below Ground (not for quarries or surface mines)-		
Foremen - - - - -		
Miners - - - - -		
Miners' helpers - - - - -		
Boys, under 16 years - - - - -		
All other employees - - - - -		
T O T A L		\$ - - - - -

(Account for all persons employed at the mine or quarry. Give the total salaries and wages paid, which should include board or rent furnished as part compensation. The wages reported for miners or quarrymen and stoncutters should be their net wages, and should not include the cost of supplies furnished by the company and charged to them, such as explosives, lamp oil, etc., and blacksmithing charges. Care should be taken that those employed "above ground" and those "below ground" be reported separately. Stockholders of corporations are not to be reported unless they are salaried officials. Amounts paid for contract work not done by employees hired directly, and the number employed in such work, must not be included in this inquiry, but be reported in answer to inquiry, 6. The average number employed during the year is the number that would be required, at continuous employment for the twelve months, to produce the quantity of product reported ed.)

AVERAGE NUMBER OF WAGE-EARNERS AT SPECIFIED DAILY RATES OF PAY.

OCCUPATIONS	Less	50.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	
	than	to	to	to	to	to	to	to	to	to	to	to	to	to	to	and	
	.50	.74	.99	1.24	1.49	1.74	1.99	2.24	2.49	2.74	2.99	3.24	3.49	3.74	3.99	4.24	over
Engineers -																	
Firemen -																	
Machinists,																	
blacksmiths,																	
carpenters,																	
and other																	
mechanics -																	
Miners or																	
quarrymen &																	
stonecutters -																	
Miners'																	
helpers -																	
Timbermen &																	
track layers -																	
Boys under																	
16 years -																	
All other																	
employees,																	
not includ-																	
ing those																	
on salaries -																	

AVERAGE NUMBER OF WAGE-EARNERS EMPLOYED DURING EACH MONTH.

MONTH	MEN 16 YEARS AND OVER	BOYS UNDER 16 YEARS	MONTH	MEN 16 YEARS AND OVER	BOYS UNDER 16 YEARS						
						January -	February -	March -	April -	May -	June -

(Only wage-earners should be reported, including miners working on tonnage and other pieceworkers. Do not include firm members, general officers, superintendents, managers, foremen, clerks, and other salaried employees.)

4. If mining or quarrying is paid for by ton, car, yard, or other unit, give rate paid and character of unit. - - - - -

Average number of employees engaged in this class of mining - - - - -
 Total amount paid for such work, \$ - - - - -

(The rate paid for mining or quarrying not done by the day should be reported, and the average number of employees engaged in such work and the total amount paid.)

5. Time in operation:
 Total number of days in operation during the year, - - - - - Number of hours in
 operation per day, - - - - - Number of shifts of workmen, - - - - - Number of hours
 to shift, - - - - -

6. Contract Work:
 Amount paid, if any, for tunneling, shaft sinking, boring test holes, etc., if not
 done by employees hired directly by this establishment, \$ - - - - -
 Average number of men employed on such work, - - - - -
 Number of days employed, - - - - -

7. SUPPLIES AND MATERIALS:

Total cost of supplies and materials of all kinds used during the year, including freight paid on the same, \$ - - - - -

(The actual cost of all supplies and materials used during the year, including freight paid on the same, must be reported. The cost of the following materials should be reported under this inquiry: Lumber and timber used for repairs, mine supports, track ties, cars, and all other purposes; iron and steel for blacksmithing, rails, frogs, sleepers etc., for tracks and repairs, parts of machinery and tools used for renewals and repairs explosives, water for boilers and other purposes, fuel, illuminating and lubricating oils machinery supplies, etc.)

8. MISCELLANEOUS EXPENSES:

I T E M S.	AMOUNT
Royalties and rent of mine and mining plant - - - - -	\$ - - - - -
Amount paid for rent of offices, taxes, insurance, interest advertising, office supplies, law expenses, injuries and damages, telegraph and telephone service, gas, and all other sundries not reported elsewhere - - -	750.00
Total - - - - -	1070.82
	1.340.82

(All items of expense incident to the operation of the mine or quarry, not accounted for under inquiries 8, and 7, must be reported here. Do not include any portion of the freight reported under inquiry 7 as paid on supplies and materials.)

9. PRODUCT:

Total quantity of mineral or stone mined during the year, - - - - - *None*

Total value at mine or quarry, \$ - - - - -

(Under this inquiry should be reported the quantity and value of all mineral or stone mined during the year, f.o.b. at mine or quarry, as reported to the United States Geological Survey.)

10. POWER:

a. POWER OWNED-

C L A S S.	NUMBER	TOTAL HORSEPOWER
ENGINES:		
Steam - - - - -	✓	✓
Gas and Gasoline - - - - -	✓	✓
Water wheels - - - - -	✓	✓
Electric motors - - - - -	✓	✓
Other power (specify kind) - - - - -	✓	✓

b. POWER SUPPLIED TO OTHER ESTABLISHMENTS, IF ANY-

Horsepower, - - - - -

c. POWER SUPPLIED BY OTHER ESTABLISHMENTS, IF ANY-

Kind of power, - - - - -; horsepower, ✓

name and address of establishment supplying same, - - - - -

(Under this inquiry should be reported all mechanical power employed, either owned or rented, including the number and horsepower of all engines, motors, water wheels etc., used for hoisting, derricks, surface machinery ventilating, pumping, and all other purposes.)

UNITED STATES CENSUS OFFICE.
Special schedule No. 6.
Division of Manufactures.
S.N.D. North, Chief Statistician.

M I N E S A N D Q U A R R I E S.

Name of mine or quarry,-- *Webster (not operated during year)*
Character of mineral,-- *Iron Ore*
Name of company, firm, or individual owner, *The Cleveland Cliffs Iron Co*
Location of mine or quarry: State *Michigan* ---; County, *Baraga*
Nearest city or town, *Michiganville* --- Post-office, *Michiganville*
General office at --- *Cleveland, O.* --- *Marquette, Mich.*

UNITED STATES CENSUS OFFICE,

Washington, D. C., January 2, 1903.

By section 7 of the Act of Congress for the establishment of a permanent Census Office, approved March 3, 1902, the Director of the Census is required to prepare a report on mines, mining, quarries, and minerals and the production and value thereof, including gold in divisions of placer and vein, and silver mines, of the United States and the following schedule has been formulated for that purpose.

For the convenience of producers, the United States Geological Survey will distribute and receive these schedules in connection with the returns for its annual report.

The information returned on this schedule should cover the business year of the establishment most nearly conforming to the year ending December 31, 1902.

All answers will be held absolutely confidential. No publication will be made in the census reports disclosing the names or operations of individual establishments in any particular. Special agents and enumerators of the census are liable to a penalty of \$500, if they disclose any information obtained in their official capacity.

William R. Merriam,
Director of the Census

EXTRACT FROM ACT OF CONGRESS, MARCH 3, 1899:

Section 22 * * * " And every president, treasurer, secretary, director, agent, or other officer of every corporation, and every establishment of productive industry, whether conducted as a corporate body, limited liability company, or by private individuals, from which answers to any of the schedules, inquiries, or statistical interrogatories provided for by this act are herein required, who shall, if thereto requested by the director, supervisor, enumerator, or special agent, willfully neglect or refuse to give true and complete answers to any inquiries authorized by this act, or shall willfully give false information, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not exceeding ten thousand dollars, to which may be added imprisonment for a period not exceeding one year."

C E R T I F I C A T E.

This is to certify that the information contained in this schedule is complete and correct to the best of my knowledge and belief.

(Signature of Special Agent)

Wm. Mather
(Signature and official designation of the person furnishing the information.)

No. 187

CONFIDENTIAL.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

DIVISION OF MINING AND MINERAL RESOURCES

To be returned PROMPTLY in accompanying franked envelope to JOHN BIRKINBINE, Odd Fellows' Temple, Broad and Cherry Streets, Philadelphia, Pa.

I R O N O R E

Statistics of iron ore mined during the year ending December 31, 1902, at the

Webster
(Give name or designation of mine.)

Located near Muschyanne

County of Baraga State of Mich

Not operated during year
Information supplied by _____

(Sign here, giving name, official position, and Post-office address.)

For use only in the preparation of general statistics for the "Mineral Resources of the United States, 1902," to be published by the United States Geological Survey.

A. Underscore character of iron ore produced, and if more than one of the following classes is mined give amount of each:

- Limonite, brown hematite, or bog ore.
- Red hematite, specular or fossil ore.
- Magnetic ore.
- Carbonate or black band ore.

B. State total amount of marketable iron ore mined or produced during the year ending December 31, 1902.

none gross tons.
(if none, so state.)

Also stock of iron ore on hand at Mine December 31, 1902.

none gross tons.
(if none so state.)

C. Give total value on cars or carts At The Mine of the iron ore produced during the year ending December 31, 1902, royalty, if any, included, but exclusive of hauling to points of shipment or consumption. The gross commercial value of the ore at the mine, NOT the cost or profit, is asked for.

\$ _____

1. Character of present organization, whether individual, firm, limited partnership, cooperative association, or incorporated company: - - - - -

2. Capital stock, bonds, dividends, and assessments (if an incorporated company):

	BONDS		PREFERRED STOCK		COMMON STOCK	
	NUMBER	TOTAL PAR VALUE	No. OF SHARES	TOTAL P. VALUE	No. OF SHARES	TOTAL P. VALUE
Authorized - - - - -		\$ - - - - -		\$ - - - - -		\$ - - - - -
Issued to the end of the year - - - - -		\$ - - - - -		\$ - - - - -		\$ - - - - -

Dividends and interest, if any, paid during the year:

Common stock, rate - - - - -; amount, \$ - - - - -

Preferred stock, rate - - - - -; amount, \$ - - - - -

Bonds, rate - - - - -; amount, \$ - - - - -

Assessments: Total amount levied, if any, since organization of company - \$ - - - - -

C L A S S E S.	AVERAGE No. EMPLOYED DURING THE YEAR	TOTAL AMOUNT PAID IN WAGES OR SALARIES DURING THE YEAR
Above Ground-		
General officers - - - - -		\$ - - - - -
Superintendents, mngrs, foremen, surveyors, etc - - - - -		
Clerks - - - - -		
Engineers, firemen, machinists, blacksmiths, carpenters, and other mechanics - - - - -		
Miners or quarrymen and stonecutters - - - - -		
Boys under 16 years - - - - -		
All other employees - - - - -		
Below Ground (not for quarries or surface mines)-		
Foremen - - - - -		
Miners - - - - -		
Miners' helpers - - - - -		
Boys, under 16 years - - - - -		
All other employees - - - - -		
T O T A L		\$ - - - - -

(Account for all persons employed at the mine or quarry. Give the total salaries and wages paid, which should include board or rent furnished as part compensation. The wages reported for miners or quarrymen and stonecutters should be their net wages, and should not include the cost of supplies furnished by the company and charged to them, such as explosives, lamp oil, etc., and blacksmithing charges. Care should be taken that those employed "above ground" and those "below ground" be reported separately. Stockholders of corporations are not to be reported unless they are salaried officials. Amounts paid for contract work, not done by employees hired directly, and the number employed in such work, must not be included in this inquiry, but be reported in answer to inquiry, 6. The average number employed during the year is the number that would be required, at continuous employment for the twelve months, to produce the quantity of product reported.)

AVERAGE NUMBER OF WAGE-EARNERS AT SPECIFIED DAILY RATES OF PAY.

OCCUPATIONS	Less than	50.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25
	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	and over
Engineers -																
Writers -																
Machinists, blacksmiths, carpenters, and other mechanics -																
Miners or quarrymen & stonecutters -																
Miners' helpers -																
Timbermen & track layers -																
Boys under 16 years -																
All other employees, not including those on salaries -																

AVERAGE NUMBER OF WAGE-EARNERS EMPLOYED DURING EACH MONTH.

MONTH	MEN 16 YEARS AND OVER	BOYS UNDER 16 YEARS	MONTH	MEN 16 YEARS AND OVER	BOYS UNDER 16 YEARS
January -			July -		
February -			August -		
March -			September -		
April -			October -		
May -			November -		
June -			December -		

(Only wage-earners should be reported, including miners working on tonnage and other pieceworkers. Do not include firm members, general officers, superintendents, managers, foremen, clerks, and other salaried employees.)

4. If mining or quarrying is paid for by ton, car, yard, or other unit, give rate paid and character of unit, - - - - -
 Average number of employees engaged in this class of mining - - - - -
 Total amount paid for such work, \$ - - - - -

(The rate paid for mining or quarrying not done by the day should be reported, and the average number of employees engaged in such work and the total amount paid.)

5. Time in operation:
 Total number of days in operation during the year, - - - - - Number of hours in operation per day, - - - - - Number of shifts of workmen, - - - - - Number of hours to shift, - - - - -

6. Contract Work:
 Amount paid, if any, for tunneling, shaft sinking, boring test holes, etc., if not done by employees hired directly by this establishment, \$ - - - - -
 Average number of men employed on such work, - - - - -
 Number of days employed, - - - - -

7. SUPPLIES AND MATERIAL:

Total cost of supplies and materials of all kinds used during the year, including freight paid on the same, \$ - - - - -

(The actual cost of all supplies and materials used during the year, including freight paid on the same, must be reported. The cost of the following materials should be reported under this inquiry: Lumber and timber used for repairs, mine supports, track ties, cars, and all other purposes; iron and steel for blacksmithing, rails, frogs, sleepers etc.; for tracks and repairs, parts of machinery and tools used for renewals and repairs explosives, water for boilers and other purposes, fuel, illuminating and lubricating oils machinery supplies, etc.)

8. MISCELLANEOUS EXPENSES:

I T E M S.	AMOUNT
Royalties and rent of mine and mining plant - - - - -	\$ - - - - -
Amount paid for rent of offices, taxes, insurance, interest advertising, office supplies, law expenses, injuries and damages, telegraph and telephone service, gas, and all other sundries not reported elsewhere - - - - -	737.74
Total - - - - -	\$ - - - - -

(All items of expense incident to the operation of the mine or quarry, not accounted for under inquiries 8, and 7, must be reported here. Do not include any portion of the freight reported under inquiry 7 as paid on supplies and materials.)

9. PRODUCT:

Total quantity of mineral or stone mined during the year, *none* - - - - -
 Total value at mine or quarry, \$ - - - - -

(Under this inquiry should be reported the quantity and value of all mineral or stone mined during the year, f.o.b. at mine or quarry, as reported to the United States Geological Survey.)

10. POWER:

a. POWER OWNED-

C L A S S.	NUMBER	TOTAL HORSEPOWER
ENGINES:		
Steam - - - - -	<i>none</i>	
Gas and Gasoline - - - - -		
Water wheels - - - - -		
Electric motors - - - - -		
Other power (specify kind) - - - - -		

b. POWER SUPPLIED TO OTHER ESTABLISHMENTS, IF ANY-

Horsepower, - - - - -

c. POWER SUPPLIED BY OTHER ESTABLISHMENTS, IF ANY-

Kind of power, - - - - - horsepower, ✓

name and address of establishment supplying same, ✓ - - - - -

(Under this inquiry should be reported all mechanical power employed, either owned or rented, including the number and horsepower of all engines, motors, water wheels etc., used for hoisting, derricks, surface machinery, ventilating, pumping, and all other purposes.)

UNITED STATES CENSUS OFFICE.
Special schedule No. 6.
Division of Manufactures.
S.N.D. North, Chief Statistician.

M I N E S A N D Q U A R R I E S.

Name of mine or quarry, --- *Ashland Mine* ---
Character of mineral, --- *Iron Ore* ---
Name of company, firm, or individual owner, *The Cleveland Cliffs Iron Co.*
Location of mine or quarry: State, *Michigan* ---; County, *Gogebic* ---
Nearest city or town, *Ironwood* --- Post-office, *Ironwood* ---
General office at --- *Cleveland, O.* ---

UNITED STATES CENSUS OFFICE,

Washington, D. C., January 2, 1903.

By section 7 of the Act of Congress for the establishment of a permanent Census Office, approved March 6, 1902, the Director of the Census is required to prepare a report on mines, mining, quarries, and minerals and the production and value thereof, including gold in divisions of placer and vein, and silver mines, of the United States and the following schedule has been formulated for that purpose.

For the convenience of producers, the United States Geological Survey will distribute and receive these schedules in connection with the returns for its annual report.

The information returned on this schedule should cover the business year of the establishment most nearly conforming to the year ending December 31, 1902.

All answers will be held absolutely confidential. No publication will be made in the census reports disclosing the names or operations of individual establishments in any particular. Special agents and enumerators of the census are liable to a penalty of \$500, if they disclose any information obtained in their official capacity.

William R. Merriam,
Director of the Census

EXTRACT FROM ACT OF CONGRESS, MARCH 3, 1899:

Section 22 * * * " And every president, treasurer, secretary, director, agent, or other officer of every corporation, and every establishment of productive industry, whether conducted as a corporate body, limited liability company, or by private individuals, from which answers to any of the schedules, inquiries, or statistical interrogatories provided for by this act are herein required, who shall, if thereto requested by the director, supervisor, enumerator, or special agent, willfully neglect or refuse to give true and complete answers to any inquiries authorized by this act, or shall willfully give false information, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not exceeding ten thousand dollars, to which may be added imprisonment for a period not exceeding one year."

C E R T I F I C A T E.

This is to certify that the information contained in this schedule is complete and correct to the best of my knowledge and belief.

(Signature of Special Agent)

W. G. Weather *Pres*

(Signature and official designation of the person furnishing the information.)

No. 229

CONFIDENTIAL.

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

DIVISION OF MINING AND MINERAL RESOURCES

To be returned PROMPTLY in accompanying franked envelope to JOHN BIRKINBINE, Odd Fellows' Temple, Broad and Cherry Streets, Philadelphia, Pa.

IRON ORE

Statistics of iron ore mined during the year ending December 31, 1902, at the

Aspland Mine Stays
(Give name or designation of mine.)

Located at Ironwood

County of Gogebic State of Mich

Information supplied by Wm G Mathy Pres
Cleveland O

(Sign here, giving name, official position, and Post-Office address.)

For use only in the preparation of general statistics for the "Mineral Resources of the United States, 1902," to be published by the United States Geological Survey.

A. Underscore character of iron ore produced, and if more than one of the following classes is mined give amount of each:

- Limonite, brown hematite, or bog ore.
- Red hematite, specular or fossil ore.
- Magnetic ore.
- Carbonate or black band ore.

B. State total amount of marketable iron ore mined or produced during the year ending December 31, 1902.

314,720 gross tons.
(if none, so state.)

Also stock of iron ore on hand at Mine December 31, 1902.

68,024 gross tons.
(if none so state.)

C. Give total value on cars or carts At The Mine of the iron ore produced during the year ending December 31, 1902, royalty, if any, included, but exclusive of hauling to points of shipment or consumption. The gross commercial value of the ore at the mine, NOT the cost or profit, is asked for.

	<u>1901</u>	<u>1902</u>	
	280	280	\$ <u>853,902.31</u>
	240	250	
	250	710	

Aspland
Jayson
Globe

D. Is there objection to the figures of output only being credited to your mine in the report when published? No.

1. Character of present organization, whether individual, firm, limited partnership, cooperative association, or incorporated company: - - - - -

2. Capital stock, bonds, dividends, and assessments (if an incorporated company):

	BONDS		PREFERRED STOCK		COMMON STOCK	
	NUMBER	TOTAL PAR VALUE	No. OF SHARES	TOTAL P. VALUE	No. OF SHARES	TOTAL P. VALUE
Authorized - - - - -	-	\$ -	-	\$ -	-	\$ -
Issued to the end of the year - - - - -	-	\$ -	-	\$ -	-	\$ -

Dividends and interest, if any, paid during the year:

Common stock, rate - - - - -; amount, \$ - - - - -
 Preferred stock, rate - - - - -; amount, \$ - - - - -
 Bonds, rate - - - - -; amount, \$ - - - - -

Assessments: Total amount levied, if any, since organization of company - \$ - - - - -

C L A S S E S.	AVERAGE No. EMPLOYED DURING THE YEAR	TOTAL AMOUNT PAID IN WAGES OR SALARIES DURING THE YEAR
Above Ground-		
General officers - - - - -		\$ -
Superintendents, mngrs. foremen, surveyors, etc - - - - -	2	34,08.50
Clerks - - - - -	4	36,00.00
Engineers, firemen, machinists, blacksmiths, carpenters, and other mechanics - - - - -	34	21,899.40
Miners or quarrymen and stonecutters - - - - -		
Boys under 16 years - - - - -		
All other employees - - - - -	59	32,140.93
Below Ground (not for quarries or surface mines)-		
Foremen - - - - -	11	8,535.14
Miners - - - - -	202	147,025.20
Miners' helpers - - - - -	65	42,259.00
Boys, under 16 years - - - - -		
All other employees - - - - -	110	58,425.82
T O T A L	487	\$ 317,793.99

(Account for all persons employed at the mine or quarry. Give the total salaries and wages paid, which should include board or rent furnished as part compensation. The wages reported for miners or quarrymen and stonecutters should be their net wages, and should not include the cost of supplies furnished by the company and charged to them, such as explosives, lamp oil, etc., and blacksmithing charges. Care should be taken that those employed "above ground" and those "below ground" be reported separately. Stockholders of corporations are not to be reported unless they are salaried officials. Amounts paid for contract work, not done by employees hired directly, and the number employed in such work, must not be included in this inquiry, but be reported in answer to inquiry, 6. The average number employed during the year is the number that would be required, at continuous employment for the twelve months, to produce the quantity of product reported.)

AVERAGE NUMBER OF WAGE-EARNERS AT SPECIFIED DAILY RATES OF PAY.

OCCUPATIONS	Less than .50	.50 to .74	.75 to 1.00	1.01 to 1.25	1.50 to 1.75	2.00 to 2.25	2.50 to 2.75	3.00 to 3.25	3.50 to 3.75	4.00 to 4.25	over
Engineers						4					
Firemen						7					
Machinists, blacksmiths, carpenters, and other mechanics				1	4	6	1	2			
Miners or quarrymen & stonecutters						86	82	41	4		
Miners' helpers					37	65					
Timbermen & track layers					37	3					
Boys under 16 years											
All other employees, not including those on salaries					29	96	4	4	4		

AVERAGE NUMBER OF WAGE-EARNERS EMPLOYED DURING EACH MONTH.

MONTH	MEN 16 YEARS AND OVER	BOYS UNDER 16 YEARS	MONTH	MEN 16 YEARS AND OVER	BOYS UNDER 16 YEARS
January 1907	468		July	490	
February	460		August	485	
March	471		September	499	
April	469		October	510	
May	469		November	498	
June	486		December 1907	457	

(Only wage-earners should be reported, including miners working on tonnage and other pieceworkers. Do not include firm members, general officers, superintendents, managers, foremen, clerks, and other salaried employees.)

4. If mining or quarrying is paid for by ton, car, yard, or other unit, give rate paid and character of unit, -----
 Average number of employees engaged in this class of mining -----
 Total amount paid for such work, \$ -----
 (The rate paid for mining or quarrying not done by the day should be reported, and the average number of employees engaged in such work and the total amount paid.)

5. Time in operation:
 Total number of days in operation during the year, 304 - Number of hours in operation per day, 20 - - - Number of shifts of workmen, 2 - - - Number of hours to shift, 10 - - -

6. Contract Work:
 Amount paid, if any, for tunneling, shaft sinking, boring test holes, etc., if not done by employees hired directly by this establishment, \$ -----
 Average number of men employed on such work, -----
 Number of days employed, -----

7. SUPPLIES AND MATERIAL:

Total cost of supplies and materials of all kinds used during the year, including freight paid on the same, \$ 130,144.43

(The actual cost of all supplies and materials used during the year, including freight paid on the same, must be reported. The cost of the following materials should be reported under this inquiry: Lumber and timber used for repairs, mine supports, track ties, cars, and all other purposes; iron and steel for blacksmithing, rails, frogs, sleepers etc., for tracks and repairs, parts of machinery and tools used for renewals and repairs explosives, water for boilers and other purposes, fuel, illuminating and lubricating oils machinery supplies, etc.)

8. MISCELLANEOUS EXPENSES:

I T E M S.	AMOUNT
Royalties and rent of mine and mining plant - - - - -	238,621.92
Amount paid for rent of offices, taxes, insurance, interest advertising, office supplies, law expenses, injuries and damages, telegraph and telephone service, gas, and all other sundries not reported elsewhere - - -	19,664.92
Total - - - - -	258,286.84

(All items of expense incident to the operation of the mine or quarry, not accounted for under inquiries 8, and 7, must be reported here. Do not include any portion of the freight reported under inquiry 7 as paid on supplies and materials.)

9. PRODUCT:

Total quantity of mineral or stone mined during the year, 314,720 Gr. Tons.

Total value at mine or quarry, \$ 853,904.31

(Under this inquiry should be reported the quantity and value of all mineral or stone mined during the year, f.o.b. at mine or quarry, as reported to the United States Geological Survey.)

10. POWER:

a. POWER OWNED-

C L A S S.	NUMBER	TOTAL HORSEPOWER
ENGINES:		
Steam - - - - -	4	800
Gas and Gasoline - - - - -	✓	✓
Water wheels - - - - -	✓	✓
Electric motors - - - - -	✓	✓
Other power (specify kind) - - - - -	✓	✓

b. POWER SUPPLIED TO OTHER ESTABLISHMENTS, IF ANY-

Horsepower, - - - - - ✓

c. POWER SUPPLIED BY OTHER ESTABLISHMENTS, IF ANY-

Kind of power, - - - - - ✓; horsepower, ✓

name and address of establishment supplying same, - - - ✓

(Under this inquiry should be reported all mechanical power employed, either owned or rented, including the number and horsepower of all engines, motors, water wheels etc., used for hoisting, derricks, surface machinery, ventilating, pumping, and all other purposes.)

The Cleveland-Cliffs Iron Co.

Copies of Reports for 1902
furnished U.S. Government

Reconciliation Our Ledger also with L. & P. Kister Co. Nov 30/1902

Cleveland Iron Mining Co etc	6200813	Dr
Iron Cliffs Co	6814047	"
Cleveland-Cliffs Iron Co	10532618	"
		23547478
Less " " " " Pigeon Lake Co.		17095938
Debit Balance 11/30/02		6451540

Add adjustment on account of 136 tons
 shipped in Nov 1902 to Maryland Car Works
 taken into Nov's as #1 Fly instead of #2 Fly
 See Jo Vou #5366-778/03 - @ 100 ton,

	13600
Debit Balance, as adjusted.	6465140

as per L & P Kister Co's books, letter 4/13/03 attached	6465140
---	---------

4/14/03. HGL

April 14th, 1903.

Dunbar Furnace Co.,

Dunbar, Pa.

Gentlemen:-

Your favor of the 18th received, and we are glad to note that our accounts are now in line as of Nov. 30th, 1902.

The balance standing on our books against you on Nov. 30th is \$64,651.40, as per your letter. We have taken into our accounts the correction of \$20.00 additional charge to you on 20 tons foundry iron shipped to Maryland Car Wheel Co. in December.

Yours truly,

THE CLEVELAND-CLIFFS IRON CO.

HGS-H

Auditor.

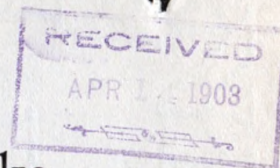
83

DUNBAR FURNACE COMPANY,

MANUFACTURERS OF

High Grade Pig Iron, Connellsville Coke.

SHIPPERS OF BITUMINOUS COAL.



Dunbar, Fayette Co., Pa.

April 13th, 1903.

Mr. R. C. Mann, Auditor,
Cleveland-Cliffs Iron Co.,

Cleveland, Ohio.

Dear Sir :-

In reply to your letters of January 20th and March 9th, 1903 relative to the difference in our respective accounts.

Am pleased to state that have at last been able to go over the statement of the account, as per your rendering, wherein you showed a difference of \$1308.16, and find that this discrepancy was occasioned by our not placing the amount which we charges you with on account of Ores not running the guaranteed analyses, viz; \$ 3884.63, to apply to the old contract which , of course, would have made a corresponding tonnage of Metal apply on the new contract. However, we have brought our accounts into agreement by crediting you with \$1308.16. In addition to this we have also credited the \$136.00 on account of November shipments of Metal to Maryland Car Wheel Co. being transferred from No.1 to No. 2X Foundry. After having made these changes, according to our books, the balance standing to your credit on December 1st, 1902 is \$64651.40. Please advise if this agrees with your account.

Would also call your attention to the fact that in December 1902, we shipped the Maryland Car Wheel Co. 20 Tons Foundry Iron which completed the order and which is charged as No. 1 Foundry and should have been 2X. We have therefore credited your account with \$20.00 to adjust this shipment.

Yours truly,

Dunbar Furnace Co.
Per *H. H. Hook*

March 9th, 1903.

Dunbar Manganese Co.,

Dunbar, Pa.

Gentlemen:-

We have not received reply from you to our letter of Jan. 20th, in regard to adjusting our accounts to Nov. 30th.

Since sending you statement enclosed therein, we have made adjustment on our books transferring 136 tons skillets during November to Maryland Car Wheel Co. from No.1 Foundry to No.2 Foundry in order to correct our records. This makes an additional differences between us of \$130.00, a total excess charge on our books against you over that shown by your books of \$1444.16.

We should be pleased to have you let us hear from you as promptly as possible so that we may get our accounts in line with yours.

Yours truly,

THE CLEVELAND-CLIFFS IRON CO.

HCS-H

Auditor.

See Memo attached Jan'y 20 you
of "Stock Dist. Pkg" from regarding
transfer # 17dy to # 2 thy

136 tons now

20 " See

Jan. 20th, 1902.

Dunbar Furnace Company,

Dunbar, Pa.

Gentlemen:-

We are in receipt of your favor of Jan. 14th, enclosing statements of your account with us to November 30th. We find on checking same that there are a number of differences in our figures which we enumerate as follows:

You have credited against the new contract "Account of ores not averaging guaranteed analysis, as per statement, \$3,884.63". This should appear on the old contract, as this adjustment of analysis was figured on ore charged you under that contract.

In view of the above change in amount applied under your *old* contract the pig iron placed on yard would, of course, be changed to correspond with the adjusted figure. We do not know what method you have taken in dividing the pig iron between the two contracts; therefore, we think it best to give you a memorandum of the account as it stands on our books, which we enclose herein. This, you will note, shows a difference of \$1,308.16 excess charge on our books over that shown by you. We also give you herewith a statement of the grades to the point at which the change from the old to the new contract took place; to July 1st, 1902, according to our books, the pig iron placed on our yard under the old contract was as follows:

Dunbar Furnace Co. #2

No. 1 Foundry,	342 tons
" 2 "	4,667 "
Hill & Basic	<u>37,316</u> "
Special Chill	o 206 "
	43,531 "

During July up to the 7th, we applied on the old contract.

No. 1 Foundry,	37 tons
" 2 "	38 "
Mill,	<u>368</u> "
	513 "

On this date we commenced to credit the ore placed on the yard under the new contract.

We trust that ^{with} the above explanation and data you will be able to get your account in line with ours. Kindly let us hear from you at as early a date as possible, and oblige.

Yours truly,

THE CLEVELAND-GLIPPS IRON CO.

Auditor.

Encls.

THE CLEVELAND-CLIFFS IRON CO'S ACCOUNT WITH L.&R. WISTER & CO., NOV. 30, 1902.

OLD CONTRACT:

200,000 tons ore,	\$ 886,846.48
Less penalty account analysis,	<u>37,622.37</u>
Net value, Ore charged,	\$ 849,223.11

NEW CONTRACT:

61,330-185 tons, as per invoices,	<u>173,462.40</u>
	\$1,022,685.51

Pig iron placed on our yard, viz:

OLD CONTRACT:

879 tons #1 Foundry	@ \$22.80 =	\$ 20,041.20
4,755 " #2 "	" 20.90 =	99,379.50
38,204 " Mill & Basic	" 19.00 =	725,883.41 *
206 " Special Chill	" 19.00 =	3,914.00
<u>44,044 "</u>		<u>\$849,223.11</u>

NEW CONTRACT:

911 tons #1 Foundry	@ \$14.00 =	\$ 12,754.00
2,521 " #2 " & S.C.	" 13.00 =	32,773.00
<u>5,285 " Mill & Basic</u>	" 12.00 =	<u>63,420.00</u>
8,717 "		\$108,947.00
52,761 " Grand Total,		<u>958,170.11</u>

Ore unsettled for Nov 30th, 1902,	64,515.40
-----------------------------------	-----------

Our account, as above,	\$ 64,515.40
------------------------	--------------

Dunbar Furnace Co. Acct.	<u>63,207.24</u>
--------------------------	------------------

Difference, excess charge on our books,	\$ 1,308.16
---	-------------

* \$12.41 added to balance account.

H.C.S.
1/20/03

126 tons #1 Fe to #2 Fe (Maryland Co. Works) @ 1.00 chg to Dunbar 136.00
1444.16

Statement of Cleveland-Cliffs Iron Co's Account November 30th, 1902.

Old Contract

Balance Nov. 30th, 1901, as per statement rendered 103494.35

Ores, as per Invoices :-

Cliff Shaft Ore	-----14571 ⁸²⁰	14571 Tons ✓	69213.96
Michigamme Ore	-----9915 ²⁰⁰	9915 " ✓	47096.65
Scotch Ore	-----9419 ¹²⁴⁰	9420 " ✓	42953.97
Comrade Ore	-----56 ⁸⁴²⁴⁰	5684 " ✓	24624.49
Imperial Ore	-----6244 ¹⁸⁸⁰	6245 " ✓	24204.90
		↓ 5935	
			208093.97 ✓

=====
311588.32
=====

Metal Yarded :-

		Tons	
No. 1 Foundry	-----	728 @ \$22.80	16598.40
No. 2X Foundry	-----	2158 @ \$20.90	45102.20
Mill & Basic	-----	12263 @ \$19.00	233000.94
		15149	294701.54

Amount account Ores not averaging guaranteed analyses, as per statement ----- 16886.78
 ===== \$ 311588.32
 =====

"

N

During 1901 = 29,123 tons
" 1902 alone 15,149

44,272

Statement of Cleveland-Cliffs Iron Co's Account, November 30th, 1902.

New Contract

Ores, as per Invoices

Cliff Shaft Ore	-----	20173 ⁴⁴⁰	20173 Tons	78385.75 ✓
Michigamme Ore	-----	337 ⁴⁷⁰	337 "	1601.64 ✓
Scotch Ore	-----	9265 ³⁰⁰	9265 "	38232.86 ✓
Comrade Ore	-----	16378 ⁸⁸⁰	16378. "	48163.21 ✓
Imperial Ore	-----	683 ⁸⁰	683 "	2647.44 ✓
Florence Ore	-----	5048 ¹⁹⁸⁰	5049 "	13329.04 ✓
Salisbury Ore	-----	6315 ⁸⁷⁵	6316 "	18189.59 ✓
Castleford Ore	-----	2963 ⁹³⁰	2963 "	7965.65 ✓
Humbolt Baron Ore	-----	165 ⁴⁰⁰	165 "	521.96 ✓
				<u>209037.14</u> ✓

Adjustment of Metal Yarded @ \$22.80, 20.90 & 19.00

to \$14.00, \$13.00 and \$12.00 per Ton -----

35272.13
=====

244309.27

Metal Yarded .

No. 1 Fdy.	-----	529.5 Tons @ \$22.80-	12072.60
No. 2X Fdy.	---	1380 Tons @ \$20.90	28842.00
Mill & Basic	--	2816 " @ \$19.00	53500.06
			<u>94414.66</u>

Account of Ores not averaging guaranteed analyses, as per statement -----

3884.63
===== 98299.29

No. 1 Fdy.	-----	418.5 Tons @ \$14.00	5859.00
No. 2 Fdy.	-----	1229 " @ \$13.00	15977.00
Mill & Basic	-----	2116 " @ \$12.00	25392.00
			<u>47228.00</u>

Adjustment of Ores shipped during 1902, as per statement -----

35574.74 ✓
===== 82802.74

181102.03

Ore unsettled for -----

\$ 63207.24
=====

Summary

1 Fdy 948 tons
2 " 2609
Mill & Basic 4937
8489

DUNBAR FURNACE COMPANY,

MANUFACTURERS OF

High Grade Pig Iron, Connellsville Coke.

SHIPPERS OF BITUMINOUS COAL.

DUNBAR, FAYETTE CO., PA., January 14th, 1903.

Mr. R. C. Mann, Auditor,

Cleveland-Cliffs Iron Co.,

Cleveland, Ohio.

Dear Sir :-

Your favor of the 8th inst came duly to hand and, as requested, we herewith hand you statement of Account as of November 30th, 1902.

In sending this statement we show our completion of the Old Contract on one sheet and the New one on Sheet 2. Will thank you to advise as soon as possible whether our accounts are in agreement, and oblige.

Yours truly,

Dunbar Furnace Co.

Per *H. Cook*



Jan. 8th, 1902.

Dunbar Furnace Company,

Dunbar, Pa.

Gentlemen:-

Will you kindly furnish us with statement showing our account with you as of November 30th, 1902. That is, the ores charged to you as per our invoices, and metal yarded to that date, similar to statement furnished us as per your letter of Dec. 11th, 1901.

Yours truly,

THE CLEVELAND-CLIFFS IRON COMPANY,

HCS-R

Auditor.

Statement of Transfers Between Grades (1902)

To	Wells	Northford	Lake Bess	Lake Sahabny	Compton	Taylor	Holland	Globe	Bedford	Comrade	(Red) Total	
Leitch	43279										✓ 43279	
at shaft		SV									✓ 34	
Bonsford	22109										✓ 22109	
Sahabny			84211								✓ 84211	
Alford			62598								✓ 62598	
Lake				61482	1110						✓ 61482	
Ashland				197					1860		✓ 2375	
Taylor				7887		3176					✓ 16189	
Bliss							7960	342			✓ 87144	
Ames				86709					465		✓ 39532	
Sahabny				38930					607		✓ 607	
Winters									884		✓ 884	
Bedford										10297	✓ 10297	
(Black)	65318			64078							✓ 64078	
		32146	6809	8084	251199	1110	2176	7960	342	3811	10297	✓ 496103

337
65

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THE CLEVELAND-CLIFFS IRON CO.

Summary of ore statements for 1902, showing amount of our grades produced, shipped and in stock. Also foreign grades shipped as our grades and as straight foreign grades.

GRADES.	In stock Dec 1, 01.	Product.	Foreign ores & transfers.	Total.	Shipments.	In stock Nov 30, 02.
Scotch	79232	76024	43279 ✓ 34 ✓	111977	25532	86445
Cliffs Shaft,	124445	279002	65388 ✓	468801	447567	21234
Lake Bes,	2274	165480	146810 ✓ 63342 ✓	314564	314564	
Lake	119545	309184	8084 ✓	373471	222248	151223
Lake Bes Sil,		3167		3167	3167	
Salisbury Bes,	2658	477831 89612	84212 ✓ 884 ✓	8058	539977	8058
Salisbury	21904	178626 89074	251199 ✓	361293	351397	9896
Foster	1200	810		2010	2010	
Tilden Sil,		4750		4750	4750	
Michigamme,	11078			11330	10684	646
" " In C & N W Dock,	252					
Volunteer,	18723		10297 ✓	8426	69	8357
Comrade,	23329		10297 ✓ 2375 ✓	33626	32667	959
Ashland	8278	255669	7960 ✓	270465	260676	9789
" " In W C dock,	933		16189 ✓			
Taylor	26580	53022	2178 ✓	65591	28883	36708
Globe		1010	342 ✓	1352	1352	
Imperial,	7509			7509		7509
Abbotsford,		21624 ✓	21624 ✓	21624	21624	
AKFORD		22598	62598			
Bedford		8939 ✓	291253811 ✓ (64078)	29125	29125	
Chatford		793	793	793	793	
Beresford		22179	42189 20	20	20	
Castleford		11850	11884 31 ✓	11884	11884	
Buffalo		89386	87174	2212	2212	
Camelo		39537	39537			
Total,	447940	1662108 1326804	392504	2112048	1771224	340824

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79B

Statement Buffalo & Cameo Ores for year ending Nov. 30, 1902.

	<u>Tons</u>	<u>Tons</u>
Amount due the C. C. I. Co.		
Buffalo	87959	
Cameo	40887	
Total	<u>128846</u>	
Received from Regent Iron Co.		
Buffalo		89386 ✓
Cameo		<u>39532</u> ✓
Total		<u><u>128918</u></u>
Amount still due	0	

Shipped:

Carp Furnace-Buffalo	1720	
Antrim Iron Co-Buffalo	492	
Total shipped as Buffalo		2212

Buffalo shipped as Salisbury	86709 ✓	
" " Bedford	465 808	
<i>Cameo shipped as Salisbury</i>	38930 ✓	87174
" " Bedford	602	
Total Cameo as other Ores		<u>39532</u>
Total		<u><u>128918</u></u>

Statement of Imperial Ore for year ending Nov. 30, 1902.

	<u>Four</u>
In stock at Mine Dec. 1st. 1901.	<u>7509</u>
<hr/>	
In stock at Mine Nov. 30, 1902.	<u>7509</u>

Statement of Volunteer Ore for year ending Nov. 30, 1902.

	<u>Four</u>	<u>Four</u>
In stock at Mine Dec. 1st 1901	18723	<u>18723</u>
<hr/>		
Shipped:		
Pioneer Furnace		69
Shipped as Comrade Ore		10297
		10366
In stock at Mine Nov. 30, 1902.		8357
<hr/>		
Total		<u>18723</u>

Statement of Comrade Ore for year ending Nov. 30, 1902.

	<u>Four</u>	<u>Four</u>
In stock at Mine Dec. 1st. 1901.		23329
Volunteer shipped as Comrade		10297
Total		<u>33626</u>

Shipped:

Sandusky	10246	
Cleveland	15597	
Ashtabula	6824	
Total Shipped		<u>32667</u>
In stock at Mine Nov. 30, 1902.		959
<hr/>		
Total		<u>33626</u>

Statement of Ashland Ore for year ending Nov. 30, 1902.

In stock at Mine Dec. 1st. 1901	<u>3278</u>	<i>Furis</i> ✓ <i>Furis</i>
In W. C. Dock, Ashland Dec. 1st. 1901	933	✓
Produced during year	<u>255669</u>	✓
Total Ashland		264880
Taylor Ore transferrédto Ashland		7960 ✓
See Weekly Mine Report		
Total		<u>272840</u>

Shipped: - Ashland -

Zenath Furnice	4251	
Toledo	14131	
Lorraine	10301	
Cleveland	29492	
Fairport	11126	
Ashtabula	83267	
Erie	6390	
Buffalo	<u>80442</u>	
Total Ashland		239400

Ashland Special

Cleveland	4770	
Ashtabula	<u>16506</u>	
Total Ashland Special		21276

Transferred Ashland Ores to other Ores
(Weekly Mine Report) Taylor

Aug. 17	Mega	Lake	2178	
			<u>197</u>	

 Total transferred to
 other Ores

		2375
In stock at Mine Nov. 30, 1902.		9789
Total		<u>272840</u>

Statement of Taylor Ore for year ending Nov. 30, 1902.

	<u>Tons</u>	<u>Tons</u>
In stock at Mine Dec. 1st. 1901	26580 ✓	
Produced during year	53022 ✓	
Total Taylor		79602
Ashland Ore transferred to Taylor (See weekly Mine report)		2178 ✓
Total		<u>81780</u>

Shipped:

Spring Valley Iron Co. 1923 ✓		
Zenith Furnace Co	6576 ✓	
Fairport	20384 ✓	
Total Shipped		<u>28883</u>

Taylor
Total transferred to other ores

	Ashland		7960 ✓	
	Globe		342 ✓	
	(See weekly Mine Report)			
May 16	Saturn	Lake	4690	
Aug. 17	Vega	Do	3197	
	Total transferred to other Ores		7887	16189
	In stock at Mine Nov. 30, 1902.			36708
	Total			<u>81780</u>

Statement of Globe Ore for year ending Nov. 30, 1902.

	<u>Tons</u>	<u>Tons</u>
Produced during year	1010	1010
Taylor Ore trans. to Globe (See weekly Mine report)		342
Total		<u>1352</u>

Shipped:

Spring Valley Iron Co. 413		
Ashland Iron & Steel	939	
Total		<u>1352</u>

THE CLEVELAND-CLIFFS IRON CO.

Report of ores received and shipped from the Lake Superior and Regent
Mines for the season ending December 5th.,

1 9 0 2.

	Abbots ford	Bed ford	Chat ford	Al ford	Beres ford	Castle ford	Buffalo & Cameo
							87959 B. 40887 C.
C.C.I.Co's Proportion,	22369	89395		62609	22125	54056	128846
Shipped by vessel & Rail,	21624	25314	793		20	11850 ✓	2212 B.
Vessel & Rail, Mixed grades,		64078		62598	22109		87174 B. 39532 C.
Total,	21624	89392	793	62598	22129	11850	128918
Amount still due,	745	3		11		42206	

SUMMARY OF SHIPMENTS IN TONS AND POUNDS.

GRADES.	TONS.	POUNDS.
Abbotsford	21623 ✓	1580
Bedford	89391 ✓	1260
Chatford	792 ✓	1790
Alford	62598 ✓	930
Beresford	22128 ✓	1630
Castleford	11850 ✓	580
Buffalo	89386 ✓	200
Cameo	39532 ✓	770
Total,	337303	2020

Statement of Abbotsford for year ending Nov. 30, 1902.

	<u>Four</u>	<u>Four</u>
Amount due C. C. Iron Co	22369	
Rec. from Lake Superior Iron Co.		<u>21624</u>
Amount still due	745	

Shipped:

Lorain	7399	
Cleveland	14225	
Total		<u>21624</u>

Statement of Bedford Ore for year ending Nov. 30, 1902.

	<u>Four</u>	<u>Four</u>
Amount due C. C. Iron Co	89395	
Rec. from Lake Superior Iron Co.		89392
Amount still due	<u>3</u>	

Other Ores transferred to Bedford

Aug. 26	Cadillac	Buffalo	465	
Nov. 17	Pratt	Salisbury	304	
		Lake	168	
Sept. 7	Sitka	Salisbury	291	
Oct. 17	Pratt	Cameo	602	
		Salisbury	289	
		Lake	1692	
		Total Other Ores		3811
		Total		<u>93203</u>

Shipped:

Pioneer Furnace	213	
Carp Furnace	1484	
Spring Lake Iron Co	7508	
Cleveland	2536	
Ashtabula	17384	
Total Shipped	(Forward)	29125

Bedford@w
Statement of ~~Abbotsford~~ (Continued).

Brought forward	<u><i>Fours</i></u> 29128
Bedford Ore trans. to Salisbury	64078
Total	<u>93203</u>

Statement of Chatford for the year ending Nov. 30, 1902

Amount due C. C. Iron Co.	
Rec. from Lake Superior Iron Co	<u><i>Fours</i></u> 793
Shipped	
Antrim Iron Co.	<u>793</u>

Statement of Alford Ore for year ending Nov, 30 1902.

Amount due C. C Iron Co	<u><i>Fours</i></u> 62609	<u><i>Fours</i></u>
Received from Lake Superior Iron Co		<u>62598</u>
Amount still due	11	
Shipped:		
Alford trans. to Lake ^{<i>Bessemer</i>} Superior		<u>62598</u>

Statement for Beresford for year ending Nov. 30, 1902.

Amount due C. C. Iron Co	<u><i>Fours</i></u> 22125	<u><i>Fours</i></u>
Rec. from Lake Superior Iron Works		<u>22129</u>
Amount still due	0	
Shipped:		
Mephan & Klein E. St. Louis		20
Beresford as crushed Cliffs Shaft		<u>22109</u> ✓
Total		<u>22129</u>

Statement of Castleford for year ending Nov. 30, 1902.

	<u>Tons</u>	<u>Tons</u>
Amount due the C. C. I. Co	54056	
Received from Lake Superior Iron Co.		11850
Amount still due	42206	
Other Ores trans. to Castleford		

July 24

Falcon Crushed Cliffs Shaft		<u>34</u>
-----------------------------	--	-----------

Total		<u>11884</u>
-------	--	--------------

Shipped:

Antrim Iron Co	95
----------------	----

Pen Iron Mfg. Co.	3572
-------------------	------

Cleveland	7193
-----------	------

Ashtabula	1024
-----------	------

Total Shipped		<u>11884</u>
---------------	--	--------------

ANNUAL REPORT

OF

(Name of Corporation) The Cleveland-Cliffs Iron Co.
 (Postoffice Address) Cleveland Ohio
 (Street and No.) 243 Bank

FRED M. WARNER, Secretary of State,

Sir:—In accordance with Section twelve of Act No 232, Public Acts of 1885, as amended, the undersigned, Directors, of the The Cleveland-Cliffs Iron Co. Company, respectfully submit the following report of its condition on the 30th day of November 1902.

1. The business in which the corporation has been engaged, during the year ending December 31, 1902, has been of the following character: Manufacturing Charcoal Pig Iron

2. The operations of said company have been conducted at the following place or places:

(Town or City) Gladstone Delta Co + Marquette
 (County) Marquette

3. The corporation during said period has been engaged in the following lines of business not specified in its articles of association:

None

4. The amount of authorized capital stock is	\$	5,000,000 =
5. The amount of capital actually paid in is		4,910,000 =
6. The present actual value of the real estate held by said corporation is		1,670,024.20
7. The liability of said corporation on real estate mortgages is (also included in #10)		858,511.95
8. The present actual value of personal estate, including credits, held by said corporation is		9,083,132.44
9. The total liability of said corporation upon chattel mortgages is		✓
10. The total indebtedness of said corporation, secured and unsecured, is		5,449,866.97
11. The total amount of credits owing to said corporation is (also included in #8)		1,729,421.08
12. The present actual value of the credits owing to said corporation is		same
13. The amount for which the corporation is indorser for members of the corporation is		✓
14. The amount for which the corporation is indorser for other corporations is		✓
15. The amount for which the corporation is indorser for persons not members of the corporation is		✓
16. The annexed list is a true statement of the names of the stockholders, and the number of shares held by each at the date of this report; also the names and postoffice addresses of each officer and director of such corporation.		

Signed

Am. G. Mathur
E. R. Perkins
James H. Hagt
J. H. McBride
Saul Mathur

Majority of Directors.

STOCKHOLDERS' NAMES.

POSTOFFICE ADDRESS.

Shares of
Stock Held.

STOCKHOLDERS' NAMES.

POSTOFFICE ADDRESS.

Shares of
Stock Held.

GIVE HERE DATE OF ORIGINAL INCORPORATION: May 14th 1891

GIVE HERE DATE OF RE-INCORPORATION (IF ANY):

NAMES OF OFFICERS AND DIRECTORS.

POSTOFFICE ADDRESSES.

Wm G Mather President,
J. H. Wade Vice Pres.
J. H. Sheadle Secretary.
Wm G Mather Treasurer.
Wm G Mather
J. H. Wade
Saml. Mather
J. H. Mc Bride
Saml. E. Williamson
E. R. Perkins
T. H. Newberry
J. H. Hoyt
Peter White

Cleveland Ohio
New York N.Y.
Cleveland Ohio
Cleveland Ohio
Cleveland Ohio
New York N.Y.
Cleveland Ohio
Cleveland Ohio
Cleveland Ohio
Hilltop Mich
St. Louis Mich
Cleveland Ohio
Marquette Mich

Directors.

State of _____ }
County of _____ } ss.

I, J. H. Sheadle, do solemnly swear that I am the Secretary of the above named corporation, and that the matters set forth in the foregoing report are true and correct to the best of my knowledge and belief: And further, that the within signatures are those of a majority of the directors of said corporation.

Signed

J. H. Sheadle

Subscribed and sworn to before me, this 25th day of March 1903

Notary Public in and for _____ County, State of Michigan.

The Cleveland-Cliffs Iron Co.

Office Copy

ANNUAL REPORT
FOR
1902.

Filed _____ 1903.

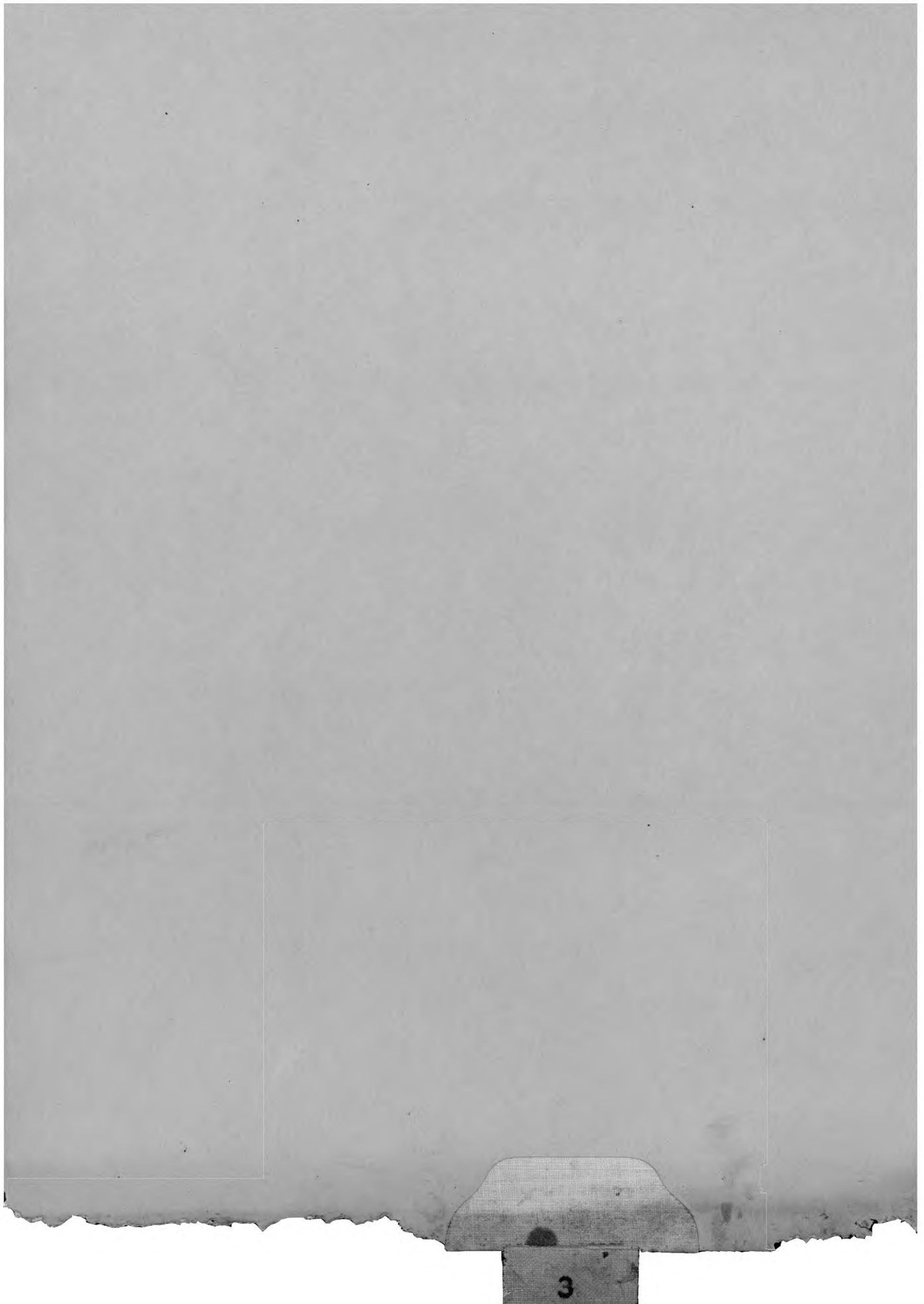
Deputy Secretary of State.

ORIGINAL FILED IN THE OFFICE OF THE SECRETARY OF STATE
IN THE DEPARTMENT OF REVENUE AND FINANCE
IN THE OFFICE OF THE CLERK OF THE COUNTY OF CUYAHOGA

SEC. 12, ACT No. 232, LAWS 1885.
(As amended.)

SEC. 12. Every such corporation carrying on its manufacturing or mercantile business within or without this State shall annually, in the month of January or February, make duplicate reports for the fiscal year of such corporation, which shall state the amount of the capital stock of the corporation, and the amount actually paid in, the amount invested in real and in personal estate, the amount of debts of the corporation, and the amount of credits, the name of each stockholder, and the number of shares held by him at the date of such reports, the name and postoffice address of each officer and director of such corporation, and such other information as the Secretary of State may require; which duplicate reports shall be made on suitable blanks furnished by the Secretary of State on application, signed by a majority of the directors, verified by the oath of the secretary of the corporation, and deposited in the office of the Secretary of State; such duplicate reports shall be so deposited within the said month of January or February. The Secretary of State shall carefully examine such reports, and, if upon such examination they shall be found to comply with all the requirements of this section, he shall file one of them in his office, and shall forward the other by mail to the county clerk of the county in which the office in this State for the transaction of the business of the corporation so reported is situated, and it shall be the duty of such county clerk, upon receipt of such report, to immediately cause the same to be filed in his office. If any of the directors of any such corporation shall wilfully neglect or refuse to make and deposit the report required by this section, within the time herein specified, they shall each be liable for all the debts of such corporation, contracted during the period of such neglect or refusal, and subject to a penalty of twenty-five dollars, and in addition thereto the sum of five dollars for each and every secular day after the first day of March in each year during the pendency of such neglect or refusal, which penalty shall be for the use and benefit of the general fund of this State. The Secretary of State shall, during the last week in June in each year, report to the Attorney General, in writing, the name and postoffice address of each and every corporation which has failed to comply with the provisions of this section, and upon the receipt of such report it shall be the duty of the Attorney General to institute proceedings in any court of competent jurisdiction to collect said penalties, and all necessary expenses incurred by the Attorney General in such proceedings shall be audited by the Board of State Auditors, and paid from the general fund of the State. And in case a corporation organized and existing under the provisions of this act shall be dissolved by process of law, or whose term of existence shall terminate by limitation, whose property and franchises shall be sold at mortgage sale or at a private sale, or for any reason the attitude of the corporation toward the State shall be changed from that set forth in the articles of association, except as is provided in sections

two and seventeen, it shall be the duty of the last board of directors of such corporation, within thirty days thereafter, to give written notice of such change to the Secretary of State and the county clerk of the county where the office of such corporation is located, signed by a majority of such directors, which said notice shall be recorded as amendments are required to be recorded; and in case of neglect to give such notice they shall be subject to the same penalties provided in case of neglect to make annual reports, which said penalties shall be collected and applied in the same manner as in case of neglect in making annual reports. It shall be the duty of the Secretary of State during the month of December, A. D. eighteen hundred ninety-nine, to cause to be mailed to every corporation subject to the provisions of act number two hundred thirty-two of the public acts of eighteen hundred eighty-five, as amended, a printed copy of this act. The neglect or refusal to file the reports required by this section to be filed shall, as to managing officers and directors, and officers and directors actually engaged in conducting the business of the corporation of which they are such officers or directors, be deemed to be wilful when the report required is not filed within the time herein limited. Whenever a corporation has neglected or refused to make and file its report within twenty days after the time limited in this section, the Secretary of State shall cause notice of that fact to be given by mail to such corporation, and to each officer and director thereof, directed to their respective postoffice addresses, and the notice to the corporation shall be accompanied by blanks upon which to make such report. The certificate of the Secretary of State, or Deputy Secretary, of the mailing of such notices and blanks shall be prima facie evidence in all courts and places of that fact, and that said notices and blanks were duly received by said corporation, officers and directors thereof severally. And in case of all officers and directors other than those managing or actually engaged in the conduct of the affairs and business of the corporation, the neglect or refusal to file the reports required by this section shall be deemed to be wilful, after the Secretary of State shall have given the notice above provided for, if such report be not made within thirty days thereafter: *Provided*, Flour milling corporations shall make and deposit annual reports in the month of July or August, and for refusal or neglect to make and deposit the reports required by this section before the first day of September in each year, such corporation or any of its officers or directors shall be liable for all the debts of such corporation contracted during the period of such neglect or refusal, and shall be immediately subject to all the penalties provided in this section. The first report under this law shall be made in the year nineteen hundred. All actions and suits, based on the neglect or refusal of the officers or directors of such corporations to make and deposit the reports required by this section, shall be commenced within two years next after such neglect or refusal has occurred, and not afterwards.



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.. CLEVELAND IRON MINING COMPANY. ..
.. ISHPEMING, MICHIGAN. ..
..
.. AGENT'S ANNUAL REPORT ..
.. FOR ..
.. Year ending November 30, 1902. ..
..
.....
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CLEVELAND IRON MINING COMPANY.

Ishpeming, Michigan Jany 20, 1903.

Mr. Wm. G. Mather, President,

Cleveland, Ohio.

Dear Sir:

I beg to submit herewith my annual report of the operations of the mines of the Cleveland Iron Mining Company.

The detailed statements, inventory and book of maps, forming a part of this report have been sent you.

HARD ORE.

MORO MINE.

Each stope has been numbered on the map for convenience of description, and the extensions for the year tinted.

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

FIRST LEVEL.

The ore in the cross cut North of the shaft was mined out about two months after the date of the last annual report. The foot and hanging came together only 20 feet beyond the face of the stope, as it existed on November 30th 1901.

SECOND LEVEL.

This level is exhausted.

THIRD LEVEL.

No.8 contract which had just started to stope East on the date of the last annual report extended the stope 150 feet when the ore was cut out by the foot and hanging coming together. The ore averaged about 25 feet wide and 20 feet high, and was of fair quality. No.8 was then moved 50 feet North, and the small vein of ore at that point stoped out 50 feet East. The deposit was only 15 feet wide and 15 feet high, when it cut out. To the West the ore was very small. No.12 has continued the exploring drift 345 feet North making the total length of the drift 870 feet.

Moro.

MORO MINE.

No ore has been encountered, the material changing from jasper to slate and back again. The drift was carried 60 feet North and 100 feet West of the diamond drill holes in the meadow. The elevation of this level is 35 feet below the ore cut by the drill, but it was figured that the pitch of the ore would carry it to this depth. As no ore was found a cross cut has been started East to get directly under the ore, from which a raise can be put up to explore ^{the} deposit shown by the drills. In a general way this drift has been very disappointing, as it was confidently expected that ore would be found under the meadow. The ground to the North and West will now be explored by diamond drilling. The breast of the drift is only 440 feet South of the old workings in No.3.

I still have hopes that ore may be found North of the original Moro deposit. There are strong evidences of an anticline with its corresponding syncline, and the ore should occur in the sinclinal fold.

FIFTH LEVEL.

A raise has been put up from this level, and No.4 contract is now working 150 feet South of the shaft, taking the bottom below the third level. The ore is what is locally known as "Green Ore" and runs about 56% in iron. It is possible to mine this because all the other ore now coming from this shaft is of the old Cleveland grade and runs from 63% to 65% in iron. There is probably 2,000 tons of ore left at this point.

SIXTH LEVEL.

Fifty feet South of the shaft a raise has been put up to the 5th level and is taking the 5th level bottom at this point. No.8 contract has been working here for two months, and there is not more than 2500 tons left. The ore will average 63% in iron. This is the only mining that has been done on this level during the year.

The cross cut 50 feet West of the shaft, which had just been started at the date of the last annual report has been extended 515 feet North without striking

Moro.

MORO MINE.

any ore. The drift for the entire distance was in soap rock and slate. The ore found on the third level should have been crossed at 360 feet. It is impossible to say whether the drift is too far East or West, because there is no uniformity to the dip or pitch of the ore bodies. North of the shaft. A raise is now being put up at an angle of 50° to the East to reach the ore shown on the third level. A diamond drill will soon be put opposite this raise to test the ground to the West.

It is not reasonable to suppose that the ore body on the third level does not extend to this depth, as the work at that point indicated it was the apex of a good defined deposit. The ore in the bottom of the stope being much larger than at the top. The formation however is so faulted that it is impossible to draw definite conclusions from the formation at any one point.

7th- 8th- 9th- and 10th Levels. These levels were exhausted with the exception of the shaft pillars, which cannot be taken while the mine is in operation.

11th LEVEL.

No.2 stope referred to last year was extended 60 feet South West, when the ore was cut out by the pitch of the hanging. The ore was of high grade.

No.11 has been extended 170 feet North West, and it is now within 30 feet of the Lake Superior line. The ore has averaged 25 feet in width, with ore in the back and will run about 63% in iron.

TWELFTH LEVEL.

No.7 stope has been extended West 100 feet, 25 feet wide and 20 feet high. No.6 has been driven 120 feet South West, averaging 20 feet wide, and 20 feet high.

At this depth the North and South deposits appear to have come together. The ore is 100 feet wide, and a very large pillar is being left between the two stopes. The breast of each of the stopes is about 230 feet from the Lake Superior boundary.

Moro.

MORO MINE.

THIRTEENTH LEVEL.

During the year the shaft was sunk 78 feet on the underlay, or to a vertical depth of 50 feet. A drift has been driven 220 feet to the West, the first 80 feet soap rock and the balance in siderite. From the dip and pitch of the formation above, the ore should be struck in about 35 feet more drifting. This will only leave 300 feet to the boundary.

The deposit seems to be flattening with depth, and if this is proved after the ore on this level is reached, it will probably not pay to sink the shaft again. It can be readily seen that unless some further deposits are located to the North that the life of this mine is limited.

The ore in the bottom of the mine is of high grade, the average in iron being higher than the Cliffs Shaft Mine.

SURFACE.

In order to increase the stock pile ground the Wallenstein house has been moved. It was found that it would be very much cheaper to do this than to attempt to extend the stock pile to the West, on account of the large amount of filling required at that point.

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

Location	Floors	Pillars	Partly developed	Totals
1st level	2000			2000
3rd level	7850			7850
5th level		4500		4500
9th level	2000	3000		5000
10th level	9600			9600
11th level	40000		1000	41000
12th level	14500	6000	4000	24500
Totals	75950	13500	5000	94450

Moro.

MORO MINE.

Total ore in sight including shaft pillars, 94,450 tons.

It will be noticed that there is in round numbers 20,000 tons less than we estimated last year. It is probable that the developments on the 13th level will show up enough ore to bring it to the total of 1901.

AVERAGE ANALYSIS OF MINE SAMPLES FOR 1902.

	Iron	Phos
Scotch Ore	61.50	.152
Coarse Scotch Ore	62.30	.137

AVERAGE ANALYSIS OF CARGO SAMPLES FOR 1902.

	Iron
Scotch Ore	60.70

The cost of Mining 76024 tons of ore has been as follows:

	1902	1901	Increase	Decrease
Product	76024	76085		61
General Expense	.051	.046	.005	
Maintenance	.064	.078		.014
Mining Expense	1.111	1.098	.013	
Cost of Production	1.226	1.222	.004	
<u>DEPRECIATION</u>				
Inventory		.030		.030
Improvement	.019	.003	.016	
New Construction		.005		.005
Total Depreciation	.019	.038		.019
Taxes	.050	.050		
Central Office	.024	.021	.003	
Cost on stock pile	1.319	1.331		.012
Loading & Shipping	.047		.047	
Total cost	1.366	1.331	.035	
Improvement .019				
Stockpile dock extension, and installing aux.pump.		5		

MORO MINE.

ORE SHIPMENTS FOR 1902.

	POCKET	STOCKPILE	TOTAL	LAST YEAR
Run of Mine	21385	1529	22914	0
Coarse Ore	15986	9928	25914	0
Fine Ore	5735	14248	19983	0
Total	43106	25705	68811	0

DIVIDED IN GRADES AS FOLLOWS:

	SCOTCH	COARSE CLIFFS SHAFT	CRUSHED CLIFFS SHAFT	TOTAL
Run of Mine	22914			22914
Coarse Ore		25914		25914
Fine Ore	2618		17365	19983
Total	25532	25914	17365	68811

ORE STATEMENT NOVEMBER 30th, 1902.

	SCOTCH	LAST YEAR
On hand December 1st, 1901	79232	3147
Output for year	76024	76085
Total	155256	79232
Shipments	68811	0
Balance in stock November 30, 1902,	86445	79232

STATEMENT OF COMPARATIVE WAGES.

	1902	1901	Inc or Decrease 1902
<u>SURFACE</u>			
Total number of days	10530	9302 $\frac{3}{4}$	
Average rate	1.75	1.77	Dec .02
Amount	18462.94	16475.50	
<u>UNDERGROUND</u>			
Total number of days	23679	24014 $\frac{1}{2}$	
Average rate	2.15	2.10	Inc .05
Moro.			

MORO MINE.

STATEMENT OF COMPARATIVE WAGES, Continued,

Amount	1902	1901	Inc or Decrease 1902
	50970.73	50532.74	
Total days	34209	33317 $\frac{1}{4}$	
Average rate	2.03	2.01	Inc .02
Total amount	69433.67	67008.24	

STATEMENT OF EXPLOSIVES USED FOR BREAKING ORE.

KIND	QUANTITY	PRICE	AMOUNT	AMOUNT 1901	
50% Powder	48950	12	5873.00	6319.56	
Fuse	65700	4.25	279.25	321.05	
Caps	17250	6.00	103.50	107.80	
Exploders				4.46	
Wire				3.60	
Total			6255.75	6756.47	
			1902	1901	
Product			76024	76085	
Lbs of Powder per ton of ore			.064	* .069	
Cost per ton for explosives			.082	.089	
Decrease			.007		

AVERAGE WAGES AND PRODUCT.

Product 76024 tons, 1902.	SURFACE		UNDERGROUND		TOTAL		
	1902	1901	1902	1901	1902	1901	
Product 76085 tons, 1901.							
Average No. men working	37	30	82	80	119	101	
Average wages per day	1.75	1.77	2.15	2.10	2.03	2.01	
Averg. wages per Mo 25 days	43.75	44.25	53.75	52.50	50.75	50.25	
Averg. prod. per man per day	7.06	8.18	3.14	3.17	2.17	2.28	
Labor cost per ton	.243	.217	.670	.664	.913	.881	
Diff. in labor cost per ton	+.026	-.196	+.006	-.010	+.032	-.207	
Averg. Prod. Breaking & Trammg.			5.43	4.89			
Average wages for contractors			2.37	2.34			
Average wages for miners			2.37	2.34			
Average wages for trammers		7	1.85	1.85			

NO.3 MINE.

This mine was closed in June 1892, and the workings are now filled with water. When operations were suspended, 150,000 tons of ore were reported in sight, and it was producing at the rate of 95,000 tons per year.

HARD ORE LOCATION.

No work has been done on the houses in this location, except that required for ordinary maintenance.

Reference is made to the Summary of House Repairs for details of this expenditure.

The location, as usual, was cleaned in the spring, and everything in excellent sanitary condition.

Wages	100.00	100.00
Food	25.00	25.00
Coal	15.00	15.00
Medical	5.00	5.00
Light	1.00	1.00
Travel	2.00	2.00
Repairs	1.00	1.00
Office of Police	1.00	1.00
Postage	1.00	1.00
Telephone	1.00	1.00

BY THE BOARD OF DIRECTORS.

Wages 1891	100.00	100.00	100.00	100.00	100.00
Wages 1892	100.00	100.00	100.00	100.00	100.00
Food 1891	25.00	25.00	25.00	25.00	25.00
Food 1892	25.00	25.00	25.00	25.00	25.00
Coal 1891	15.00	15.00	15.00	15.00	15.00
Coal 1892	15.00	15.00	15.00	15.00	15.00
Medical 1891	5.00	5.00	5.00	5.00	5.00
Medical 1892	5.00	5.00	5.00	5.00	5.00
Light 1891	1.00	1.00	1.00	1.00	1.00
Light 1892	1.00	1.00	1.00	1.00	1.00
Travel 1891	2.00	2.00	2.00	2.00	2.00
Travel 1892	2.00	2.00	2.00	2.00	2.00
Repairs 1891	1.00	1.00	1.00	1.00	1.00
Repairs 1892	1.00	1.00	1.00	1.00	1.00
Office of Police 1891	1.00	1.00	1.00	1.00	1.00
Office of Police 1892	1.00	1.00	1.00	1.00	1.00
Postage 1891	1.00	1.00	1.00	1.00	1.00
Postage 1892	1.00	1.00	1.00	1.00	1.00
Telephone 1891	1.00	1.00	1.00	1.00	1.00
Telephone 1892	1.00	1.00	1.00	1.00	1.00

1917

The following table shows the production of gold in the United States during the year 1917, and compares it with the production in the years 1916, 1915, 1914, 1913, 1912, 1911, 1910, 1909, 1908, 1907, 1906, 1905, 1904, 1903, 1902, 1901, and 1900.

Production of Gold

The production of gold in the United States during the year 1917 was 1,000,000 ounces, or 100,000,000 dollars. This was an increase of 100,000,000 dollars over the production in the year 1916, which was 900,000,000 dollars. The production of gold in the United States during the year 1917 was 100,000,000 dollars, or 100,000,000 ounces. This was an increase of 100,000,000 ounces over the production in the year 1916, which was 900,000,000 ounces. The production of gold in the United States during the year 1917 was 100,000,000 ounces, or 100,000,000 dollars. This was an increase of 100,000,000 dollars over the production in the year 1916, which was 900,000,000 dollars.

LAKE MINE.

The cost of mining 477831 tons of ore this year has been as follows:

	1902	1901	Increase	Decrease
Product	477831	468883	8948	
General Expense	.021	.022		.001
Maintenance	.047	.047		
Mining Expense	.770	.818		.048
Cost of Production	.838	.887		.049
Exploratory		.004		.049
DEPRECIATION				
Inventory	.001	.006		.005
Improvement	.001	.018		.017
New Construction	.091	.034	.057	
Lake Ang. Drainage		.006		.006
Total Depreciation	.093	.064	.031	
Taxes	.037	.034	.003	
Central Office	.026	.023	.003	
Cost on Stockpile	.994	1.012	.037	
Loading and shipping	.012	.011	.001	
Total cost	1.006	1.023	.017	

In comparison with the cost of last year, our mining expense shows a decrease of $4\frac{1}{2}$ per ton, and a decrease in the General Expense items of .9 of a cent per ton.

Lake.

LAKE MINE DIVISION OF MINING COST FOR THE YEAR ENDING NOVEMBER 30, 1902.

	AMOUNT	COST	OUTPUT BY GRADES	LAKE BESS.	LAKE	SILICA	TOTAL
General Expense	9783.08	.021	South Deposit	156204	46244	3167	205615
Maintenance	22685.67	.047	2nd Level		108629		108629
Mining Expense			3rd Level	4022	154311		158333
Air pipes	859.17	.002	Overrun	5254			5254
Compressors	8700.19	.018		165480	309184	3167	477831
Hoisting	7630.57	.016					
Steam Pumps	8183.96	.017	For 1901	186203	282680		468883
Sinking, "Repairs of Shaft"	2408.19	.005	Increase		26504	3167	8948
Mining Captain & Bosses	6794.06	.014	Decrease	20723			
Dry House	959.75	.002					
Top Landing & Trammig	5658.05	.012					
Stocking & Sorting	7367.30	.015					
Lake Ang. Dr. Pumping Expense	4912.10	.010					
Total	85942.09	.179					
Year 1901	87577.06	.188					

	SOUTH DEPOSIT		2nd LEVEL		3rd LEVEL		TOTAL 1902		TOTAL 1901	
	205615 tons		108629 tons		158333 tons		477831 tons		468883 tons	
	Amount	Cost	Amount	Cost	Amount	Cost	Amount	Cost	Amount	Cost
Drifting	17949.42	.088	2888.51	.026	12153.36	.077	32991.29	.069	30154.92	.064
Breaking ore	84553.99	.412	42918.39	.396	61873.24	.391	189345.62	.396	185619.20	.396
Trammig	12848.24	.062	6831.57	.063	9897.14	.063	29576.95	.062	37506.07	.080
Filling			917.77	.008	1843.83	.011	2761.60	.006	7319.27	.016
Timbering	23526.96	.113	14098.65	.130	20938.63	.132	58564.24	.123	62410.89	.133
Cave In			1283.55	.012			1283.55	.003	4825.47	.010
Total	138878.61	.675	68938.44	.635	106706.20	.674	314523.25	.659	327835.82	.699
Year 1901	122471.99	.655	141907.12	.714	65456.71	.765		.699		
Add Cost pr ton, Acts ab.		.179		.179		.179		.179		
Cost of Production 1902		.854		.814		.853		.838		
Cost of Production 1901		.843		.902		.953		.887		
Decrease				.088		.100		.049		
Increase		.011								

SUMMARY		
	1902	1901
Mining Cost	.659	.699
Genl. Exp Items	.179	.188
Total	.838	.887
Decrease	.049	

LAKE MINE.

ORE STATEMENT NOVEMBER 30th, 1902.

	BESSEMER	LAKE	LAKE BES. SIL.	TOTAL	TOTAL LAST YEAR
On hand December 1, 1901	2274	119545		121819	59719
Output for year	165480	309184	3167	477831	468883
Total	167754	428729	3167	599650	528602
Shipments	167754	277506	3167	448427	406783
Balance in stock		151223		151223	121819
Increase in product - 2% -				8948	

AVERAGE WAGES AND PRODUCT.

	SURFACE		UNDERGROUND		TOTAL	
	1902	1901	1902	1901	1902	1901
Product, 477831 tons, 1902						
Product, 468883 tons, 1901						
Average number men working	84	90	435	434	519	524
Average wages per day	1.94	1.96	2.23	2.19	2.18	2.15
Average wages per mo. 25 days	48.50	49.00	55.75	54.75	54.50	53.75
Average Prod. per man per day	17.99	16.69	3.80	3.73	3.14	3.05
Labor cost per ton	.107	.117	.581	.588	.688	.705
Difference in labor cost per ton	.010	.006	-.007	.022	-.008	.016
Avg. Prod. Breaking & Trimming			6.31	5.83		
Average wages for Miners			2.28	2.24		
Average wages for trammers			2.28	2.24		
Average wages for contractors			2.28	2.24		

AVERAGE ANALYSIS OF MINE SAMPLES.

	Iron	Phos
Lake Bessemer	64.70	.038
Lake	60.20	.108
Lake Bessemer Silica	47.67	.042

Lake.

LAKE MINE.

ORE SHIPMENTS FOR 1902.

	POCKET	STOCKPILE	TOTAL	TOTAL LAST YEAR
Bessemer	101455	66299	167754	203329
Lake	173425	104081	277506	203454
Lake Bessemer Silica	3167		3167	
Total	278047	170380	448427	406783
Total Last Year	269755	137028	406783	
Increase - 10% -			41644	

AVERAGE ANALYSIS OF CARGO SAMPLES.

	Iron	Phos
Lake Bessemer	64.00	.041
Lake	60.00	

STATEMENT OF COMPARATIVE WAGES.

	1902	1901	Inc or Decrease 1902
<u>SURFACE</u>			
Total number of days	26273 $\frac{3}{4}$	28096	
Average rate	1.94	1.96	Dec .02
Amount	50936.28	55009.30	
<u>UNDERGROUND</u>			
Total number of days	124420	125786	
Average rate	2.23	2.19	Inc .04
Amount	277568.12	275631.68	
Total days	150693 $\frac{3}{4}$	153882	
Average rate	2.18	2.15	Inc .03
Total amount	328504.40	330640.98	

Lake.

LAKE MINE.

STATEMENT OF TIMBER USED FOR THE YEAR 1902.

SIZE	LINEAL FEET	AVG. PRICE	AMOUNT	AMOUNT 1901	ft. Brd.Measure.
6 to 8"	56868	.02	1137.36	561.44	73928
8 to 10"	206410	.030	6238.08	7137.44	268333
10 to 12"	154528	.048	7493.18	6586.17	466675
12 to 14"	37420	.065	2427.30	1847.95	187100
14 to 16"	6530	.09	587.70	750.06	48975
16 to 18"	1716	.091	156.04	99.88	18018
Total	463472	.039	18039.66	16982.94	1063029
Total 1901	424012	.040	16982.94	17504.47	954923
<u>LAGGING.</u>					
5 foot	931875	.52	4845.75		
7 foot	535752	.598	3202.51		
Poles	47943	.0086	411.18		
Total	1515570	.558	8459.44		
Total '01	1441735	.56	8130.34		
				1902	1901
Feet of timber per ton of ore				.97	.904
Feet of lagging per ton of ore				3.066	3.075
Feet of lagging per foot of timber				3.27	3.400
Cost per ton for timber and lagging				.076	.054
Equivalent of stull timber to board measure				1063029	954923
Feet Board Measure per ton of ore				2.22	2.04
Total product				477831	468853

Lake.

LAKE MINE.

STATEMENT OF EXPLOSIVES USED FOR BREAKING ORE.

KIND	QUANTITY	PRICE	AMOUNT	AMOUNT 1901	
50% Powder	18572	.12	2216.64	1399.20	
40% Powder	69050	.10½	7250.25	7365.75	
Fuse	240400	4.25	1021.71	903.07	
Caps	79508	6.00	477.05	441.69	
Total			10965.65	10109.71	
			1902	1901	
Product			477831	468883	
Lbs of Powder per ton of ore			183	174	
Cost per ton for explosives			.023	.021	
Increased cost per ton			.002		

ESTIMATE OF ORE IN SIGHT DECEMBER 1st, 1902.

<u>OLD MINE.</u>			
Above 1st level, East side, shaft pillar,		53,000	
Above 1st level, West side, shaft pillar,		53,500	
Above 2nd level.			
East Side North East, shaft pillar,		150,000	
237' sublevel		25,000	
2nd level South East		31,000	
West Side			
South West		4,500	
North West, shaft pillar		155,000	365,500
Above 3rd level.			
Estimate 1897, 2nd to 3rd levels,	2,000,000		
Mined on 271 & 290' subs	134,000		1,866,000
Lake.			

LAKE MINE.

ESTIMATE OF ORE IN SIGHT, Continued.

Above 4th level practically developed		150,000
South Side Deposit		
Above 2nd level,	44,000	
Above 300' level	153,000	
Above 3rd level	<u>117,000</u>	314,000
Total		2,802,000 tons

COMPARATIVE STATEMENT MAINTENANCE ACCOUNT.

	1902	1901	Increase	Decrease
Tracks and Yards	3252.48	3146.56	105.92	
Docks, Trestles & Pockets	4297.51	1194.48	3103.03	
Buildings	513.62	307.12	206.50	
Shop Machinery	14.00	109.53		95.53
Boilers	647.25	429.91	217.34	
Hoisting Machinery	893.36	1059.90		166.54
Compressors & Air Pipes	453.79	410.40	43.39	
Steam Pumps	426.82	231.77	195.05	
Portable Machinery				
Top Tram Engine & Cars	899.77	905.99		6.22
Skips & Skip roads	746.86	801.26		54.40
Underground tracks & Cars	1299.69	1087.54	212.15	
Electric Tram Plant	9225.84	12199.88		2974.04
Testing Boilers & Engines	14.68	105.68		91.00
Repairs of stokers		73.23		73.23
Fire in coal pile		158.62		158.62
Total	22685.67	22221.87	4083.38	3619.58
Increase for 1902			463.80	

Lake.

LAKE MINE.

While the cost of maintenance for 1901 was \$1885.68 less than for 1900, that for 1902 shows a net increase over 1901 of \$463.80. The large increase in the account of Docks, Trestles and Pockets is responsible for the account showing an increased cost for the year. Itemizing the various accounts shows the causes for both increase and decrease during the year.

TRACKS AND YARDS. Increase \$105.92. The expense in connection with joint tracks for the year was \$107.06 over that of 1901, leaving the mine expense about the same as for previous year. The cost of moving the main tracks to the North at the point of the cave on Lake Superior land was \$1230.37, our portion being \$410.12.

DOCKS, TRESTLES AND POCKETS. Increase \$3103.03. The cost of filling stock pile ground for Lake Ore, South of tracks, which is constantly settling was \$2347.94, an increase of \$2102.09 over 1901, when very little filling was done. The cost of additional stocking ground at Presque Isle of \$958.56 is charged to this account.

BUILDINGS. Increase \$206.50. The comparative statement below shows the cost on each building.

BUILDINGS.

	1902	1901	Increase	Decrease
Office	29.79	26.71	3.08	
Warehouse	1.82		1.82	
Shops	20.17	11.02	9.15	
Shaft House	131.59	60.45	71.14	
Engine House	23.80	70.02		46.22
Dry House	197.57	138.92	58.65	
Hospital	108.88		108.88	
Total	513.62	307.12	252.72	46.22
Increase for 1902			206.50	

Lake.

LAKE MINE.

The item of "Hospital" covers the Lake Mine proportion, 83%, of the amount paid by the C. I. M. Co; for additions to Ishpeming Hospital, of Elevator and cellar. The total we paid was \$131.18, being for our one-tenth in the building.

(The Iron Cliffs Co., paying a like amount)

BOILERS. Increase \$217.34. Includes cost of scales for weighing coal, \$107.95. Replacing pipes and valves and grate bars, Cost \$110.78.

HOISTING MACHINERY. Decrease \$166.54. The hoisting plant at No.3 shaft was taken up in January, which reduced the maintenance cost on account of having to only operate the main plant for No.1 shaft.

COMPRESSORS, RECEIVERS AND AIR PIPES. Increase \$43.37. Ordinary repairs only.

STEAM PUMPS. Increase \$195.05. Placed pump in No.4 winze at cost of \$61.77, and overhauling some of pumps.

UNDERGROUND TRACKS AND CARS. Increase \$212.15. For rails and ties for sublevels between 2nd and 3rd main levels.

ELECTRIC TRAM PLANT. Decrease \$2774.04.

Following is detailed statement of the various items making up this account, and the comparative costs as compared with 1901.

ELECTRIC TRAM PLANT.

	1902	1901	Increase	Decrease
Engine	122.46	35.47	86.99	
Dynamos		2.69		2.69
Motors	4619.88	2961.23	1658.65	
Wiring	406.98	675.91		268.93
Track & Cars	4076.52	7503.15	158.66	3585.29
Wiring 3rd level		303.81		303.81
Tram 3rd level		717.62		717.62
Total	9225.84	12199.88	1745.64	4719.68
Decrease 1902		17		2974.04

Lake

LAKE MINE.

ENGINE. Increase \$86.99. Ordinary repairs.

MOTORS. Increase \$1658.65. (previous year's decrease \$1087.46)

The comparative cost for each motor is as follows:

	1902	1901	Increase
Motor No.1	918.62	466.52	
Motor No.2	644.53	752.16	
Motor No.3	719.05	450.12	
Motor No.4	599.29	255.19	
Motor No.5	898.39	218.91	
General Expense	840.00	818.33	
Total	4619.88	2961.23	1658.65
Extraordinary Expense, New parts etc., included in above amounts	1224.75	627.94	596.81
Ordinary repairs	3395.13	2333.29	1061.84

Motors No.1 and No.3 had a collision which cost for repairs \$819.19, and Motor No.5 was equipped with new armature, wheels etc.

WIRING. Decrease \$268.93. No extensions or alterations during year.

TRACKS AND CARS. Decrease \$3426.63.

The comparative cost is as follows:

	1902	1901
Tracks	1957.42	1798.76
Cars, Repairs to old cars, 1151.72 Repairs to new cars, 967.38	2119.10	5704.39
Total	4076.52	7503.15

During the year many of the old bottom dump cars were discarded, there being now only 17 in use on 2nd. level.

Lake.

LAKE MINE.

The following statement shows the cost per ton for maintenance of electric Tram Plant, as compared with 1901.

Product, 477331 tons, 1902	1902		1901		
	Amount	Per ton	Amount	Per ton	
Product, 467712 tons, 1901					
Engines	122.46	.000	35.47	.000	
Dynamos			2.69		
Motors	4619.88	.010	2961.23	.006	
Wiring	406.98	.001	675.91	.002	
Tracks and Cars	4076.52	.008	7503.15	.016	
Total	9225.84	.019	11178.45	.024	

Lake

LAKE MINE.

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

OLD MINE		DEVELOPMENT	MINED IN STOPES.
		Feet	Feet
N E	190' sublevel		23
	206' "	128	410
	223' "	144	200
	271' "	233	
S E	3rd level	65	
N W	206' sublevel	57	20
	223' "	82	120
	237' "		79
S W	2 nd level	45	
	271' sublevel	51	830
	290' "	98	
	170' "	105	69
	180' "	95	80
	206' "		355
	237' "		102
	2nd level	188	155
	271' sublevel	429	155
	Total	1720	2598
<u>SOUTH SIDE</u>			
	149' sublevel	16	214
	166' "	164 $\frac{1}{2}$	362
	202' "	42	63 $\frac{1}{2}$
	214' "	50	127
	224' "	137 $\frac{1}{2}$	76
	2nd level	370 $\frac{1}{2}$	49
	268' sublevel	27 $\frac{1}{2}$	
	280' "	50	50
	300' "	113 $\frac{1}{2}$	106
	312' "	67	140
	3rd Level	1036	
	Total	2074	1187 $\frac{1}{2}$
	Raise to surface from 2nd level	182	
<u>No.4 Shaft</u>			
	Drifting on 4th level	130	
	Sunk from surface drift	75	
	Drifting on 2nd level	104	
	Raised & Timbered above 2nd level	96	
	Raised above 2nd, no timber	18	
	Raised from 3rd level	20	
	Drifting on the 3rd level	495	
	Total	938	
Lake		20	

LAKE MINE.

Drifting and Raising for the Year, Cont'd.

RECAP.

	Development Feet	Mined in the stopes. Feet
Old Mine,	1720	2598
South Deposit	2074	1187½
Raise to Surface from 2nd level	182	
No.4 Shaft	938	
Total	4914	3785½
Grand Total		8799½

LAKE MINE.

FATAL ACCIDENTS.

There have been two fatal accidents during the year.

On November 1st, Daniel Becken was killed by being crushed between the cars and an ore chute. Becken was employed to clean the tracks, and at the time of the accident was standing between the train and the timbers, where there is plenty of room for several persons to be without danger. When the brakeman called to him that they were going to start the train, he stepped between the cars, intending it is presumed, to ride to the shaft. Instead of going forward however, the train was backed up, and in this way he was caught and crushed. There is a strict rule against the men riding on the cars. In this case the accident happened so quickly that there was no opportunity to warn him or stop the train.

The second accident occurred on the 10th of November. Mat Besola while cleaning a chute was struck on the head by a piece of ore which fell from the cribbing above him.

Both these accidents were beyond the control of the Captain and shift bosses, and can in no way reflect on their care and diligence.

The record for accidents at our Ishpeming mines has been exceptionally good this year.

The accident reports sent you and the evidence before the Coroner's Jury gives full particulars of each of these occurrences.

The work in the different parts of the mine has been as follows:

South East and North East.

During the year the 206 and 223' sublevels have been exhausted.

237' sublevel, South and North East.

This sub has been opened from the 9th room East to the 11th room East, and stoping has now begun. All the ore from this sub will come from between the old Lake.

LAKE MINE.

stopes. This part of the mine is badly mixed with rock, and the ore is of low grade, and high in alumina.

These two conditions materially increase the cost of mining, but it is imperative that the ore be mined now, so that caving will proceed uniformly. This sub level will be exhausted in four months. Below this the ore will be taken through the 3rd level.

271' sublevel North West and South West.

During the year the greater part of the ore on this sublevel North West has been mined out. There still remains a few pillars between the 8th and 20th rooms North West, which are now being stoped. On the South West the ground has been opened, but very little mining has been done. The 9th, 10th, 11th and 12th rooms are filled with mud above the second level, and extreme care will be necessary when caving on this sublevel to prevent a run of this material. It is likely that a small amount of ore will be lost, as it will be necessary to leave a back of ore to protect the men when taking out ore below.

Practically all the ore from this part of the mine has been too high in phosphorus to use in the Bessemer mixture.

291' sublevel North West and South West.

This sub has been opened up from the 7th room North West to the 26th room South West. All the work up to this time has been in development, and mining has not yet begun.

271' sublevel North East.

Two raises have been put up from the third level East of the 7th room, and the sublevel opened 250 feet East and 100 feet South, preparatory to mining, when all the ore has been removed from the 237' sublevel.

2ND LEVEL.

The pillars between the 15th and 18th rooms have been mined to the sill floor, the ore being taken from the 271' sublevel.

LAKE MINE.

From the 5th to the 12th rooms, the pillars have also been mined. The work in this part of the mine was exceedingly difficult and dangerous, owing to the adjacent rooms being full of mud. Fortunately no accident of any kind occurred, which was due to the extreme care exercised in the work.

The 12th, 13th and 14th rooms are full of mud, and the pressure is so great that it would be extremely hazardous to the men and the mine to attempt to remove the pillars. Fortunately the ore at this point is narrow and lean, and the loss by reason of leaving pillars will not amount to much. Under the circumstances we would certainly not be justified in making the attempt.

THIRD LEVEL.

No drifting has been done in the North deposit. Six raises however have been put up to the 271' sublevel. Two in the North East and four in the South West.

In the South deposit a drift was carried East 400 feet to the foot wall. The first 40 feet in rock, the balance in ore.

To the West of the main drift a circular drift has been completed, connecting with the South end of this drift. There was very little ore developed, and for this reason the estimate of ore in sight in the South deposit is much less than was anticipated in the last annual report. We still hope that there may be ore West of this drift. As yet no work has been done to prove up the ground. There is about 250 feet between this and the Lake Superior line.

During the coming year it is proposed to test the depth and dimensions of the ore below the 3rd level with a diamond drill.

SOUTH DEPOSIT.

All the ore above the 202' sublevel in the North West corner near G raise has been mined, excepting about 600 tons next the Lake Superior line.

Lake.

LAKE MINE.

Below this sublevel the ore is only 15 feet wide and 150 feet long, pitching very fast towards the West. A raise from the second level shows that the ore does not reach to within 15 feet of this level.

There will hardly be to exceed 4,000 tons more to come from this deposit. On the 224' sublevel at G raise there is still about 6,000 tons left. Perhaps one half of this ore is too high in phosphorus to put in the Bessemer mixture.

On the extreme South West the ore has all been mined to the sill floor of the 2nd level. The ore at this point is very narrow, and not much is expected below this level.

300' SUBLEVEL.

All the ore on this level East of No.3 shaft has been mined. To the West practically no work has been done during the year, as no more ore can be taken from this sublevel until the ore above is exhausted.

312' SUBLEVEL.

Seven raises have been put up from the 3rd level, East of the main drift, and a sublevel opened below the 300 foot level. The deposit at this point is 300 feet long and 175 feet wide. A large part of this year's product has come from this sub. There are still some pillars left, which will last until the end of February. Twelve feet below this sub another sub has been started on the extreme East end of the deposit.

No work has been done on this sublevel West of the main drift, for the reason before explained. West of the main drift seven raises have been put up from the 3rd level to the 300 foot sublevel, and everything is in readiness to begin mining, as soon as the ore above the 2nd level is exhausted.

B raise which has been used as a second outlet for the men in case of accident to the main shaft, began showing weight early in the year. Supporting this raise are several pillars of good Bessemer ore, which must be taken, if at all, before work on the 2nd level is abandoned.

LAKE MINE.

Considering the expense of maintenance, and the amount of ore that was tied up, it was thought advisable to put a new raise to surface in the diorite foot which would be absolutely permanent. This raise starts just above No.3 shaft, and is now 230 feet on the incline, and should hole in 50 feet more.

No.4 SHAFT.

The cross cut from the second level has been extended 100 feet to the line of the shaft, and the shaft raised and timbered for 100 feet. From the drift 60 feet below the surface a winze was sunk 85 feet and holed to the shaft below. This winze is now being stripped and timbered, and connection will be made by February 1st.

On the third level the drift was extended 375 feet to the line of the shaft, and a raise has just been started to connect with the shaft above, between the 2nd and 3rd level. Both the 2nd and 3rd level drifts were in exceptionally hard diorite, as is also the shaft, and the cost was correspondingly high.

In order to have the 4th level opened by the time the 3rd is exhausted, a winze has been sunk from the 14th room South West 3rd level, to a vertical depth of 100 feet, and a drift started towards the line of shaft. This is now in 125 feet.

Thirty feet from the bottom of the winze the foot wall was struck. The drift to the shaft at this point will be 600 feet long.

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

	Cost to date.
Drifting to shaft	16811.07
Temporary Compressor Plant	719.28
Rental of equipment	150.00
Sinking & Raising	9676.83
Timbering shaft	1280.94
Total	28638.12

LAKE MINE.

MUD RUNS.

Only one slight run of mud occurred during the year. On July 9th., without any warning, the mud broke through at the 12th room, and found its way to the 3rd level. No particular damage was done, but the cost of cleaning up amounted to \$538.00.

FIRE.

On April 14th at noon, fire was discovered on the 2nd level South West where a chute crossed the main drift at the 10th room. Fortunately no one was injured, and the flames were quickly subdued. Owing to the large amount of smoke which had accumulated in the mine, work was not begun until the 16th at 7 A M.

The cost of this fire, not including the loss of ore was \$406.83.

A second fire was discovered on September 29th in the coal pile, but by the liberal use of water, it was put out with little loss of fuel. The total cost of this work amounted to \$95.20.

By an examination of the statement showing the loss of product due to accidents, you will note that the year has been exceptionally free from delays. The loss of product due to the two fatal accidents has also been exceptionally light.

LAKE ANGELINE DRAINAGE.

No new work has been done during the year on the Lake Angeline Drainage. The Launder from the Lake Angeline office for a distance of 700 feet West is in very bad condition, and arrangements have been made with Captain Walters to have it rebuilt. The agreement is that each Company shall pay one third of the cost.

The East end of the present launder crosses ground under which we are now mining, and where it is likely that the ground will cave before the end of another year. It is going to be a very serious problem to carry the water across the land Lake.

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LAKE MINE.

under where the Lake Angeline Co., and ourselves are now operating. It is probable that in order to get a permanent location, it will be necessary to build along the side of the hill South of the ore measures. This will be difficult because as mining progresses it is likely that some of this ground may be pulled down.

I have not yet taken the question up with the other Companies, as I preferred to get the old portion of the launder repaired before doing so. Since ditching the hills East of the Lake no difficulty has been experienced in taking care of the heaviest rain fall. Each year the sump in the lake bottom is getting more contracted, so that it is necessary to handle the water expeditiously to avoid drowning out the mine.

As our workings and the Lake Superior mines are connected on the 3rd level, they are equally interested in maintaining the launder, and I anticipate no trouble in arranging with them for rebuilding it.

STOCKING ORE AT PRESQUE ISLE.

65,000 tons of ore were stocked at Presque Isle during last winter at a cost of .074cents per ton.

So little of the Lake stockpile was shipped this year that it will again be necessary to stock part of the winter's output at the dock, in spite of the high cost of doing so. In order to furnish room for this ore it was necessary to extend the stock pile bottom, which was done at a cost of \$958.56.

It is estimated that we now have capacity for 60,000 tons additional. With this tonnage and the stockpile ground available at the Lake, we shall be able to mine with full force until the opening of navigation.

I am advised by Mr. Harris that the cost of handling the ore during the winter is slightly in excess of the summer work, and that there will be an additional charge of $\frac{3}{4}$ of a cent per ton. freight.

TAXES.

There has been practically no change in the valuations of any of our properties, but the taxes have increased \$4642.74.

This is owing to the building of a new Court House at Marquette. The Board of Supervisors have decided to spread the cost of the building, which will amount to about \$150,000, over three years, rather than to issue bonds.

PRIZES.

The usual prizes for well kept premises have been given, and have resulted in further improvement of the general appearance of our locations.

The system of requiring competitors to notify the General Office has not been satisfactory. This year there were not as many competing as there were prizes offered. In order to obviate this trouble it has been decided next year to send notices of the competition to each house holder & lease holder on the Company's lands, which it is thought will increase the interest in this competition, and result in a very much larger number of applications.

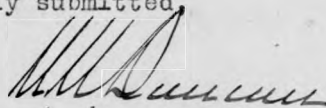
I should regret to see this feature dropped, as in my opinion, it has been of great benefit, not only to our employes, but to the city at large.

The Cleveland-Cliffs and Mechanic's Clubs have continued their good work of former years, and are both in a healthy condition.

The relations between the Company and its employes are cordial, and there is no indication of any dissatisfaction among the men.

Before closing my report I wish to express my appreciation for the hearty cooperation of the Heads of the different Departments in the work of the year, to whose efforts the results obtained have been largely due.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read 'W. D. ...', written in dark ink.

Agent.



CLEVELAND IRON MINING COMPANY
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THE CLEVELAND-CLIFFS IRON CO.

Cost of Production for the Month of Years 1902 & 1901

Lake	Mine	Month of <u>12 Months</u> <u>1902</u> <u>477,831 tons</u>					<u>12 Months, 1901</u> <u>688,831 tons</u>					Months, 1901	
		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	Amount	Cost Per Ton
GENERAL EXPENSE,													
Insurance,				371.65	0.01	371.65	0.01			375.68	0.01	375.68	0.01
Engineering,	1246.83	0.03	218	0.00	1268.63	0.03	872.96	0.02	257	0.00	1120.92	0.02	
Analysis,	1645.53	0.04	1431.87	0.03	3277.40	0.03	1778.23	0.02	1545.13	0.04	3323.36	0.05	
Relief Fund,			2043.00	0.04	2043.00	0.04			1675.10	0.05	2075.10	0.05	
Mine Office,	2118.03	0.04	722.99	0.02	2841.02	0.06	2126.25	0.04	1983.32	0.02	2924.77	0.06	
Total,		5010.39	0.11	4772.69	0.10	9783.08	0.21	4777.64	0.10	5096.60	0.12	9874.44	0.22
MAINTENANCE—Repairs of													
Tracks and Yards,	2270.51	0.05	981.97	0.02	3252.48	0.07	2326.61	0.05	789.95	0.02	3116.56	0.05	
Doors, Trundles and Pockets,	1601.93	0.03	2695.58	0.06	4297.51	0.09	8912.6	0.02	1194.28	0.01	1194.28	0.02	
Buildings,	203.67	0.00	309.93	0.01	513.60	0.01	195.43	0.01	111.69	0.00	307.12	0.01	
Shop Machinery,			14.00	0.00	14.00	0.00			109.53	0.00	109.53	0.00	
Boilers,	263.16	0.00	384.99	0.01	648.15	0.01	246.13	0.01	111.78	0.00	357.91	0.01	
Lifting Machinery,	2053.6	0.01	582.00	0.01	2635.60	0.02	171.91	0.00	877.99	0.02	1059.90	0.02	
Compressors and Air Pipes,	299.15	0.01	154.64	0.00	453.79	0.01	177.44	0.00	237.96	0.01	415.40	0.01	
Conish and Steam Pumps,	278.54	0.01	148.28	0.00	426.82	0.01	146.92	0.00	24.22	0.00	231.77	0.00	
Top Tram Engines and Cars,	405.35	0.01	494.42	0.01	899.77	0.02	541.28	0.02	164.51	0.00	705.79	0.02	
Skips and Skip Roads,	409.22	0.01	337.64	0.01	746.86	0.02	403.11	0.01	246.15	0.01	649.26	0.02	
Underground Tracks and Cars,	562.01	0.01	737.68	0.02	1299.69	0.03	474.85	0.01	1126.97	0.01	1087.54	0.02	
Electric Tram Trail	5337.40	0.11	3882.44	0.07	9219.84	0.18	7050.63	0.15	2149.55	0.11	12999.88	0.26	
Repairs of Stokes							68.42	0.00	4.81	0.00	73.23	0.00	
Repairs of Coal Pits							158.62	0.00		0.00	158.62	0.00	
Refrigerators & Engines	14.68	0.00			14.68	0.00	105.68	0.00		0.00	120.36	0.00	
Total,		11951.00	0.25	10734.67	0.22	22685.67	0.27	13018.51	0.28	9242.36	0.19	22260.87	0.27
MINING EXPENSE,													
Air Pipes,	666.97	0.02	192.20	0.00	859.17	0.02	668.59	0.02	114.67	0.00	783.26	0.02	
Compressors,	2273.60	0.05	6421.59	0.13	8700.19	0.18	2151.53	0.04	8387.76	0.14	8552.29	0.18	
Hauling,	3212.14	0.07	4418.43	0.09	7630.57	0.16	3883.85	0.08	1140.67	0.02	5024.52	0.09	
Pumping,	2871.08	0.06	5312.88	0.11	8183.96	0.17	3421.19	0.07	1112.16	0.02	4533.35	0.08	
Sinking,	2911.67	0.06	442.48	0.01	3354.15	0.07	1442.13	0.03	233.81	0.01	1675.94	0.04	
Drifting,	17400.138	0.64	3874.52	0.08	21274.66	0.44	26009.47	0.56	8745.85	0.08	34750.32	0.64	
Breaking Ore,	2911.67	0.06	15344.24	0.32	18255.91	0.38	17024.75	0.36	15374.45	0.32	18509.20	0.39	
Tramming,	2475.498	0.05	4821.97	0.10	7297.46	0.15	3142.07	0.07	608.50	0.01	3750.57	0.08	
Filling,	2618.01	0.05	143.59	0.01	2761.60	0.06	6870.62	0.15	2420.03	0.01	7319.27	0.16	
Timbering,	29889.54	0.63	2867.40	0.06	32756.94	0.69	5856.24	0.12	3511.453	0.08	6207.69	0.13	
Strong Captain and Bosses,	6794.06	0.14			6794.06	0.14	6923.11	0.15			6923.11	0.15	
Dry House,	949.00	0.02	10.75	0.00	959.75	0.02	937.30	0.02	24.99	0.00	962.29	0.02	
Top Landing and Tramming,	2936.03	0.10	722.02	0.02	3658.05	0.12	5018.32	0.11	911.75	0.02	5929.07	0.13	
Stocking Ore,	5901.84	0.11	1465.46	0.04	7367.30	0.15	2412.48	0.05	169.10	0.01	7581.85	0.16	
Sorting Ore, <u>See on 2nd Page</u>	290.73	0.01	117.10	0.00	407.83	0.01					407.83	0.01	
Lake, <u>See on 2nd Page</u>	722.96	0.02	4912.10	0.10	5635.06	0.12	3642.46	0.06	916.88	0.19	4552.34	0.10	
Lease In			142.76	0.00	142.76	0.00			112.01	0.02	254.77	0.02	
Total,		29097.80	0.69	71016.79	1.61	102083.59	2.30	30056.87	0.64	82055.00	1.77	383316.57	8.18
Cost of Production, Per Ton, <u>477,831 tons</u> <u>1902</u> <u>400,465.84</u> <u>1901</u> <u>318,252.72</u>													
EXPLORATORY													
Exploring in Mines,							121.80	0.01	116.54	0.00	242.34	0.01	
Outside							126.14	0.02	423.95	0.01	550.09	0.03	
Total,							247.94	0.03	540.49	0.01	792.43	0.04	
DEPRECIATION, ETC.													
Inventory,					687.73	0.01					295.68	0.06	
Improvement,					589.77	0.01					829.75	0.18	
New Construction,					43133.05	0.91					16061.70	0.34	
Coal Assoc. <u>See on 2nd Page</u>											312.26	0.06	
Total,					48710.55	0.10					19399.39	0.04	
REVENUE													
Income from Sale of Ore,											452.38	0.09	
Income from Sale of Coal,											3034.60	0.64	
Income from Sale of Gas,											16.89	0.00	
Income from Sale of Other Products,											109.86	0.02	
Total,											4852.73	1.03	

Division of Product	1902		1901		Remarks	ANALYSIS OF LABOR				LABOR Cost
	Amount	Per Ton	Amount	Per Ton		Stakings	Drifters	Operative Cost	Comparative Cost	
Sand Deposit	205.615	186.954								
3rd Level	108.619	108.623								
2nd Level	158.330	82.956								
Over Run	52.50	119.7								
Total	477.831	470.886								
Lake Bureau	165.480	117.400								
Lake	309.184	282.680								
Lake Bay Silica	31.67									
Total	477.831	470.886								

Summary of Supplies Used During *Years 1902 & 1901.*

THE CLEVELAND-CLIFFS IRON CO.		COST OF SUPPLIES.		COST PER TON.	
<i>Lake</i> MINE.		<i>1902</i>	<i>1901</i>	<i>1902</i>	<i>1901</i>
Product.		<i>477,831</i>	<i>468,883</i>	<i>901</i>	<i>Year.</i>
General Supplies,		<i>64,556.9</i>	<i>68,468.0</i>	<i>013</i>	<i>015</i>
Iron and Steel,		<i>29,781.3</i>	<i>32,837.0</i>	<i>006</i>	<i>007</i>
Oil, Grease and Candles,		<i>46,834.2</i>	<i>52,709.3</i>	<i>010</i>	<i>011</i>
Machinery Supplies,		<i>4,905.21</i>	<i>10,583.35</i>	<i>010</i>	<i>023</i>
Building Material,		<i>51,186.4</i>	<i>90,408.2</i>	<i>011</i>	<i>019</i>
Explosives,		<i>16,113.57</i>	<i>14,148.37</i>	<i>034</i>	<i>030</i>
Mine Timber,		<i>26,798.78</i>	<i>25,479.05</i>	<i>056</i>	<i>054</i>
Fuel,		<i>20,228.54</i>	<i>23,913.25</i>	<i>042</i>	<i>051</i>
Barn,		<i>386.33</i>	<i>250.32</i>	<i>001</i>	<i>001</i>
Sundries,		<i>4,788.08</i>	<i>4,257.24</i>	<i>010</i>	<i>009</i>
Total Supplies,		<i>924,563.9</i>	<i>1,031,738.3</i>	<i>193</i>	<i>220</i>
Miscellaneous,		<i>19,934.89</i>	<i>34,898.39</i>	<i>042</i>	<i>074</i>
Total,		<i>1,123,912.8</i>	<i>1,380,722.2</i>	<i>235</i>	<i>294</i>
SUMMARY.					
As per Cost Sheet,		<i>109,503.62</i>	<i>125,672.57</i>	<i>229</i>	<i>267</i>
Improvement,					
New Construction,		<i>2,887.66</i>	<i>12,346.44</i>	<i>006</i>	<i>027</i>
Other Charges,			<i>53.21</i>		<i>000</i>
Total,		<i>1,123,912.8</i>	<i>1,380,722.2</i>	<i>235</i>	<i>294</i>

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Cost Sheet for the Month of *1901*
 Mine. *Lake*