

ANNUAL REPORT
1917



The Cleveland-Cliffs Iron Co.
LAND DEPARTMENT
NEGAUNEE, MICHIGAN.

MS 86-100
2032

#2032

RECEIVED

APR -4 1918

ANS'D 4/4

RECEIVED MICHIGAN, March 24, 1917.

Mr. W. G. ...
1100 ...
Cleveland, Ohio.

ANNUAL REPORT

YEAR 1917

Dear Sir:

I have the honor to acknowledge the receipt of your letter of the 14th inst. in relation to the ...
LAND DEPARTMENT - NEGAUNEE, MICHIGAN ...
Company, Land Department, and its subsidiary companies for the fiscal year 1917.

Respectfully,

[Handwritten Signature]
Land Agent.

WGD

NEGAUNEE, MICHIGAN, March 26, 1918.

ANNUAL REPORT

Mr. Wm. G. Mather, President,
1100 Rockefeller Building,
Cleveland, Ohio.

Dear Sir:-

I hand you herewith ANNUAL REPORT of The Cleveland-Cliffs Iron
Company, Land Department, and its subsidiary companies for the fiscal year
1917.

Respectfully,

C. V. P. Townsend
Land Agent.

CVRT:D

THE MINING COMPANY

AMERICAN IRON COMPANY

AMERICAN IRON MINING COMPANY

MICHIGAN COMPANY

MICHIGAN, MARQUETTE & SOUTH LANSING

WILSON HILL MINING COMPANY

THE CLEVELAND-CLIFFS

A N N U A L R E P O R T

General Report	1
Report of Mr. A. J. ...	11
Report of Mr. A. J. ...	22
Receipts	23
Statement of Land and Timber Sales	24
Land Purchased	25
Land Acquired	26
Land Owned	27

LAND DEPARTMENT - NEGAUNEE, MICHIGAN

FISCAL YEAR 1917

THE CLEVELAND-CLIFFS IRON COMPANY

THE MUNISING

THE MUNISING COMPANY

General Report	34
Report of Mr. A. J. ...	45
Report of Mr. A. J. ...	56
Receipts	57
Land Acquired	58
Statement	59

ARCTIC IRON COMPANY

AMERICAN IRON MINING COMPANY

MICHIGANNE COMPANY

MUNISING, MARQUETTE & SOUTHEASTERN RAILWAY CO.

BUNKER HILL MINING COMPANY

ARCTIC IRON CO.

Land Acquired	60
---------------	----

AMERICAN IRON MINING COMPANY

Land Acquired	70
---------------	----

MICHIGANNE COMPANY

Land Acquired	71
---------------	----

MUNISING, MARQUETTE & SOUTHEASTERN RAILWAY COMPANY

Land Acquired	72
---------------	----

BUNKER HILL MINING COMPANY

Land Acquired	73
---------------	----

I N D E X

THE CLEVELAND-CLIFFS IRON COMPANY

General Remarks	1
Report of Mr. H. T. Johnston, Forester	14
Report of Mr. A. J. Erickson, Collector	20
Forest Fires	29
Receipts	30
Statement of Land and Timber Sales	31
Lands Purchased	32
Land Acreage	33
Lands Owned and Controlled	35

THE MUNISING COMPANY

General Remarks	36
Report of Mr. A. O. Jopling, Engineer in Charge	47
Albino Deer by Geo. Shiras 3d	53
Report of Glyde B. Terrell - Food Plantings	54
Statement of Land and Timber Sales	65
Receipts	66
Land Acreage	67
Statement of Number of Guests Registered at Hotel Williams	68

ARCTIC IRON COMPANY

Land Acreage	69
--------------	----

AMERICAN IRON MINING COMPANY

Land Acreage	70
--------------	----

MICHIGANME COMPANY

Land Acreage	71
--------------	----

MUNISING, MARQUETTE & SOUTHEASTERN RAILWAY COMPANY

Land Acreage	72
--------------	----

BUNKER HILL MINING COMPANY

Land Acreage	73
--------------	----

LAND DEPARTMENT REPORT FOR THE FISCAL YEAR ENDING

DECEMBER 31, 1917.

The Land Department has under its care and supervision the lands of The Cleveland-Cliffs Iron Company, American Iron Mining Company, Arctic Iron Company, The Munising Company, Munising, Marquette & Southeastern Railway Company, Michigamme Company, and Bunker Hill Mining Company; however, under date of December 31st, 1917, the lands of the Munising Company and the Munising, Marquette & Southeastern Railway Company, were consolidated with the Cleveland-Cliffs Iron Company.

The work of the Department consists of the careful supervision of the company lands; the prevention of trespasses of every kind; protecting the timbered lands and forest products from fire; the locating and establishing of woodworking manufacturing plants at points tributary to the company railroads; the sale and leasing of farm stock and produce; the sale and leasing of lots in the various villages and cities; the sale of timber stumpage to the woodworking manufacturing plants within the districts mentioned, the collection of rents and all moneys from such sales and leases; studying the general conditions of the company's tenants and the locations in which they live, and encouraging improvements in the various cities, townships and villages in which the companies are interested; the operating and maintenance of Grand Island Forest and Game Preserve and Improvements, Hotel Williams and Cottages, Forestry Operations, Munising Sawmill and its various branches, and the operations conducted by various woodworking and other industries on the companies' lands and within its territory. It is also the duty of the Land Department to look after land titles, assessments and levy of taxes, and the payment of same.

LANDS PURCHASED.

No purchases of any importance were made during the year. We received the usual number of offers of lands throughout the Upper Peninsula. There were no descriptions, however, desirable for the company's operations.

TIMBER SALES.

Covered by Mr. Erickson's report, which is attached hereto.

LAND SALES.

A statement showing the land sales in detail for the year is made a part of this report.

TIMBER SALES TO MANUFACTURERS.

Munising Paper Company

Its logging operations, with the exception of a few small jobbers, are now being conducted by the Lumbering Department.

Brunswick-Balke-Collender Company

Their entire operations have been very active during the present year. It has been greatly handicapped due to the shortage of labor and cars to move their products. Their logging operations are now quite remote from its plant site, necessitating the building of spur lines and operating the same with their own locomotives. They have engaged a permanent land cruiser, estimating the available timber in their vicinity, and are actively endeavoring to secure a further supply of standing timber.

Schneider & Brown Sawmill - Marquette

With the increase in prices for all forest products, their operations have been active and they have had less difficulty in financing their needs. They, however, continue to be pirates in purchasing logs, etc., - oftentimes offering more than the material is actually worth. This results in an unstable market and makes it very difficult to buy logs in the open market at a fair price.

Nufer Cedar Company - PLANT Marquette

Their mill has operated continuously. Are buying their lumber requirements from the mills throughout this district. Their operations offer a reasonably good market for low grades of hardwoods.

Mangum Mill

Has practically ceased operations. The Consolidated Fuel & Lumber Company have a small logging operation at Mangum on lands purchased from the Chicago & North Western Railway Company - The logs are shipped to the Schneider & Brown mill at Marquette and sawed under contract.

Dalton Mill - New Dalton

Operated approximately two months. Financially unable to carry on a more extensive operation.

Munising Tannery Company

The plant was operated at full capacity during the year, with the exception of about thirty days they were idle on account of not having sufficient supply of bark.

General

The market for forest products during the Winter of 1916-17 was active, with keen competition.

The output of forest products by farmers or small jobbers along the Munising, Marquette & Southeastern Railway is yearly growing less. Nevertheless there is a scramble to pick up the products that are offered for sale, which results in stimulating prices beyond their reasonable market value.

The activity of the various lumber interests throughout the Upper Peninsula resulted in the lumber-jack becoming independent and practically dictating his own terms of employment. This result unsteadied the men and they moved about from camp to camp and demoralized efficient and normal outputs. The wages in the woods averaged from a minimum of \$40.00 to a maximum of \$55.00 per month, with board and lodging. With this earning power, the men do not work over three-fourths of their former monthly average and have spending money to blow in at the saloons. It is expected that after the State goes dry May 1st, these conditions will improve and result in better labor conditions.

Woodworking Industries

Piqua Handle Company - Marquette

The mill operations started late in the Fall. The plant is reported working satisfactorily and steadily, employing about 200 persons - a large number being females.

They were unable to build a spur into their timber owing to the scarcity of rail and the inability of the Duluth, South Shore & Atlantic Railway Company to give them the rail which they had promised. It was necessary to get a timber supply that could be made quickly available. They purchased the timber on the American Iron Mining Company's lands near Michigamme. This gave them immediately an available supply, with the least possible railway track building, and enabled the starting of the mill as soon as it was ready.

Munising Woodenware Company

The plants of the Munising Veneer Company and the Munising Woodenware Company were consolidated under the name of the Munising Woodenware Company, and part of the Veneer plant is being arranged to produce butter dishes.

The Veneer plant was handicapped in its operations, owing to its lack of timber. It bargained for a considerable quantity of logs outside of the Munising District but were unable to obtain cars in which to ship the logs, resulting in their going elsewhere. This unfortunate condition permitted the plant to operate but only a short time during the year.

The Munising Woodenware Company, through its own logging operations, was more fortunate in having a sufficient supply, which was further augmented by purchases made in the Munising District.

FARM - RUMELY.

Under lease to H. W. Crawford.

GREENHOUSES.

The Greenhouses were under lease during the year to F. E. Nielsen. He has not been successful and it is likely that the company will either be compelled to take over the operation of the houses again or dismantle them.

NORTHERN FOREST PROTECTIVE ASSOCIATION

In July the Association turned its work over to the Public Domain

Commission of the State of Michigan. Its work will be carried along vigorously by the State as a special appropriation of \$40,000.00 was made by the last Legislature to take care of the work for the two following years. The Association's work was well regarded throughout the State, and in the State's taking over the work, they retained its Secretary-Manager and nearly all of its rangers, excepting in districts where the State had older men in similar capacities. There was much duplication of patrol work by the Association and the State, and by having the management under the State's control, it eliminated this unnecessary expense.

FOREST FIRE PROTECTION.

The Forest Fire Committee did no active work during the year. There were no operations that called for special attention. Owing to the unrest among the labor, it was deemed advisable to put on an additional patrolman in the areas having a large amount of cordwood at the stump.

REFORESTATION.

See Mr. Johnston's report -- pages 15 and 16

UPPER PENINSULA DEVELOPMENT BUREAU.

Its work during the past year has been energetic. There seems to be much better feeling throughout the Upper Peninsula towards the Association and it is meeting with liberal response in donations. The men now in charge seem to be active, wide awake and are energetically promoting the sheep industry. Should their efforts meet with success, it will greatly stimulate the selling of cut-over lands and the prosperity of the farmers throughout the Upper Peninsula.

BALDWIN KILNS PLAINS LANDS.

There is nothing further to report than is contained in my report for 1912 and 1913.

TAXES.

You will note from the tax statements included in this report that the valuations have increased on our lands, particularly in Alger and Luce Counties. The various assessors in the Townships comprising these counties

have made these increases in anticipation of a visit from the Tax Commission. The Tax Commission have had their cruisers throughout several counties in the Upper Peninsula and have held reviews in some of the Townships. They, however, did not complete their work in time to hold reviews in Alger and Luce Counties. This, we understand, will be done this coming year.

The Tax Commission had one of their representatives in this office for several months going over our timber estimates which will guide them in making assessments on our lands. The increase in valuation by the local assessors makes a corresponding increase in taxes. Also another factor is the increase in State taxes this year. The personal valuation on the various industries in the City of Munising was increased considerably which accounts for the increase in taxes. Our annual comparative tax statement shows in detail the changes in valuations and rates.

LOGGING OPERATIONS.

Gust Fredeen - Contract No. 255:

On May 1st, 1916, a contract was entered into with Gust Fredeen, of Norway, Michigan, to remove the timber from certain lands in Town 46 North, Range 23 West, Town 47 North, Range 23 West, and Town 47 North, Range 24 West. The lands originally covered by this contract carried approximately 14,000,000 feet of saw timber, 5,600 cords of hemlock bark, 100,000 pieces of cedar, 4,000 cords of pulp, 21,000 cords of hardwood and 58,000 pieces of pine shingle timber.

It was decided in October to assign Fredeen certain additional lands to operate in this district, which would bring the total estimated quantities to 27,000,000 feet of saw timber, 10,000 cords of hemlock bark, 37,000 cords of hardwood, 84,000 ties, and 154,000 cedar posts and poles, besides a small quantity of pulpwood. At the present writing, however, Fredeen has not signed the amended contract covering these lands.

Up to December 31st there had been delivered on board cars from this operation better than 8,000,000 feet of saw timber, 51,000 pieces of ties, posts, poles, etc., 2,500 cords hemlock bark and 1,400 cords of pulpwood. During the bark peeling season there was peeled approximately 2,400 cords. 7,000,000 feet

of logs were cut, as well as a large quantity of piece stuff. Practically all of this material was skidded to the logging roads ready for the winter haul.

Due to the unusual labor conditions that prevailed during the year and the increased cost of foodstuffs and all other materials used in an operation of this kind, it was found necessary to grant the contractor certain increases over the prices provided for in the original contract. In February an increase of 50¢ per thousand feet was granted and in June an additional 75¢ per thousand feet, also \$1.00 per cord for bark peeled during the 1917 peeling season. In October an increase in the price of piece stuff was granted. On an average of 100 men and 30 teams were employed and the work was carried on as expeditiously as conditions would permit.

George Roberts - Contract No. 276:

On April 14th, 1916, a contract was entered into with George Roberts, of Cooks, Michigan, to remove the timber from certain descriptions in Towns 45 and 46 North, Range 18 West. Our estimates showed that these lands contained about 820 cords of bark, 2,000,000 feet of saw timber, 4,000 pieces of cedar, as well as a small quantity of pulpwood and kiln wood.

The logs were hauled to the landing with the bark on during the Winter of 1916-17 and were peeled during the peeling season of 1917. The material was banked along the old Juniper Spur and before any of it could be loaded out, it was necessary for the railroad to relay the steel. On account of the shortage of labor, they were unable to do this and it was necessary to go in ourselves and relay the steel. The expense thus incurred was much higher than it would have been under ordinary conditions and we were also delayed in getting out the material, so that at December 31st, 1917, the shipments from this operation had only equaled 490,000 feet of logs. This contractor had great difficulty in securing labor, and, therefore, did not make the progress with his work that it was expected he would do when the contract was made.

Lumbering Department Operation No. 73:

We have received from this operation 187,000 feet of saw timber, 2,000 cords of pulpwood and 357 poles during the year. The logs from this job cost us for operating expenses \$12.47 delivered to the main line of the Munising, Marquette & Southeastern Railway. The loss to this Department, on material received for the year, was \$1,264.58.

During the Spring we kept a man on this job selecting logs suitable for the Woodenware and Sawmill from the timber cut for cordwood purposes. A very small portion of the logs so selected have been shipped to us, and as they were cut and on the ground during the summer months, it is likely they will have greatly deteriorated.

Anthony Mushlock - Contract No. 303:

On May 15th a contract was entered into with Anthony Mushlock to operate the timber from the SE¹/₄ of NE¹/₄ and the SE¹/₄ of Section 28, Town 47 North, Range 20 West. Our estimates show approximately 488,000 feet of saw timber, 18,000 pieces of cedar, 170 cords of bark, and 365 cords of pulpwood, on these descriptions.

On December 31st there had been cut 550,000 feet of saw timber, 165 cords of bark peeled, approximately 7,000 pieces of cedar, and 80 cords of pulp. The bark under this contract was to be loaded on cars at Wilcox Siding, a point on the Duluth, South Shore & Atlantic Railway; the balance of the material was to be banked on the lake shore.

Frank Johnson - Contract No. 304:

On June 9th a contract was entered into with Frank Johnson, of Skandia, Michigan, to operate the timber on the NE¹/₄ of the SW¹/₄ of Section 20, Town 46 North, Range 23 West. Our estimates show 347,000 feet of saw timber, 70 cords of bark, 1,800 cords of hardwood, and a small quantity of piece stuff.

There was cut 120,000 feet of saw timber, and 60 cords of bark were peeled.

Wesley Miller - Contract No. 305:

On July 6th a contract was entered into with Wesley Miller, of Turin, Michigan, to operate the timber on certain descriptions in Town 44 North, Range 24 West. Our land lookers' estimates show 445 cords of bark, 1,400,000 feet of saw timber, 20,000 cedar posts, 7,100 cedar ties, as well as a small quantity of mining timber and pulpwood.

Up to December 31st there had been cut 85,000 feet of logs, approximately 5,000 pieces of cedar, and 24,000 lin. feet of mining stulls.

John Snell - Contract No. 312:

On November 6th a contract was entered into with Hill and Snell, of Ishpeming, Michigan, to operate the timber on certain descriptions in Section 31, Town 45 North, Range 24 West. Mr. Hill later withdrew from the partnership and the contract was assumed by Mr. Snell. Our estimates show 300 cords of hemlock bark, 1,400,000 feet of logs, 25,000 pieces of cedar, as well as a quantity of mining timber.

Up to December 31st there had been cut 200,000 feet of logs, 500 ties, 200 posts, 25 cords of lagging, and 50 cords of pulpwood.

Connor Bros. - Contract No. 316:

On December 3rd a contract was entered into with Connor Brothers, of Turin, Michigan, to operate the timber on certain descriptions in Section 35, Town 44 North, Range 24 West. Our land lookers' estimates show 275 cords of bark, 2,400,000 feet of logs, 2,800 pieces of cedar, as well as a small quantity of pulpwood and mining timber.

On account of this contract not being signed until late in the year, no estimate of the quantity produced was made.

T. O. Nault - Contract No. 324:

On December 12th a contract was entered into with T. O. Nault, of Forsyth, Marquette County, Michigan, to remove the timber from certain descriptions in Section 29, Town 45 North, Range 24 West. Our estimates show

these descriptions to contain approximately 450,000 feet of logs, 24,000 pieces of cedar, 4,400 cords of pulpwood, and 1,800 cords of lagging.

Camps were erected and the work gotten underway during December.

General Logging Conditions:

The output of our various logging operations were curtailed to a considerable extent by the shortage of labor, and also by the indifference and inefficiency of the labor that it was possible to secure. It was also curtailed to a certain degree by the inability to secure railroad transportation. The shortage of cars in this district has been a serious handicap and has greatly increased the cost of the material, due to the re-handling that frequently was necessary, due to the lack of cars to load the material as it came from the woods. Practically all the bark which we shipped during the year had to be ranked out at the loading point and loaded as cars could be obtained. The same condition prevailed, although not to such a large extent, in connection with the shipment of logs, pulpwood, etc.

Market Conditions - Forest Products

The demand for all forest products was healthy during the year. The prices stiffened materially, although they were not in keeping with the high costs of labor and supplies. The difficulty in obtaining cars in which to make shipments resulted in much material having to be handled twice, making an additional cost, which, to a large extent, offset the advances paid.

Sales of Forest Products

A sale was made to the Munising Paper Company of all the spruce and balsam pulpwood which we developed during the Winter of 1916-17, at a price of \$8.00 per cord for the spruce, and \$5.25 per cord for the balsam, f.o.b. cars shipping points.

The cedar posts developed at the Grondin Operation near Newberry were sold to the Warner-Newton Lumber Company, St. Ignace, Michigan, at the following prices, f.o.b. cars:

<u>Top</u>	<u>Length</u>		
3"	7 ft.	\$.04 3/4
4"	7 "		.08
5"	7 "		.10
6"	7 "		.11 1/2
7"	7 "		.14
3"	8 "		.05 1/2
4"	8 "		.09
5"	8 "		.11
6"	8 "		.12 1/2
7"	8 "		.15
4"	10 "		.12
5"	10 "		.15
6"	10 "		.20
7"	10 "		.30
8"	10 "		.50

On May 9th we sold to Erickson & Bissell, of Escanaba, Michigan, the cedar posts and poles we have on the Rapid River Branch of the Soo Line and at the Fredeen Job on the Munising, Marquette & Southeastern Railway, at the following prices, f.o.b. cars; terms 2% cash 15 days, or net 60 days:

Posts

<u>Top</u>	<u>Length</u>		
3"	7 ft.	\$.05 1/2
4"	7 "		.09
5"	7 "		.11
6"	7 "		.12
7"	7 "		.15
4"	8 "		.10
5"	8 "		.14
6"	8 "		.16
7"	8 "		.20

Poles

4"	20 ft.		.45
5"	20 "		.55
6"	20 "		.70
5"	25 "		.75
6"	25 "		1.35
7"	25 "		1.75
6"	30 "		2.75
6"	35 "		3.85
7"	35 "		6.25
7"	40 "		7.25
7"	45 "		8.50
7"	50 "		11.00

A sale of 20 cars of hemlock bark was made to the H. V. Bretney Company, Springfield, Ohio, and 10 cars to the Adam Kroehle Sons Company, Cleveland, Ohio, at \$16.00 and \$15.50 per cord, respectively, delivered at destination.

We sold to the Tanners Supply Company, Grand Rapids, Michigan, all the bark we developed during the 1917 peeling season, outside of that sold to the parties mentioned above and 600 cords to the Munising Tannery, at a price of \$11.75 per cord f.o.b. cars loading point. Numerous letters were sent to tanneries in Michigan, Ohio, Pennsylvania, Vermont, North Carolina and New York, endeavoring to make a sale of our bark at an increased price over that obtained last year. \$11.00 per cord was the best offer we could obtain until along in November when the Tanners Supply Company increased their offer to \$11.75. As it was getting late in the season and there did not appear any prospects of securing a better price, we accepted their offer.

A sale was made to the Munising, Marquette & Southeastern Railway Company of all the ties that were produced along their line during the season, estimated at about 50,000, at the following prices:

6" & 7" Cedar	60¢
Culls	35¢
6" & 7" Hemlock	50¢
Culls	25¢

In December a sale was made of the pulpwood which we will develop at the Grondin Job to the Central Paper Company, of Muskegon, Michigan; the prices being \$10.00 per cord for unpeeled spruce and \$7.00 per cord for unpeeled balsam and hemlock, all f.o.b. cars Newberry.

WORK DONE FOR THE BENEFIT OF OUTSIDE DEPARTMENTS.

No work of this nature performed this year.

NEGAUNEE CEMETERY.

During the year court proceedings were taken in order to have the cemetery vacated and to compel the persons who had bodies remaining therein to

remove same. After the proper notice was published in the City's official paper the matter came up for hearing before Judge Flannigan and the attorneys for Mr. Watters and Mr. Muck were the only ones that appeared in Court. Agreement between their attorneys and ours resulted in allowing Mr. Muck \$250.00 for his claim and Mr. Watters was to receive \$150.00 and an additional \$100.00 attorney's fee, making a total of \$500.00 to be paid these parties. The other parties having bodies in the cemetery were not represented in court and a final decree of vacation was granted by Judge Flannigan.

It was later learned that Mr. Muck stated that he had not agreed to accept \$250.00 and that he should receive a much larger sum, and his attorney accordingly opened the matter up at the next term of court and at a hearing before Judge Flannigan he denied the application for the rehearing of the case and an order was entered to that effect. Mr. Muck has no further recourse in this matter unless he appeals to the Supreme Court.

The only other matter of importance that came up during the year was the raising of three bodies for Michael Scanlon and his wife to view. Mr. Scanlon is the party we defeated in the Minnesota courts during 1916. These three bodies that we raised were the ones that he claimed his child was among or buried near, but upon raising them he refused to identify anyone of them as his child. Everything possible was done in an effort to locate the body of his child but up to the present time we are unable to find same.

getting out forest material from the north district. The lands being operated were located along the large areas of wet-over-land and so very quickly dried up. On May 15th fire broke out and in spite of the work of a large crew of men the company suffered a loss of approximately \$1,000.00 and the Contractor twice that amount. There is little doubt but that this fire was caused by sparks from the locomotive, the property of a contractor named Olds, who was logging in this vicinity. An attempt was made to prove Olds responsible, but, like all attempts along this line, little was accomplished. The Olds case and that of LeComber, who caused the recent Sully Valley fire, seems to prove that unless there is absolutely unrefutable evidence little can be accomplished in the courts by a suit for damages.

ANNUAL REPORT OF THE FORESTER FOR THE YEAR ENDING

DECEMBER 31st, 1917.

During the past year the Forester's time has been taken up with the various duties connected with his position but principally in the inspection of the several logging operations being conducted by this Department.

FOREST FIRES.

Protective organizations of the Upper Peninsula report fewer fires each year. These results are brought about in a large measure by the educational campaign carried out along the line of fire prevention. The spirit of cooperation between the various protective organizations, and the public in general, was more thoroughly exemplified in the past year than ever before.

With the one exception of the fire at Birch, this company suffered very little through fire losses during the last year. At several times during the Spring, manufactured forest products were endangered, but due to the early discovery and prompt and efficient action by crews of men from the various camps, little harm was done. In the early part of May the fire situation was exceptionally bad. After the snow melted there was little or no rain so that slashings became very dry; even though in the mature green timber considerable snow remained.

Birch Fire:

This situation was particularly acute at Birch where the company was getting out forest material under the Raish Contract. The lands being operated were located close to large areas of cut-over land and so very quickly dried up. On May 15th fire broke out and in spite of the work of a large crew of men the company suffered a loss of approximately \$1,000.00 and the Contractor twice that amount. There is little doubt but what this fire was caused by sparks from the locomotive, the property of a contractor named Olds, who was logging in this vicinity. An attempt was made to prove Olds responsible, but, like all attempts along this line, little was accomplished. The Olds' case and that of Lacombe, who caused the recent Rumely Valley fire, seems to prove that unless there be absolutely unrefutable evidence little can be accomplished in the courts by a suit for damages.

Other Fires:

At Fredeen's Camp No. 2 a small fire occurred, which, though causing no damage, endangered a large amount of forest products.

At Grondin's operation north of Newberry, another fire occurred and only through the efforts of a large crew of fire fighters was serious damage averted.

The above case seems to prove conclusively that only by the maintenance of an efficient system of fire patrol and the piling and burning of slashings around landings can we hope to combat this fire danger. Special picked men should be put on during the one or two months of greatest danger and some system worked out, such as the registering at various points, to see that these men patrol faithfully. This Department's greatest risks are at Fredeen's two camps and on Grand Island. At least one man should be located at each of these operations and I should advise that two be put on Grand Island. In addition telephone communication should be established between Underhill's Camp and other points on the Island. This seems to me to be of exceptional importance.

Due to the operations of other concerns scattered holdings belonging to this company are left in large areas of slashings. These lands should be operated as soon as possible.

REFORESTATION.

During the Spring of 1917 the cut-over hemlock lands on Grand Island were reforested; 50,000 white, 35,000 Norway and 15,000 Scotch Pine seedlings were planted. A new method of doing this work was tried out; short handled, double bitted axes were used. After the stroke the axe was turned right and left thus leaving a triangle hole. After the seedling was placed, the holes were closed by foot pressure. The trees were planted rather thickly, about two and a half to three feet apart, and the species were, as far as possible, alternated, thus reducing the danger from fire, snow and wind breaks and insect enemies. The results were most satisfactory and last Fall fully eighty per cent of the seedlings were living and in a healthy condition. The above

method of planting resulted in relatively cheap cost of doing the work and a planting cost of \$5.25 was realized; this also included the cost of the seedlings. Considering the low price of seedlings, it would seem that close planting is the proper method, thus making it possible for a larger death rate without re-stocking.

Other Reforestation:

Outside of the work discussed above, no reforestation has been done by this Department. The risk from fire and taxation makes the reforestation of cut-over lands a very unattractive proposition. It seems to be the consensus of opinion now, however, that the wisest policy for the State to pursue is to encourage the reforestation and holding of timber lands rather than to compel the owner to harvest the crop because of excessive taxation. There is no question but that future Legislatures will work out some plan so as to encourage the reforestation of cut-over lands. Many of the States have passed laws exempting growing timber from taxation and Michigan cannot much longer ignore this important matter.

BLACK ASH HOOPS.

The operations of the hoop makers on the Fredeen Job have been continued during the past year and approximately \$900.00 has been realized for stumpage on timber of little or no value for other purposes. It has been found expedient to have the operations of the hoop makers follow all logging so that any material which will make merchantable logs can be taken out and the remaining ash timber can then be worked up into hoops. We are now engaged in looking up the proposition of selling black ash timber by the cord. By this proposition we hope to obtain a closer utilization of the material and be enabled to manufacture larger quantities. The above plan would more-over solve the difficulty now experienced in obtaining efficient hoop makers.

DOWN TIMBER.

The past two years have been characterized by exceptionally high

winds, which resulted in the falling of considerable timber, particularly hemlock. Most of this material is scattered, making its recovery difficult and expensive. It has been found hard to induce contractors to pick up this material but we find that the small farmers are willing to pay a good stumpage price for the privilege of picking up these logs which they later cut into lumber for their own use.

SCATTERED TIMBER.

On some of the company's holdings there has remained after lumbering operations small quantities of scattered timber, which have been left for some reason or other. Where there is enough of this material to pay, small jobbers have been put in to recover as much of it as is possible. In the case of the more scattered and poorer material, however, it seems far better to include this in the cost of the land. In this way the new farmer has the means of making a little money by working up this material in the Winter, and at times which would otherwise be wasted, and the company could receive a fair price for stumpage.

SETTLERS.

Considerable of the Forester's time is devoted to work among the settlers and it is becoming apparent that conditions have improved considerably in the last year or two. This is shown in the better appearance of the small farms; the increase in dairy stock and the falling off of the demand for loans. With some of the poorer class of farmers, however, the big price paid for labor have induced them to give up, temporarily, farm work.

INTRODUCTION OF SHEEP.

The introduction of sheep should do wonders for the Upper Peninsula but it should be borne in mind that if the proposition is one of raising sheep, that is to say, feeding during the severe winter months, a much better grade of soil is necessary than if it is merely a fattening proposition. The soil must be of sufficiently good quality to raise the crops for winter feeding.

NURSERY.

The Nursery was sold with the Coalwood Tract. It is in our estimation far cheaper for the company to buy their planting stock from the large commercial nurseries than attempt to raise it themselves.

TRESPASS.

The Forester has been unable to devote much of his time to trespass work during the past year because of other work. As far as possible, however, the lands most liable to trespass have been inspected. It is, in our estimation, advisable that the Forester have an assistant who, when not engaged in working with the Forester, can devote his time to looking for trespasses. The bare fact that there is someone constantly in search for trespass has a very healthy influence and it should be always remembered that the proposition is more one of trespass prevention than of trespass detection.

TAMARACK.

The work of the larch fly seems to be gradually dying out in the Upper Peninsula, and most of the tamarack which still remains alive, will, I think, survive. The largest part of this material, however, is dead and rapidly deteriorating. An effort is now being made to recover as much as possible of this material and this work should be pushed vigorously. However, even though sap rot has started in, the heart of the timber is usually found to be sound and unimpaired. This material though dead can be used to good advantage by the Mining Department and they should realize in making their specifications that a little sap rot does not detract from the strength of this material if the heart is sound. If they wish to obtain Tamarack, they must expect to have a large percentage of it dead.

LOGGING CONTRACTS.

This Department now has eleven contractors producing various products along the Munising, Marquette & Southeastern, Chicago & North Western, and Duluth, South Shore & Atlantic Railroads. These men have done exceptionally

February 14th, 1918.

Fayette District:

Mr. C. V. R. Townsend, Land Agent,

Building.

Dear Sir:-

I beg to submit the following as my annual report for 1917:

THE CLEVELAND-CLIFFS IRON COMPANY

SALES OF LAND & TIMBER:

From the following statement you will get an idea as to the prices obtained in the various tracts in which sales of land and timber were made during the year:

District	Number of sales	Acreage	Total Am't of sales	Timber Value	Avg.Amt. of sale	Avg.Price per Acre.Land Only
Rumely-Chatham	17	869.44	\$ 6620.00	\$ 246.75	\$ 389.41	\$7.33
Trenary	12	763.50	5935.00	232.50	494.58	7.46
Cooks	2	120.00	600.00		300.00	5.00
Fayette	4	389.50	3820.00	2247.00	955.00	4.01
Maple Ridge	7	558.09	6160.00	3331.25	880.00	5.07
Minnesota	7	280.04	2130.00	150.75	304.29	7.06
Miscellaneous	11	1222.21	8705.80	3041.25	791.43	4.63
Total	60	4082.72	\$33370.80	\$9384.50	\$ 556.18	\$5.87

Rumely-Chatham & Trenary Districts:

Twenty-nine sales; these were made principally to Finns from Chatham, Trenary, Rumely, Eben, Gwinn, Ishpeming and Negaunee. Some sales were made to other nationalities from Gladstone and Marquette; no sales to Hollanders and Belgians during the year. A large portion of these sales were made through the Marquette County Land & Insurance Company and Wm. Wright of Gladstone. They received a commission of 5% on these sales.

Cooks District:

Only two sales were made in this district during the year;

280 acres remain unsold.

Lumbering Department and allied industries at Minnising.

Fayette District:

These lands are under the exclusive sale of the Fayette Land Company. The principal sale in this district during the year covered our holdings on Little Summer Island.

Maple Ridge District:

We were fairly successful in disposing of a large part of our holdings in this district during the year. Seven sales aggregating 558.09 acres were made; there remains only a few scattering descriptions in this vicinity and we believe that another year or two will dispose of these.

Minnesota Lands:

Seven sales aggregating 280.04 acres were made during the year. We received quite a number of inquiries and believe that these lands will work off gradually.

Miscellaneous:

The principal sales under this heading are: the holdings of this company included in the Coalwood Tract and sale to Father Pinten of 313.01 acres in Sections 19 and 30, 48-25; the balance is made up of sales in various parts of the Peninsula.

Surrendered and Cancelled Contracts:

Three contracts covering previous year's sales, two in the Rumely District and one at Trenary, were surrendered or cancelled during the year. All of these contracts covered lands that are desirable and we do not expect to have any trouble in disposing of them again.

Collections:

The collections of the various Sales Receivable Accounts were very good, with the result that a number of the contracts were paid up and deeds issued.

SALE OF TIMBER:

There were no sales of timber to parties outside of the

Lumbering Department and allied industries at Munising.

LOT SALES:

The only sale was to R. J. Black covering Lot 7, Burt & Ely's Addition, Marquette, for \$110.00. The sale to Otto E. Olson covering the Carp Furnace Office Building and Lot for \$275.00 was cancelled as he found it impossible to make the first payment and keep up the contract.

RENTED BUILDINGS:

Of the 37 houses of this company 34 were occupied practically all the time, the other three were occupied only a part of the time. One building, No. 127, was sold to Tony Petroni November 1st, 1917, for \$200.00. The earnings amounted to \$4,761.68; this is approximately \$260.00 less than for the year 1916, due to the Belden residence being vacant for four months and two of the other buildings being occupied only a portion of the time. The total operating cost amounted to \$6,788.08, of which the repairs amounted to \$4,295.57, or \$189.73 less than for the year 1916. The taxes increased over \$100.00 and depreciation \$1060.00. The operation of the houses show a loss for the year of \$2,026.40. The extraordinary repairs were as follows: stone foundations and basements built under Houses Nos. 3, 4, 5, 8, 9, 10 and 11; sewer connections for Houses Nos. 121, 122, 123 and 124; house No. 125 was raised up, water and waste connections made, the interior changed somewhat, and in fact the entire building given a general overhauling; house No. 103, the water pipes were renewed, some new floors put in, a new partition and some cleaning; house No. 104, roof was repaired, some new floors put in and some cleaning; house No. 112, new floors, windows fixed, storm sash and some cleaning; house No. 208, kitchen re-plastered, new floor in bathroom and some other minor repairs; house No. 209, roof broken in by snow and had to be repaired. The Assistant Auditor's residence was painted and considerable repairs to the Agent's house. A number of the Jackson houses are very old and on this account the repair item is high each year.

The uncollected rent at the end of the year amounted to \$378.51. This is a reduction of \$195.64 over the balance due at the end of the year 1916 and we hope to effect a further reduction during the year 1918.

GROUND RENTS:

The net earnings from leased lots and lands increased approximately \$370.00 over the year 1916. The uncollected rent at the end of the year was reduced approximately \$1600.00. The accounts are in very good shape with the exception of a very few and these we are watching very closely.

NEW LEASES:

The new leases issued during the year covered the lots in the Lake Angeline Location, a few lots in the Salisbury Location, two or three new lots in the C. I. M. Co's 2nd Addition and several land leases near the National Mine and Hematite Location and a number of camping leases. The annual rentals on these new leases is in the neighborhood of \$350.00.

LAND PRODUCTS SALES - \$618.25:

This item is made up as follows:

Sale of Wire Grass	\$ 75.00
3393 loads of gravel and sand	342.75
30 loads of stone	7.50
2100 cu. yds. of Rock used by Negaunee City Crusher	42.00
Sales of Hay	151.00
Total	\$618.25

BELLEVUE & CLIFFS FARMS:

These farms were leased to the same parties during the year, the former to Jacob Ahola for \$300.00 and the latter to John Kuisti and Albert Lindberg for a rental of \$70.00.

IMPROVEMENTS:

General Conditions:

The improvement work done by the company in the various locations several years ago is holding up very well. The gradual im-

THE MINING COMPANY

provement in the appearance of these locations through work done by tenants in fixing up fences and buildings is still going on and the locations are presenting a better general appearance from year to year.

NEW WORK:

No new work was done by the company during the year. I wish to call attention again to the conditions existing in parts of the Marquette, Hard Ore and Barnum Locations, previously reported. In the Barnum Location particularly the situation is bad and we had complaints from the Ishpeming Health Officer several times during the summer on account of the poor sanitary condition of this location. It seems that something should be done to put this location in proper shape.

The Jackson Storm Sewer which was started in 1916 was completed during the year and the City of Negaunee also completed its sanitary sewer in the Jackson Location. This will result in better sewer facilities for this part of town and will mean a great improvement of the sanitary condition of that Location.

The only new street work done by the City of Ishpeming affecting any of the company lots was on West Empire Street. This was improved and next year the sidewalks will be built. This new work should stimulate the leasing of our lots in the C. I. M. Co's 2nd Addition, in fact, three new lots were leased during the Fall in that location.

GARBAGE COLLECTION & CLEANING:

This work was again carried on in the various locations in the City of Ishpeming and the expense amounted to \$543.04. Included in this is \$41.77 covering some filling done in the Hill Street alley.

SALES OF TIMBER:

No sales of timber except to allied industries at Minising during the year.

THE MUNISING COMPANY

SALES OF LAND & TIMBER:

The following statement shows the number of sales, acreage, etc. made in the various districts during the year:

District	Number of sales	Acreage	Total Am't of sales	Timber Value	Avg. Am't of sale	Avg. Price per Acre. Land Only
Rumely-Chatham	5	300.00	\$ 2340.00	\$	\$ 468.00	\$ 7.80
Brimley	1	80.00	1000.00	190.00	1000.00	10.12
Miscellaneous	4	13654.72	30504.20	607.00	7626.05	2.19
Total	10	14034.72	33844.20	797.00	3384.42	2.35

The remarks under The Cleveland-Cliffs Iron Company with reference to the Rumely-Chatham District will apply to this Company also.

Brimley District:

Only one sale of 80 acres was made in this district during the year. We had a number of inquiries but the timber remaining on most of our lands in that vicinity is a detriment to their sale for agricultural purposes. We have so far been unable to interest any one in the purchase of the timber and do not think that we will have much success in disposing of the land until the timber is cut off.

Miscellaneous:

The principal sale under this heading is the company holdings included in the Coalwood Tract and the sale of 3,060.46 acres to Chester A. Pelser in Superior Township, Chippewa County. This sale covered barren lands of practically no agricultural value.

Cancelled Contracts:

Three contracts covering previous year's sales in the Rumely District were cancelled or surrendered during the year. The lands covered by these contracts are all well located and desirable and we should have no trouble in disposing of them again.

SALES OF TIMBER:

No sales of timber except to allied industries at Munising during the year.

The total earnings were \$468.00. Repairs amounted to \$219.00 and re-
LOT SALES - \$560.00:

only the necessary work in the way of cleaning and minor repairs.

This represents the sale of six lots in Block 3, Anna River Addition. There were no sales of Chatham lots during the year.

MUNISING HOUSE & LOT SALES - \$1,750.00:

This item is represented by the sale of Lot 6, Replat of S $\frac{1}{2}$ of Block 12, Original Plat, to John H. Anderson.

The payments on the various house and lot contracts are being watched closely with the result that there is only one contract,

viz., that held by Stuesser, that is very far in arrears. We expect to make some disposition of this contract as soon as a purchaser can be found for the property.

RENTED BUILDINGS:

Nine houses were occupied the entire year; the house at the Au Train Water Power Station up to the time of its transfer to the Mining Department and House No. 7 up to the time of its sale November 1st. Included in the houses of this company are the Beach Inn and Manufacturers' Hotel. The total earnings amounted to \$4,458.82. The total operating cost was \$7,586.56, showing a loss of \$3,127.74. The repair item amounted to \$3,219.55 made up principally of \$2,324.62 on the Beach Inn covering cost of renewal of equipment and interior decoration, and \$557.47 on House No. 1B covering the cost of building a new kitchen and doing considerable interior decorating and repairs to roof.

Taxes, insurance and uncollectible accounts amounted to \$1720.60 and the depreciation to \$2,646.41. The uncollected rent at the end of the year amounted to \$575.80. Some of this has been paid since the books were closed and the largest part of this item is made up of rent due from the Manufacturers' Hotel.

COLLECTIONS:

Practically all BUNKER HILL MINING COMPANY

RENTED BUILDINGS:

The five houses of this company were tenanted the entire year.

These have been paid since the books were closed and all will be taken
The total earnings were \$468.00. Repairs amounted to \$219.00 and repre-
sents only the necessary work in the way of cleaning and minor repairs.
The total operating cost, including insurance and taxes and depreciation,
amount to \$312.86, leaving a net earning of \$155.14. There was no uncol-
lected rent at the end of the year.

LAND PRODUCTS SALE - \$24.00:

This represents the sale of hay on two parcels in the old
Nursery.

COLLECTIONS:

The only item remaining uncollected at the end of the year
was \$65.08, represented by 1917 taxes, charged to the Consolidated leases.
year:

MICHIGAMME COMPANY

RENTED BUILDINGS:
House No. 46 was the only building rented during the year. The
earnings amounted to \$60.00. No repairs. Taxes and insurance, which in-
clude Houses No. 1 and 4, amount to \$92.53, showing a loss of \$32.53.

LOT SALES - \$170.00:

Represented by the sale of the $\frac{1}{2}$ of Lot 138, including the
house thereon, and those portions of Lots No. 192 and the $\frac{1}{2}$ of No. 191
lying above the 1556 foot elevation. We had very few inquiries for lots
at Michigamme during the year.

SALE OF HOUSES:

Besides the sale of House No. 24 located on the $\frac{1}{2}$ of Lot
138 mentioned above, we disposed of House No. 8 to Robert Moore for \$75.00.
We have only Houses Nos. 1, 4 and 46 unsold and we will endeavor to dispose
of at least Nos. 1 and 4 during the year 1918.

COLLECTIONS:

Practically all the rents were collected during the year. The
item of \$76.39 uncollected at the end of the year represents the 1917 taxes
charged to the various leases in the month of December. A large portion of

these have been paid since the books were closed and all will be taken care of during the present year.

AMERICAN IRON MINING COMPANY

The timber on the lands of this company was sold to The Piqua Handle & Manufacturing Company during the year for \$27,000.00. We also received \$1.00 from them for railroad right-of-way across some of this Company's lands. The only other revenue is \$30.10 interest collected on outstanding land contracts.

M. M. & S. E. RAILWAY COMPANY

The following is a statement of the lots sales made during the year:

W. H. Acker, Lots 23 & 24, Blk. 1, O. Plat	\$ 475.00
John Yell, Lots 14 & 15, Blk. 13, Home Add.	190.00
M. M. Bonz, Lot 8, Blk. 13, O. Plat	385.00
Andrew Olson, Lot 21, Blk. 8, O. Plat	225.00
Robert Wingate, Lots 10 & 11, Blk. 1, Anna River Add.	40.00
Algot Norlin, Lot 1, Blk. 9, O. Plat	305.00
Malcolm McDougall, Lot 2, Blk. 6, Home Add.	215.00
Eric P. Norberg, Lot 2, Blk. 9, O. Plat	285.00
Wm. Anderson, Lot 17, Blk. 3, Home Add.	115.00
Total	\$2,235.00

COLLECTIONS:

The collections on the various outstanding contracts continue good and there are only one or two in arrears. The uncollected rents at the end of the year amounted to \$46.32, more than half of which has been collected since the books were closed. We expect to clean up the balance during the year 1918.

Respectfully submitted,

A. J. Erickson
.....

AJE:S

THE CLEVELAND-CLIFFS IRON COMPANY

LAND DEPARTMENT

STATEMENT OF FOREST FIRES OCCURRING DURING YEAR 1917 AS REPORTED BY THE VARIOUS DEPARTMENTS OF THE CLEVELAND-CLIFFS IRON COMPANY

REPORT NO.	DATE 1917	LOCATION	OWNER OF LAND			CAUSE			PREVENTABLE OR NOT	ATTRIBUTABLE		QUANTITIES AND KINDS.	LOSS VALUE			LOSS VALUE TO OUTSIDE PARTIES	ITEM
			COMPANY	CO. LAND SOLD	OTHER PARTIES	SPARKS FROM ENGINE	FARMERS BURNING BRUSH	MISCELLANEOUS		TO PRACTICES OF COMPANY	TO PRACTICES OF OUTSIDE PARTIES		TO LAND DEPT.	TO LBRG. DEPT.	TO RY. DEPT.		
1	March 1	Gastham Depot			1	1			Yes		1	Hole in roof 2 ft. long				Small damage to roof	1
2	May 10	Marquette - West Yard			1		#		"		1	Few shingles on shanty				Roof switchmen's shanty	2
3	May 11	NW 1/4 of NW 1/4 of Section 12-48-14	1				0		?			40 acres dead grass					3
4	May 13	1 1/2 miles west of Birch			1		(1)		Yes		1	Grass on right-of-way					4
5	May 13	Eagle Mills			1			1	"		1	Grass on right-of-way					5
6	May 14	1 mile frm Birch - South & East			1			(2)	"		1	Brush					6
7	May 14	Isnpeming - Between North Lake Interlocker & Mile Post #21			1				1		1	Dry Grass					7
8	May 14	Mitchell			1			0	?			Brush					8
9	May 15	NE 1/4 of Section 32-50-26	1				(2)		?			1670 posts, 282 poles, 50 cds Spruce Pulp, 600 cds. Cordwood & 50 cds Bark	\$1012.40			\$2598.40 to Contractor, E. Raish. Total loss \$3610.50 to all parties	9
10	May 16	Lawson - Bunn's Spur			1		1		Yes		1	Grass on right-of-way					10
11	May 16	Skandia - Opposite Bunn's Spur			1		1		"		1	Grass & stumps					11
12	May 17	1/2 mile East New Coalwood			1			0	?			Brush outside rt-of-way					12
13	May 17	Ferguson		1				0	?			15 acres light brush					13
14	May 19	SE 1/4 of SW 1/4 of Section 33-48-25	1				1		Yes		1	1 acre brush & grass					14
15	May 20	3 Telegraph poles west of Vail			1		1		"		1	Brush on rt-of-way					15
16	May 29	Big Bay-2 1/2 miles west of Antlers			1		1		"		1	Brush					16
17	May 29	Marquette - West McReavys Siding			1			0	?			Grass outside rt-of-way					17
18	May 29	Marquette - McReavy's Siding			1			1	Yes		1	Grass west side track					18
19	June 12	1 Mile west of Harvey			1			(3)	"		1	Dry grass on rt-of-way					19
20	July 1	Isnpeming - between Cliffs Shaft & old Cliffs Shaft grade	1				1		"		1	Fire in black muck					20
21	July 29	Hennigan-Camp 4, Pedrie Siding			1			0	?			No damage					21
22	Nov. 14	1/2 mile east of Rumely			1		1		Yes		1	Burnt side of pole					22

LED:D

CAUSE	QUANTITY	VALUE
Caused by sparks from Engine	10	10,000.00
" " Farmers burning brush	1	100.00
" " MISCELLANEOUS		100.00
# Defective Chimney	1	100.00
0 Unknown	6	600.00
(1) Cigar Stub or Pipe	1	100.00
(2) Presume started by Old's Logging Engine	2	200.00
(3) Defective Engine Pan	1	100.00
TOTAL	22	10,800.00

THE CLEVELAND - CLIFFS IRON COMPANY

LAND DEPARTMENT

COMPARATIVE STATEMENT OF RECEIPTS FOR YEARS 1917 AND 1916.

R E C E I P T S	1917	1916
Alger County Farm	500.00	500.00
Greenhouse Sales - Outside Parties	900.00	4,458.35
Greenhouse Sales - Other operations		165.74
Earnings from Rented Buildings	4,761.68	5,021.84
Lot Rents - Pendill Location	182.00	182.00
Junction Do.	360.00	360.00
Winthrop "	148.00	148.00
Salisbury "	99.00	72.00
Barnum "	528.00	528.00
Excelsior Iron Co's Addition	12.00	12.00
C. I. M. Co's 1st Addition	1,901.02	1,901.02
Do. 2nd "	580.50	586.00
" 3rd "	2,937.00	2,918.50
" 4th "	77.00	90.00
" 5th "	1,120.00	1,120.00
Nebraska Location	135.00	135.00
Bancroft "	228.00	228.00
Hard Ore "	750.00	750.00
Marquette "	1,101.00	1,095.00
Hematite "	28.00	28.00
J. I. Co's Addition	1,190.14	1,167.00
P. I. Co's 2nd Addition	90.00	
Munising Location	55.00	
Land Rents	8,235.38	7,592.14
Sales of Real Estate and Timbered Lands	19,115.00	51,078.46
Sales of Farm Lands	13,065.80	9,990.00
Sales of Town Lots	2,345.00	290.00
Sales of Cordwood	19,599.97	1,934.38
Sales of Forest Products	37,822.63	39,513.66
Trespass Cases	219.56	163.14
Sales of Bark	1,703.45	1,498.25
Land Products Sales	618.25	201.78
Profit on Sales of Tax Titles	479.92	4.77
Sales of Timber	8,604.00	6,800.90
Sales of Forest Products Produced - Outside Parties	14,595.16	19,627.26
" " " " " - Other Operations	12,377.00	10,055.25
Miscellaneous Sales of Machinery and Equipment	200.00	125.00
Miscellaneous Earnings	951.79	559.05
Cash Discount on Purchases	228.18	153.30
Interest Received	7,911.29	3,947.90
Collection Fees		.50
Munising Cow Pasture Rental	25.00	
Sundry Rentals	11.00	
Box Shook Earnings	14685.66	
Lumbering Dept. Operations #73 - Outside Parties	16,721.76	
" " " - Other Operations	773.26	
TOTALS -	197,972.40	175,002.19

HJT:FCA

THE CLEVELAND-CLIFFS IRON COMPANY

LAND DEPARTMENT

STATEMENT OF LAND AND TIMBER SALES FOR YEAR - 1917

DESCRIPTION	ACREAGE SOLD	LAND	AMOUNT OF SALE TIMBER	TOTAL	REMARKS	CANCELLATION
Lot 9, W $\frac{1}{2}$ of NE $\frac{1}{4}$ and SE $\frac{1}{4}$ of NE $\frac{1}{4}$	Sec. 19-50-22. Minn. 5-42-22	40.00	290.00	290.00		C.3105-1/17-Jacob Maki, NE $\frac{1}{4}$ of SW $\frac{1}{4}$ Sec.7-45-21. 40.00-300.00
SW $\frac{1}{4}$ of SE $\frac{1}{4}$	25-46-26 "	118.09	840.00	360.00	1200.00	
NW $\frac{1}{4}$ of SW $\frac{1}{4}$	32-47-18 "	40.00	265.00	55.00	320.00	C.2775-12/17-Alex Maki, SW $\frac{1}{4}$ of NE $\frac{1}{4}$ NW $\frac{1}{4}$ of SE $\frac{1}{4}$, 4-43-21 80.00-530.00
E $\frac{1}{2}$ of NE $\frac{1}{4}$	28-42-17	40.00	330.00	420.00	750.00	C.2792-12/17-Victor Siltala, W $\frac{1}{2}$ of SW $\frac{1}{4}$, 32-46-22.
SW $\frac{1}{4}$ of SE $\frac{1}{4}$	13-47-29	80.00	400.00		400.00	S. of R.R. 57.07-360.00
SE $\frac{1}{4}$ of SW $\frac{1}{4}$	32-44-21	40.00	300.00		300.00	177.07-1190.00
SE $\frac{1}{4}$ of NE $\frac{1}{4}$	21-28-19	40.00	320.00		320.00	
SE $\frac{1}{4}$ of NE $\frac{1}{4}$	34-50-23 Minn.	40.00	283.50	16.50	300.00	
Lot 4, S	5-46-25 "	40.09	246.25	13.75	260.00	
NE $\frac{1}{4}$ of SE $\frac{1}{4}$	25-46-26 "	40.00	340.00		340.00	
Marquette County Road	Sec. 17, 18 19-47-26		1.00		1.00	
SW $\frac{1}{4}$ of NW $\frac{1}{4}$ 5, SE $\frac{1}{4}$ of NE $\frac{1}{4}$ 6,	43-21 "	80.00	650.00		650.00	
SW $\frac{1}{4}$ of NW $\frac{1}{4}$	3-46-25 "	40.00	282.50	37.50	320.00	
SE $\frac{1}{4}$ of SW $\frac{1}{4}$	32-42-17	40.00	200.00		200.00	
Part of Lot 6,	18-46-29	32.00	1500.00		1500.00	
S $\frac{1}{2}$ of SW $\frac{1}{4}$	33-44-21	80.00	600.00	20.00	620.00	
NE $\frac{1}{4}$ of SE $\frac{1}{4}$	9-45-21	40.00	280.00		280.00	
NW $\frac{1}{4}$ of NE $\frac{1}{4}$	31-46-22	40.00	220.00	80.00	300.00	
SW $\frac{1}{4}$ of NE $\frac{1}{4}$	31-46-22	40.00	260.00	40.00	300.00	
SW $\frac{1}{4}$ of NE $\frac{1}{4}$	16-41-24	40.00	251.00	49.00	300.00	
NW $\frac{1}{4}$ of NE $\frac{1}{4}$	2-43-21	158.71	1200.00		1200.00	
NW $\frac{1}{4}$ of NW $\frac{1}{4}$	23-46-22	40.00	260.00		260.00	
Part of SW $\frac{1}{4}$ of NW $\frac{1}{4}$	4-41-22	.82	250.00		250.00	
NW $\frac{1}{4}$ of NW $\frac{1}{4}$	3-43-21	41.34	300.00		300.00	
SW $\frac{1}{4}$ of NW $\frac{1}{4}$	31-46-22	36.34	273.25	126.75	400.00	
NW $\frac{1}{4}$ of NW $\frac{1}{4}$	32-47-18	40.00	255.50	144.50	400.00	
N $\frac{1}{2}$ of NW $\frac{1}{4}$	11-43-21	80.00	600.00	50.00	650.00	
S $\frac{1}{2}$ of NW $\frac{1}{4}$	11-43-21	80.00	600.00	50.00	650.00	
NW $\frac{1}{4}$ of NE $\frac{1}{4}$	5-43-21	41.83	300.80	25.00	325.00	
SE $\frac{1}{4}$ of NE $\frac{1}{4}$	19-46-22	40.00	320.00		320.00	
NE $\frac{1}{4}$ of SE $\frac{1}{4}$	19-46-22	40.00	280.00		280.00	
SE $\frac{1}{4}$ of SE $\frac{1}{4}$	32-44-21	40.00	300.00		300.00	
NE $\frac{1}{4}$ of NE $\frac{1}{4}$	33-46-22	40.00	300.00		300.00	
N $\frac{1}{2}$ of NW $\frac{1}{4}$	19-46-22	77.82	600.00		600.00	
SE $\frac{1}{4}$ of NE $\frac{1}{4}$	26-46-22	40.00	260.00		260.00	
SE $\frac{1}{4}$ of NW $\frac{1}{4}$, E $\frac{1}{2}$ of SW $\frac{1}{4}$ & W $\frac{1}{2}$ of SE $\frac{1}{4}$	13-42-23	200.00	814.25	1165.75	1980.00	
School Site NW $\frac{1}{4}$ of NW $\frac{1}{4}$	16-46-27	1.00	25.00		25.00	
Right of Way SE $\frac{1}{4}$ of NE $\frac{1}{4}$	2-50-32		1.00		1.00	Conv. 3291
NE $\frac{1}{4}$ of NW $\frac{1}{4}$	4-43-21	41.62	300.00		300.00	
NW $\frac{1}{4}$ of NE $\frac{1}{4}$ & NE $\frac{1}{4}$ of NW $\frac{1}{4}$	29-46-22	80.00	640.00		640.00	
Holdings on Little Summer Island		229.50	653.00	2247.00	2900.00	
NE $\frac{1}{4}$ of SW $\frac{1}{4}$	10-43-21	40.00	300.00		300.00	
NW $\frac{1}{4}$ of NE $\frac{1}{4}$	15-47-24	40.00	67.00	183.00	250.00	
N $\frac{1}{2}$ of NE $\frac{1}{4}$	19-46-22	80.00	600.00		600.00	
Fayette Cemetery Site		.98	1.00		1.00	
Church "		2.07	1.00		1.00	
Right of Way, S $\frac{1}{2}$ of SW $\frac{1}{4}$ of NW $\frac{1}{4}$	4-41-22	2.05	50.00		50.00	Conv. 3313
NW $\frac{1}{4}$ of NE $\frac{1}{4}$ & NE $\frac{1}{4}$ of NW $\frac{1}{4}$	13-42-23	80.00	355.00	585.00	940.00	
SW $\frac{1}{4}$ of NE $\frac{1}{4}$	13-42-23	40.00	161.50	398.50	560.00	
S $\frac{1}{2}$ of S $\frac{1}{2}$ & N $\frac{1}{2}$ of N $\frac{1}{2}$	30-48-25	313.01	955.25	2244.75	3200.00	
NE $\frac{1}{4}$ of NE $\frac{1}{4}$	13-42-23	40.00	175.50	324.50	500.00	
Lot 3,	5-46-25 Minn.	39.95	272.00	28.00	300.00	
SE $\frac{1}{4}$ of NE $\frac{1}{4}$	13-42-23	40.00	162.50	297.50	460.00	
NW $\frac{1}{4}$ of SE $\frac{1}{4}$	13-42-23	40.00	185.00	335.00	520.00	
NE $\frac{1}{4}$ of SW $\frac{1}{4}$	19-46-22	40.00	300.00		300.00	
SW $\frac{1}{4}$ of NE $\frac{1}{4}$	19-46-22	40.00	300.00		300.00	
Right of Way NW $\frac{1}{4}$ of NE $\frac{1}{4}$	26-48-31		1.00		1.00	Conv. 3260
SW $\frac{1}{4}$ of NW $\frac{1}{4}$ & NW $\frac{1}{4}$ of SW $\frac{1}{4}$	19-46-22	75.28	620.00		620.00	
NE $\frac{1}{4}$ of SW $\frac{1}{4}$	35-46-22	40.00	280.00		280.00	
NW $\frac{1}{4}$ of NE $\frac{1}{4}$	33-44-21	40.00	252.50	87.50	340.00	
Part of Coalwood Tract		630.33	1575.80		1575.80	
NW $\frac{1}{4}$ of SE $\frac{1}{4}$ & SE $\frac{1}{4}$ of SE $\frac{1}{4}$	19-46-22	80.00	580.00		580.00	
TOTAL		4082.78	23986.30	9384.50	33370.80	

	UNPLATTED LANDS							PLATTED LANDS			TOTAL	MINERAL RIGHTS RESERVED IN SALES	
	FEE	SURFACE ONLY	MINERALS ONLY	LEASED MINERALS	MINING OPTION	TIMBER ONLY	LEASED SURFACE	WATER RIGHTS	FEE	SURFACE ONLY			MINERALS ONLY
Total Acreage as per Acreage Statement December 31st, 1916	475175.63	71133.81	2096.91	2816.99	53696.96	33959.66	321.35		172.12	63.44	283.49	639720.36	42695.61
Purchased in 1917 (1)	770.25	340.00				80.00			.10	.16		1422.05	
Cancelled Contracts (2)	120.00	57.07										177.07	120.00
Total	476065.88	71530.88	2096.91	2816.99	53696.96	34039.66	326.60	226.29	172.22	63.60	283.49	641319.48	42575.61
Sold in 1917 (3)	3931.07	165.00	.49 (4)						.15	.60		4096.33	3930.58
Surrendered							880.00					880.00	
Total	3931.07	165.00	.49				880.00		.15	.60		4976.33	3930.58
Total Acreage as per Acreage Statement Dec. 31, 1917	472134.81	71365.88	2097.40	2816.99	53696.96	33159.66	326.60	226.29	172.07	63.00	283.49	636343.15	46506.19

(1) Pur. Nos. 1807, 1812, 1817, 1818, 1820, 1833, m1836, 1837.
 (2) Conv. Nos. 2775, 2792, 3105.
 (3) Sales as above plus Conv. Nos. 3206, 3277, 3236, 3239, 3270, 3312, 3353.
 (4) Conv. No. 3206 - Marquette County Gas & Electric Co., on iron formation in Marquette County.

THE CLEVELAND-CLIFFS IRON COMPANY

LAND DEPARTMENT

STATEMENT OF LANDS PURCHASED AND EXPENSES INCURRED ON ACCOUNT OF LAND TRACTS FOR THE YEAR 1917.

PURCHASE	GRANTOR	PURCHASE NO.	ACREAGE	PURCHASE PRICE.	ABSTRACTS & RECORDING	LEGAL EXPENSES	TAXES	TOTAL
Donahoe	Mrs. Catherine Donahue	4			.75			.75
Muck	Charles Muck & Wife	592			2.00			2.00
Trueman (Tax)		1687					5.18	5.18
Caples(Carp River Water P.)	David G. Caples	1793			3.75	2.50		6.25
Pioneer Iron Company	Pioneer Iron Company	1799			4.00			4.00
State Exchange	Public Dom.Comm. of Mich.	1817	770.25		6.75			6.75
M. M. & S. E. Ry.Co.Pur.	M. M. & S.E. Ry. Co.			80167.45				80167.45
Total			770.25	80167.45	17.25	2.50	5.18	80192.38

OMC:CH
2-7-18
3

32

THE CLEVELAND-CLIFFS IRON COMPANY

LAND DEPARTMENT

LAND ACREAGE - DECEMBER 31ST. 1917.

TOWN	RANGE	UNPLATTED LANDS								PLATTED LANDS			TOTAL	MINERALS RESERVED IN FARM LAND SALES
		FEF	SURFACE	MINERALS	LEASED MINERALS	MINING OPTION	TIMER ONLY	LEASED SURFACE	WATER RIGHTS	FEF	SURFACE	MINERALS		
43	5	400.00											400.00	
44	7	400.01											400.01	
45	7	235.31											235.31	
46	7	851.26											851.26	
47	7	338.81											338.81	
48	7	497.70											497.70	
49	7	44.00											44.00	
44	8	76.88											76.88	
46	8	2311.92											2311.92	
47	8	6957.72											6957.72	
48	8	4222.30											4222.30	
49	8	3763.04											3763.04	
50	8	160.00											160.00	
44	9	40.00											40.00	
47	9	17477.35											17477.35	
48	9	2553.11											2553.11	
49	9	800.00											800.00	
45	10	1440.00											1440.00	
47	10	13895.47											13895.47	
48	10	12815.29											12815.29	
49	10	1508.85											1508.85	
43	11	480.00											480.00	
44	11	277.00											277.00	
46	11	4582.55											4582.55	
47	11	11262.40											11262.40	
48	11	17174.86											17174.86	
49	11	40.00											40.00	
46	12	15514.00											15514.00	
47	12	16684.42	198.41										16884.42	
48	12	19261.22	160.00										19421.22	
49	12	4709.41											4709.41	
50	12	359.65											359.65	
45	13	320.00											320.00	
46	13	833.25											833.25	
47	13	2347.32											2347.32	
48	13	12724.15	114.51										12838.66	
49	13	15960.85											15960.85	
50	13	164.35											164.35	
46	14	720.00											720.00	
47	14	5230.41											5230.41	
48	14	13252.01	553.68										13805.69	
49	14	8706.37	360.00										9066.37	
46	15	3993.37											3993.37	
47	15	6889.76	320.00										7209.76	
48	15	12123.12											12123.12	
49	15	4810.91	393.59										5204.50	
46	16	535.96											535.96	
47	16	2182.57	240.00										2422.57	31.06
48	16	6204.95	495.37										6700.32	
49	16	1004.60	600.00										1604.60	
41	17													5797.51
42	17	120.00											120.00	1680.00
46	17	2885.71											2885.71	
47	17	7345.35	200.00										7545.35	200.00
48	17	4276.15	201.00										4477.15	
39	18	32.43											32.43	
41	18	160.00											160.00	800.00
44	18	135.78											135.78	80.00
45	18	360.00											360.00	
46	18	5328.49											5328.49	
47	18	2843.88	120.00										3063.88	717.28
48	18	520.00											520.00	
37	19	175.60											175.60	561.00
38	19	2543.29											2543.29	3615.60
39	19	1371.54											1371.54	1244.21
41	19													360.00
42	19	560.00											560.00	
43	19	520.00					2610.71						3130.71	
44	19	6987.17					5370.67						12357.84	
45	19	502.47	80.66				3856.31						4439.44	630.33
46	19	1543.09	176.35										1719.44	252.73
47	19	929.63											929.63	
48	19	33.60											33.60	
38	20	22.10											22.10	335.90
42	20		279.54										279.54	
44	20	6911.28	40.00										6951.28	
45	20	1052.99	1039.78				780.29						2873.06	
46	20	4871.71	80.00				80.00						5031.71	
47	20	702.01											702.01	
48	20	113.96											113.96	
43	21	1866.43	200.00				360.65						2427.08	3198.28
44	21	3918.14	952.78				1084.80						5955.72	2560.00
45	21	2614.61					2877.51						5492.12	720.00
46	21	6194.97	80.00				320.00						6594.97	
47	21	4274.57											4274.57	861.16
48	21	963.48											963.48	
40	22	113.69											113.69	
41	22	14.93									2.59		116.28	
42	22	160.00											14.93	204.07
43	22												160.00	718.09
44	22													80.00
45	22	6553.63	920.00				440.00						7913.63	
46	22	3912.49	1906.06				2680.00						8498.55	
47	22	4385.00	474.32										4859.32	5418.33
48	22	6726.14	1786.61										8512.75	600.00
39	23	2140.09	279.70										2419.79	
40	23	240.00											240.00	160.00
42	23	240.00											240.00	3149.01
43	23	680.00											680.00	1080.00
44	23	287.31	4595.25										4882.56	39.22
45	23	1379.49	5295.17										6674.66	40.00
46	23	1826.32	10788.40										12614.72	400.00
47	23	2560.00	4609.40										7169.40	

THE CLEVELAND-CLIFFS IRON COMPANY

LAND DEPARTMENT

LAND ACREAGE - DECEMBER 31ST, 1917.

(CONTINUED)

TOWN	RANGE	UNPLATTED LANDS								PLATTED LANDS			TOTAL	MINERALS RESERVED IN FARM LAND SALES
		FEE	SURFACE	MINERALS	LEASED MINERALS	MINING OPTION	TIMBER ONLY	LEASED SURFACE	WATER RIGHTS	FEE	SURFACE	MINERALS		
39	24	40.00											40.00	200.00
41	24	280.00											280.00	120.00
44	24	1880.32	7926.64										9806.96	
45	24	1042.00	4762.00										5804.00	
46	24	1986.37	240.00										2226.37	
47	24	280.00	40.00										320.00	
44	25	614.35			43.23								657.58	
45	25	1562.57	659.49		896.23						59.75		3178.04	1.65
47	25	6201.57	1082.53										7284.10	
46	25	3425.82	280.00							4.90			3710.72	1090.66
49	25	40.14											40.14	831.90
44	26	162.91											162.91	
45	26	927.49											927.49	
46	26	60.00											60.00	
47	26	6183.39	217.41	274.58						41.71	1.95	82.77	8801.81	1810.00
48	26	4250.48	1207.07	26.64	157.50				226.29			3.00	5870.98	770.61
49	26	680.00	4294.40										4974.40	73.04
50	26	200.00	440.00										640.00	80.00
51	26	89.65	570.01										659.66	160.00
47	27	121.68											121.68	
46	27	13614.52	199.98	604.99	160.00			5.25		122.87	.22	197.72	15105.55	916.82
48	27	5055.91	3676.02										8731.93	356.20
49	27	919.28											919.28	
50	27	20.00	100.00										120.00	160.00
51	27	1969.17	79.03										2048.20	
52	27	40.00											40.00	
47	28	1314.79	73.60	75.00	727.94								2191.33	5.00
48	28	954.69											954.69	4.00
50	28	1921.62	789.33										2710.95	160.00
51	28	3320.00	840.00										4160.00	109.05
52	28	200.00											200.00	40.00
49	29	280.00											280.00	
50	29	1627.44	60.00										1687.44	
51	29	4511.88											4511.88	531.40
52	29	3808.37											3808.37	704.25
45	30	46.20	160.00										206.20	
46	30	746.80	320.00										1066.80	185.70
47	30	407.90	1475.36										1883.26	
49	30	640.00											640.00	
50	30	5400.98	1204.26										6605.24	
51	30	5795.77	641.95										6437.72	
52	30	1960.00											1960.00	
48	31	60.00	120.00		160.00								340.00	
49	31	40.00											40.00	
50	31	5530.28	160.00										5690.28	
51	31	218.80	240.00										458.80	
52	31	40.00											40.00	
49	32	160.00	1120.00										1280.00	
50	32	2035.37											2035.37	
47	33	640.00											640.00	
48	33	160.00											160.00	
49	33	4435.14	118.62	36.55			6730.26						11320.57	
50	33	1463.17		40.00			3092.21						4595.38	
43	34		320.00		160.00								480.00	
47	34			982.34									982.34	
49	34	788.24					1036.25						1824.49	
50	34	2495.92					1840.00						4335.92	
43	35		80.00		160.00	288.60							628.60	
48	39													711.57
49	39													480.00
45	29	42.32	167.72										210.04	126.17
46	29	1425.11											1425.11	142.35
47	29	40.00											40.00	80.00
48	30	56.90											56.00	
43	31	115.22											115.22	
42	31				120.00								120.00	
44	33	80.00											80.00	
50	22 Minn.	614.56											614.56	760.00
49	23	189.96		2.50									192.46	
50	23	1007.98		54.80									1062.78	40.00
46	25	120.01											120.01	160.04
47	25	39.75											39.75	
46	26	280.00											280.00	160.00
47	22		119.88		80.00			319.60					519.48	
47	23		40.00										40.00	
58	15				152.09								152.09	
59	15							1.75				1.08	2.83	
45	1E Wis.	133.33											133.33	
41	31 Mich.					42.38							42.38	
42	31					929.79							929.79	
43	31					456.85							456.85	
44	31					835.45							835.45	
45	31					4239.77							4239.77	
46	31					990.00							990.00	
41	32					1493.40							1493.40	
42	32					1360.00							1360.00	
43	32					400.05							400.05	
44	32					2281.50							2281.50	
45	32					5709.45							5709.45	
46	32					4974.49							4974.49	
42	33					1331.00							1331.00	
43	33					519.59							519.59	
44	33					2075.18							2075.18	
45	33					3879.99							3879.99	
46	33					3227.69							3227.69	
44	34					1452.85							1452.85	
45	34					2815.56							2815.56	
46	34					3132.49							3132.49	
43	35					1066.37							1066.37	
44	35					2978.74							2978.74	
45	35					2000.00							2000.00	
44	36					561.40							561.40	
47	32					1597.92							1597.92	
47	33					160.00							160.00	
49	33					1631.69							1631.69	
49	33					80.00							80.00	
47	36					475.82							475.82	
47	36					120.00							120.00	
48	36					440.00							440.00	
TOTALS		472134.81	71365.88	2097.40	2816.99	53696.96	33159.66	326.60	226.29	172.07	63.00	283.49	636343.15	46506.19

THE CLEVELAND-CLIFFS IRON COMPANY AND SUBSIDIARY COMPANIES
 ACREAGE STATEMENT - LANDS OWNED AND CONTROLLED - SHOWING OWNERSHIP BY COMPANIES ONLY
 DECEMBER 31ST, 1917.

COMPANIES	UNPLATTED LANDS								PLATTED LANDS			TOTAL ACRES	ACRES OF LAND NOT TIMBERED "H"	ACRES OF LAND TIMBERED "I"	LANDS ON THE MINERAL FORMATION "J"	MIN. RIGHT RESERVED SALES "K"	
	FEE "A"	SURFACE ONLY "B"	MINERALS ONLY "C"	LEASED MINERALS "D"	MINING OPTION "E"	TIMBER ONLY "F"	LEASED SURFACE	WATER RIGHTS	FEE	SURFACE ONLY "G"	MINERALS ONLY						
CONSTITUENT COMPANIES (Entire stock owned by The C. C. I. Co.) The Cleveland-Cliffs Iron Co. The Munising Company	472134.81 135304.86	71365.88 2924.81	2097.40	2816.99	53696.96	33159.66	326.60	226.29	172.07 25.28	63.00 14.33	283.49	636343.15 136269.28	148655.00 19159.46	487688.15 119109.82	104698.11	46506.19 31634.90	
TOTAL CONSTITUENT COMPANIES	607439.67	74290.69	2097.40	2816.99	53696.96	33159.66	326.60	226.29	197.35	77.33	283.49	774612.43	167814.46	606797.97	104698.11	78141.09	
ALLIED COMPANIES (A portion of the stock only, owned by The C. C. I. Co.) Negaunee Mine Arctic Iron Company Athens Mining Company Munising, Marquette & S.E. Ry. Co. Michigan Mineral Land Company Bunker Hill Mining Company Lucky Star Mining Company	2.40 1083.54 41.76 154.13 28175.62 43.10 49.74	3.49 20.00 834.43	 37.98 10.00 24298.31 10.20	213.36 22.90	 	 	 	 	 41.42 	 3.21 103.53 .27	 222.46 1225.05 74.93 215.55 53308.36 53.30 49.74	 222.46 1225.05 74.93 215.55 53308.36 53.30 49.74	 	 	 	 	198.40 288.02 74.66 52473.99 53.30 49.74
TOTAL ALLIED COMPANIES	29550.29	857.92	24356.49	236.26					41.42	3.48	103.53	55149.39	55149.39			53138.05	
ASSOCIATE COMPANIES (The C.C.I. Co. no ownership but acts agent) American Iron Mining Company Michigan Company	2658.08 1431.82	 275.20	158.42 1.85						37.95		89.89	2816.50 1836.71	2816.50 1370.56	466.15		2816.50 1195.70	
TOTAL ASSOCIATE COMPANIES	4089.90	275.20	160.27						37.95		89.89	4653.21	4187.06	466.15		4012.20	
GRAND TOTAL LANDS OWNED AND CONTROLLED-ALL COMPANIES	641079.86	75423.81	26614.16	3053.25	53696.96	33159.66	326.60	226.29	276.72	80.81	476.91	834415.03	227150.91	607264.12	161848.36	78141.09	

"A" - Lands where entire fee is owned.
 "B" - Lands where surface only is owned.
 "C" - Lands where minerals only are owned in known mineral district
 "D" - Lands where our interest is confined to a mining lease,
 "E" - Lands where our interest is confined to a mining option.
 "F" - Lands where timber only is owned.
 "G" - Lands where we own the entire fee, surface only, or minerals only, in lands which are a part of recorded plats of towns or villages.
 "H" - Lands which have been examined and which reports show do not contain sufficient timber to be classed as timber land.
 "I" - All lands not included in "H". This includes both lands that have been examined and others which have not but which were purchased for timber purposes and are classed as timber lands until such time as reports will show that they are barren either through fire or through operations of the Lumbering Department.
 "J" - Approximate acreage of lands inside the mineral formation as indicated by maps furnished to the Land Department by the Mining Department, April 1914.
 "K" - Acres of minerals reserved in Farm Land Sales, outside of mineral formation.

	UNPLATTED LANDS								PLATTED LANDS			TOTAL ACRES	ACRES OF LAND NOT TIMBERED	ACRES OF LAND TIMBERED	LANDS ON THE MINERAL FORMATION	MIN. RIGHT RESERVED SALES
	FEE	SURFACE ONLY	MINERALS ONLY	LEASED MINERALS	MINING OPTION	TIMBER ONLY	LEASED SURFACE	WATER RIGHTS	FEE	SURFACE ONLY	MIN. ONLY					
Total Acreage December 31, 1916	657883.62	75191.74	26613.67	3053.25	53696.96	33959.66	321.35	226.29	279.38	80.98	476.56	851597.17	236633.97	614923.20	161848.36	60415.79
Purchased during year																
The Cleveland-Cliffs Iron Company	770.25	340.00				80.00	5.25	226.29	.10	.16		1422.05	571.80	850.25		
The Munising Michigan Athens Mining Company (1)	151.92									.27		151.92	151.92			
Cancelled contracts during year																
The Cleveland-Cliffs Iron Company	120.00	57.07							.21			177.07	177.07			120.00
The Munising Company	120.00											120.21	120.21			120.00
TOTAL -	659045.79	75588.81	26613.67	3053.25	53696.96	34039.66	326.60	226.29	279.69	81.41	476.56	853428.69	237655.24	615773.45	161848.36	60175.79
Sold during year																
The Cleveland-Cliffs Iron Company	3931.07	165.00	.49						.15	.60		4096.33	2875.73	1220.60		3930.58
The Munising Company	14034.86								.79			14035.65	14035.65			14034.72
Michigan Company (2)									.35		.35					
Mun. Mar. & S.E. Ry. Co. (3)									1.68			1.68	1.68			
American Iron Mining Co. (4)												2096.50	2096.50			
Surrendered																
The Cleveland-Cliffs Iron Company						880.00						880.00	880.00	880.00		
Miscellaneous (5)													3000.00	3000.00		
The Cleveland-Cliffs Iron Company													1312.23	1312.23		
The Munising Company																
TOTAL	17965.93	165.00	.49			880.00			2.97	.60	.35	19013.66	10504.33	8509.33		17965.30
TOTAL ACREAGE DECEMBER 31ST, 1917.	641079.86	75423.81	26614.16	3053.25	53696.96	33159.66	326.60	226.29	276.72	80.81	476.91	834415.03	227150.91	607264.12	161848.36	78141.09

(1) Purchase No. 1802 and 1815
 (2) Conv. Nos. 3209 and 3235.
 (3) Conv. Nos. 3211, 3241, 3242, 3267, 3279, 3284, 3285, 3300, 3303, 3314, 3326.
 (4) Conv. No. 3250 - Timber only, to Piqua Handle Manufacturing Co. 2653.08 Acres sold of which 561.58 Acres previously classified as non-timbered.
 (5) Represents acreage operated during year and classification changed.

2653.08
561.58
2091.50

THE MUNISING COMPANY

LAND SALES.

But very few sales of this company's lands were made during the year 1917. We were successful, however, in disposing of the Coalwood Tract, the larger part of which is owned by The Munising Company.

The demand for farm lands was not quite as active in 1917 as the previous two years, due largely to the high price paid for all kinds of labor.

A statement showing the land sales for the year is made a part of this report.

SAWMILL PLANT.

The sawmill was operated double shift during the year and produced a total of 21,263,389 feet, of which 19,198,075 were softwood and 2,065,314 feet were hardwood. The average daily production was 79,341 feet. The production cost per thousand feet for the year, not included depreciation, was \$6.43, as compared with \$5.60 for the previous year. The increase is due to the advance made in wages during the year, higher taxes, and a greater insurance cost, due to the larger stock carried.

Shipments during the year totaled 19,353,410 feet; in addition to which there was sold through the retail yard 1,374,179 - a total of 20,727,589 feet. Our inventory of December 31st was 14,608,800 feet, as compared with 14,073,000 December 31st, 1916. We had unfilled orders on our books December 31st for 2,505,000 feet, leaving a balance unsold of 12,103,800 feet.

Night Operations

During the Winter months it frequently was difficult to operate the mill at nights on account of the shortage of labor. We experienced some severe storms and it was practically impossible to get the men to do any outside work during stormy weather. As a rule the production during the night shift was not equal to that during the day.

Lumber Market

The prices prevailing for lumber throughout the year were reasonably fair, with an active demand. The prices kept increasing, due to the inability of producers to get cars and make deliveries. Prices advanced from \$2.00 to \$4.00 over those obtainable during 1916, with a more active demand for low grade hardwoods. The requirements of the Government for cantonment purposes and the needs for crating material stimulated not only the demand for Hemlock but equally so for low grade hardwoods.

The Southern Pine producers were unable to market their product on account of car shortages and embargoes. This resulted in the stocks of most large consuming centers being reduced and prices were stimulated accordingly.

The inability to get cars is a menace to all producers in this part of the country. We are so remote from the usual car centers, and with active business it is difficult to get a fair proportion of the cars in service, except if they come to this country under load. A much greater amount of lumber would have been shipped from the Munising mill had cars been available.

Lath were in eager demand and at excellent prices.

The labor condition was also abnormal; the men working as they pleased, with no assurance that a job once started would be completed. This was very true in the lumber yard, particularly should a storm come up the men would refuse to work, although the mill supplied them with a complete rubber suit.

Log Supply

There was on hand January 1st, 1917 at the mill and in Murray Bay 2,890,844 feet of logs, of which 280,525 feet were hardwood; the balance softwood. Our receipts during the year totaled 16,476,534 feet. Of this quantity 14,759,714 feet were softwood. Included in this was the pine received from M. D. Olds, approximating 6,000,000 feet. The receipts from

the Lumbering Department, which are included in the above figures, were 1,155,713 feet of softwood and 539,917 feet of hardwood. There was a balance on hand December 31st of 816,896 feet, most of which was in Murray Bay.

Our operations were curtailed to some extent during December due to our inability to secure logs. With a few exceptions there were no purchases of logs made from outsiders for the reason that there were very few offerings.

Box Shooks

In order to complete our contract for box shooks with the Goodyear Lumber Company, it was decided to join with the Superior Lumber & Cedar Company in the operation of their shingle mill and produce box shooks. Accordingly during May and June we operated this mill on a fifty fifty basis with the Superior Lumber Company, but it was found to be so unprofitable that we withdrew before having manufactured a sufficient number of box shooks to fulfill our contract. An agreement was made with the Goodyear Lumber Company, whereby they released us upon the payment of \$20,000.00, and a settlement was made with the Superior Lumber Company, whereby we sold them 15,000 pieces of cedar at 15¢ and 35¢. Our total loss, including the settlement with the Goodyear people, totaled \$27,411.99.

Manufacturers Hotel

This Hotel was open during the entire year and was of great assistance in the case of the employes of the industries at Munising. Due to the great increase in costs of foodstuffs, it has been necessary to increase the rates from time to time, yet with these increases in rates, the hotel has not been able to break even, although the loss has been more than offset by the benefits derived from its operation.

Labor Conditions

No difficulty was experienced with the day shift at the mill. With the night crew, however, it was difficult to keep an adequate crew, particularly on wet or disagreeable nights.

An increase of 10%, with an additional bonus of 5%, did not seem to interest the care free men. The large wage earned enabled them to go about at will and as there was work throughout the country for everybody, they appeared to be restless, with a desire to keep moving. The 5% bonus applies to all the men, with the exception of the superintendent, sales manager, cashier, mill wright, night foreman and retail yard foreman; the latter men being placed on a profit sharing basis.

No strikes or serious trouble were experienced with the men about the plant or in our logging jobs, although there were many times when it proved trying to keep things going. The labor employment men were constantly going about the logging jobs and soliciting men to go elsewhere. This sort of agitation resulted in much unrest among the men.

The bonus of 5%, we find, steadied the married men, who did not care to make a change.

Shipments of Products

There was shipped from the mill during the past two years the following number of cars:

	1917	1916
Lumber	465 cars	236 cars
Softwoods		
" Hardwoods	231 "	206 "
Lath	61 "	38 "
Shingles		9 "
Hardwood Squares		4 "
Box Shooks	14 "	53 "
Ties	7 "	3 "
Posts	1 "	1 "
Mixed	10 "	18 "
Pulpwood	157 "	116 "
Hogged Refuse	56 "	116 "
4' Fuel Wood Hard	32 "	50)
4' Fuel Wood Soft	23 ")
Shooks to Veneer Plant		35 "
Sawdust		3 "
TOTAL -	1057 cars.	888 cars

These moved as follows:

All MM&SE	399 cars	385 cars
Via Munising Jct.	141 "	174 "
Via Eben Jct.	39 "	42 "
Via Little Lake	102 "	133 "
Via Doty	<u>376</u> "	<u>154</u> "
TOTAL -	1057 cars	888 cars

Shingle Mill

The shingle mill was not operated during the year.

Planing Mill

This mill was operated continuously. During the time that we were able to secure cars for shipments, the increased capacity of this mill was in use. There were times, however, during the year when, due to inability to get cars, it was necessary to curtail the operations of this plant.

Repairs to Dock

In order to ship by water, and thus make a considerable saving in freight, the pine which was sold to the Fisher & Wilson Company, it was decided to repair the lumber dock. These repairs cost approximately \$13,000.00, and we shipped during the season of navigation approximately 5,000,000 feet, and there remains on the dock 1,255,000 feet. It is likely during the coming year that we will utilize this dock to a considerable extent on account of the inability to secure railroad transportation.

EBEN CRUSHER.

At a meeting of the Alger County Road Commission and the Alger County Board of Supervisors, held August 14th, the purchase of the Eben Rock Crusher and a ten-year lease of the Quarry was authorized. A bill of sale and lease were prepared by Mr. Belden's office, and the sale was completed at a price of \$3,200.00. We are to receive a royalty of 5¢ per ton on all rock removed during the period of the lease, with a minimum of \$100.00 per year.

BEACH INN.

During the past year the hotel was under lease to Mr. Sams and he has been very successful and seems to be enjoying a very fine patronage.

The proposed sale of the hotel to Charles Prohl, of Milwaukee, did not materialize.

Practically the entire interior of the hotel was re-decorated during the year and the necessary replacements of equipment were made. This expense amounted to \$2,324.62.

LOGGING OPERATIONS.

Grand Island Bark Contract - Conveyance No. 2957:

The Munising Leather Company requested that we peel for them during the 1916 peeling season 2,000 cords of bark under the above agreement. The delivery of this bark was completed in August of this year.

They made no request for any specified amount to be delivered from the 1917 peel, and we, therefore, proceeded to deliver the minimum amount required under the contract - that is 600 cords - and of this amount we have delivered in the current year 335 cords, leaving a balance of 265 cords to be delivered during 1918.

The loss on the 2,000 cords required from the 1916 peel was \$10,374.50, on the basis of the bark being charged at the market price. If it was charged at the cost price, the loss would have been \$5,951.17.

E. A. Grondin - Contract No. 257:

On June 1st, 1916, a contract was entered into with E. A. Grondin to remove the timber from certain descriptions in Section 19, Town 46 North, Range 9 West. Our estimates show approximately 620,000 feet of saw timber, 11,900 pieces of cedar, 225 cords of bark, 265 cords of spruce and balsam pulpwood, and 1,175 cords of hardwood.

This job produced 618,000 feet of saw timber, 10,642 pieces of cedar, 325 cords of bark, and 269 cords of spruce and balsam pulpwood. We have been unable to operate any of the cordwood, due to the inability to secure labor. There is yet to be shipped during the Winter of 1917-18 approximately 200,000 feet of saw timber, as well as about 100 cords of pulpwood.

Charles Hammill - Contract No. 258:

The deliveries of bark under this contract, which was entered into in May, 1916, with Charles Hammill, totaled 543 cords. It was delivered to the Tannery by Davenport & Underhill. Our advances to this contractor exceeded the amount he would have received under the contract price by \$960.41.

This amount was closed off to the contract. The transaction showed a profit of \$942.06, which would represent the stumpage received.

Davenport & Underhill - Contract No. 259:

The contract entered into with this firm in May 1916 terminated May 1st, 1917. Under an agreement made August 20th, it was extended to May 1st, 1918, with certain revisions of the prices for logs and bark.

There was delivered to the lake shore 2,643,000 feet of logs, and to the Munising Leather Company (Tannery) 895 cords of bark. Due to the unfavorable ice conditions prevailing, the haul of the bark to the main land was a very expensive proposition and the contractors were unable to deliver all the bark that was peeled. On account of the unexpected difficulties in delivering the bark to the main land, more teams were required than was estimated would be necessary and this delayed the work on the logs so that a million and a half feet that had been cut and skidded were left in the woods.

E. A. Grondin - Contract No. 298:

An agreement was entered into with E. A. Grondin, of Newberry, Michigan, April 2nd, to log certain lands in Towns 46 and 47 North, Range 10 West. These lands carry approximately 3,000,000 feet of saw timber, 2,500 pieces of cedar and 6,000 cords of pulp.

Work was started during the summer and the following material was cut and skidded ready for hauling: 2,300,000 feet of logs, 900 cords of hemlock bark, 4,100 pieces of cedar and 100 cords of pulpwood.

Some delay in the shipping of this material was experienced due to our inability to secure rail for the loading spur.

GRAND ISLAND.

Forest Preserve

No unusual conditions were noted during the year. Some reforestation work was undertaken. See Mr. H. T. Johnston's report -- page 15 and 16.

Deer

The deer are in very good condition and food seems to be plentiful. Apparently the logging operations on the Island provide them with considerable food as we find it difficult to entice them into the traps.

Elk

See Mr. Jopling's report - pages 48 and 49.

Fox Propagation

See Mr. Jopling's report - page 49.

Game Birds

See Mr. Jopling's report.

Predatory Animals

The usual amount of hunting for wolves and coyotes was done during the year. We find traces of these animals occasionally and in the early Spring when the does are heavy with fawn, we frequently find the carcass of a deer that had been killed by some of these animals. A hunt is immediately started and the animal or animals are either killed or driven from the Island. We killed during the year three coyotes.

Hunting

Thirty people availed themselves of the privilege of hunting on the Island. A total of 19 bucks and 5 does were killed.

Sales of Deer

The demand for deer continues very strong and we are unable to fill the orders received. Our shipments totaled 29 deer. It is thought that the logging operations on the Island provide the deer with such additional food that it makes it difficult to attract them to the traps.

Sales of Elk

No sales made.

Pickeral - Echo Lake

The seining of pickeral in Echo Lake resulted in a catch of 200 pounds, as compared to 552 pounds caught in 1916.

Road Work

Due to the scarcity of labor and its high cost, no work was done on the roads, with the exception of the fill on the East Road, which is mentioned in Mr. Jopling's report.

As stated in my report for last year, the wooden bridges, particularly those over one or two of the deep ravines, should be replaced by more substantial structures. In each instance where possible culverts and fills should be used.

Trails

The various trails were cleared of the usual accumulation of brush and undergrowth during the spring.

Docks

No repairs were made on the docks outside of the one at the Stone Quarry Cottage, and a stone crib was put in there to facilitate the unloading of supplies for the logging operations.

East Road from North Light

Since we have started to operate automobiles on the Island, it would seem that some consideration should be given to the completion of this road so as to make a continuous drive around the Island.

Maple Syrup

The syrup season was one of the most favorable that we have ever had. The syrup was of excellent quality and we produced 276 gallons, as compared with 205 gallons the previous year.

Cottage Sites

There were no applications for cottage sites during the year.

Hotel and Cottages

The Hotel was opened June 1st and closed October 26th. It was well patronized during August and September.

An increase in the rates enabled us to keep ahead of the rising costs of foodstuffs.

Summer Tourists

As usual not many people visited the Island during the month of June, and it was well into July before the Hotel was comfortably filled. Automobile parties coming for the week-end are increasing and during the rush season we were unable to accommodate a number of these parties.

Trout Bay Cottage No. 4 was occupied from July 1st to October 15th, and the other cottages were occupied intermittently.

A statement of the number of people who visited the Island is made a part of this report. See page 68.

Improvements

There was considerable criticism among the guests and others that the one particular feature lacking is a suitable building for dances, also possibly bowling. The young people of the present day are not interested in walking and because of the fact that we haven't any golf grounds, there is very little to interest or keep the young people busy, with the result they do not care to come to the Island. This affects some of the parents who do not like to have their families divided. Some improvement of this kind should be made to further attract the people to the Island, so that the present accommodations could be kept filled to capacity during the season.

Electric Light

The present plant is about worn out. The storage batteries are almost useless and as soon as cheap current is obtainable at Munising, a line should be laid across the channel so that the Island can be provided with cheap

light. The installing of a new plant to take the place of the one now in use would cost nearly as much as to lay a cable across the channel. The present electric light wiring on the Island would not have to be changed with the advent of the new current from Munising.

Telephone

Each year there are requests for direct telephone communication with Grand Island. The installation of a telephone would be expensive and unsatisfactory. It would mean the employment of an operator to receive the calls and the expense of this service would be probably greater than the revenue. There has not been a case where necessity required a person to catch a train or otherwise that the guests have not been notified in ample time by telegraph and the message received promptly, and there would be quite as much delay in receiving telephone messages, particularly if the people were out about the Island on picnics, etc. It would seem as though this feature is the last one to be considered in further adding to the interest and welfare of the guests.

ROADS AND TRAILS

The wooden bridge at Station 2 + 50, was the last one built, having become unsafe, was condemned, and instead of rebuilding it, was demolished to fill in the ravine with earth and provide for the stream running through it by laying a corrugated iron pipe 30" in diameter and some 50 feet in length. The contract for this work was let to Underhill, the Junior contractor, who had at the time some spare teams and men on the Island which he could employ while he filled and graded the new road. Some 5000 cubic yards of earth were moved and considerable clearing and grubbing done in widening the right of way in order to get sufficient earth for the purpose.

Some repairs were necessary on the road from Williams Point to the Underhill Camp on account of the traffic. Similar repairs were also made on the Sunn Point Road. Then there was the usual clearing out of fallen trees and brush on all roads and trails.

GRAND ISLAND

REPORT FOR FISCAL YEAR ENDING DECEMBER 31ST, 1917

Mr. C. V. R. Townsend, Land Agent,

Negaunee, Michigan.

Dear Sir:-

During the past year, as you know, no new work was undertaken on the Island, and the small force under Mr. Pringle was employed only in making the usual repairs on roads, trails and the various buildings.

WILLIAMS LANDING

The boat shed built last year at the merchandise dock has been closed in and four compartments built at the north end, with separate doors, as a garage for the Ford cars.

Additional storage being needed for the farm produce, a new root-house (18 x 20) was built beside the original one in the rear of the boarding house.

ROADS AND TRAILS

The wooden bridge at Station 9 + 50, near the East Gate Camp, having become unsafe, was condemned, and instead of rebuilding it, was determined to fill in the ravine with earth and provide for the stream running through it by laying a corrugated iron pipe 30" in diameter and some 60 feet in length.

The Contract for this work was let to Underhill, the lumber contractor, who had at the time some spare teams and men on the Island which he could employ making the fill and grading the new road. Some 2000 cubic yards of earth were moved and considerable clearing and grubbing done in widening the right of way in order to get sufficient earth for the purpose.

Some repairs were necessary on the road from Williams Point to the Underhill Camp on account of the traffic. Similar repairs were also made on the Game Fence Road. Then there was the usual clearing out of fallen trees and brush on all roads and trails.

HOTEL WILLIAMS

There were no changes or additions to the hotel or cottages of any account this season, the work being confined to the usual Spring repairs.

DOCKS

In order to furnish better facilities for unloading supplies for the lumbering operations on the Island, the dock at the Stone Quarry Cottage was enlarged by a stone filled crib 40 x 60.

The landing dock at the head of Murray Bay also received some attention in the way of new planking and stone filling and repairs to cribs.

TROUT BAY

The work here was confined to the building of a small pumphouse and adding a bathroom to N o. 4 cottage occupied by Dr. Schmidt and family. This expense was all borne by Dr. Schmidt, with the exception of the erection of the pump house, which is a small frame structure, costing in the neighborhood of \$50.00.

GAME

The native deer, although perhaps not so numerous as in former years, seem to be holding their own fairly well and appear in good condition. The diminishing number of elk no doubt has given the undergrowth a chance to recover from their destructive feeding, and this, together with the browse furnished by the timber cutting operations on the Island, has contributed to their general welfare. The lumbering operations made it necessary to take down parts of the Paige wire fence along the Game Fence Road, thus permitting the game animals to range freely throughout the Island. The few elk remaining from all accounts are seldom seen although their tracks may be observed along the roads. Now that the game fence is down it is possible for the elk to get to the south end of the Island and thus reach the mainland by swimming the channel, but so far I have heard no reports of their having accomplished this. The hunting and trapping of wolves, or more strictly speaking, coyotes, have been practiced as usual and resulted in accounting for three of them during the year, two by trapping and one by shooting. Of course during the hunting with hounds a number of the animals are driven off to the mainland, but these generally re-

turn shortly afterwards and so the men are kept steadily on the alert for undoubtedly these coyotes kill a great many of the young deer.

The number of elk which come in to be fed in Winter at the Fishing Grounds is now reduced to about three or four, according to Mr. Pringle.

At the Fox Farm there were no additions this year, and no natural increase due to breeding. It is supposed that the mating period, on account of the backward season, occurred later than usual, and that the usual practice of separating the sexes after this period was done too soon. The present stock consists of 15 animals, all of the common red variety, but even these are of considerable value now on account of the great advance in the prices of all furs.

The Albino deer in the enclosure near the old Williams' Arbor seem to be doing well, and it is to be hoped that there will be an increase again this Spring and that they will breed true to type. Mr. George Shiras III is much interested in this herd, and has visited the Island a number of times in order to photograph and observe them. An illustrated article written by him on the Albino deer of Grand Island appears in the March (1918) number of "Field and Stream", a copy of which accompanies this report. They are fed daily by our men with alfalfa, oats and cedar brush in their enclosure of Paige wire fencing which during this season has been enlarged to an area of between seven and eight acres. The herd consists now of four Albino deer, one buck 5 or 6 years old - 2 does, 1 $\frac{1}{2}$ year old - and one 1917 fawn. There are also in the enclosure 7 common does.

When on the Island early in October, Mr. Mather made some inquiries as to the general condition of the game, and particularly as to our efforts to attract wild fowl, there being an unusual number of wild ducks visiting these waters at that time, and he suggested that there be further experimenting with the planting of duck foods.

Accordingly I wrote to Mr. Clyde B. Terrell of Oshkosh, Wisconsin, an expert in this line, and arranged with him to visit the Island for an examination and report. With your approval Mr. Terrell came up and spent the 29th, 30th and 31st of October on the Island, making a survey of its waters which

included Echo Lake, Duck Lake and Murray Bay, at the same time planting 100 pounds of Wild Rice seed that he had brought with him. The results of his survey are embodied in his report recently received, a copy of which is made a part of this report.

I was with him during the three days of his visit and although the weather was very stormy and unfavorable, with a fall of fully 6" of snow, his examinations were evidently made with great care and consisted in soundings to get at the character of the bottom in all these waters and also to determine the kinds of aquatic growth to be found there. After reviewing the results of Mr. Terrell's examination of the waters of Grand Island I am satisfied that there is a good prospect of making successful planting of duck food under his direction, and the promise of it I think would justify the effort and expense involved. The fact that Mr. Hill of Grand Marais succeeded some years ago in getting Wild Rice established on the Sucker River, some 12 miles east of that place, goes to show that there is nothing to prevent its growing in this region. The main requirements for success are reliable seed and protection from the ravages of muskrats and deer before the new growth has covered a sufficient area to establish itself. The muskrats are particularly destructive as they begin to feed on it as soon as it begins to appear above the surface of the water in the Spring. Mr. Hill told me that the muskrats created such havoc during the first Spring he planted the rice that he was obliged to employ a man to watch the marsh who by shooting and trapping succeeded in disposing of over 100 rats. The deer damage is chiefly by trampling and later on by feeding on the seed before it is ripe. The other duck foods mentioned in the report, consisting of aquatic plants and bulbs, of course are not so subject to these attacks as they grow in deeper water and merely reach the surface.

Our former efforts at planting wild rice seed and wild celery were unsuccessful largely by reason of their poor condition when they reached us. As is well known now, the seed of Wild Rice loses its power of germination if allowed to dry out. For this reason it requires great care in keeping it moist while in transit and planting it with as little delay as possible.

The usual way is to seed it immediately after gathering in the Fall, but of course in this way a considerable percentage of the seed is apt to be picked up by the wild fowl and muskrats unless ice forms immediately afterward. In order to overcome this loss, some seed houses advocated planting in the Spring, and for this purpose kept it in cold storage during the Winter to be delivered to customers in the Spring as soon as the waters were clear of ice. We tried this plan, as you will remember, for two seasons, but it is my opinion that the seed stored in this way quickly spoiled and accounted for the lack of success with it. Another cause of failure in other attempts was due to trying to cover too much area with the seed and also planting where the bottom was not suited to its growth. You of course have noted Mr. Terrell's recommendations for planting duck foods in Echo Lake, Duck Lake and Murray Bay according to the conditions he found there.

I would particularly call your attention to his remarks on Duck Lake which he found best suited to the growth of Wild Rice on account of its shallowness and black muck bottom. This Lake, therefore, I regard as the one which should receive our closest attention and facilitate in every way the growing of the rice during and after seeding. I agree with Mr. Terrell in his suggestion that we surround Duck Lake with a fence to keep out the deer until the rice becomes established. We have plenty of fencing for this purpose since we took down the Paige game fence on account of the lumbering operations. While examining this Lake with Mr. Terrell we observed quite a number of muskrats and a number of their winter houses. We succeeded in shooting several and after seeding it will be necessary to employ some one to watch the place and keep it clear of these rodents.

At the end of Mr. Terrell's report you will notice a list of seeds and plants with quantities, that he recommends for the Spring and Fall planting for the season of 1918. In order to secure the Spring supply

he advises us to notify him as early as possible, as on account of the great demand for these duck foods the supply is limited, and our order if delayed may arrive too late. The Spring planting should be done just as soon as the ice goes out, and I, therefore, would suggest that the order be forwarded as soon as possible.

Albino Deer on Grand Island

By Geo. Morris Ed

Special Assistant Game Protector

Yours truly,

A. O. Jopling,

Engineer in Charge.

DURING the past few years the south shore of the island of Grand Island, one of the most fertile and fertile. The island is about 10 miles long and 10 miles wide. It is situated in the middle of the Great Salt Lake, and is about 20 miles from the shore of Utah. The island is a part of the California-Texas boundary, and is a part of the same. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit.

It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit.

It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit.

It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit.

It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit.

It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit.



It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit.

A very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit.

It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit. It is a very fertile island, and is a very interesting place to visit.



Albino Deer on Grand Island

By Geo. Shiras 3d

Director, American Game Protective Association

LYING athwart the entrance of one of the few deep bays on the south shore of Lake Superior is Grand Island, ever true to its name in size and beauty. Terminating the westerly end of the famous Pictured Rocks, its giant, sandstone cliffs of 500 feet face 150 miles of open water, while the nearly land-locked waters on the inner side afford the only natural harbor for 200 miles. This was the camping place of the Chippewa Indians for many centuries, and, later, a Hudson's Bay Post, with the interesting life incident thereto, was established there.

By a Providential happening, this beautiful island has been saved from the ravages of the axe and the too deadly use of the gun, for a number of years ago it was acquired by a mining and lumber company when purchasing a larger tract ashore. Unlike many of the pioneer corporations of the West, this concern has always shown a commendable interest in the welfare of the various communities in which it carries on business, by endeavoring to leave a fair equivalent in place of that which must be destroyed. It was this spirit which led to an extensive effort to protect the native wild game and to introduce new or foreign species most likely to succeed in this northern country. Starting with a hundred or more deer, moose were introduced, together with elk, caribou, black-tail deer, antelope and several hundred pairs of Scandinavian game birds. For the use of the last-named thousands of young Scotch firs were planted to provide their natural winter food. The results of this experiment are interesting and of value for the future.

The native white-tail won the day against all enforced intruders, except the elk. In these two species, therefore, we have the ones best adapted for the unoccupied ranges throughout the more easterly part of the country. A continued closed season on an island, however, big as it may be, will finally bring most animals face to face with an unavoidable enemy—starvation. Thus it became necessary to supply food in winter, besides shipping hundreds of deer and surplus elk to parks and game preserves, followed still later by an open season on the deer.

If, however, this long and costly effort to make Grand Island the permanent home of many new species has proved disappointing, an unexpected reward has come, which may eventually prove of

greater value and interest than the fulfillment of the original plan, viz: the establishment of a beautiful herd of albino white-tail deer. One of the fundamental characteristics of the Michigan deer has been the general uniformity in physical appearance, for, though more deer have been killed in Michigan the past forty years than the aggregate elsewhere, there are very few freaks in antlers or extremes in weight, while albinism has been extremely rare.

Only once, in the long period that I have hunted or photographed these animals in this region, have I seen an albino, and that one lingered for a year and a half about my camp, which is situated midway between Marquette and Grand Island. Signs were put up in the neighborhood reading: "Do not shoot the white deer—it will bring you bad luck." But, though the first part of the appeal stayed the hand of the sportsman, and the latter that of most pot-hunters, it was finally killed by an unsuperstitious homesteader, and the heretofore unsuccessful efforts to photograph it ended.

Some eight years ago word came that a fine albino buck had been seen frequently on Grand Island and that it came to a little pond on the easterly part of the



AN 8-POINT ALBINO BUCK

Island. Taking a camping outfit, a canoe and my guide, several days and nights were spent watching the pond, and, although other deer came during the day, or were seen under the jacklight, the white buck did not appear.

The next year the quest was no more successful, and when I heard that on the opening of the season the buck had been killed by a lumberjack, it was satisfactory to know that the body had been shipped to a taxidermist in Detroit, preparatory to being added to the little museum of the Island Hotel. There, later, I took the

measurements of the antlers and body, and, then, to show what a striking picture such a marbled figure would present, with a background of black, the mounted animal was carried one evening to the edge of the forest, where once it had roamed, and the flash was fired. Feeling quite confident from the age of this buck that white descendants would sometime be found on the island, a very careful watch was maintained.

ABOUT the middle of June, 1916, a white fawn only a few days old was discovered in a thicket and brought to the hotel. Here, with careful attention and in the company of another fawn it grew rapidly. During the earlier months this fawn had the usual row of white spots on the back and sides, and, although there was no difference between these and the body color, they were conspicuous in the same way that satin needlework in a single color may carry a varied pattern. Shortly after this a good-sized albino buck was noticed loitering about the box-traps set for capturing deer that were to be shipped away, and with little effort it was trapped, and placed in a smaller range with half a dozen ordinary does. In June, 1917, one of these does bore an albino doe fawn, which lacked, however, the white spots of the previous one.

By this time the first fawn had become a yearling and was placed in the same enclosure. Last fall I learned from a member of the Michigan Sportsmen's Association that there was a yearling albino doe at the State Game Farm, and in a few weeks it was safely transported to Grand Island, where such an addition, in new blood, will prove of undoubted value. With the three white does, a white buck, and the addition of a number of other does, the ensuing spring should tell the story of this effort.

IT may be of interest to note that the original buck weighed about 150 pounds and possessed a rather extraordinary set of antlers, spreading twenty-six inches, with terminal points much farther apart than any I have ever seen. The velvet on the antlers of both bucks was snow white, giving them a most statuesque appearance amid the green foliage of the forest. The eyes of the three native albinos are a very light grey-blue, while the doe from the southern portion of the State has the usual red eye-balls. The lack of any pigment in the layers of the retina of this individual discloses the red blood-vessels that characterize most albinos and makes it very susceptible to a bright light. The second buck differs from the original one in being somewhat larger, but it has two long, upright spikes of about eighteen inches, the left one of the last two years being slightly forked.

While the writer has been under the impression that the offspring of albinos were usually white and on and after the third generation uniformly so, following the rule in silver and black foxes, Dr. James G. Needham, Professor of Biology at Cornell, writes: "I would say that full albinos of both sexes should breed true from the first, albinism being, insofar as known to me, a purely recessive character among mammals." Such assurance, therefore, makes the problem less difficult, and in the absence of accident or disease, there should soon be a permanent herd of these interesting animals. As time goes on specimens of this new and beautiful phase of the white-tail will find representation in our zoological parks.

DEVELOPMENT

OF

FEEDING GROUNDS TO ATTRACT WILDFOWL

AT

GRAND ISLAND

GAME PRESERVE

UPPER PENINSULA, MICH.

Showing where plantings of wild
rice seed were made in the fall
of 1917, and giving plans for
future development.

EXAMINATION, PLANTING, AND REPORT

made by

GLYDE B. TERRELL

SPECIALIST ON THE DEVELOPMENT OF

ATTRACTIVE PLACES FOR BIRDS, GAME, AND FISH.

DUGGAN BUILDING

OSHKOSH, WISCONSIN.

Date of Examination
October 29th--November 1st, 1917.

PREFACE

Food is the most essential thing for all living things. Man, animal, and bird all require it. Migratory birds and wild waterfowl especially go where they find necessary, desirable, and attractive feeding grounds. Famed wildfowl resort owe their reputation to the abundance of necessary food plants which are to be found in the vicinity.

By propagating plants which attract wildfowl, many formerly unattractive places have become famous as wildfowl feeding grounds.

From the writer's observation, former plantings of wildfowl attractions made at the Grand Island Game Preserve, did not bring the most desirable results either because (1) germinable planting material was not used, (2) plantings were not made in the most favorable places, or they were not given ample protection from muskrats or deer which destroy them.

The writer's purpose in this report is to insure the best success in attracting wildfowl and propagating plants which are their natural food, by showing (1) just what plants are best suited to the conditions and purposes in view at the Grand Island Game Preserve, (2) where, and (3) in what quantities, each kind of planting material should be planted to produce the best results, (4) what form of planting material should be used in each case, whether seed, bulbs, tubers, roots, or young plants, (5) when to plant, and (6) the methods of protecting the plants from deer, muskrats, and other destroyers.

.....

ECHO LAKE REPORT.

Results of Former Plantings of Wild Rice.

An investigation of former plantings of wild rice seed made here, indicates that there was some degree of success with the plantings. It is said that the wild rice made a stand the first season. At the time of this investigation, the season was so far advanced that frost had destroyed much vegetation. A solitary stalk of wild rice, which apparently had seeded that fall, was noted in one of the bays on the east side of the lake.

Deer are exceptionally fond of wild rice and may eat considerable during the summer before it ripens.

Wild Rice Planted Fall 1917.

During the writer's investigation, twenty pounds of wild rice seed was planted in two bays on the west shore of this lake where the most suitable bottom was found.

Plantings Recommended for Making Attractive Feeding Grounds for Wildfowl at Echo Lake.

1. Wild Celery (*Vallisneria spiralis*)- (the most attractive food for bluebills, redheads, and canvas backs). Winterbuds or plants transplanted in the spring, bring quickest results. The seed (obtainable for planting only in September and October) brings good results in time but takes longer to produce results and mature plants.

2. Water Cress (*Nasturtium officinale*)

Plants for transplanting in streams leading into and out of this lake. It is attractive to wild ducks and furnishes green salad for the table in winter months where the stream is open, as well as in summer.

3. Wild Sago (*Potamogeton pectinatus*)

One of the best all round duck foods. Recommend planting tubers or roots in spring or seed in September. Tubers or roots usually bring quickest results.

I can recommend the three above plants as being best adapted to conditions found at Echo Lake and reasonably sure of bringing results there. They are also highly approved of as wild duck foods by the United States Department of Agriculture.

Water

Supplied from springs, fresh and well suited to the growth of most water plants.

Chemical tests showed water to be free from any substances injurious to growth of water plants.

Depth: Near the shore and in bays of this lake, the lake averages from two to six feet in depth - a suitable depth for the growth of many water plants. The center of the lake out thirty rods from shore, is much deeper, too deep, in fact, for successful planting of aquatic plants.

Soil

The soil at the bottom of this lake is, for the most part, very sandy, especially along the east and south shores. However, in a number of bays and places located along the north and west shores of this lake, the sandy soil is covered with a layer of rich soft soil, chiefly humus or decayed vegetation. It is best to make plantings where the layer of soft soil is found as the soil in these places will produce the best growth of vegetation.

Wild Fowl

A few bluebills were noted on Echo Lake at the time this examination was made. Many more bluebills and other kinds of wildfowl, especially the diving ducks such as the redhead and canvasback, would undoubtedly be induced to stop on this lake if there was plenty of suitable food there for them.

Vegetation

Vegetation Noted: Very little vegetation of value as food for wildfowl was noted in this body of water. There is a quite heavy growth of Bulrushes (*Scirpus*), bordering the east shore of the lake and a bed of Waterlilies (*Nymphae*) is found along the north shore of the lake. While a hungry

bird may be tempted to eat parts of these plants at times, the wise duck soon departs to a place where he can get something better.

Wild Rice (*Zizania aquatic*) seed, which was planted in small quantities experimentally in two of the bays on the west shore of this lake, may produce desirable results. Duck Lake, however, seems a more desirable place for making wild rice plantings because it has a larger area of soft bottom covered by shallow water and wild rice planted there, can be more easily protected from deer. On the other hand, Echo Lake seems to have the better conditions for growing Wild Celery, Wild Sago, and Water Cress. These plants recommended for planting, need no protection for deer.

Quantity

The quantity of material recommended for planting will be given at the end of this report.

DUCK LAKE REPORT

Water

The water is supplied from springs and is of about the same nature as that in Echo Lake.

Chemical tests showed that the water is free from any substance injurious to the growth of water plants.

The depth, however, shows a considerable difference from that of Echo Lake, being much shallower here. No parts exceed ten or twelve feet in depth; five or six feet would be an average depth and many places are much shallower. The shallow water of this lake affords suitable places for planting one kind or another of wild duck foods in every part of the lake, and the depth is such that ducks can reach their food without diving great distances. For this reason, this lake can be made an exceptionally attractive place for mallards, black ducks, and other shallow water feeders.

Soil

The soil at the bottom of this lake, while sandy in a few places, is for the most part of a soft rich nature, at the surface, either a sandy loam or humus and decayed vegetation and excellent for growing water plants.

Vegetation

During the writer's investigation, he planted Wild Rice seed in two suitable places in Duck Lake. There was not sufficient seed, however, to cover all the desirable area. It would be a good plan to sow more Wild Rice seed next spring, all around the edge of the lake where not sown last fall. With proper care, an excellent field of wild rice would be available when the wild ducks arrive next fall.

Plantings Recommended for Making Attractive Feeding Grounds for Wildfowl at Duck Lake

1. Wild Rice (*Zizania aquatica*). No one needs to speak of the fame of Wild Rice. If I were to confine myself to planting any one duck food, I would select Wild Rice if I had a suitable place to plant it. It is eaten in one form or another by practically all varieties of wildfowl. It is especially attractive to shallow water ducks such as the mallard, black duck, and teal. In the writer's opinion Duck Lake offers the best place on Grand Island for planting Wild Rice. To get the quickest results with Wild Rice, plant the seed in the spring.

2. Wild Sago (*Potamogeton pectinatus*). The merits of Wild Sago have already been spoken of in the Echo Lake Report. It is an excellent duck food and produces seed in the size and appearance of wheat, and an abundance of tender white runners and tubers. To get the quickest results, plant the tubers or roots of Wild Sago in the spring. The seed may also be planted in the fall, but it usually takes a longer time to produce results than from the roots.

3. Wapato or Duck Potato (*Sagittaria arifolia*). This plant produces an abundance of tubers and tender white runners which are eagerly sought for by wild ducks and other waterfowl. Mallards, Widgeon, Bluewing Teal, Greenwing Teal, Canvasbacks, and Canada Geese are especially fond of this plant.

Near St. Paul, Minnesota, countless numbers of Mallards are attracted to beds of these plants, where they fill themselves to the throat with the tubers. A bed of Duck Potatoes can be best started by transplanting the tubers in the spring.

Protection of Plantings at Duck Lake.

As deer and muskrats, as well as wildfowl, are very fond of Wild Rice and Duck Potatoes, some means should be taken for protecting Wild Rice fields and Duck Potato beds at Duck Lake from the deer and muskrats.

Protection from Deer

It is advised that plantings of Wild Rice and Duck Potatoes at Duck Lake be protected from deer, by running a high wire fence entirely around the lake. There is plenty of wire and posts available on the Island for this purpose, that were used in making an enclosure for elk and moose, which are not now in use, and there would be no expense except putting the wires around the lake. The wire could probably be nailed to trees, and few posts would be required. This should be done as early as possible before growth starts in the spring. Personally I would recommend putting up this fence to protect the plantings before further plantings of Wild Rice or Duck Potato are made at Duck Lake, and I think it should be done anyway to protect the Wild Rice already planted there. With such protection an excellent stand of Wild Rice should be produced; without such protection the results would be more or less doubtful.

Deer damage Wild Rice chiefly by eating off the seed heads before the Wild Rice goes to seed. This is likely the reason that former plantings of Wild Rice have not been more successful. Wild Rice reproduces from seed alone and will not grow from roots the following season if the seed is destroyed. About the first of October, after the Wild Rice has seeded, openings could be made in the fence, if desired, and the deer could be allowed to feed on the Wild Rice as there would be no danger of them destroying the seed at this time and the Wild Rice would prove to be a valuable and attractive feeding place for deer as well as for wildfowl.

Protection from Muskrats

Muskrats sometimes do considerable damage to both Wild Rice fields and Duck Potato beds. They eat the Wild Rice roots, and tender Duck Potato plants, runners, and tubers, and cut down both the plants to use in building their houses.

It is usually a simple matter to rid a small lake like Duck Lake of muskrats by shooting, trapping and spearing. A good dog will also catch many of them.

At the present time when muskrat hides bring from fifty to seventy-five cents each, the hides should more than pay for the expense of catching these muskrats. The writer engages men to trap a few hundred acres of muskrat marsh and finds it more profitable than running a farm.

Methods of catching muskrats as well as stretching and caring for the hides and other information is ably set forth in a bulletin of the United States Bureau of Biological Survey entitled "The Muskrat". This bulletin may be obtained free by writing the Secretary of Agriculture, Washington, D. C., asking for Farmer's Bulletin 356, "The Muskrat". In trapping muskrats the writer has found that No. 1 $\frac{1}{2}$ Newhouse steel trap is most suitable for the purpose.

MURRAY BAY REPORT

Water

It will be noticed by looking at a map of Grand Island, that Murray Bay is a more or less sheltered arm of Lake Superior. As it faces the main land, it is not subject to as heavy seas as those parts of the island facing out into the open lake, still there is considerable wash of waves around the shores of the bay at times. This fact makes it undesirable for planting Wild Rice, but as shown in the planting plan for Murray Bay, both Wild Celery (*Vallisneria spiralis*) and Wild Sago (*Potamogeton pectinatus*) may be planted there to good

advantage. From the plantings recommended, in time, Wild Celery may spread to desirable places all over the bay, and the bay would become an exceptionally attractive place for such ducks as the Bluebill, Redhead, and Canvasback.

Depth: The water in the coves or inlets along the shores of the bay is shallow and well suited to the growth of Wild Celery and Wild Sago, the average depth being perhaps three or four feet. Farther out in the Bay, the water is deeper, but it is not too deep in many places for the growth of Wild Celery which will grow in water up to fifteen feet deep.

Soil

The soil of Murray Bay is for the most part with sand or sandy loam but in the coves where the plantings of Wild Sago and Wild Celery are recommended, a covering of soft rich soil is usually found.

Vegetation

No vegetation of importance as food for wild ducks was noticed at Murray Bay. A growth of coarse grass and rushes borders the shores.

Former Plantings of Wild Rice

The writer was told that Wild Rice planted at Murray Bay had made a growth but had disappeared. The writer's opinion is that the wash of the waves was the cause of this, and consequently Wild Celery and Wild Sago which are better adapted to this condition are recommended for future plantings, instead.

Muskrats in considerable numbers were noted at Murray Bay and may have been responsible to some extent for destroying former plantings of Wild Rice. It is suggested that the muskrats in these and other waters on Grand Island be trapped as closely as possible as a protective measure.

Plantings Recommended for Making Attractive Feeding Grounds for Wildfowl at Murray Bay

1. Wild Celery (*Vallisneria spiralis*). Transplant the winter buds or young plants in the spring to produce the quickest results.
2. Wild Sago (*Potamogeton pectinatus*). Transplant the tubers or roots in the spring or the seed in the fall.

These plants, which are best adapted for planting at Murray Bay have been discussed in more detail here-to-fore in this report.

CONCLUSION

The examination of Grand Island shows that reasonably certain success can be had with a number of plants that will attract, and provide food for, wild-fowl, provided plantings are made in the most favorable places as shown by planting plans, and are given reasonable protection.

The plants recommended are held in very high favor as wild fowl attractions by the United States Department of Agriculture, and sportsmen throughout the United States and Canada. I can recommend them for making the waters and grounds at Grand Island more attractive to wildfowl, more valuable as real estate, and for bringing greater enjoyment to the owners of the Grand Island Game Preserve and their guests.

Requirements for Planting

This is the material that I think will produce the best results, and I have suggested the quantities I would recommend planting. I can collect the material for you at the following prices.

Spring 1918 Planting

350 lbs. Wild Rice seed	\$ 164.50
6 crates Water Cress plants	50.00
* 1500 Duck Potato bulbs	60.00
* 1050 Wild Sago tubers	63.00
* 4000 Wild Celery winter-buds	160.00

Fall 1918 Planting

1 1/8 bu. Wild Sago seed	33.12
200 lbs. Wild Celery seed	<u>64.00</u>
	\$594.62
Less 12 1/2% discount if paid before Mar. 1, 1918	<u>74.33</u>
	\$520.29

*Note: To insure best and quickest results and simplify planting, it is suggested in the case of Wild Celery and Wild Sago to make one-half of the planting in the spring in the form of winter-buds and tubers, and one-half of the planting in the fall in the form of seed.

Planting

Please give notice as to the amount of planting material to be reserved for your planting as the demand often exceeds the supply. Place your order early and the material will be collected and sent you at the most favorable time for planting. Early order means - early shipment - early planting - and quick results.

Plantings attended to if desired at reasonable rates.

Further information given gladly.

THE MUNISING COMPANY
LAND DEPARTMENT

STATEMENT OF LAND AND TIMBER SALES FOR YEAR 1917.

DESCRIPTION	AMOUNT OF SALE				REMARKS
	ACREAGE SOLD	LAND	TIMBER	TOTAL	
Certain Lands in Chippewa County	3060.46	3093.00	607.00	3700.00	C. 3233
" " " 45-14 & 15, & 46-15		25.00		25.00	"Delinquent Lands" Not carried on A.Statement
W $\frac{1}{2}$ of NE $\frac{1}{4}$ of SE $\frac{1}{4}$ 1-46-19	20.00	320.00		320.00	
NW $\frac{1}{4}$ of NE $\frac{1}{4}$ & S $\frac{1}{2}$ of NE $\frac{1}{4}$ of NE $\frac{1}{4}$ 22-46-22	60.00	480.00		480.00	
NW $\frac{1}{4}$ "SE $\frac{1}{4}$ " SE $\frac{1}{4}$ of SE $\frac{1}{4}$ 19-46-2	80.00	810.00	190.00	1000.00	
School Site, Secs. 5 & 6, 45-20	.58	25.00		25.00	C. 3296
SW $\frac{1}{4}$ of NE $\frac{1}{4}$ 4-45-21	40.00	320.00		320.00	
E $\frac{1}{2}$ of NE $\frac{1}{4}$ 28-46-22	80.00	600.00		600.00	
E $\frac{1}{2}$ of SW $\frac{1}{4}$ 22-46-22	80.00	640.00		640.00	
NW $\frac{1}{4}$ of NE $\frac{1}{4}$ 20-46-22	40.00	300.00		300.00	
Part of Coalwood Tract	10573.68	26434.20		26434.20	
TOTAL	14034.72	33047.20	797.00	33844.20	

	UNPLATTED LANDS		PLATTED LANDS		TOTAL	MINERAL RIGHTS RESERVED IN SALES
	FEE	SURFACE	FEE	SURFACE		
Total Acreage as per Acreage Statement Dec. 31, 1916	149067.80	2924.81	25.86	14.33	152032.80	17720.18
Purchased during year (1)	151.92				151.92	
Cancelled Contracts (2)	120.00		.21		120.21	120.00
TOTAL	149339.72	2924.81	26.07	14.33	152304.93	17600.18
Sold during year (3)	14034.86		.79		14035.65	14034.72
Total Acreage as per Acreage Statement Dec. 31, 1917	135304.86	2924.81	25.28	14.33	138269.28	31634.90

- (1) Purchase #1832
 (2) Conv. Nos. 2706, 2721, 2905, 2713, 3147.
 (3) Sales as above and unplatted parcel included in Conv. #3287.

AJE:CH
 3
 2-9-18

THE MUNISING COMPANY

LAND DEPARTMENT

COMPARATIVE STATEMENT OF RECEIPTS FOR YEARS 1917 AND 1916.

RECEIPTS	1917	1916
Sawmill Deliveries to Outside Parties	419,542.02	167,944.52
Sawmill Deliveries to Other Operations	13,013.28	9,899.06
Sawmill Deliveries; Sawing for Outside Parties		121.51
Retail Yard Deliveries - Outside Parties	33,233.48	
Retail Yard Deliveries - Other Operations	4,659.06	
Ties deliveries to Outside Parties		705.00
Tie deliveries to Other Operations		118.95
Shingle Deliveries to Outside Parties	1,932.94	3,891.24
Shingle Deliveries to Other Operations	158.95	2,349.69
Au Train Power to Outside Parties	30,293.11	19,587.18
Crushed Rock Sales - Outside Parties	1,492.83	3,718.41
Crushed Rock Sales - Other Operations	52.50	32.35
Building Rock Sales - Outside Parties	157.90	305.91
Hotel Williams and Cottages - Outside Parties	10,638.71	7,725.50
Hotel Williams and Cottages - Other Operations	1,692.51	1,319.75
Grand Island - Outside Parties	5,101.18	6,255.98
Grand Island - Other Operations	1,442.34	1,272.16
Box Shook Deliveries - Outside Parties	275.56	6,424.11
Earnings from Rented Buildings	4,458.82	4,239.17
Lot Rents	9.00	11.00
Land Rents	160.75	
Sundry Rentals	52.50	328.50
Sales of Real Estate and Timbered Lands	4,750.00	11,942.04
Sales of Farm Lands	28,194.20	6,567.28
Sales of Town Lots	510.00	100.00
Sale of Houses and Lots	1,750.00	2,050.00
Cordwood Sales	33,618.13	11,836.85
Sales of Forest Products	10,549.38	2,102.61
Bark Sales	323.91	19.73
Profit on Tax Titles	22.46	24.71
Deliveries of Forest Products Produced - Outside Parties	3,142.80	77.08
" " " " - Other Operations	23,846.10	
Timber Sales	3,619.25	8,514.23
Miscellaneous Sales - Machinery and Equipment	3,250.00	1,700.00
Rental of Equipment		
Miscellaneous Earnings	711.96	976.67
Cash Discount on Purchases	357.98	369.02
Interest Received	3,726.54	4,146.52
Collection Fees		.50
Box Shooks		16,808.45
Trespass Cases		
Royalties Received (Limestone)	203.50	
Total Receipts -	646,943.65	303,131.52

HJT:FCA

THE MUNISING COMPANY

LAND DEPARTMENT

STATEMENT OF LAND ACREAGE-DECEMBER 31, 1917.

TOWN	RANGE	UNPLATTED LANDS		PLATTED LANDS		TOTAL	MINERALS RESERVED IN FARM LAND SALES
		FEE	SURFACE	FEE	SURFACE		
45	1E	40.00				40.00	80.00
45	1W	280.00				280.00	
46	1						80.00
47	1	40.00				40.00	
45	2	80.00				80.00	43.13
46	2	2853.61				2853.61	3079.00
47	2	131.28				131.28	160.25
45	3	166.56				166.56	
46	3	1421.84				1421.84	1791.47
47	3	720.00				720.00	440.00
46	4						120.00
47	4						222.50
45	5	160.00				160.00	640.00
46	5	722.71				722.71	160.00
47	5	40.00				40.00	120.00
44	6	417.60				417.60	420.75
45	6	800.00				800.00	1309.99
46	6	280.00				280.00	
44	7	3795.38				3795.38	118.20
45	7	355.96				355.96	80.00
48	8	819.22				819.22	
49	8	160.00				160.00	
46	9	512.23				512.23	200.00
47	9	316.39				316.39	
48	9	1583.47				1583.47	
50	9	23.00				23.00	
46	10	300.72				300.72	
47	10	723.61				723.61	
48	10	1718.72				1718.72	
49	10	1907.14				1907.14	
47	11	2510.89				2510.89	
48	11	2417.85				2417.85	
49	11	705.17				715.17	
47	12	182.37				182.37	
48	12	2315.58				2315.58	
49	12	3520.00				3520.00	
45	13	1153.71				1153.71	
46	13	480.00				480.00	
47	13	2827.21				2827.21	
48	13	6745.48				6745.48	
49	13	440.00				440.00	
42	14	35.00				45.00	
43	14	236.85				236.85	
45	14	440.00				440.00	
46	14	120.00				120.00	
47	14	839.39	437.25			1276.64	
48	14	5670.13				5670.13	
49	14	583.70				583.70	
42	15	1108.74				1108.74	658.03
43	15						194.10
45	15	80.00				80.00	
46	15	1399.41	40.00			1439.41	
47	15	1896.88	654.20			2551.08	
48	15	2056.10	520.00			2576.10	
49	15	40.00				40.00	
41	16						903.65
42	16						14.20
43	16	205.50				205.50	360.00
44	16	80.00				80.00	
45	16	63.85				63.85	
46	16	920.07				920.07	
47	16	2266.21				2266.21	
48	16	2614.31				2614.31	
42	17	160.00				160.00	120.00
44	17						238.69
45	17	912.37				912.37	240.00
46	17	695.10				695.10	
47	17	737.95				737.95	
43	18	40.00				40.00	
46	18	6444.55				6444.55	1228.10
47	18	8421.55				8421.55	194.01
45	19	115.81				115.81	1310.42
46	19	8878.27		16.18	14.33	8908.78	8631.77
47	19	8609.32	108.18	8.06		8725.56	190.88
48	19	6331.46	638.35			6969.81	
44	20	80.00				80.00	
45	20	5252.37	526.83			5779.20	.58
46	20	10530.03				10530.03	
47	20	4422.72				4422.72	280.00
45	21	2281.96				2281.96	914.26
46	21	3174.59		1.04		3175.63	3012.09
45	22	1829.78				1829.78	116.34
46	22	2063.19				2063.19	3962.49
TOTAL		135304.86	2924.81	25.28	14.33	138269.28	31634.90

THE MUNISING COMPANY

LAND DEPARTMENT

STATEMENT SHOWING NUMBER OF GUESTS REGISTERED AT HOTEL WILLIAMS
BY STATES AND CITIES, DURING THE SEASON OF 1917.

<u>MICHIGAN</u>			(Total Carried)		555
			<u>MINNESOTA</u>		<u>TOTAL</u>
Munising	97		Minneapolis	7	
Detroit	42		Duluth	3	32.12
Marquette	118		St. Cloud	5	
Negaunee	39				915.88
Iron River	8				
Wyandotte	12		<u>OHIO</u>		197.05
Gladstone	16		Toledo	2	
Bay City	2		Cleveland	21	
Kalamazoo	8		Columbus	6	1225.05
Flint	1		Dayton	1	
Ishpeming	17		Cincinnati	8	
Saginaw	1				38
Port Huron	5				
Calumet	10		<u>MISSOURI</u>		
Hancock	4		St. Louis	14	14
Grand Rapids	9				
Chassel	1		<u>WASHINGTON, D. C.</u>	1	1
Menominee	4				
Brimley	1		<u>IOWA</u>		
Battle Creek	2		Dubuque	8	8
Lake Linden	1				
Escanaba	6		<u>CALIFORNIA</u>		
Houghton	12		San Francisco	5	5
Manistique	3				
Gwinn	1		<u>INDIANA</u>		
Lansing	1		Indianapolis	1	1
		411			
			<u>MASSACHUSETTS</u>		
			Pittsfield	2	
			Cambridge	1	3
			<u>NEW YORK</u>		
			Buffalo	4	
			New Rochelle	3	7
			<u>TENNESSEE</u>		
			Memphis	4	4
			<u>NORTH DAKOTA</u>		
			Minot	1	1
			<u>DELAWARE</u>		
			Wilmington	3	3
			<u>PHILLIPINE ISLANDS</u>	1	1
			U. S. A.	1	1
		43			
		555			657

ARCTIC IRON COMPANY

LAND DEPARTMENT

LAND ACREAGE - DECEMBER 31ST, 1917

TOWN	RANGE	UNPLATTED LANDS		PLATTED LANDS	TOTAL
		FEE	MINERALS	MINERALS	
47	25	32.12			32.12
47	26	903.42	4.43	88.03	995.88
48	26	148.00	33.55	15.50	197.05
TOTAL		1083.54	37.98	103.53	1225.05

CAJ:CH

CAJ:CH

AMERICAN IRON MINING COMPANY

LAND DEPARTMENT

LAND ACREAGE - DECEMBER 31ST, 1917.

TOWN	RANGE	UNPLATTED LANDS		PLATTED LANDS	
		FEE	MINERALS	TOTAL	TOTAL
47	31	515.98	38.42	554.40	35.37
48	31	2142.10	120.00	2262.10	1373.36
TOTAL		2658.08	158.42	2816.50	427.98
TOTAL		1431.82	275.30	89.39	1036.71

CAJ:CH

CAJ:CH

MICHIGAN GAME COMPANY COMPANY

LAND DEPARTMENT

LAND ACREAGE - - - DECEMBER 31ST, 1917.

TOWN	RANGE	UNPLATTED LANDS			PLATTED LANDS		TOTAL
		FEE	SURFACE	MINERALS	FEE	MINERALS	
48	29	35.37					35.37
48	30	968.47	275.20	1.85	37.95	89.89	1373.36
48	31	427.98					427.98
TOTAL		1431.82	275.20	1.85	37.95	89.89	1836.71

CAJ:CH

CAJ:CH

MUNISING, MARQUETTE & SOUTHEASTERN RAILWAY COMPANY

LAND DEPARTMENT

LAND ACREAGE - DECEMBER 31ST, 1917.

TOWN	RANGE	UNPLATTED LANDS		PLATTED LANDS		TOTAL
		FEE	SURFACE	FEE	SURFACE	
46	19	128.82		41.42		170.24
47	19	25.31				25.31
45	23		20.00			20.00
TOTAL		154.13	20.00	41.42		215.55

CAJ:CH

BUNKER HILL MINING COMPANY

LAND DEPARTMENT

LAND ACREAGE - DECEMBER 31ST, 1917.

TOWN	RANGE	UNPLATTED LANDS		TOTAL
		FEE	MINERALS	
47	26	43.10	10.20	53.30

CAJ:CH



