ONTARIO
DEPARTMENT OF MINES

Mineral Resources Circular No. 11

Iron Deposits of Ontario

By
ROMAN SHKLANKA

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IRON DEPOSITS OF ONTARIO

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Roman Shklanka

ABSTRACT

More than 800 known deposits of iron in Ontario are classified and briefly described. Their economic aspects are emphasized. The development work undertaken and the sources of information are indicated.

It is estimated that there are 8,000 million tons of proven iron reserves in the province with a weighted mean grade of 29 percent iron. In 1966, shipments of ore or concentrate amounted to 8,144,289 tons valued at 91,700,740 dollars.

CONTENTS

Figures

Table

IRON DEPOSITS OF ONTARIO

by

Roman Shklanka[1]

INTRODUCTION

More than 800 deposits of iron in Ontario are described briefly in this report. The deposits are arranged alphabetically, first according to district or county (Figure 1) and second according to township or 15 minute area[2] of latitude and longitude. The deposits are classified according to their stage of development and their origin. A brief description of the geology is given with the economic aspects emphasized. The type of development work, the year it was performed and by whom it was carried out are noted. Sources of information are included for reference purposes.

Production

To the end of 1966, 101,806,343 tons of iron ore or concentrates valued at $876,747,460 had been shipped from mines in Ontario. In 1966, 12,011,148 tons of ore were mined in the province, accounting for shipments of 8,144,289 tons of ore or concentrate valued at $91,700,740 (Table 1). In 1967, the number of tons of ore mined increased to 13,266,544 tons.

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[1] Review and Resources Geologist, Ontario Department of Mines, Toronto. Manuscript received by the Director, Geological Branch, Aug. 20, 1968.

[2] Defined by the latitude and longitude of the southeast corner.

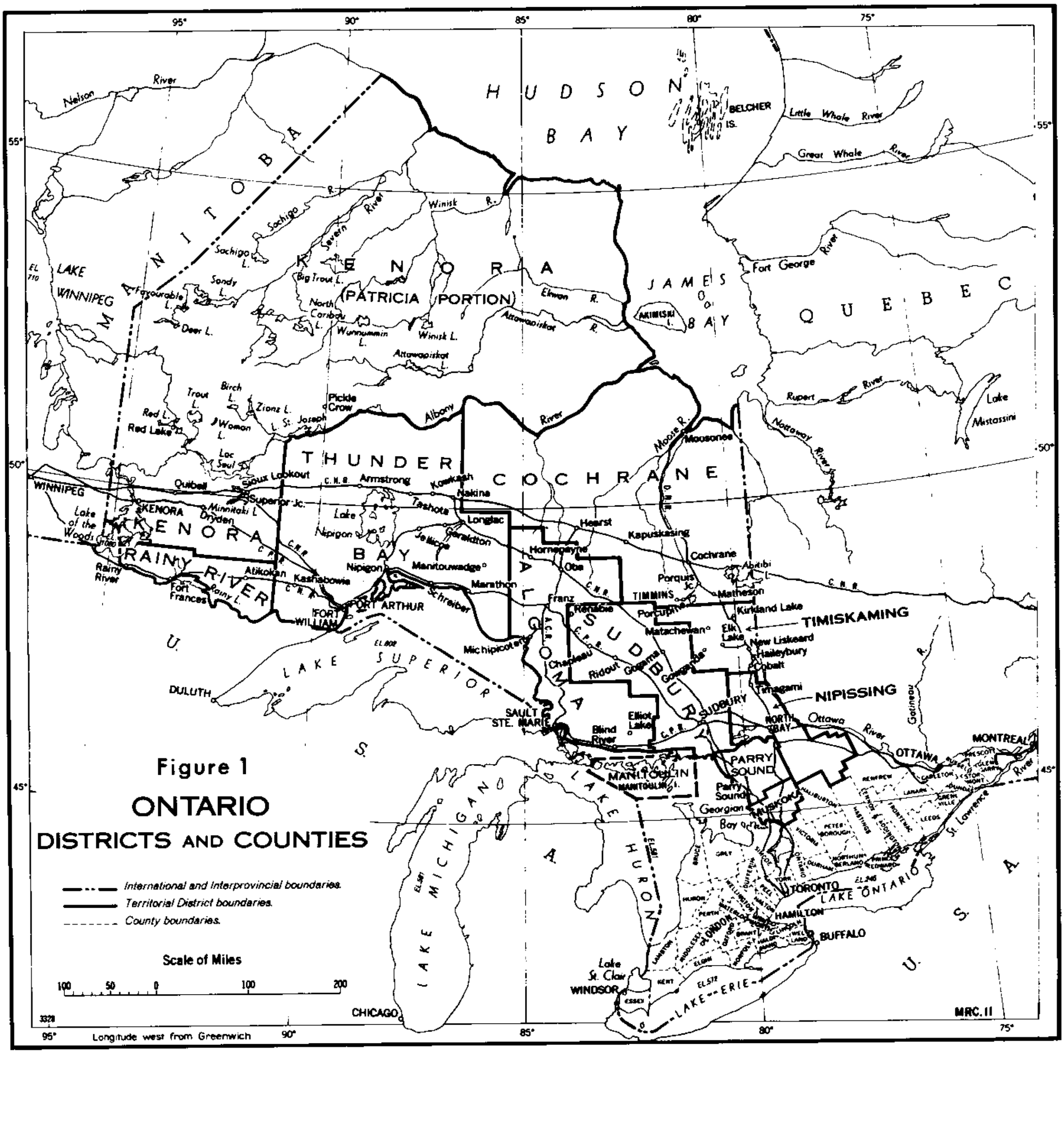


Figure 1
ONTARIO
DISTRICTS AND COUNTIES
International and Interprovincial boundaries.
Territorial District boundaries.
County boundaries.
Scale of Miles
100 50 0 100 200
Longitude west from Greenwich
HUDSON BAY
JAMES BAY
MANITOBA
QUEBEC
KENORA (PATRICIA PORTION)
KENORA
RAINY RIVER
THUNDER BAY
COCHRANE
ALGOMA
SUDBURY
TIMISKAMING
NIPISSING
MANITOULIN
PARRY SOUND
MUSKOKA
LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
LAKE ONTARIO
LAKE ERIE
U. S. A.
MRC. II

Table 1 Iron Ore Production, 1966

Company	Tons Mined	Tons of Ore or Concentrate Shipped	Value in Dollars
Algoma Steel Corp. Ltd.	3,429,961	2,008,602	17,297,252
Caland Ore Co. Ltd.	1,736,035	1,629,556	18,212,026
Jones and Laughlin Mining Co. Ltd.	3,338,780	1,103,157	13,101,600
Marmoraton Mining Co. Ltd.	902,928	555,166	8,353,716
National Steel Corp. Ltd.	1,395,405	642,879	10,388,421
Steep Rock Iron Mines Ltd.	1,208,039	1,350,051	11,684,205
International Nickel Co. of Canada Ltd.	By - product	754,066	11,635,238
Falconbridge Nickel Mines Ltd.	By - product	100,812	1,028,282
Totals	12,011,148	8,144,289	91,700,740

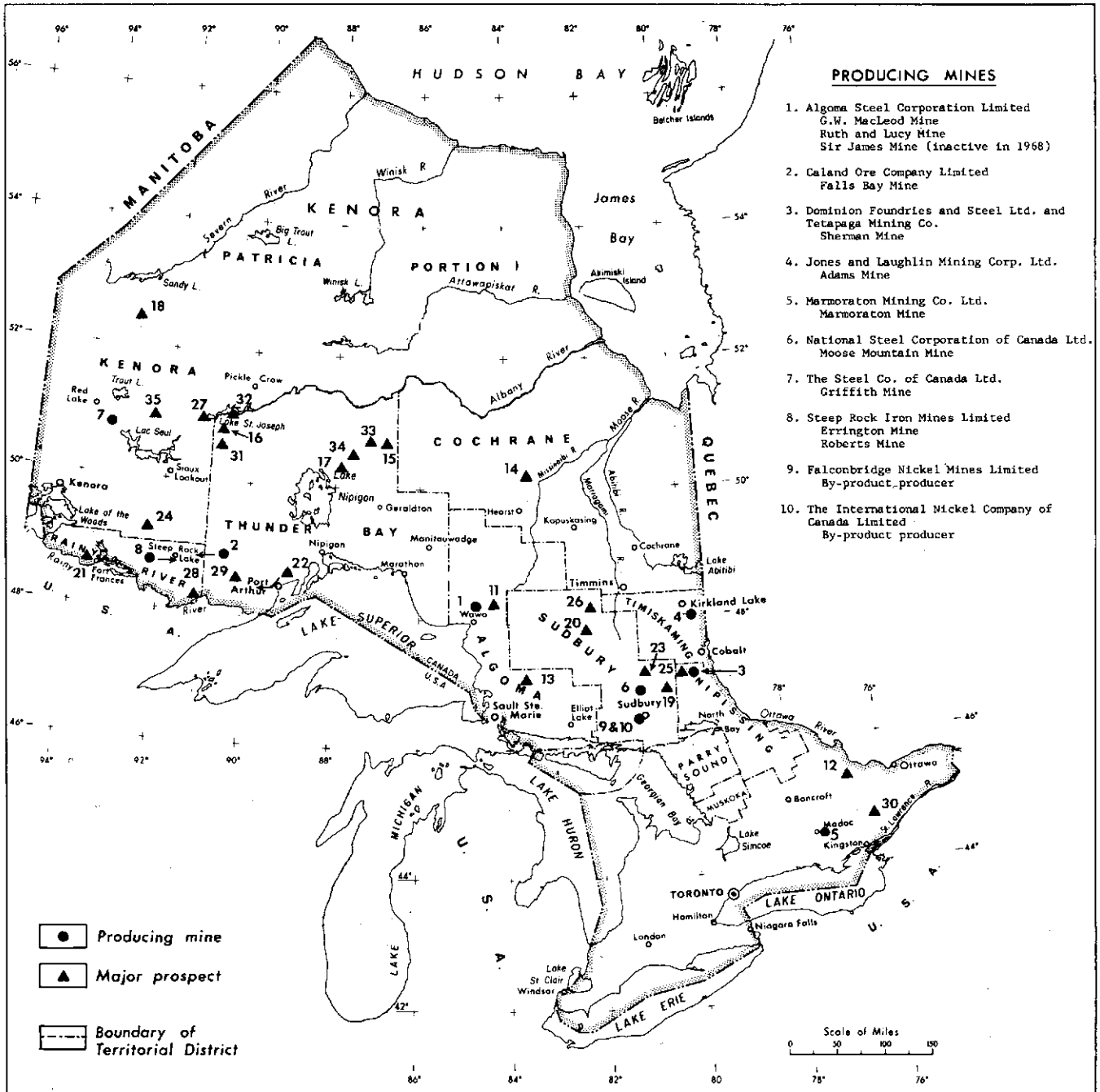
Developments completed or in progress indicate that annual increases in shipments of iron ore or concentrate may be expected at least to 1971. This year the pellet plant of Steep Rock Iron Mines Limited will have been in operation for its first complete year. The Griffith and Sherman mines, which came into production this year, should increase production totals for this year as well as the next, as they go through the first

complete year of operations in 1969. Falconbridge Nickel Mines expects to have its plant complete by late 1969 to handle 300,000 tons of high grade pellets. By early 1970, The International Nickel Company of Canada Limited expects work to be completed on an expansion program which would increase its annual capacity of high grade pellets by 30 percent.

Reserves

It is estimated that in Ontario there are 8,000 million tons of proven iron reserves which have a weighted mean grade of approximately 29 percent iron (Fe). This figure includes 6,800 million tons of calculated reserves available to the writer, for which proven, probable or possible tonnages have been outlined through development work. In addition a conservative estimate of 800 million tons is added to accommodate reserves of known deposits for which data are not available to the writer, and 400 million tons are added for deposits upon which development work has been carried out but no calculations are known to have been made. Depths to which reserves are calculated are dependent upon the depth to which the deposits have been outlined by development work. Most calculations are in the 400- to 600-foot interval but range from a depth of 100 to 3000 feet.

A breakdown of the known reserves by grade, which follows, is made to indicate the relative abundance of the various grades of



PRODUCING MINES

1. Algoma Steel Corporation Limited
   G.W. MacLeod Mine
   Ruth and Lucy Mine
   Sir James Mine (inactive in 1968)
2. Caland Ore Company Limited
   Falls Bay Mine
3. Dominion Foundries and Steel Ltd. and Tetapaga Mining Co.
   Sherman Mine
4. Jones and Laughlin Mining Corp. Ltd.
   Adams Mine
5. Marmoraton Mining Co. Ltd.
   Marmoraton Mine
6. National Steel Corporation of Canada Ltd.
   Moose Mountain Mine
7. The Steel Co. of Canada Ltd.
   Griffith Mine
8. Steep Rock Iron Mines Limited
   Errington Mine
   Roberts Mine
9. Falconbridge Nickel Mines Limited
   By-product producer
10. The International Nickel Company of Canada Limited
    By-product producer

MAJOR PROSPECTS

Algoma Steel Corporation Limited
11. Bartlett (Britannia)
12. Calabogie Main
13. Goulais River
14. Pivabiska

Anaconda Iron Ore (Ontario) Limited
15. Skibi Lake

Belcher Mining Corp. Ltd. and Lun-Echo Gold Mines Ltd.
16. Doran Lake

Can-Fer Mines Limited
17. Central Onaman Range

T.J. Day, J.H. Low, M.C. Gardiner Estate, and J.W. McBean
18. North Spirit Lake

Eagle Rock Iron Mines Limited
19. Cummings Lake

Excelsior Mines Limited
20. Stackpool (East)

Great West Mining and Smelting Limited
21. Emo

Inland Steel Company
22. Kaministikwia

Ironco Mining and Smelting Limited
23. Burwash Lake

Jalore Mining Company Limited
24. Bending Lake
25. Ko-Ko-Ko

Kukatush Mining Corp. (Ontario) Limited
26. Radio Hill

Lake St. Joseph Iron Limited
27. Eagle and Fish Island

Lakehead Mines Limited
28. That Man Lake

Monpre Mining Company Limited
29. Matawin Range

New Mylamaque Mining and Smelting Limited
30. Matthews and Chaffey Mines

Northern Canada Mines Limited
31. North Kasheweogama

Steep Rock Iron Mines Limited
32. Lake St. Joseph

Stewart Lake Iron Mines Limited
33. Stewart Lake
34. Summit Lake

Tex-Sol Explorations Limited
35. Kesaka Lake

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Figure 2 — Producing iron mines and major prospects in Ontario

iron reserves, and to arrive at a weighted mean grade.

Tonnage (millions)	Percent Fe (range)	Percent Fe (mean)
547	50-70	54
401	35-50	36
5,457	20-35	27
357	less than 20	17
Total 6,759	Composite Mean	29

Figure 2 indicates the location of the producing mines in Ontario and the known prospects with reserves in excess of 30 million tons of more than 20 percent Fe.

Classification

The deposits are classified firstly according to stage of development and secondly according to their mode of formation. Individual deposits are subdivided into: mines, with producers and past producers differentiated; prospects, denoting deposits upon which significant development work has been performed; and occurrences, representing the undeveloped deposits.

A simple genetic classification is adopted with the following categories:

1. Magmatic deposits
2. Contact metasomatic deposits
3. Contact metamorphic deposits
4. Hydrothermal deposits
5. Sedimentary deposits
   - A. Iron formation, Algoma type
     Superior type

B. Bog iron and surficial pyrite and siderite deposits.

C. Placer deposits

6. Secondary deposits

Types and Distribution of Deposits

Magmatic Deposits: Significant concentrations of magnetite are found in anorthositic, gabbroic, and alkalic intrusions as well as carbonatites. These range from early segregations to late crystallization products. Whereas deposits in mafic and syenitic intrusions are most numerous in southeastern Ontario, alkalic complexes and carbonatites occur throughout the province. Concentrations of magnetite have been noted in some granitic rocks but not in appreciable amounts. In addition, late deuteric concentrations of magnetite, resulting through serpentinization of ultramafic bodies, are included.

The magmatic deposits are not currently being exploited but some of the major prospects and early mines are of this class.

Contact Metasomatic Deposits: Magnetite-bearing skarn deposits are especially abundant in southeastern Ontario where most are found at or near marble and amphibolite contacts with felsic to mafic intrusions. This type of deposit provided much of the iron ore mined in the 1800's and early 1900's. At present, the Marmoraton Mine is the only producer but several major prospects

fall into this class.

Contact Metamorphic Deposits: Distinct from the contact metasomatic deposits are the development of magnetite-rich areas in iron formation adjacent to some mafic dikes. Oxidation and up-grading of the host rock is indicative of some mobility of constituents. In several areas, high-grade magnetite zones in magnetite-bearing iron formation have been attributed to metamorphic enrichment. These types of deposits are known to occur north of the Grenville Front, within the Gunflint Formation and some Archean iron formations.

Hydrothermal Deposits: Known hydrothermal deposits are confined to the south half of the province. Hematite-bearing veins and replacements along faults and fractures account for most deposits of this type. They provided local sources of high-grade hematite but are not being exploited today. Less common are replacements and veins of magnetite. These are mainly found in southeastern Ontario where they are related to and difficult to differentiate from the magnetite-skarn deposits. A notable exception is the Atikokan Range in the Rainy River District, where magnetite-sulphide deposits are found along the Quetico Fault. The hydrothermal magnetite deposits, although mined in the past,are not a present source of iron ore.

Sedimentary Deposits: The majority of the iron deposits are Algoma-type iron formations and these provide the bulk of the iron ore production at present. These iron formations are mainly bedded magnetite-quartz (chert, jasper) deposits with a variable proportion of intercalated sediment or tuff. Hematite-, pyrite-, or siderite-rich varieties are also known. The iron formations are laterally discontinuous and may grade into lean or barren chert, into higher-grade zones, or into clastic sediments or volcanics. Two distinct, but locally gradational, associations are present. One is a dominantly greywacke association, with the iron formation preferentially concentrated near regional greywacke - volcanic contacts; the other is a volcanic association, usually accompanied by some conglomerate, arkose or greywacke, with some indication that regional fault troughs or basins localized iron deposition. Oxide, carbonate and sulphide facies can be defined in iron formations within the volcanic environment; oxide and sulphide facies are recognizable in the greywacke environment.

Iron ore is obtained from localized zones in the iron formation. These zones, in addition to providing a satisfactory grade of magnetite or siderite, also must provide acceptable mining widths, determined by the true width of the formation and the degree of folding it has undergone.

The Superior-type iron formation is represented mainly by the Gunflint Formation. A taconite (magnetite-hematite) facies and a carbonate facies have been investigated as sources of iron ore. The taconite deposits are dominantly located southwest of Port Arthur; the carbonate deposits are mainly to the northeast. The deposits are gently-dipping zones within the broader Gunflint Formation, much of which is capped by Keweenawan diabase. In addition, Proterozoic inliers containing Superior-type iron formation occur within the Paleozoic sediments west of James Bay.

Limonitic bog deposits occur in local areas throughout the province. Some production has been obtained from this type of deposit in the 1800's. Probably genetically similar are the pyritic sand deposits in the Goudreau area, one of which was mined in 1918, and the siderite deposits in Paleozoic limestones in Bradley and Hogg townships.

Placer deposits include magnetite-bearing lake and stream sands, and glaciofluvial goethite-hematite sands and gravels. The magnetite sands occur in the Lake Superior - Lake Nipigon and McDowell Lake areas. The glacial gravels, near Atikokan, were mined between 1958 and 1964.

Secondary Deposits: Secondary deposits of goethite or hematite are known to occur in carbonate and sulphide iron formation of the Algoma or Superior types and over hydrothermal sulphide deposits, marble and carbonatite. They are scattered throughout

the south half of the province. Deposits such as the Eldorado Mine and the Old Helen Mine are clearly the result of meteoric waters; deposits as the Josephine Mine and those at Steeprock Lake, which may have been deformed or possess a strong structural control are probably similar but have been interpreted by some workers as of hydrothermal or syngenetic origin.

The secondary deposits have been an important source of iron ore in the past, and at present the Steeprock Lake deposits account for the largest total and yearly production of iron ore for any single area in the province.

Others: The above categories may not accommodate all the deposits. The most numerous type cited are hematitic veins and replacements, in the southern part of the province, attributed by some workers to deposition by surficial or circulating waters. These deposits occur in Precambrian as well as Paleozoic rocks. Some deposits classified herein as hydrothermal may be of this category.

By-products

Iron is being recovered as a by-product of the sulphide ores in the Sudbury area in the form of iron calcine and pellets. In the past, a small amount of iron was recovered from mining for apatite in the Eagle Lake and Glendower mines.

The only by-product recovered from an iron mining operation, was gravel for aggregate at the Canadian Charleson Mine near

Atikokan. However, some commodities associated with the iron deposits which have or are being investigated include: titanium in magmatic and placer deposits; vanadium in magmatic deposits; apatite in magmatic deposits; copper in magmatic, contact metasomatic, hydrothermal and sedimentary deposits; lead and zinc in sedimentary deposits; columbium, thorium and yttrium in magmatic deposits; manganese in hydrothermal and secondary deposits; kaolinite in secondary deposits; sulphur in hydrothermal and sedimentary deposits; and nickel in magmatic deposits. Cobalt was noted in one hydrothermal and one contact metasomatic deposit, and uranium in one magmatic deposit.

Sources of Information

The information contained herein was taken from published reports, company reports and assessment files which are located in resident geologist offices throughout the province. Duplicate files of much of the assessment data are also available for viewing in Toronto.

Many of the deposits are located on the 1963 edition of the Ontario Mineral Map or a revised edition in preparation, and on the current series of 4 miles to 1 inch geological compilation maps or their 2 miles to 1 inch preliminary editions, all prepared by the Ontario Department of Mines.

For a current summary of developments the reader is referred

to the Annual Reviews of the Ontario Department of Mines; for yearly summaries of the industry, the Canadian Minerals Yearbook or the annual bulletins of the Mineral Resources Division of the Department of Energy, Mines and Resources should be consulted.

Aeromagnetic expressions of the deposits are defined on published maps on the scale of 1 mile = 1 inch by the Geological Survey of Canada or jointly by the Geological Survey of Canada and the Ontario Department of Mines. 4 miles to 1 inch compilations of these maps are available from the Geological Survey of Canada and 16 miles to 1 inch compilations are available from the Ontario Department of Mines.

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Abbreviations

The following abbreviations are used in the text.

A.C.R.	=	Algoma Central and Hudson Bay Railways (Limited)
CIMM	=	Canadian Institute of Mining and Metallurgy
Conc.	=	Concession
d.d.	=	diamond drill (drilling)
G.R.	=	Geological Report
GSA	=	Geological Society of America
GSC	=	Geological Survey of Canada
INCO	=	The International Nickel Company of Canada Limited
insol.	=	insoluble
I.O.C. Rpt	=	Report of the Iron Ore Commission
I.R.	=	Indian Reserve

M = mesh

mag. = magnetic

Mem. = memoir

M.I. Bull.= Mineral Information Bulletin

Misc. Paper = Miscellaneous Paper

M.R. Circular = Mineral Resources Circular

N,S,E,W = north, south, east, west

OBM = Ontario Bureau of Mines

ODM = Ontario Department of Mines

p. = page

P.R. = Preliminary Report

pt. = part

R. = Range

Res. = Resources

Rpt. of Prog. = Report of Progress

Sec. = Section

sol. = soluble

Sum. Rpt. = Summary Report

Tp. = Township

Acknowledgments

The writer acknowledges with thanks the various company officials who aided the writer in supplying information, the resident geologists of the Ontario Department of Mines for

their co-operation in this study, G.A. Gross of the Geological Survey of Canada for making his index file on Ontario iron deposits available to the writer, and the Mineral Resources Division, Ottawa, for supplying the writer with their mineral card files.

J.J.C. Geul and R.A. Keele assisted the writer in parts of this survey.

DESCRIPTION OF DEPOSITS

ALGOMA DISTRICT

ABERDEEN TOWNSHIP

Leeburn Occurrence

Class: Sedimentary?

Location: W central part Aberdeen and E central part Aberdeen Add'l townships.
N 1/2 Lots 10, 11, Conc. 3 and S 1/2 Lots 11, 12, Conc.4 of Aberdeen Township; Lots 1, 2, 3, Conc. 4 and Lots 3, 4, Conc. 5 of Aberdeen Add'l Township.
Reference: ODM map 2108.

Description: NW-trending zone approx. 3 miles long containing lenses of massive and disseminated hematite and specularite associated with ferruginous slate in Lorrain quartzite.

Economic Features: Thicknesses up to 10 feet have been recorded.

History: Before 1917 32-foot shaft.
1903 4 d.d. holes.

References: ODM map 2108; GSC map 32-1962.
ODM, 1923, I.O.C. Rpt., p.199.

ABERDEEN ADD'L. TOWNSHIP

Leeburn Occurrence

(See Aberdeen Township)

Lot 6, Concession 3 Occurrence

Class: Hydrothermal.

Description: Films of earthy hematite and thin seams of specularite in Lorrain quartzite.

References: ODM, 1923, I.O.C. Rpt., p.199.
GSC, 1925, Mem. 143, p. 133.

Old Stobie Mine (Past Producer)

Class: Hydrothermal.

Location: N of W end Gordon Lake, Conc. 1.
Reference: ODM map 2108.

Description: Veins of hematite-specularite-quartz up to 5 feet wide and over a length of approx. 90 feet, within the Lorrain (quartzite) Formation.

History: 1874-78 Mining from open cut and shaft.
1894 Some diamond drilling.

References: ODM map 2108; GSC map 32-1962.
GSC, 1925, Mem. 143, p. 133.
ODM, 1923, I.O.C. Rpt., p. 199.

Aberdeen Add'l. Tp. (Cont.)

Two Horse Lake Prospect

Class: Contact metasomatic?

Location: 400 feet E of Two Horse Lake; Lot 3, Conc.6
Reference: ODM map 2108.

Description: NW-trending zone 1800 feet long containing magnetite-quartz with sulphides (pyrite, chalcopyrite) locally, within Bruce (?) limestone intruded by mafic sills and dikes.

Economic Features: True widths intersected in drilling range between 5 and 33 feet. Assayed sections include 23.2% Fe over 8.0 feet; 43.7% Fe over 13.2 feet, 44.5% Fe over 15.0 feet, and 51.15% Fe over 10.0 feet.

History: 1963-64 28 d.d. holes for 2,857 feet by New Senator-Rouyn Ltd.

References: ODM map 2108.
Assessment files, Sault Ste. Marie.

ANDERSON TOWNSHIP

Duncan - Anderson Occurrence

(See Duncan Township)

AWERS TOWNSHIP

Trout Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: S of Trout Lake, Section 34.

Description: A large xenolith of Archean magnetite-quartz iron formation in granitic gneiss .

References: ODM, 1923, I.O.C. Rpt., p. 198.
Hay, R.E., 1963, Ph.D. thesis, McGill Univ., p.68.

DEAGLE TOWNSHIP

Deagle Township Occurrences

Class: Iron formation, Algoma type.

Location: Near N boundary of township.
Reference: ODM map P. 317.

Description: Lean magnetite-quartz iron formation with minor hematite and disseminated pyrite within Archean metasediments. Fe content less than 20 percent.

References: ODM maps P. 317, 2256G.

DEROCHE TOWNSHIP

Breitung Mine (Past producer)

Class: Hydrothermal.

Location: On SW shore of Northland Lake, Lot 4, Conc. 1.
Reference: ODM map 2108.

Deroche Tp. (Cont.)

Description: Specularite as disseminations and irregular lenses with quartz in Gowganda argillite. Mineralized zones up to 50 feet wide.

History: 1900-1905 Shaft (175 feet), 2 adits (298 and 132 feet) and 2,000 to 3,000 tons of ore shipped by the Breitung Iron Co. and Loon Lake Iron Co.

References: ODM maps 2108, 35a.
ODM, 1923, I.O.C. Rpt., p. 197.
ODM, 1926, Volume XXXV, pt. 2, p.47-48.
GSC, 1921, Sum. Rpt., pt. D, p.31-32.
Hay, R.E., 1963, Ph.D. thesis, McGill Univ., p. 299-304.

Maple Lake Occurrence

Class: Iron formation, Algoma type.

Location: In the vicinity of Maple Lake, Deroche Township, and Sections 25 and 26 of Vankoughnet Township. Reference: ODM map 2200G.

Description: Thin beds of magnetite-quartz iron formation and "bunches and lenses" of pyrite within Archean metavolcanics.

History: Before 1926 1 d.d. hole and several pits.

References: ODM map 2200 G.
ODM, 1926, Volume XXXV, pt.2, p.47.
Hay, R.E., 1963, Ph.D. thesis, McGill Univ., p.67.

Midge Lake Occurrences

Class: Hydrothermal.

Location: In the vicinity of Midge Lake; Lots 1 and 2, Conc. 1 and 2.

Description: Small hematite veins along shear zones in the Gowganda Formation and Archean gneiss complex.

History: Before 1926 stripping, trenching and some drilling.

References: ODM, 1926, Volume XXXV, pt. 2, p.48.
ODM, 1923, I.O.C. Rpt., p. 197.
GSC, 1921, Sum. Rpt., pt. D.

Miscellaneous Occurrences

Class : Hydrothermal.

Location: S part of township.

Description : Numerous small hematite veins occur in Lorrain quartzite.

History: Some d.d. holes and trenching.

Reference: ODM, 1923, I.O.C. Rpt. p.197.
ODM, 1926, Volume XXXV, pt. 2, p.48.
Assessment files, Sault Ste. Marie.

Deroche Tp. (Cont.)

Shields - Deroche Prospect

(See Shields Township)

Williams Mine (Past Producer)

Class: Hydrothermal.

Location: SE corner of township; Lot 1, Conc. 1.
Reference: ODM map 2108.

Description: Specularite as veins in sheared Gowganda conglomerate and greywacke.

History: 1902-1905 Shaft (212 feet), several hundred feet of drifting on 2 levels, 1,500 feet of d.d. in 5 holes, and approximately 500 tons of ore mined by the Williams Iron Mines Co. Ltd.

References:
ODM maps 2108, 35a.
ODM, 1923, I.O.C. Rpt., p. 196-7.
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GSC, 1921, Sum. Rpt., pt.D, p.31-2.
Hay, R.E., 1963, Ph.D. thesis, McGill Univ., p.304-5.

DUNCAN TOWNSHIP

Duncan - Anderson Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Sections 21 and 22 of Duncan Township and S part Anderson Township.
Reference: ODM map 2200G.

Description: Magnetite-quartz (chert) iron formation, trending N-S for 3/4 mile, within Archean metagreywacke.

References: ODM map 2200G.
ODM, 1926, Volume XXXV, pt. 2, p.6, 47.
Hay, R.E., 1963, Ph.D. thesis, McGill Univ., p.67-8.

Section 17 Occurrence

Class: Iron formation, Algoma type.

Location: Section 17.

Description: Ferruginous chert bearing pyrite, 50 feet wide over an outcrop length of 400 feet.

Reference: Hay, R.E., 1963, Ph.D. thesis, McGill Univ., p.69.

EBBS TOWNSHIP

Ebbs Township Occurrences

Class: Iron formation, Algoma type, sulphide facies.

Ebbs Tp. (Cont.)

Location: East of Mattawishkwia River near south boundary of township and SW of Shetland Creek in south-central part of township.
Reference: ODM map P 397.

Description: Pyrite-pyrrhotite bearing zones in Archean greywacke.

History: 1956 Geophysical surveys and diamond drilling by Northern Canada Mines Ltd.

References: ODM maps P.397, 2224G.

FENWICK TOWNSHIP

Fenwick Occurrence

Class: Hydrothermal or sedimentary.

Location: SW 1/4, Section 6, NW part of township.
Reference : ODM map 2108.

Description: Hematite exposed in trenches within a ferruginous carbonate unit, 40 feet thick,which strikes NNE and dips 15 to 30 W.

Setting: Overlain by conglomerate and underlain by ferruginous shale of post-Archean (Huronian?) age.

History: 1954 Trenching and geological survey by Algoma Ore Properties Ltd.

References: ODM map 2108.
Assessment files, Sault Ste.Marie.

Havilland Lake Occurrence

Class: Iron formation, Algoma type.

Location: Section 4 and 6.
Reference: ODM map 2108.

Description: E-W trending iron formation. In Section 6, it is lean and cherty. Within Archean metavolcanics.

References: ODM maps 2108, 2201G.
Assessment files, Sault Ste. Marie.

GAUDETTE TOWNSHIP

Gaudette Township Occurrence

Class: Iron formation, Algoma type.

Location: Near NE corner of township.
Reference: ODM map 2108.

Description: Banded and contorted iron formation striking N40E, traceable over 1600 feet with a maximum observed width of 45 feet.

History: 1963 Geological and magnetometer surveys by Algoma Steel Corp. Ltd.

References: ODM maps 2108, 2214G.
Assessment files, Sault Ste. Marie.

JARVIS TOWNSHIP

McCauley Occurrence

Class: Magmatic?

Location: 2 miles S of Bellevue Station.

Description: An outcrop of titaniferous magnetite "to small to be of interest". A sample assayed 39.0% Fe, 5.4% SiO_2, 0.37% S, 4.25% TiO_2.

Reference: ODM, 1923, I.O.C. Rpt., p. 197.

JOHNS TOWNSHIP

Caddy Creek Occurrence

Location: Centre of township, west of Caddy Creek.
Reference : ODM map 2129.

Description: "Magnetite in a raft of metavolcanics", A sample of which assayed 8.10% soluble Fe.

References: ODM maps 2129, 2178G, 2179G.
ODM, 1966, G.R.49, p.14.

JOHNSON TOWNSHIP

Desbarats Lake Occurrence

Class: Hydrothermal?

Location: On SW shore of Desbarats Lake.
Reference: ODM map 2108.

Description: An iron occurrence on a WNW-trending fault separating the Lorrain Formation to the N from a mafic intrusion to the S.

References: ODM map 2108; GSC map 32-1962.

Desbarats Location Occurrences

Class: Hydrothermal.

Location: Section 22 and Section 32.
Reference: ODM map 2108.

Description: Hematite, in part specularite, is present in Lorrain quartzite as disseminations or segregated in veins and pockets. On Section 22 veins up to 15 inches wide are recorded; on Section 32 a 20-inch vein was traced for 200 yards.

History: Before 1897, 2 exploration shafts on Section 22.

References: ODM map 2108; GSC map 32-1962.
ODM, 1923, I.O.C. Rpt., p.199-200.

LAIRD TOWNSHIP

Laird Township Occurrences

Class: Hydrothermal?

Location: SE 1/4 of Sec. 3 and NW 1/4 of Sec. 12.

Description: Films and streaks of specular hematite in Lorrain quartzite.

References: ODM, 1923, I.O.C. Rpt., p.199.
GSC, 1925, Mem. 143, p.133.

LAKE SUPERIOR

Devil's Warehouse Island Prospect

Class: Hydrothermal.

Location: Devil's Warehouse Island.

Description: Veins of manganite and hematite in Keweenawan rhyolite erratically distributed along a fault zone striking N32W and dipping 60NE. The zone is up to 60 feet wide and is exposed for 2200 feet across the island.

Economic Features: The average manganite and hemetite content is less than 10 percent. The largest high grade lens measured 14 feet by 14 inches, a sample of which assayed 29.2% Fe and 15.1% Mn.

History: 1910: 12 trenches and 2 d.d. holes.
1926-42: Some diamond drilling.

References: ODM map 2138.
L.D. Ayres, ODM, personal communication.
Assessment files, Sault Ste. Marie.

LEWIS TOWNSHIP

Lewis Township Occurrence

Class: Hydrothermal.

Location: West centre of Lot 10, Conc. 3.
Reference: ODM map P. 246.

Description: Hematite in veins within Archean granitic-metavolcanic complex.

Reference: ODM map P. 246.

LIZAR TOWNSHIP

Kabinakagagami Lake Prospect

Class : Iron formation?

Location: On peninsula at W central part of Kabinakagagami Lake .
Reference: ODM map 2209G.

Description: Massive and semimassive magnetite zones up to 3000 feet long and 1500 feet wide.

Economic Features: Preliminary work suggests approx. 10 million tons of ore grading 66.5% Fe.
A 300 pound sample gave a concentrate of better than 70% Fe.

History: 1954 Aeromagnetic survey by Neoscope Explorations Ltd.
1955 Surface mapping and sampling by Black Bourgon Mines Ltd.
1957 Some d.d. by Sand River Gold Mines Ltd.

References: ODM map 2209G.
Northern Miner, June 27, 1957.
Prospectus, 1955, Black Bourgon Mines Limited.
Assessment files, Timmins.

LONG TOWNSHIP

Long Township Occurrence

Class: Hydrothermal.

Location: On Location X, near Algoma Mills.
Reference: ODM map P.73.

Long Tp. (Cont.)

Description: Numerous small veins, a few inches in width, are scattered irregularly through a diabase outcrop 120 feet long and 30 feet wide.

References: ODM maps P. 73, 2108.
ODM, 1967, Open File Rpt. 5010, p. 158.
ODM, 1923, I.O.C. Rpt., p.200.

MACDONALD TOWNSHIP

Armstrong - Henry Occurrence

(See Meredith Township)

Osborne Occurrence

Class: Hydrothermal.

Location: SE 1/4 of Section 29.
Reference: ODM map 2108.

Description: A zone up to 70 feet wide heavily stained with hematite and in part fractured and recemented with hematite.

Reference: ODM map 2108.
ODM, 1923, I.O.C. Rpt., p.199.
GSC, 1925, Mem. 143, p. 133.

Rulidge Occurrence

Class: Hydrothermal.

Location: Section 22.
Reference: ODM map 2108.

Description: A vein with "a little hematite" in Lorrain quartzite.

Reference: ODM map 2108.
ODM, 1923, I.O.C. Rpt., p. 198.
GSC, 1925, Mem. 143, p.133.

MEREDITH TOWNSHIP

Armstrong - Henry Occurrence

Class: Hydrothermal.

Location: Section 36 of MacDonald and Section 31 of Meredith townships.
Reference: ODM map 2108.

Description: Veins of soft and hard hematite in Lorrain quartzite. Widths up to 15 inches recorded.

History: Before 1900 Exploration shafts and 1 d.d. hole.

References: ODM map 2108.
ODM, 1923, I.O.C. Rpt.,p. 199.
GSC, 1925, Mem. 143, p.133.

PALMER TOWNSHIP

Batchawana Mine Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Approx. 1 mile N of Carp Lake, S central part of township.
Reference: ODM map 2108.

Palmer Tp. (Cont.)

Description: ENE-trending, hematite (specularite) magnetite-jasper iron formation in two lenses 1/2 mile by 150 feet and 1/4 mile by 150 feet. Dips are 60 to 80 N. Within Archean metasediments and metavolcanics.

Economic Features: Trenching and drilling indicate width of 80 to 120 feet with 16 to 31 percent soluble Fe.

History: Late 1800's Exploration test pits, 25-foot shaft, and tunnels by Batchewanung Mining Company.
1964 3607 feet of d.d., and dip needle and geological surveys by Pall Mall Copper Mines Ltd.

References: ODM maps 2108, 35b, 2187G.
ODM, 1926, Volume XXXV, pt. 2, p.77-78.
Assessment files, Sault Ste. Marie.

Mammoth - Vulcan Prospect

(See Tp. 28, R. 13)

Pancake Lake Prospect

Class: Iron formation (with metamorphic enrichment?), Algoma type, oxide facies.

Location: NE part Ryan and NW corner Palmer townships, 1 mile S of Pancake Lake.
Reference: ODM map 2108.

Description: E-W trending, magnetite-quartz iron formation dipping 45 to 65S. In Ryan Township there are two parallel zones 200 to 300 feet wide, 100 to 300 feet apart. In Palmer Township the formation is 9300 feet long and up to 200 feet wide.

Setting: Within Archean metavolcanics intruded by diabase.

Economic Features: The iron formation normally contains 15 to 30 percent soluble Fe but local sections up to 17 feet thick are composed essentially of magnetite.

In Palmer Township true widths of 30 to 118 feet were intersected, with averages for total Fe of 26.2% over 103 feet, 30.1% over 118 feet, and 29.8% over 80 feet.

In Ryan Township one lens, 600 feet long, has a possible 600,000 tons per vertical 100 feet, of which 200,000 tons may be of direct shipping grade.

Tests on 12 samples which ranged from 30.7 to 67.5% Fe gave a magnetic concentration at -325M between 58.9 to 71.0% Fe and 0.6 to 18.3% SiO_2 for a 60.6 to 97.9 percent recovery.

History: 1952 Dip needle survey and 4 d.d. holes for 933 feet by Algoma Ore Properties Ltd.

1952-54 Dip needle survey and 3 d.d. holes for 1969 feet by Jalore Mining Co. Ltd.

1961-62 Geological and magnetometer surveys and 9 d.d. holes for 2003 feet by Cliffs of Canada Ltd.

References: ODM maps 2108, 2188G.
Assessment files, Sault Ste. Marie.

PARKINSON TOWNSHIP

Parkinson Township Occurrence

Location: S 1/2 Lot 7, Conc. 1.

Description: Several parallel bands of lean magnetite in dark hornblendic rock.

Reference: ODM, 1923, I.O.C. Rpt., p. 200.

PATTON TOWNSHIP

Cobden River Occurrence

Class: Contact metasomatic.

Location: NW corner of township.

Description: Magnetite averaging about 30 percent Fe is associated with chalcopyrite on both sides of a NW-trending diabase dike within Bruce Limestone.

History: 35-foot shaft.

Reference: Mineral files, Mineral Resources Division, Ottawa.

PROCTOR TOWNSHIP

Proctor Township Occurrence

Class: Iron formation, Algoma type.

Location: NW corner of township, N of Depot Lake and W of Kings Lake.
Reference: ODM map P.245.

Description: Bands of magnetite-quartz iron formation with some hematite and pyrite in lenses up to 1,500 feet by 40 feet. A grab sample assayed 29.5% Fe.

References: ODM map P.245, 2108, 3237G.

RYAN TOWNSHIP

Pancake Lake Prospect

(See Palmer Township)

SCHOLFIELD TOWNSHIP

Mattawishkwia River Occurrence

(See Talbott Township)

Scholfield - Talbott Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: Conc. 7, Lots 1, 2, 3 of Talbott Township
Conc. 7,8,9, Lots 31, 32, 33, 34 of Scholfield Township.
Reference: ODM map P.397.

Description: NE-trending lenses of pyrrhotite-pyrite bearing Archean metagreywackes. Anomalies are up to 700 feet in width and 3000 feet in length.

History: 1956 Magnetometer and electromagnetic surveys by Continental Copper Mines Ltd.

References: ODM maps P. 397, 2224G.
Assessment files , Timmins.

SHIELDS TOWNSHIP

Shields - Deroche Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Approximately 3 miles SW of Wabos.
Reference: ODM map 2108.

Description: NE-trending zone of Archean magnetic-quartz iron formation, with some interbedded metavolcanics. Up to 2 miles in length and 50 to 200 feet wide.

Shields Tp. (Cont.)

Economic Features: Twenty assayed samples averaged 37.2% Fe, 44.0% SiO_2. A sample across 50 feet gave 34.1% Fe, 46.5% SiO_2. A 2 ton sample with a 38.2% crude Fe content by grinding to 60 to 80 M, gave a concentrate of 63.6% Fe with a ratio of crude to concentrate of 2:1.

History: 1909(±) Stripping and sampling.
1963 Magnetometer survey by Band-Ore Gold Mines Ltd.
1964 4 d.d. holes for 1,331 feet by Band-Ore Gold Mines Ltd.

References: ODM maps 2108, 2201G.
ODM, 1923, I.O.C. Rpt., p. 198.
GSC, 1921, Sum. Rpt., pt.D, p.32.
Prospectus , 1964, Band-Ore Gold Mines Ltd.
Assessment files, Sault Ste. Marie.

TALBOTT TOWNSHIP

Mattawishkwia River Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: NE corner of Talbott Township and NW corner of Scholfield Township. Conc. 10,11, Lots 33, 34 of Scholfied Township. Conc. 10, 11, 12, Lots 1, 2 of Talbott Township.

Description: N-trending pyrite-pyrrhotite zones in Archean metagreywacke. Zones average approximately 100 feet wide and contain variable amount of sulphides which form up to 40 percent of 50 foot drill sections.

History: 1957 Magnetometer, electromagnetic and scintillometer surveys and 7 d.d. holes by Northern Canada Mines Ltd.

References: ODM maps P397, 2224G .
Assessment files, Timmins.

Scholfield - Talbott Occurrence

(See Scholfield Township)

VANKOUGHNET TOWNSHIP

Mapple Lake Occurrence

(See Deroche Township)

Kirby Occurrence

Class: Hydrothermal.

Location: 1 1/8 miles E of Kirby P.O.; SW 1/4 Lot 36

Description: ESE-trending hematite filled veins within Huronian quartzite and slate. Five intersections include 14 feet of 10.46% Fe, 2.5 feet of 4.03% Fe, 1.5 feet of 16.46% Fe and 3 feet of 19.48% Fe.

History: 1960 - 2 d.d. holes for 597 feet by North Tech Explorations Ltd.

References: Assessment files, Sault Ste Marie.

TOWNSHIP 3B

Briscoe - Kokdtow Occurrence

Class: Hydrothermal.

Location: Centre of township.
Reference: Assessment files, Sault Ste. Marie.

Description: Hematite-bearing quartz-carbonate vein with minor amounts of pyrite and chalcopyrite. The vein is approximately 100 feet wide and exposed for 600 feet along a strike of N5W. A grab sample assayed 30-35 percent Fe.

Reference: Assessment files, Sault Ste. Marie.

TOWNSHIP 3F

Townships 3F and 4F Occurrences

Class: Hydrothermal.

Location: Townships 3F and 4F.

Description: Quartz veins up to 10 inches wide bearing quartz, pyrite, chalcopyrite and specularite near diabase dike contacts within Archean granitic rocks.

Reference: ODM, 1923, I.O.C. Rpt., p.200.

TOWNSHIP 4F

Township 3F and 4F Occurrences

(See Township 3F)

TOWNSHIP 5E

Seabrook Lake Occurrence

Class: Magmatic.

Location: On peninsula between Southwest and Centre bays, south shore of Seabrook Lake.
Reference: ODM map 2005.

Description: "... hematite mineralization is exposed in an area about 300 feet square. Although it may underlie a large area, its iron content, as revealed in exposures is not sufficient to make ore" (Parsons, 1961).

Setting: Within a mafic breccia facies of the Seabrook Lake alkalic complex.

References: ODM map 2005.
ODM, 1961, G.R. No. 3, p.20.

TOWNSHIP 22, RANGE 12

Goulais River Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Annibal Lake to N of Cowie Lake, W half of township.
Reference: ODM map 2108.

Description: The iron range trends NNW, has a total length of nearly 20,000 feet, and has widths from a few feet to approximately 600 feet. The iron formation consists of magnetite-quartz (chert, jasper), amphibole and interlayered bands of volcanics and sediments. It is intruded by felsic and mafic dikes.

Setting: Major part of the Goulais River (South) Iron Range within Archean metavolcanics and metasediments.

Tp. 22, R. 12 (Cont.)

Economic Features: The portions of the range of economic interest are in lenses with widths between 50 and 230 feet and have a total iron content of 25 to 40 percent averaging approximately 30 percent.

Reserves are sufficient to produce 1 million tons of pellets per year for about 30 years.

Concentration tests indicate that grinding to 200 M produces a product of 60 percent or more Fe with a ratio of 2.5 crude to 1 of ore.

Ownership: Algoma Steel Corporation Limited.

History: 1941-44 - Trenching and 207 d.d. holes for 119,522 feet by Algoma Ore Properties, Limited.

References: ODM maps 2108, 1946-4a, b, c, 2215G.
ODM, 1946, Volume LV, pt. 4, p.7-36.
Canadian Mines Handbook, 1967-68.
Assessment files, Sault Ste. Marie.

TOWNSHIP 22, RANGE 13

McClintock Occurrence

Class: Hydrothermal?

Location: Centre of township, approximately 4 miles N and 12 miles E of Alva.

Description: Small seams and bunches of hematite up to 1 foot in diameter in pegmatitic granite, making up to 5 percent of the rock.

Reference: ODM, 1923, I.O.C. Rpt., p.196.

TOWNSHIP 23, RANGE 13

Central Goulais Prospect

(See Township 23, R.14)

Tp. 23, R. 13 (Cont.)

McPhail Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SW corner of township, S of the Goulais River.
Reference: ODM map 1946-4a.

Description: The N termination of Goulais River (South) Iron Range represented by NE and NW trending bands coalescing in the S and pinching out to the W. The iron formation consists of magnetite-quartz-amphibole with interlayered volcanics and sediments and intruded by felsic and mafic dikes.

Economic Features: An early estimate gives a possible tonnage of 0.5 million tons per 100 feet of depth averaging 31% Fe for the west limb and possibly 5 million gross tons to a depth of 400 feet, averaging 32 percent Fe for the remainder (Moore, 1925).

History: 1922, 7 d.d. holes.

References: ODM maps 2108, 1946-4a, 34d, 2215G.
ODM, 1946, Volume LV, pt. 4.
ODM, 1925, Volume XXXIV, pt. 4, p.23-27.

TOWNSHIP 23, RANGE 14

Central Goulais Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: From S of Butter Tin Lake to NW of Dyson Lake, W central part of Tp. 23, R.14, and SW part of Tp. 23, R.14.
Reference: ODM map 2108.

Description: Numerous narrow, discontinuous NW-trending bands of iron formation in a zone some 4.5 miles long and 3.5 miles wide interbedded with Archean metavolcanics and sediments and intruded by mafic dikes. Iron formation consists of quartz (chert, jasper) and magnetite and ranges from chert or lean iron formation to a band 100 feet by 6 feet, a sample of which assayed 59.60 Fe.

Tp. 23, R. 14 (Cont.)

Economic Features: Two main bands, which merge into one band in the NW, were traced for 6000 feet. NE band is lean iron formation mixed with schists and has a maximum thickness of 75 feet; SW band is up to 150 feet thick. Channel samples taken over widths of 100 feet or more assayed in the order of 33 percent Fe and 60 percent SiO_2.

History: 1924-25 Stripping and trenching.
1943 Dip needle survey.
1950 Dip needle and geological surveys by Mekatina Iron Mines.
1959 Geological survey and 6 d.d. holes for 1332 feet by Algoma Ore Properties Ltd.
1965 Magnetometer survey and 12 d.d. holes for 2573 feet by Algoma Steel Corp. Ltd.

References: ODM maps 2108, 34d, 2215G.
ODM, 1925, Volume XXXIV, pt. 4.
Assessment files, Sault Ste. Marie.

Northern Goulais Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: NW quarter of township, between Vacher and Snyder lakes.
Reference: ODM map 34d.

Description: Numerous, dominantly NW-trending, scattered, small lenses of quartz (jasper, chert) - magnetite iron formation within an area some 1.5 miles square.

Setting: Within Archean metavolcanics and metasediments.

Economic Features: Drilling on the S end of Vacher Lake on two lenses 400 and 900 feet long, intersected from 7 to 89 feet (core lengths) of iron formation. In one hole 33 feet averaged 38.84% Fe, 0.23% Mn, 0.57% S and 0.034% P; in another, 89 feet averaged 26.4% Fe, 0.14% Mn, 0.065% P, 43.4% SiO_2, 0.30% S.

History: 1960 Magnetometer survey and 5 d.d. holes for 1,506 feet by Principle Strategic Minerals Ltd.
1962 Geological and geophysical surveys by Algoma Central & Hudson Bay Railways Ltd.

References: ODM maps 2108, 34d, 2215G.
ODM, 1925, Volume XXXIV, pt. 4, p.32, 33.
Assessment files, Sault Ste. Marie.

TOWNSHIP 24, RANGE 14

Boyle Lake Occurrence

Class: Secondary deposit in iron formation.

Location: 1 mile S of E end of Boyle Lake.

Description: An outcrop of brecciated jasper with narrow bands and matrix filling of hematite. A single sample assayed 67.18% Fe, 2.64% SiO_2.

Setting: The iron formation is part of the Central Goulais Iron Range which occurs within Archean metavolcanics and sediments.

Reference: ODM, 1925, Volume XXXIV, pt. 4, p.31.
Assessment files Sault Ste. Marie.

TOWNSHIP 24, RANGE 15

Drury Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Approximately 10 miles NE of Pangis Station.

Description: Iron formation composed of magnetite, jasper and schist of "no economic interest".

Reference: ODM, 1923, I.O.C. Rept., p.196.

TOWNSHIP 25, RANGE 25

Township 25, Range 25 Occurrence

Class: Iron formation, Algoma type.

Location: Centre part of township.

Description: Iron formation in Archean metavolcanics.

References: ODM maps P.184, 2206G.

TOWNSHIP 26, RANGE 13

Township 26, Range 13 Occurrence

Class: Iron formation, Algoma type.

Location: 1 1/2 mile N of Adelaide Lake, west centre part of township.
Reference: ODM map P.363.

Description: Several narrow, discontinuous bands of quartz magnetite iron formation less than 50 feet wide. One band, with a maximum width of 100 feet, is composed of pyrite and quartz. All within Archean metavolcanics.

References: ODM maps P.363, 2108, 35b, 2202G; A.C.R. map 41 N/1 and 8.
ODM, 1923, I.O.C. Rpt., p.195, 196.
ODM, 1926, Volume XXXV, pt. 2, p.77.

TOWNSHIP 26, RANGE 14

Batchawana Occurrence

Class: Iron formation, Algoma type.

Location: Approximately 1/2 mile SE of Batchawana Station.
Reference: ODM map 35b.

Description: Small band of iron formation in Archean metavolcanics.

References: ODM map 35b.
ODM, 1926, Volume XXXV, pt. 2, p.27.

TOWNSHIP 26, RANGE 25

Hamilton (Sweet) Range Occurrence

(See Township 27, Range 25)

TOWNSHIP 26, RANGE 26

Cawdron Lake Occurrence

Class: Iron formation, Algoma type.

Location: Near centre of north shore of large peninsula, SE side of Cawdron Lake.
Reference: ODM map 49g.

Description: Outcrop of iron formation in Archean metavolcanics.

References: ODM maps 40c, 49g.

TOWNSHIP 27, RANGE 12

Township 27, Range 12 Occurrence

Class: Iron formation, Algoma type.

Location: N part of township.
Reference: ODM map 2108.

Description: Iron formation with "poor economic possibilities", in Archean metavolcanics.

References: ODM maps P.364, 2108, 2202G.

TOWNSHIP 27, RANGE 13

Township 27, Range 13 Occurrence

Class: Iron formation, Algoma type.

Location: 1/4 mile E of west boundary and 1 1/4 mile S of N boundary of township.
Reference: ODM map P.359.

Description: Iron formation in Archean mafic volcanics.

References: ODM maps P.359, 2108, 2202G.

TOWNSHIP 27, RANGE 25

Alden (Hamilton) Range Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: East of Speight Lake, NW corner of township.
Reference: GSC map 2050.

Description: Two, east-west trending lenses, 3,000 feet long and up to 50 feet wide of rusty quartz, schist and pyrite beds, up to 8 feet thick. A sample of pyrite assayed 43.3% Fe, 30.45% S.

References: ODM maps P.184, 2192G; GSC map 2050.
GSC, 1926, Mem. 147, p.62, 94, 155.

Hamilton (Sweet) Range Occurrence

Class: Iron formation, Algoma type, sulphide-carbonate facies.

Location: In the vicinity of Smith (Forge) Lake from centre of Township 27, Range 25 to western part Township 26, Range 25.
Reference: GSC map 2050.

Description: Quartz-carbonate-pyrite iron formation up to 200 feet wide in Archean metavolcanics. Lens of massive pyrite 50 feet wide is present on the west shore of Smith Lake.

History: 1913-14 Trenching.

References: ODM maps P.184, 2206G; GSC map 2050.
GSC, 1926, Mem. 147, p.155-57.
ODM, 1967, M.R. Circular No. 5, p.29.

TOWNSHIP 27, RANGE 26

Goudreau Pyritic Sand Deposit (Past Producer)

Class: Surficial deposit of pyrite.

Location: On claim AC50, immediately SE of Goudreau Station.

Description: 0 to 5 feet of loose granular pyrite on a sloping surface of pyrite-siderite iron formation. Deposit overlain by 1 foot of granular quartz and 6 feet of sand and gravel.

Economic Features: Contained "many" tons of pyritic sand grading +45% S.

History: About 1918 Mined by Rand Consolidated Mines Limited.

References: GSC, 1926, Mem. 147, p.112-114.
ODM, 1967, M.R. Circular No. 5, p.22.

Goudreau Range Deposits

Class: Iron formation, Algoma type, sulphide facies.

Location: NW part of township between Goudreau and Goudreau Lake.
Reference: ODM map 49g.

Tp. 27, R. 26 (Cont.)

Description: Quartz-pyrite-carbonate iron formation with some pyrrhotite forms S-shaped open folds with a dominant easterly trend. The formation is up to 225 feet thick and is composed of a lower carbonate member, a middle pyrite member averaging approximately 50 to 60 feet in thickness, and an upper silica member. It is underlain by felsic and overlain by mafic Archean metavolcanics.

Economic Features: From west to east this part of the Range contains the following deposits.

Morrison No. 4 (Past Producer): A sheet of pyrite 3000 feet long, 40 feet wide and grading 40.5% Fe, 7.41% SiO_2, 26.9% S from which a considerable tonnage was mined in 1918-1919 and 67,000 tons mined in 1958 and 1959.

Goudreau "B" Occurrence: A pyrite-bearing zone 900 feet long.

Goudreau "D" Prospect: Consists of a North limb containing 150,000 tons grading 24.5% S, 36.3% Fe and a South limb containing 150,000 tons grading 28.4% S, 41.3% Fe over an average width of 95 feet.

Goudreau "E" Prospect: A shallow deposit of interbedded pyrite, schist, carbonate and silica over a width of 250 feet with minor tonnage.

Goudreau "F" Occurrence: Narrow pyritic lenses.

Goudreau "C" (Past producer): A pyrite lens 200 to 300 feet wide, 50 feet thick, over 600 feet long and averages 28.33% S from which approximately 375,000 tons of ore were recovered.

"C" Extension (Past producer): About 200,000 tons of pyrite grading 38.9% Fe, 23.6% S are blocked out. Mining carried out in 1962-63.

Bear Claim (Past producer): A pyrite-bearing zone with a length of 1500 feet, a width of 100 feet, and depth of 120 feet from which approximately 350,000 tons of pyrite were mined in 1959-61.

McPhail Prospect: Contains a West section with a pyrite zone 500 to 600 feet long, about 40 feet wide and grading 40% Fe, 6% SiO_2, 38% S; a Centre section of pyrite and limestone; and an East section.

Goudreau "A" (Past producer): A main pyritic body 1800 feet long, 20 to 100 feet thick, and dipping 30 to 45 N. 250,000 tons mined in 1960-61.

Morrison No. 3 Prospect: Lens of pyrite 1250 feet long, up to 115 feet wide with an open pit potential of 130,000 tons grading 40% Fe, 6% SiO_2 and 31.7% S.

Ownership: Algoma Steel Corporation Limited.

History: 1914-1918 300,000 to 400,000 tons of pyrite mined by Nichols Chemicals Co. and a few thousand tons mined by Rand Consolidated Mines Ltd.
1959-1962 Approximately 850,000 tons of ore mined by Algoma Steel Corp. Ltd.

References: ODM maps P.184, 49g, 2193G, 2207G; GSC map 2050.
ODM, 1967, M.R. Circular No. 5, p.21-28.
GSC, 1926, Mem. 147, p.105-110.
Econ. Geol., 1954, Volume 49, p.310-316.

TOWNSHIP 28, RANGE 13

Mammoth - Vulcan Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: S central part Township 28, Range 13 including Mammoth and Vulcan 'A' and 'B' Locations, and N part section 5 of Palmer Township.
Reference: ODM map P.361.

Description: NE-trending lenses up to 1 mile long of magnetite-quartz (chert, jasper) iron formation with minor amounts of pyrite. Widths are up to 400 feet but thickness is less than 100 feet and usually less than 50 feet. Dips range from 30 SE to verticle. The grade is mainly between 15 and 30% Fe but assays of 36.34% Fe, 49.78% SiO_2 and 42.08% Fe, 43.30% SiO_2 have been recorded.

Setting: Within Archean metavolcanics.

Economic Features: Magnetic tests on 2 samples assaying 15.50 and 16.00% Fe gave concentrates between 58.10 and 65.30% Fe, and 14.68 and 8.24% SiO_2 at -325M and -400M for a 23.21 to 24.06 percent weight recovery and 90.19 to 94.74 percent Fe recovery.

History: 1956 Dip needle and geological surveys by Algoma Ore Properties Ltd.
1961 Geological and magnetometer surveys by Cliffs of Canada Ltd.
1962 Magnetometer and electromagnetic surveys by Jorsco Explorations Ltd.

Tp. 28, R. 13 (Cont.)

References: ODM maps P.361, 2108, 35b, 2188G.
ODM, 1926, Volume XXXV, pt. 2, p.78-81.
Assessment files, Sault Ste. Marie.

TOWNSHIP 28, RANGE 22

Lake Mishewawa - Anjigomi Lake Occurrence

(See Township 29, Range 22)

TOWNSHIP 28, RANGE 23

Firesand River Occurrence

(See Township 29, Range 23)

TOWNSHIP 28, RANGE 24

Loonskin Lake (Kathleen Range) Occurrences

Class: Iron formation, Algoma type, sulphide facies.

Location: S and SE of Loonskin Lake, NW part of township.
Reference: ODM map P.184.

Description: NE-trending lenses of silica (chert) with minor amounts of pyrite and some pyrrhotite in Archean metavolcanics. Formation up to 100 feet thick with pyritic zones up to 20 feet thick. Locally, surficial gossan accummulated in depressions adjacent to the formation to the NW.

History: Before 1918 adit.
1961 Geological and geophysical surveys by Algoma Central and Hudson Bay Railways Ltd.

References: ODM maps P.184, 2192G; GSC map 1972.
GSC, 1926, Mem. 147, p.92-3.
Assessment files, Sault Ste. Marie.

Ruth and Lucy Mine (Producer)

Class: Iron formation, Algoma type, carbonate facies.

Location: Part of the Ruth and Lucy ranges; Tp. 28, R. 24, and Tp. 29, R. 24.

Description: See Ruth Range and Lucy Range deposits.

Economic Features: Open pit mine from Ruth and Lucy ranges, estimated to contain 6 million tons of open pit reserves to be mined at the rate of 600,000 gross tons per year.

Ownership: Algoma Steel Corp. Ltd. on lease from Michipicoten Iron Mines Ltd.

History: 1967 Initial production from open pit.

Reference: Annual Report, 1967, Algoma Steel Corp. Ltd.

Ruth Range Deposit

Class: Iron formation, Algoma type, carbonate and pyrite facies.

Location: NW corner of township, between Bouldry Lake and the Josephine Fault.
Reference: ODM map 1946-7.

Description: NE-striking, steep dipping quartz-siderite-pyrite iron formation within Archean metavolcanics. Siderite-pyrite concentrated at the base of a silica member up to 350 feet thick.
(Also see Ruth and Lucy Mine; Tp. 28, R. 24).

Tp. 28, R. 24 (Cont.)

Economic Features: Three main bodies are outlined: The East Ore Body approximately 1350 feet long, 40 to 230 feet wide, and containing 20.1 million tons of potential ore based on drilling to a maximum depth of 1,040 feet; the Central Ore Body, 3200 feet long, up to 250 feet wide, and containing 9.1 million tons of potential ore based on drilling to a maximum depth of 1,450 feet; and the West Ore Body, a small body up to 130 feet wide and tapering to the NE containing 1.7 million tons of potential ore based on drilling to a maximum depth of 665 feet.

Total reserves are calculated at 30.9 million long tons of which 11.6 million tons average 34.5% Fe, 7.0% SiO_2, 6.1%S, 0.165% As, 1.8% Mn and 19.4 million tons average 30.9% Fe, 14.2% SiO_2, 5.1% S, 0.19% As, 1.8% Mn.

Ownership: Leased to Algoma Steel Corporation Limited by Michipicoten Iron Mines, Limited in 1967.

History: Before 1902 - trenching and adit.
1930 - 8 d.d. holes by Bethlehem Steel Corp.
1942 - about 50,000 feet of d.d. by Frobisher Exploration Co. Ltd.
1967 - preparation for open pit operations.

References: ODM maps 1946-7, P.184, 2192G.
ODM, 1946, Volume LV, pt. 4, p.59-73.
GSC, 1926, Mem. 147, p.89-91.

TOWNSHIP 28, RANGE 25

Big Lake Prospect

Class: Iron formation, Algoma type, sulphide facies.

Location: Immediately E and SE of Big Lake.
Reference: ODM map P. 184.

Description: Iron formation with pyrite-siderite lenses within Archean metavolcanics.

Tp. 28, R. 25 (Cont.)

Economic Features: Two main lenses outlined one 1550 feet long and 21.4 feet wide, another 735 feet by 52 feet. Potential tonnage , to a depth of 300 feet, estimated at 1.9 million tons grading 30.7% S, 39.0% Fe, 7.9% SiO_2 with an additional possible tonnage of 462,420 tons averaging 30.2% S, 33.8% Fe.

History: 1950 Drilling and geological survey by Jalore Mining Co.
1951 14 d.d. holes by Jorgan Mines Ltd.
1953 11 d.d. holes for 4,111 feet by Candela Development Co.

References: ODM map P. 184.
ODM, 1967, M.R. Circular, No. 5, p. 18.
Prospectus, 1967, Jorgan Mines Limited.
Assessment files, Sault Ste. Marie.

Brooks Range Occurrences

Class: Iron formation, Algoma type, carbonate and sulphide facies.

Location: Central part of township.
Reference: GSC map 1972.

Description: E-W trending quartz-siderite-pyrite iron formation in 3 main sections each of which is approximately 4,000 feet wide. The West Brooks (Brooks No.3) section contains 3 east-striking segments 400 feet, 1,800 feet and 1,000 feet in length and one north-striking segment 1,000 feet long. Widths range from 4 to 40 feet. The Centre Brooks (Brooks No. 2) section is from 300 to 850 feet in width; the East Brooks (Brooks No.1) section is up to 125 feet wide. The iron formation is mainly banded silica with lens of siderite, pyrite and pyrrhotite.

Economic Features: Nine pyrite lenses, 150 to 500 feet long and 15 to 25 feet wide, and several siderite lenses 100 to 400 feet long and 10 to 45 feet wide are reported.

Tp. 28, R. 25 (Cont.)

History: 1949-50 Geological survey and shallow drilling by Jalore Mining Company Ltd.

References: ODM maps P.184, 2192G; GSC map 1972.
GSC, 1926, Mem.147, p. 93-4.
ODM, 1923, I.O.C. Rpt., p. 194.
Assessment files, Sault Ste. Marie.

Holdsworth Prospect

Class: Iron formation.

Location: Near S boundary in central part of township.
Reference: ODM map P. 184.

Description: Two lenses of massive pyrite, 200 feet apart, within Archean metavolcanics. One lens 1100 feet by 18 to 25 feet; the other 600 feet by up to 31 feet.

Economic Geology: The two lenses are estimated to contain 900,000 tons of pyrite averaging 46.31% S.

History: 1918-19 22 d.d. holes by Algoma Steel Corp. Ltd.

References: ODM map P. 184.
ODM, 1967, M.R. Circular No.5, p. 29.
GSC, 1926, Mem. 147, p. 123-4.

Tp. 28, R. 25 (Cont.)

Josephine Mine (Past Producer)

Class: Secondary deposit in iron formation.

Location: Beneath former Parks Lake with shaft on SE side.
Reference: ODM map 1946-8.

Description: Discontinuous lenses of hematite over a strike length of approximately 2,800 feet, up to 80 feet thick, occur within banded silica of the Josephine-Bartlett Range near the contact with felsic Archean metavolcanics. Locally manganite, rhodochrosite and pyrite are present.

Economic Features: Ore reserves in August 1945 were calculated at 3,840,000 tons grading 51,99% Fe, 14.99% SiO_2, 2.119%S. Two types of ore were included a high-grade lump ore with plus 60.1% Fe and a lower-grade ore much higher in SiO_2.

Ownership: Michipicoten Iron Mines Ltd.

History: 1899 3 d.d holes by H.A. Wiley.
1900-1906 21 d.d. holes and 2 shafts (150 and 50 feet deep) by E.V. Clergue et al.
1941 6 d.d holes for 6,500 feet for Frobisher Exploration Co. Ltd.
1941-1945 Dewatering of Parks Lake, mine and plant construction by Michipicoten Iron Mines, Limited.
1945-1946 61,637 tons of ore shipped.
August 1946 Mine closed due to cave-in.

References:
ODM maps 1946-8, P.184, 2192G; GSC map 1972.
ODM, 1946, Volume LV, pt.4, p. 37-57.
Can. Mining Jour., 1942, January.
CIMM, 1947, Volume 1, p. 637-656.
CIMM, 1947, No. 427, p. 589-636.
GSC, 1926, Mem. 147, p.121-123.
Structural Geol. of Can. Ore Deposits, 1948, CIMM Sym., p. 429-432.
Assessment files, Sault Ste. Marie.

Tp. 28, R. 25 (Cont.)

Josephine-Bartlett (Britannia) Range Deposits

Class: Iron formation, Algoma type, carbonate and sulphide facies.

Location: Between Goetz Lake to E of Siderite Lake, S part of township.
Reference: ODM map 1946-8.

Description: East-trending, quartz-pyrite-siderite iron formation up to 550 feet thick and 3 2/3 miles long. Mainly banded silica, with siderite and siderite-pyrite concentrations along S contact.

Economic Features: Between Parks Lake and Goetz Lake - Two siderite lenses, one 30 to 130 feet wide assaying 34 to 40 percent Fe and 1.6 to 6.5 percent S; the other up to 70 feet wide, an assay from which gave 37.8 percent Fe and 3.0 percent S. Beneath the former Parks Lake - See the "Josephine Mine". Near the east end of the Range- Drilling on the Bartlett (Brittannia) Prospect outlined 30 million tons averaging 41% Fe over a strike length of 4000 feet.

On west side of Siderite Lake - "A small body of siderite of fair grade .....".

History: 1912 - 3 d.d holes by Algoma Steel Corp. Ltd.
1946 - 4 d.d holes by Algoma Ore Properties Ltd.

References: ODM maps 1946-8, P.184, 2192G; GSC map 1972.
ODM, 1946, Volume LV, pt.4, p. 57-8.
GSC, 1926, Mem. 147, p. 93-4.
Can. Mines Handbook, 1967-8.

Reau Lake Occurrence

Class: Iron formation, Algoma type, sulphide and carbonate facies.

Location: On island and beneath NE corner of Reau Lake near north boundary at centre part township.

Description: Two pyrite-siderite zones with intercalated metavolcanics. One zone 100 feet wide; second zone approximately 30 feet wide and at least 300 feet long.

History: 1953 - 7 d.d holes by Jalore Mining Company.
1954 - Geophysical and geological surveys and 1,978 feet of d.d by Candela Development Co.

References: ODM, 1967, M.R. Circular, No. 5, p.30.
Assessment files, Sault Ste Marie.

Sheldon and Cline Range Occurrences

Class: Iron formation.

Location: NE part of township.
Reference: ODM map P.184.

Description: Two WNW-trending iron formation bands in Archean metavolcanics.

References: ODM map P. 184, 2192G.
Richter, D.H.,1952, M.Sc. thesis, Queen's Univ.

TOWNSHIP 28, RANGE 26

Candela Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: East central part of township.

Tp. 28, R. 26 (Cont.)

Description: Pyritic iron formation, up to 70 feet wide and 2,200 feet in length containing lenses of pyrite up to 6 feet wide.

History: 1954 Trenching and geological survey by Candela Development Company.

References: ODM, 1967, M.R. Circular, No.5, p. 19.
Assessment files, Sault Ste. Marie.

Dreany (Rutledge) Range Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: NW corner of township.
Reference: ODM map P.184.

Description: Numerous short lenses of magnetite - quartz (chert) iron formation, with some hornblende and epidote, within Archean metavolcanics. Up to 150 feet thick with an estimated iron content of 20 percent.

Economic Features: One main anomaly outlined, 300-400 feet by 110 feet. Chip sample across width assayed Fe - 22.8%, SiO_2 - 62.6%, S - 0.01%, P - 0.037%.

History: 1918 Trenching by Dreany Iron Mines Ltd.
1953 Geological and dip needle survey by Algoma Ore Properties Ltd.

References: ODM maps P. 184, 49g, 2193G; GSC map 1972.
GSC, 1926, Mem. 147, p. 100.
Assessment files, Sault Ste. Marie.

Eccles and Irene Lakes Occurrence

Class: Iron formation, Algoma type.

Tp. 28, R. 26 (Cont.)

Location: Between High Falls on Michipicoten River to north of Lake Mishewawa.
Reference: ODM map 15b.

Description: Iron formation trending NW for 2 miles with a width of 1/4 mile.

References: ODM maps 2191G, 15b.
ODM, 1923, I.O.C. Rpt., p.195.

Morrison (Rand) No. 2 Prospect

Class: Iron formation, Algoma type, sulphide and carbonate facies.

Location: 1 1/2 miles S of Goudreau Station.
Reference: ODM map 49g.

Description: Two E-W trending quartz-pyrite-siderite iron formation bands which dip 60 to 70 N. The bands are 80 to 275 feet wide and composed of a lower siderite member an intermediate member and an upper silica member, within Archean metavolcanics.

Economic Features: Reserves calculated from track level to a maximum elevation of 350 feet as containing 5,500,000 tons of material grading 50% pyrite with an average width of 31 feet and 2,415,800 tons of material grading 56% siderite (27% Fe) with an average width of 41 feet. Three principal zones outlined with lengths of 1,300, 2,600 and 1,400 feet.

History: 1915-1916 Trenching and 19 d.d. holes for 4,470 feet.
1920 Adit for 200 feet by Rand Consolidated Mines Ltd.
1941 11 d.d. holes for 4,218 feet and 150-foot tunnel by Aldermac Copper Corp. Ltd.

References: ODM maps 49g, P.184, 2192G; GSC map 1972.
GSC, 1926, Mem. 147, p.103-5.
ODM, 1967, M.R. Circular, No. 5, p.29, 30.
Assessment files, Sault Ste. Marie.

TOWNSHIP 28, RANGE 27

Dreany Range Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: E. quarter of township.
Reference: ODM map 49g.

Description: Discontinuous, NE-trending bands of magnetite-quartz iron formation from 2 to 200 feet in width within Archean metavolcanics.

References: ODM maps P. 184, 49g, 2193G.
GSC, 1926, Mem. 147, p. 155-6.

TOWNSHIP 29, RANGE 20

Mijinemungshing Lake Occurrence

Class: Iron formation, Algoma type.

Location: Midway along the NE extension of Mijinemungshing Lake.
Reference: ODM map 15b.

Description: A band of rusty banded silica in Archean metavolcanics.

References: ODM maps 15b, 2190G.
OBM, 1906, Volume XV, pt. 1, p.179.

TOWNSHIP 29, RANGE 22

High Falls - Lake Mishewawa Occurrence

Class: Iron formation, Algoma type.

Tp. 29, R. 22 (Cont.)

Location: SW and W centre part of township.
Reference: ODM map 49g.

Description: Numerous, small, contorted bands of quartz-magnetite iron formation in Archean metavolcanics. Widths up to 75 feet reported.

References: ODM maps 49g, P.184, 2192G; GSC map 1972.
GSC, 1926, Mem. 146, p.94-95.

Lake Mishewawa - Anjigomi Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Between N end of Lake Mishewawa to east of NE end of Anjigomi Lake in Townships 28 and 29, Range 22.

Description: Discontinuous exposures of E-W trending iron formation. On the A.C.R. east of Anjigomi Lake the unit is up to 90 feet wide and is composed of quartz (chert) pyrite and magnetite. The formation ranges from barren chert to magnetite-rich phases. A sample of the latter taken over a width of 35 feet assayed 46.9% Fe, 23.0% SiO_2, 0.68% S.

References: ODM map 2191G, 15b.
ODM, 1923, I.O.C. Rpt., p.195.
OBM, 1906, Volume XV, p.177-8.

TOWNSHIP 29, RANGE 23

Barton Occurrence

Class: Iron formation, Algoma type.

Location: SW part of township on claim BY80.
Reference: GSC map 1972.

Tp. 29, R. 23 (Cont.)

Description: A 6-foot wide and a 4-foot wide band of iron formation traced for 100 feet containing quartz and minor iron oxides and pyrite.

History: Before 1923 40-foot drift.

References: ODM map 2191G, GSC map 1972.
GSC, 1926, Mem. 147, p. 79.

Firesand River Occurrence

Class: Secondary oxidation of carbonatite.

Location: NE part of Township 29 and NW part of Township 28.
Reference: ODM map 2006.

Description: Surficial zone of hydrous iron oxide overlying the Firesand carbonatite complex. A 17-foot surface sample assayed 55.5% Fe, 1.0% SiO_2; the first 80 feet of drill core in 1 hole assayed 25.6% Fe.

History: 1924 - 3 d.d. holes
1951 -58 Diamond drilling and geological and dip needle surveys by Algoma Ore Properties Ltd.

References: ODM maps 2006, P. 184; 2191G, 2192G.
GSC, 1927, Mem. 147, p. 70-81.
ODM, 1961, G.R., No. 3, p. 23-32.
Can. Mining Jour., 1924, February 1.
ODM, 1927, Volume XXXV1, pt.2, p. 43-44.

TOWNSHIP 29, RANGE 24

Helen Range Mines (Producer and Past Producers)

Class: Iron formation, Algoma type, carbonate facies and secondary deposit in iron formation.

Location: South central part of township.
Reference: ODM map 1946-5.

Description: A siderite-pyrite-quartz iron formation with minor amounts of magnetite, the Helen Iron Formation, strikes east-west over a length of 2.5 miles and dips 80 S. The iron formation consists of an upper banded chert member up to 1000 feet thick and averaging 350 feet, an intermediate pyrite member 10 to 50 feet thick, and a lower siderite member up to 350 feet thick. It is underlain by Archean felsic pyroclastics and overlain by mafic flows.

Economic Features: Past production was obtained from the Old Helen Mine, the Helen Mine including the Helen, the Victoria and the Alexander ore bodies, and the George W. MacLeod Mine. The latter mine is the only one in production.

The Old Helen Mine was a surficial secondary deposit of geothite with pockets of pyritic and quartz sands within the siderite and pyrite members. It was 1,090 feet long and 400 feet wide and bottomed at 700 feet below the surface. 2.7 million tons of iron ore grading 53% Fe and 52,000 tons of pyrite were mined between 1900 and 1918.

The Helen Mine operated from 1939 to 1962 by open pit and underground mining to a depth of 919 feet. Siderite ore averaging approximately 35 percent iron was mined over widths up to 300 feet. Production was at a rate of about 500,000 tons per year to 1950 and then increased to in excess of 1,000,000 tons per year.

The MacLeod Mine extends 900 feet below the Helen lower limit with lateral additions to the east and west. An estimated 50 million tons of siderite ore were blocked out with widths up to 300 feet. Production began in 1960 at the rate of approximately 2 million tons per year.

The siderite ore averaging 35 to 36 percent Fe is treated to produce a sinter grading 51 percent iron.

Tp. 29, R. 24 (Cont.)

History: 1900-1918 Mining from the Old Helen Mine by open pit and 2 shafts by Algoma Steel Corporation Ltd.
1939-1962 Mining from the Helen Mine by 2 open pits and 2 shafts by Algoma Steel Corporation Ltd.
1960 to present Mining from the George W. MacLeod Mine serviced by a vertical 3-compartment shaft, 2,066 feet deep.

References: ODM maps P. 184, 1946-5, 1946-5a, 2192G.
Can. Mining Jour., 1956, Volume 77, No.11, p.75-130.
Econ. Geol., 1964, Volume 59, No.4, p. 684-718.
ODM, 1946, Volume LV., pt. 4, p. 87-118.
GSC, 1926, Mem. 147, p. 93-87, 115-123.

Johnson (Eleanor) Range Occurrence

Class: Iron formation, Algoma type, carbonate facies.

Location: Between Lena and Wawa lakes, west of Wallbank Lake, SE part of township.
Reference: ODM map P. 184.

Description: Iron formation striking ENE, up to 125 feet wide and more than 4,800 feet in length. Contains lenses up to 25 feet wide of siderite, a sample of which assayed 37.4% Fe, 3.44% SiO_2.

References: ODM maps P. 184, 1964-5, 2192G; GSC map 1972.
ODM, 1946, Volume LV, pt. 4, p. 83-6.
GSC, 1926, Mem. 147, p. 87-8.

Lucy Range Deposits

Class: Iron formation, Algoma type, carbonate and sulphide facies.

Location: Between Mildred and Loonskin lakes in Township 29; Range 24 and Township 28, Range 24.
Reference: ODM map 1946-6.

Description: NE - trending, steep dipping siderite-pyrite-quartz iron formation overlain by mafic volcanics and underlain by felsic volcanics. The iron formation averages 340 feet in width, of which the lower 70 feet comprise the siderite and pyrite members and the overlying 270 feet the banded silica member.

Economic Features: The siderite member of the central orebody is 2,500 feet long and up to 100 feet in width. In the west extension orebody, offset to the north, it averages 50 feet in width and is 1,200 feet long. The pyrite member averages 25 feet in width. Also see Ruth and Lucy mine; Tp. 28, R. 24.

Ownership: On lease to Algoma Steel Corp. Ltd. from Michipicoten Iron Mines, Ltd.

History: 1908 trenching by Alois Goetz.
1947 d.d. by Jalore Mining Company Ltd.
1950 Geological mapping and d.d by Jalore Mining Co. Ld.
1967 Prepared for open pit with initial production by Algoma Steel Corp. Ltd.

References: ODM maps P. 184, 1946-6, 2192G; GSC map 1972.
ODM, 1946, Volume LV, pt.4, p.88-9.
GSC, 1926, Mem. 147, p. 74-86.
W.L. Young, 1951, M.Sc. Thesis, McGill Univ.

Tp. 29, R. 24 (Cont.)

Mildred (Goetz) Range Occurrence

Class: Iron formation, Algoma type.

Location: 1/2 mile south of Magpie River, SW part Township 29 and SE part Township 30.
Reference: ODM map P. 184.

Description: Iron formation striking E-W for approximately 2 miles and up to 450 feet thick within Archean felsic volcanics. The formation consists of banded silica with minor magnetite, siliceous siderite up to 30 feet thick, some pyrite and interbedded metavolcanics. A 25-foot bed of banded silica parallels the formation 200 feet to the north.

History: Before 1906 trenching at 60-foot intervals.

References: ODM map P. 184, 2192G; GSC map 1972.
GSC, 1926, Mem. 147, p. 82-3.

Mile 12 Occurrence

Class: Iron formation, Algoma type.

Location: 1000 feet N of mile post 12 on the A.C.R., NW of Walbank Lake.
Reference: ODM map P. 184.

Description: An exposure of chert with small amounts of pyrite and siderite less than 100 feet in length and width, within Archean metavolcanics.

References: ODM map P. 184.
GSC, 1926, Mem. 147, p. 88

Tp. 29, R. 24 (Cont.)

Sir James Mine (Eleanor Range) (Producer)

Class: Iron formation, Algoma type, carbonate facies.

Location: Between Wawa and Lena lakes, SE part of township. Reference: ODM map P.184.

Description: Siderite-chert iron formation striking N45 E over a length of approximately 2,450 feet within Archean metavolcanics.

Economic Features: Drilling to 3,000 feet indicated 80 million tons of siderite, of which 7 million tons is available to open-pit mining. The orebody is 140 to 180 feet wide. Open pit mining began in 1958 at a rate of approximately 1.2 million tons per year till 1961 and at approximately 700,000 tons per year since then. A sinter grading 51 percent iron was produced.

History: 1958 to 1967 Open-pit mining by Algoma Steel Corp. Ltd. with 7,646,269 tons mined. Inactive in 1968.

References: ODM map P.184, 36a, 2192; GSC map 1972.
ODM, 1946, Volume LV, pt. 4, p.83-6.
GSC, 1926, Mem. 147, p.87-8.
Mineral Res. Div., 1961, M.I. Bull. 51, p.59-60.

TOWNSHIP 29, RANGE 25

Reynolds (Lake) Range Occurrence

(See Township 29, Range 26)

TOWNSHIP 29, RANGE 26

Alice Range Prospect

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: E and S of Alice Lake and 1 mile S of Magpie Mine.
Reference: ODM map P. 184.

Description: North-trending series of 12 lenses of iron formation extending for a length of 3,500 feet, composed of magnetite-quartz interbedded with pyrite and underlain by a 5 to 10-foot cherty member.

Economic Features: The iron formation lenses range from 650 feet by 75 feet to 60 feet by 10 feet and average 400 feet by 40 feet.

Samples and drill core assays from the N and central part of the range average 49.5% Fe, 4.1% SiO_2, 5.97% S, 0.007% P; those taken from the S and central part of the range average 42% Fe, 18% SiO_2, 6.5% S, 0.018% P.

History: 1911 - 8 d.d. holes for 4,858 feet by Lake Superior Corp. Ltd.
1953 - Geological survey by Algoma Ore Properties Ltd.

References: ODM map P. 184, 2192G; GSC map 1972.
GSC, 1926, Mem. 147, p. 97-8.
Evans, S.W. 1951, B.A.Sc. thesis, Univ. of Toronto.
Assessment files, Sault Ste. Marie.

Finger Lake (Evans Creek) Range Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: N of Godon Lake and west and north of Rainbow Lake
Reference: ODM map P.184.

Description: E-W segment extending for 1,600 feet and up to 400 feet wide containing banded silica and magnetite iron formation.

Economic Features: Dip needle survey revealed an anomaly 1000 feet by 120 feet.

History: 1911 Trenching by Algoma Steel Corporation Ltd.
1953-4 Geological and dip needle surveys by Algoma Ore Properties Ltd.

References: ODM maps P. 184, 2193G; GSC map 1972.
GSC, 1926, Mem. 147, p. 99.
Assessment files, Sault Ste. Marie.

Godon Lake (Evans Creek) Range Prospect

Class: Iron formation, Algoma type, carbonate and sulphide facies.

Location: East of Godon Lake.
Reference: ODM map P. 184.

Description: N- trending iron formation containing siderite, magnetite and pyrite, up to 330 feet wide and 5,000 feet in length. A second band of layered chert, 30 feet wide, parallels the range to the west.

Economic Features: Drilling intersected up to 77 feet of siliceous siderite averaging 30.7% Fe, 21.9% SiO_2.
Sink-float tests preformed with unfavorable results.

History: 1910-14 Trenching by Algoma Steel Corporation Ltd.
1953-54 7 d.d. holes and geological survey by Algoma Ore Properties Ltd.

References: ODM maps P. 184, 2192G; GSC map 1972.
GSC, 1926, Mem. 147, p. 99.
Assessment files, Sault Ste Marie.

Tp. 29, R. 26 (Cont.)

Magpie Mine (Past Producer)

Class: Iron formation, Algoma type, carbonate facies.

Location: SE part of township.
Reference: ODM map P. 184.

Description: NW-trending band of siderite iron formation, with a minor amount of disseminated pyrite, within Archean metavolcanics. The deposit is tabular with a width of 40 to 60 feet.

Economic Features: An average of 157 samples from the 1st and 2nd levels was 36.79% Fe, 5.70% SiO_2, 0.78% S, 0.012% P, 2.00 to 3.00 % Mn.

Drilling outlined an estimated 2.25 million tons of ore of which 1.5 million tons were mined out. The ore was roasted producing a nodulized product grading 50.10% Fe, 9.14% SiO_2, 2.74% Mn.

History: 1909-1913 Diamond drilling and mine and roasting plant construction by Algoma Steel Corporation Ltd.
1913-1921 Shipment of 1,212,866 tons of ore by Algoma Steel Corporation, Ltd.
1921 Mining terminated at the 5th level.

References: ODM maps P. 184, 2192G; GSC map 1972.
GSC,1926, Mem. 147, p. 95-7.
ODM, 1923, I.O.C. Rpt., p. 159-61.

North Evans Creek Range Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SW of Tray Lake to Magpie River, NE part of township.
Reference: ODM map P. 184.

Description: WNW - trending magnetite-quartz (chert) iron formation 4 miles long and approximately 175 feet wide.

Tp. 29, R. 26 (Cont.)

Economic Features: 3 magnetic anomalous zones outlined, 2,000 by 200 feet, 3,600 by 200 feet, and 2000 by 100 to 150 feet. Assayed sections of 60 feet, 57 feet, and 150 feet from these zones gave 16.5% Fe, 30.5% Fe, and 13.9% Fe respectively.
Davis tube test at - 150 M gave a concentrate of 60.9% Fe, 15.2% SiO_2 and at -270M gave a concentrate of 64.1% Fe, 9.5% SiO_2.

History: 1953-54 Dip needle and geological surveys and 8 d.d. holes for 3.442 feet by Algoma Ore Properties Ltd.

References: ODM maps P. 184, 2193G. 2192G; GSC map 1972.
GSC, 1926, Mem.147, p. 98-99.
Assessment files, Sault Ste. Marie.

Reynolds(Lake)Range Occurrence

Class: Iron formation, Algoma type, carbonate and sulphide facies.

Location: From Godon Lake to S of Magpie River, S central part of Township 29, Range 26, and NE part of Township 29, Range 25.
Reference: ODM map P. 184.

Description: NE-trending iron formation with a length of 5 miles. The formation is 250 feet thick near the N end, consists of 2 parallel bands in the centre, and is 300 feet thick near the south end. It is mainly banded chert with a small body of pyrite and pyrrhotite near Reynolds Lake and a siderite lens midway between Eva and Godon lakes.

Economic Features: The lens of siderite is 350 feet by 5 to 10 feet and has an approximate average grade of 31.1% Fe, 3.5% SiO_2.

Tp. 29, R. 26 (Cont.)

History: 1953-54 Geological survey and 2 d.d. holes for 1347 feet by Algoma Ore Properties, Ltd.

References: ODM map P. 184, 2192G; GSC map 1972.
GSC, 1926, Mem. 147, p. 98.
Assessment files, Sault Ste. Marie.

South Evans Range Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: From N of Rainbow Lake to east of Magpie River.
Reference: ODM map P. 184.

Description: E-trending quartz (chert) -magnetite iron formation 3 miles in length.

Economic Features: Two magnetic anomalous zones outlined: the east zone at Magpie River, 4,600 feet by 250 feet, from which 200 feet of drill core assayed 15.0% Fe, 66.3% SiO_2, 2.1% S; and the west zone from which a surface sample over 200 feet assayed 14.4% Fe, 77.9% SiO_2, 0.27% S.

History: 1953 Geological and dip needle surveys and 1 d.d. hole by Algoma Ore Properties Ltd.

References: ODM maps P. 184, 2192G, 2193G; GSC map 1972.
GSC, 1926, Mem. 147, p. 99-100.
Assessment files, Sault Ste Marie.

TOWNSHIP 30, RANGE 19

Gamitagama Lake Complex Occurrence

(See Township 30, Range 20)

Gargantua Lake Occurrence

(See Township 31, Range 19)

TOWNSHIP 30, RANGE 20

Gamitagama Lake Complex Occurrence

Class: Magmatic.

Location: SE quarter Township 30, Range 20 and NE part Township 30, Range 19.
Reference: ODM maps 2138, 2139.

Description: Disseminated iron-titanuim oxide in gabbroic and dioritic facies of the Gamitagama Lake Complex which averages approximately 5.5 percent. Locally, small anorthosite lenses contain up to 8.5 percent ilmeno-magnetite and 5.5. percent hemo-ilmenite.

Reference: ODM maps 2139, 2138, 2190G.
L.D. Ayres, ODM, personal communication.

Red Rock Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Immediately west of Red Rock Lake.
Reference: ODM map 2139.

Tp. 30, R. 20 (Cont.)

Description: Magnetite-quartz (chert) iron formation with some grunerite, up to 60 feet wide within Archean felsic metavolcanics. A grab sample assayed 34.9% Fe.

References: ODM map 2139, 2190G.
L.D. Ayres, ODM, personal communication.

Red Rock River Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Centre part of township.
Reference: ODM map 2139.

Description: Discontinuous east-west trending magnetite-quartz (chert) iron formation with some siderite, dolomite and iron silicates, up to 2/3 mile long and 350 feet wide, within Archean metavolcanics. A grab sample assayed 11.46% Fe.

References: ODM maps 2139, 2190G.
L.D. Ayres, ODM, personal communication.

TOWNSHIP 30, RANGE 22

Miscellaneous Occurrences

Class: Iron formation, Algoma type.

Location: West and west central part of township.
Reference: ODM map 15b.

Description: Scattered occurrences of magnetite-quartz, lean chert, pyritic slate, and "sandy ore".

References: ODM maps 15b, 2191G.
ODM, 1906, Volume XV, pt.1, p. 177-8.
ODM, 1923, I.O.C. Rpt., p. 194-5.

TOWNSHIP 30, RANGE 23

Michipicoten Harbour Deposits

Class: Iron formation, Algoma type, oxide facies.

Location: On Gros Cap peninsula.
Reference: ODM map P. 184.

Description: 3 bands of iron formation striking NW and dipping 45-50 SW. One, up to 150 feet wide, and another 60 feet wide, contain quartz and hematite; the third consists of magnetite, pyrite and quartz.

Economic Features: Early mining was restricted to a 25-foot section of hematite-rich material, a sample of which assayed 86.8% Fe_2O_3.

History: Circa 1866 64-foot shaft by J.W. Johnston.

References: ODM map P. 184, 2191G.
GSC, 1926, Mem. 147, p. 78.

Tp. 30, R. 23 (Cont.)

Miscellaneous Township Occurrences

Class: Iron formation, Algoma type.

Location: In the vicinity of Michipicoten Harbour, the mouth of the Magpie River, and Mile 3 of the A.C.R., and the NE corner of Gros Cap Indian Reserve.
Reference: ODM map P.184.

Description: Banded silica with iron oxides approximately 15 feet thick occurs on the N shore of the Magpie River, 1/4 mile E of Lake Superior.

Near Mile 3, quartz-magnetite iron formation 15 to 20 feet wide is offset by the Tremblay fault to the NE corner of Gros Cap Indian Reserve where it is up to 60 feet wide and at least 2,000 feet long, with an average Fe content of less than 15 percent.

North of Gros Cap peninsula, lean iron formation with local hematitic zones is up to 150 feet wide and approximately 2,500 feet long.

A small band of iron formation, "of no value", occurs just south of Michipicoten Harbour, and a band 30 feet thick and 200 feet long composed of quartz and pyrite occurs 1/2 mile east of the Harbour.

References: ODM map P.184, 2191G, 2192G; GSC map 1972.
GSC, 1926, Mem. 147, p.79-81.
ODM, 1923, I.O.C. Rpt., p.190.

TOWNSHIP 30, RANGE 24

Mildred (Goetz) Range Occurrence

(See Township 29, Range 24)

TOWNSHIP 30, RANGE 25

Dore River Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: SE half of township.
Reference: ODM map P.184.

Description: Iron formation consisting of quartz (chert) and iron oxides 60 feet thick, within Archean metavolcanics.

References : ODM map P. 184; GSC map 1972.
GSC, 1926, Mem. 147, p. 103.

TOWNSHIP 30, RANGE 26

Brant (Lake) Range Prospect

Class: Iron formation, Algoma type, oxide facies (with metamorphic enrichment).

Location: N part Tp. 30, R.26 and SW corner Tp. 30, R. 27.
Reference: ODM map P. 184.

Description: Up to 7, parallel, E-W bands of magnetite-quartz (chert) iron formation with some siderite and pyrite occur over a strike length of 4 miles and within a total width of 2000 feet.
Individual bands range in width up to 300 feet.

Economic Features: One main zone, 565 feet long (including a 75-foot diabase dike) and up to 65 feet wide, was outlined averaging 46.3% Fe.

History: 1902 - Trenching
1911 - 3 d.d. holes for 2, 915 feet by Algoma Steel Corporation Ltd.
1953 - Geological survey (west of Tea Lake) by Algoma Ore Properties Ltd.
1953 - Magnetometer and geological surveys by Seven Island Mining and Exploration Corporation Ltd.
1962 - 20 d.d. holes for 2389 feet by Seven Island Mining and Exploration Corporation Ltd.

References: ODM maps P. 184, 2193G; GSC map 1972.
GSC, 1926, Mem. 147, p. 100-3.
Assessment files, Sault Ste. Marie.

TOWNSHIP 30, RANGE 27

Brant (Lake) Range Occurrence

Class: Iron formation, Algoma type.

Location: SE part of township.
Reference: ODM map P. 184.

Description: E-trending iron formation in Archean greywacke. (Also see Township 30, Range 26).

References: ODM maps P. 184, 2193G.

TOWNSHIP 31, RANGE 19

Gargantua Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: E-central part of Tp. 31, R. 19 and W central part Tp. 30, R. 19.
Reference: ODM map 2138.

Description: Iron formation containing 10 to 20 percent magnetite, quartz, biotite, chlorite and plagioclase, in units up to 50 feet thick, alternate with Archean metagreywacke.

References: ODM maps 2138, 2190G.
L.D. Ayres, ODM, personal communication.

TOWNSHIP 31, RANGE 20

Chaillon Lake Occurrence

Class: Sedimentary.

Location: Between Gravel and Cheer Lake, 3/4 mile N of Chaillon Lake.
Reference: ODM map 2139.

Description: N-S trending belt more than 1 mile in length containing 10 to 20 percent magnetite associated with quartz, plagioclase, biotite, chlorite, pistacite and garnet, interbedded with Archean metagreywacke. A grab sample assayed 17.78% Fe.

References: ODM maps 2139, 2190G.
L.D. Ayres, ODM, personal communication.

TOWNSHIP 31, RANGE 25

Back Lake Occurrence

(See Township 31, Range 26)

TOWNSHIP 31, RANGE 26

Back Lake Occurrence

Class: Iron formation, Algoma type.

Location: S central part of Tp. 31, R. 26 and NE corner Tp. 31, R. 25.
Reference: ODM map P. 184.

Description: NNW trending iron formation in Archean metavolcanics.

References: ODM maps P. 184, 2192G.

Tp. 31, R. 26 (Cont.)

Betty Lake Range Prospect

Class: Iron formation, Algoma type.

Location: Near the east shore of Kabenung Lake east of Star Island.
Reference: ODM map P. 184.

Description: The range is "L" shaped with the west part trending NNE and consisting of 4 discontinuous bands of chert with minor magnetite interbedded with greywacke over a strike length of 2 miles. The shorter limb strikes NE, is continuous, ranges in width from 50 to 200 feet, and changes from magnetite-bearing in the west to magnetite-siderite in the east. Siderite present as two members, one 30 to 40 feet thick, the other 10 to 80 feet thick.

Economic Features: Main deposit at the SE extremity of the range were the siderite-bearing iron formation is folded. Here the N limb is 100 feet wide, the S limb 130 feet wide and the join at the nose forms a pod 340 feet long and 400 feet wide.

Preliminary reserve estimates suggest 13,470 tons per vert. foot averaging 39.51% Fe, 14.53% SiO_2.

History: 1954 Geological survey and 620 feet of shallow drilling by Algoma Ore Properties Ltd.

1955 8 d.d. holes for 3153 feet by Algoma Ore Properties Ltd.

References: ODM map P. 184, 2192G, 2176G, 2177G.
Assessment files, Sault Ste. Marie.

Elmo Range Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: East and south of NE Arm Kabenung Lake, NE part of township.
Reference: ODM map P. 184.

Description: E-trending, magnetite-quartz iron formation with some disseminated pyrite and small lenses of siderite. Formation offset medially into two 1 1/4 mile long segments.

Economic Features: East segment up to 100 feet wide containing 15 to 20% disseminated magnetite and pyrite. West segment 100 to 488 feet wide, with siderite pods 3 to 8 feet by 20 to 25 feet. A grab sample of siderite assayed 33.0% Fe, and one magnetite-bearing sample assayed 33.6% Fe.

History: 1954 Geological survey by Algoma Ore Properties Ltd.

References: ODM map P. 184, 2193G.
Assessment files, Sault Ste. Marie.

TOWNSHIP 31, RANGE 27

Charlotte Lake Range Occurrence

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: Along N shore of Charlotte Lake with extensions to E and W. SW corner Tp. 31, R. 27 and SE corner Tp. 32, R. 27.
Reference: ODM map P. 184.

Description: E-trending lenses of cherty, pyritiferous or magnetite-bearing iron formation, up to 35 feet wide and several hundred feet long, within Archean metagreywacke.

Tp. 31, R. 27 (Cont.)

History: 1954 Geological survey by Algoma Ore Properties Ltd.

References: ODM maps P. 184, 2177G.
Assessment files, Sault Ste. Marie.

Magnetic Point Range Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Fungus Lake and Kabenung Lake, S central part of township
Reference: ODM map P. 184.

Description: E-trending magnetite-quartz iron formation with interbedded greywacke over a length of 9000 feet, extending to Magnetic Point on Kabenung Lake. Two main bands, 100 to 200 feet wide, separated by 600 to 1000 feet of Archean greywacke.

Economic Features: Five anomalous zones outlined ranging from 70 to 500 feet in width and 600 to 2,600 feet in length . Drill intersections of 30, 24, and 84 feet range between 28.8 and 33.1% Fe for an average of 31.4% Fe, 51.0% SiO_2.

History: 1954 Geological and geophysical surveys and some diamond drilling by Algoma Ore Properties Ltd.

References: ODM maps P. 184, 2192G, 2176G.
Assessment files, Sault Ste. Marie.

TOWNSHIP 32, RANGE 26

Brotherton Hill Occurrence

Class: Iron formation, Algoma type, carbonate facies.

Location: South of Paint Lake and 1/2 mile east of Francis Mine prospect.
Reference: ODM map P. 184.

Description: Isolated segment of iron formation 4500 feet long and 350 to 450 feet wide in metagreywacke.
Iron formation mainly bedded chert with scattered siliceous siderite layers 1/2 to 1 inch wide. Several occurrences of secondary (?) siliceous hematite up to 10 feet by 2 feet.

History: 1954 Geological survey by Algoma Ore Properties Ltd.

References: ODM maps P. 184.
Assessment files, Sault Ste Marie.

Francis Mine Prospect

Class: Secondary deposits in iron formation.

Location: 1 mile west of Paint Lake.
Reference: ODM map P. 184.

Description: Isolated segment of quartz (chert, jasper)- siderite pyrite iron formation 1,375 feet long and 935 feet wide in Archean metasediments. Outcrop traversed by 2 faults, striking N75E and N36W, which contain 4 seams of secondary hematite.

Economic Features: Hematite seams range from 50 to 100 feet in length by 5 to 10 feet in width. Assayed samples include 50.2% Fe, 62.46% Fe, 63.10% Fe.

Tp. 32, R. 26 (Cont.)

History: Circa 1902 - 6 d.d. holes, shaft and drift.
1954 - Geological mapping by Algoma Ore Properties Ltd.
1955 - 1 d.d hole for 860 feet by Algoma Ore Properties Ltd.

References: ODM map P. 184.
ODM, 1923, I.O.C. Rpt., p. 188.
Assessment files, Sault Ste. Marie.

Jimmy Kash Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: N of Jimmy Kash Lake, S central part of township.
Reference: ODM map P. 184.

Description: E-trending magnetite-quartz iron formation traced for 2.5 miles. It is 120 feet wide composed of 30 feet of chert, and 80 to 90 feet of magnetite-chert containing an estimated 20 percent Fe. A second, 10-foot wide band parallels the range 200 feet to the south.

History: 1954 Geological survey by Algoma Ore Properties Ltd.

References: ODM maps P. 184, 2176G.
Assessment files, Sault Ste. Marie.

Paint Lake Occurrence

Class: Bog iron.

Location: N shore of Paint Lake.

Tp. 32, R. 26 (Cont.)

Description: Layer of limonitic bog 2 to 3 feet thick extending for 700 feet. A sample contained 54.6% Fe, 0.08% S, 0.016% P.

References: OBM, 1905, Volume XIV, pt. 1, p. 324.
Assessment files, Sault Ste. Marie.

Morse Mountain Range Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Raymond Lake and Morse Mountain.
Reference: ODM map P. 184.

Description: Magnetite-quartz (chert) iron formation, with local disseminations of pyrite and a small siderite body (3 feet by 6 feet), mainly 40 to 50 feet wide but widening to 500 feet through folding at Morse Mountain. Within Archean metasediments (Dore Group).

Economic Features: Estimated average iron content between 20-25%. Three grab samples averaged 23.5 percent. A representative siderite sample assayed 39.2% Fe.

History: 1954 Geological survey by Algoma Ore Properties Ltd.
1966 Trenching by Acme Gas and Oil Co. Ltd.

References: ODM map P. 184, 2177G.
Assessment files, Sault Ste. Marie.

Tp. 32, R. 26 (Cont.)

Mount Raymond Range Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Between Morse Mountain and Raymond Lake, just north of Paint Creek.

Description: Magnetite-quartz iron formation with local pyrite, iron silicate, and siderite. Mainly 100 feet thick but thickening from 400 to 600 feet through folding.

Economic Features: Fe content estimated at 20 to 25 percent.

History: 1954 Geological survey by Algoma Ore Properties Ltd.

References: ODM maps P. 184, 2176G.
Assessment files, Sault Ste. Marie.

TOWNSHIP 32, RANGE 27

Charlotte Lake Range Occurrence

(See Township 31, Range 27)

TOWNSHIP 33, RANGE 23

Fall Creek Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: SW part of township.
Reference: ODM map 14a.

Tp. 33, R. 23 (Cont.)

Description: Discontinuous, NW-trending lenses of iron formation containing quartz (chert, jasper) and variable amounts of magnetite and hematite. Traced for up to 2 miles with widths less than 200 feet.

References: ODM maps 14a, 2175G.
ODM, 1923, I.O.C. Rpt., p. 194.
OBM, 1905, Volume XIV, pt. 1, p. 316-337.

TOWNSHIP 33, RANGE 26

Iron Lake Range Prospect

Class: Iron formation, Algoma type.

Location: Between Bole Lake and Red Pine Point.
Reference: ODM map P. 184.

Description: E-trending, lean magnetite-quartz (chert, jasper) iron formation with local pockets of secondary? hematite, and some carbonate and disseminated pyrite. Mainly 200 feet wide but widths to 1000 feet are reported.

Economic Features: Four samples of hematite material range between 41.2 and 55.1% Fe.
Overall grade of formation estimated at about 10% Fe.

History: 1909 - 5 d.d. holes for 3,500 feet and trenching.
1948 - 3(?) d.d. holes by A.C.R.
1963 - Geological survey by Algoma Ore Properties Ltd.

References: ODM map P. 184, 2177G.
ODM, 1923, I.O.C. Rpt., p. 187-8.
Assessment files, Sault Ste. Marie.

Tp. 33, R. 26 (Cont.)

Katossin Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: N of Iron Creek, east central part of township.
Reference: ODM map P. 184.

Description: Two, parallel, east-trending bands of magnetite-hematite-quartz (chert, jasper) iron formation with some pyrite, approximately 600 feet apart and up to 75 feet in width.

Economic Features: 3 samples from the north band assayed 40.39, 43.17, and 58.48% Fe.

References: ODM maps P. 184, 14a, 2176G.
ODM, 1905, Volume XIV, pt.1, p. 313-4, 321-2.

TOWNSHIP 47

Emily Range Occurrence

Class: Iron formation, Algoma type.

Location: Between Brothers Creek and Lochalsh Bay, N central part of township.
Reference: ODM map P. 184.

Description: Several, east-west bands of iron formation a few feet in width and 200 to 300 feet long composed of quartz, carbonate, magnetite, pyrite and interlayered Archean metavolcanic rocks.

References: ODM maps P. 184, 1946-2, 2207G; GSC map 2050.
ODM, 1945, Volume LIV, pt. 4, p. 7.
GSC, 1926, Mem. 147, p. 155.

TOWNSHIP 48

Miscellaneous Occurrences

Class: Iron formation, Algoma type.

Location: 4 small scattered occurrences between Pine and Cline lakes, central part of township; one occurrence south of Justin Lake, N central part of township; one occurrence 500 feet SW of Old Cabin Lake, SE part of township.

Description: Iron formation in Archean metavolcanics.

References: ODM maps P. 184, 49g, 40e, 2207G.

Pine Lake Occurrence

Class: Iron formation, Algoma type.

Location: On west boundary 1.5 mile N of S boundary.

Description: Drilling intersected a magnetite-sulphide zone over 61 feet, containing 10 to 36% Fe, 1 to 17% S with an average S content of 9.7%.

Setting: Between mafic and felsic Archean metavolcanics.

History: 1953 d.d. by Algoma Ore Properties Ltd.

References: ODM map 2207G.
ODM, 1967, M.R. Circular No. 5, p. 17.
Assessment files, Sault Ste. Marie.

Tp. 48 (Cont.)

Wilcox (Webb) Occurrence

Class: Iron formation, Algoma type.

Location: 1/2 mile N of east end Pine Lake.
Reference: ODM map 49g.

Description: Folded, east-west trending iron formation containing limonite and pyrite over widths of 20 to 30 feet in outcrop.

Setting: Part of the Goudreau Iron Range of Archean age

History: Before 1931 Trenching.

References: ODM maps P. 184, 40e, 49g, 2207G; GSC map 2050.
GSC, 1926, Mem. 147, p. 111.

TOWNSHIP 49

Bearpaw Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: At Bearpaw Lake, SE part of township.
Reference: ODM map P. 184.

Description: A 12-foot wide band of pyrite intercalated with Archean felsic volcanics.

History: Trenching and drilling.

References: ODM map P. 184.
ODM, 1967, M.R. Circular No. 5, p. 18.
Assessment files, Sault Ste. Marie.

Tp. 49 (Cont.)

Dreany Range Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 3/4 mile N of Dreany Lake, N central part of township, and in the NE part of township.
Reference: ODM map 49g.

Description: ENE-trending quartz-magnetite iron formation with some epidote, hornblende, garnet, hematite and intercalated "country rock". Main band, north of Dreany Lake, is over 1 mile long. Widths are up to 200 feet. Within Archean metavolcanics.

References: ODM maps P. 184, 49g, 2207G; GSC map 2050.
GSC, 1926, Mem. 147, p. 155-6.

Lovell Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: Between Lovell Lake and west end of Morrison No.1 .
Reference: GSC map 2050.

Description: Several narrow bands of iron formation with thin beds of pyrite and pyrrhotite within Archean metavolcanics.

References: ODM map 40e, GSC map 2050.
GSC, 1926, Mem. 147, p. 111-112.

Tp. 49 (Cont.)

Morrison No. 1 Prospect

Class: Iron formation, Algoma type, sulphide facies.

Location: 1/2 mile N of Goudreau Lake.
Reference: ODM map P. 184.

Description: Quartz-pyrite-carbonate iron formation 80 to 140 feet thick outlines a double fold with a NE trend. Part of the Goudreau Iron Range and occurs at the contact between Archean mafic and felsic metavolcanics.

Economic Features: Drilling outlined a pyritic lens at least 400 feet long, 12 to 110 feet thick, and extending to at least 200 feet in depth. Ore reserves estimated at 300,000 tons of pyrite with 38 to 42% S and nearly an equal amount of lower grade material.

History: 1914 - 8 d.d. holes by Algoma Steel Corporation Ltd.
1953 - Some d.d. by Algoma Steel Corporation Ltd.

References: ODM maps P. 184, 49g, 2207G; GSC map 2050.
GSC, 1926, Mem. 147, p. 110-111.
ODM, 1967, M.R. Circular No. 5, p. 28.

TOWNSHIP 137

Township 137 Occurrences

Class: Iron formation, Algoma type,oxide facies.

Location: SW part of township.
Reference: ODM map 2003.

Tp. 137 (Cont.)

Description: West to WNW - trending belt up to 3/4 mile wide containing bands of magnetite-quartz iron formation 50 to 100 feet wide interbedded with Archean volcanics and sediments. Minor amount of pyrite and pyrrhotite are present.

History: 1951 Geological survey by Tech Exploration Co. Ltd.

References: ODM maps 2003, 2108, 2256G.
ODM, 1962, G.R., No. 10, p. 15-16, 83-84.

TOWNSHIP 139

Deschamp Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: 1/4 mile S of Deschamp Lake, W central part Township 139, and SE of Rooster Lake, SE part of Township 145.

Description: Remnants of magnetite-quartz iron formation in metavolcanics intruded by Archean granitic rocks. Dominantly N-striking zones up to 100 feet wide and 2000 feet long.

Economic Features: 3 channel samples averaged 31.7% Fe, 47.9% SiO_2; 3 grab samples ranged from 33.43% sol. Fe, 5.29% insol. Fe, 36.83% SiO_2 to 41.32% sol.Fe, 2.50% insol. Fe, 37.00% SiO_2.

History: 1964 - Magnetometer, gravity and reconnaissance geological surveys.
1965 - 2 d.d. holes for 1,541 feet.

References: ODM maps 2108, 48k, 2257G.
ODM, 1939, Volume XLVIII, pt. 11, p.5.
ODM, 1925, Volume XXXIV, pt. 4, p. 46-8.
Assessment files, Sault Ste. Marie.

TOWNSHIP 143

Pecors Lake Occurrences

Class: Iron formation, Algoma type.

Location: On and near SW shore Pecors Lake.
Reference: ODM map 2001.

Description: Lean iron formation, not more than 20 feet thick traced for 400 feet.

History: 1951-53 Geological and geophysical surveys and 3 d.d. holes by Tech Exploration Co. Ltd.

References: ODM maps 2001, 2108, 2256G.
ODM 1961, G.R.,No. 4, p. 46-47.

Township 143(West) Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: SW corner of township.
Reference: ODM map 2001

Description: NW-trending zone 1500 feet wide containing several bands of magnetite-quartz (chert) iron formation up to 80 feet wide interbedded with Archean volcanics and sediments.

References: ODM maps 2001, 2108, 3237G.
ODM, 1961, G.R., No. 4, p. 9.

TOWNSHIP 145

Deschamp Lake Occurrences

(See Township 139)

TOWNSHIP 155

Elliot Lake Occurrence

Class: Contact metasomatic.

Location: Townships 155 and 149.

Description: Magnetite and quartz as alternating layers with a total thickness of 15 feet were traced for a distance of over 2 miles at the base of the Bruce Limestone.

Economic Features: Magnetite and quartz in a ratio of approximately 1:4. A sample from a 2-inch band assayed 40.3% Fe, 31.1% SiO_2, 0.037% P, and 0.04% S.

Reference: GSC, 1925, Mem. 143, p. 131.

TOWNSHIP 157

Samreid Lake Prospect

Class: Iron formation, Algoma type, sulphide facies.

Location: West of NW end of Samreid Lake.
Reference: ODM map 2108.

Tp. 157 (Cont.)

Description: Chert with massive to disseminated pyrite, pyrrhotite, magnetite with some chalcopyrite, cubanite and marcasite in E-W zone 4,200 feet long and 4 to 100 feet wide. Within Archean metagreywacke.

Economic Features: Reserves calculated at 502,600 tons averaging 38.27% Fe and 32.5% S to a depth of 450 feet across a 13.47-foot section of the zone.

History: 1954-57 34 d.d. holes for 8,281 feet by Talvey Metal Mines Ltd.
1955 Magnetometer survey by Talvey Metal Mines Ltd.

References: ODM maps 2108, 48k, 2241G.
ODM, 1939, Volume XLVIII, pt. 9, p. 9-10.
ODM, 1967, M.R. Circular No. 5, p. 20.
Econ. Geol., 1959, Volume 54, p. 268-284.
Assessment files, Sault Ste. Marie.

TOWNSHIP 162

Mace Lake Occurrence

Class: Sedimentary.

Location: West of Mace Lake.

Description: Low grade iron formation in the Gowganda Formation.

References: ODM, 1963, G.R., No. 13, p. 35-6.

TOWNSHIP 163

Townships 163 and 169 Occurrence

Class: Hydrothermal.

Location: Townships 163 and 169 including mining locations, Townships 25 and 26.

Description: A fractured zone in greywacke filled with secondary quartz, hematite, magnetite and calcite.

Reference: ODM, 1923, I.O.C. Rpt., p. 200.

TOWNSHIP 169

Townships 163 and 169 Occurrence

(See Township 163)

TOWNSHIP 176

Stringer Lake Occurrence

Class: Hydrothermal.

Location: 27 miles N of Dean Lake (exact location unknown).

Description: Hematite and quartz in fault zones within Lorrain quartzite.

Economic Features: 6 samples from a zone 1,600 feet long assayed between 61.79 and 68.24% Fe.

Tp. 176 (Cont.)

History: 1946 - Trenching and diamond drilling by Westland Mining Co. Ltd.

References: Steel, 1946, Volume 118, February 25, p. 102.

CARLETON COUNTY

FITZROY TOWNSHIP

Lot 17, Concession 9 Occurrence

Class: Magmatic.

Location: Lot 17, Conc. 9.
Reference: GSC, 1967, Econ. Geol. Rpt. No. 22, Fig. 8.

Description: Segregation of magnetite in gabbro.

Reference: GSC, 1924, Mem. 136, p. 112.

TORBOLTON TOWNSHIP

Torbolton Township Occurrence

Class: Magmatic.

Location: Lots 6, 7, 8; Conc. 6, 7.
Reference: GSC, 1924, Econ. Geol. Rpt. No. 22, Fig.8.

Description: Mineralized gabbro body overlain by approximately 400 feet of Ordovician rocks. Magnetite separated from the rock cores analysed 64.34% Fe_2O_3, 29.25% FeO, 0.73% TiO_2.

References: G.A. Gross, G.S.C., personal communication.

COCHRANE DISTRICT

ABBOTSFORD TOWNSHIP

Abbotsford Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: 3 miles SSE of Abbotsford Lake.
Lat. 49.104 Long. 79.753.
Reference: ODM map P. 373.

Description: Iron formation intersected in drilling, is up to 117 feet in core length and contains quartz, pyrite, pyrrhotite, garnet, biotite, and chlorite(?).

Setting: Interbedded with Archean metavolcanics with some metasediment.

History: 1965 - 3 d.d holes by Canadian Superior Exploration Ltd.

References: ODM maps P. 373, 2366G.
Assessment files, Timmins.

ADAIR TOWNSHIP

Joe Lake Occurrence

Class: Iron formation, Algoma type.

Location: 1/2 mile SE of Joe Lake.
Reference: ODM map 2025.

Description: Lean iron formation, 8 feet thick, consists of grunerite, magnetite and quartz. A grab sample assayed 9.78% Fe.

Setting: Within Archean metavolcanics.

History: Trenching.

References: ODM map 2025.
ODM, 1963, G.R. No. 14, p.11.

BEARDMORE TOWNSHIP

Audrey River Occurrence

Class: Iron formation, Algoma type.

Location: 0.8 mile NE of Audrey Lake, SW part of township.
Reference: ODM map P. 398.

Description: Drilling intersected iron formation interbedded with Archean metagreywacke.

References: ODM maps P. 398, 2268G.
Assessment files, Timmins.

BRADBURN TOWNSHIP

Bradburn Township Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: SE part of township; Lots 1 to 9, Conc. 1,2.
Lat. 49.076, Long. 81.508.
Reference: ODM map P. 372.

Description: Drilling intersected up to 24.3 feet (core length) of magnetite-quartz-chlorite-amphibole-garnet iron formation with some pyrrhotite and pyrite. Magnetite content estimated at 2 to 40 percent.

Setting: Within Archean metagreywacke.

History: 1963 - 5 d.d holes by INCO.

References: ODM maps P. 372, 2302G.
Assessment files, Timmins.

Mattagami River Occurrence

Class: Magmatic, late deuteric.

Location: 1/4 mile west of Mattagami River, near south boundary of township.
Lot. 20, Conc. 1.
Lat. 49.064, Long. 81.603.
Reference: ODM map P. 372.

Description: Drilling intersected serpentinized peridotite containing a visually estimated magnetite content that ranges from 1 to 15 percent over a core length of 272.5 feet.

Setting: Archean metaperidotite intruding metavolcanics.

History: 1963 - 1 d.d hole by INCO.

References: ODM maps P. 372, 2302G.
Assessment files, Timmins.

BRADETTE TOWNSHIP

Turgeon River Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: NE Bradette Township and Deeppe Township, Quebec.
Lat. 49.535, Long. 79.536.
Reference: ODM map P. 373.

Description: Magnetite-quartz iron formation, easterly striking and steep dipping was traced geophysically for 14,000 feet, and has an estimated width of 400 to 12,000 feet and an overall grade of 14% soluble iron (Griffith, 1957).

Economic Features: In Bradette Township, one drill hole intersected 443 feet (core length) of iron formation within which 120 feet averaged 23.81% sol. Fe, 90 feet averaged 22.00% and 40 feet averaged 23.39%.

Bradette Tp. (Cont.)

Setting: Interbedded with Archean metagreywacke.

History: 1957 - Magnetometer survey by Conwest Explorations Ltd.
1957 - 4 d.d holes (1 in Bradette Township) by Conwest Explorations Ltd.

References: ODM maps P. 373, 2368G.
Assessment files, Timmins.

BRADLEY TOWNSHIP

Opazatika River Prospect

Class: Siderite in limestone.

Location: On the Opazatika River, 1 mile south of Breakneck Falls.
Reference: ODM map 13b.

Description: Siderite and ferruginous carbonate occurs as a secondary replacement of Devonian (?) limestone, together with surficial goethite and goethite-quartz oxidation zones. Deposit at least 750 feet and probably 1500 feet long and 225 feet wide. A minimum thickness of 15 feet is indicated from exposures along the river.

Economic Features: Samples of siliceous goethite gave 34.84% Fe_2O_3, 53.14% SiO_2; ferruginous limestone gave 4.42% Fe_2O_3, 19.56% MgO, 1.00% SiO_2; and siderite gave 62.1% Fe_2O_3.

References: ODM map 13b.
OBM, 1904, Volume XIII, pt. 1.

BYERS TOWNSHIP

Byers Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Byers Tp. (Cont.)

Location: 1/4 mile NW of Byers Lake.
Reference: ODM map 2300G.

Description: A narrow band of magnetite-quartz iron formation.

Setting: Interbedded with Archean metavolcanics.

References: ODM map 2300G.
ODM, 1931, Volume XL, pt. 3, p.27, 35.

CAITHNESS TOWNSHIP

Big Pike Lake Occurrence

Class: Iron formation, Algoma type.

Location: 2 miles west of Big Pike Lake, S central part of township.
Reference: ODM map P. 397.

Description: Zones of magnetite-pyrite-pyrrhotite in Archean metagreywacke.

History: 1960 Magnetometer and electromagnetic surveys by Macassa Mines Limited.

Reference: ODM map P. 397.

Mattawitchewan Rapids Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: 0.5 miles south of Mattawitchewan Rapids, W central part of township.
Reference: ODM map P. 397.

Description: ENE-trending pyrite-pyrrhotite bearing iron formation within Archean metagreywacke.

References: ODM map P. 397.
ODM, 1967, Misc. Paper 10, p.56.

Mattawitchewan River Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: 0.7 miles west of Mattawitchewan River, N central part of township.
Reference: ODM map P. 397.

Description: Drilling intersected sulphide-bearing iron formation interbedded with Archean metagreywacke.

References: ODM map P. 397.
Assessment files, Timmins.

CALDER TOWNSHIP

Calder-Ottaway Occurrence

Class: Iron formation, Algoma type.

Location: SE part and NW part Ottaway Township.
Lat. 49.062, Long. 81.258.
Reference: ODM map P. 372.

Description: Northwesterly-trending iron formation over 3 miles in length. Drilling intersected iron formation in layers up to 284 feet (core length) interbedded with metagreywacke over 415 feet (core length). Iron formation contains magnetite, quartz, carbonate, pyrrhotite, and pyrite.

Setting: Iron formation within Archean greywacke, interlayered with metavolcanics.

History: 1962-63 - 6 d.d holes by INCO.

References: ODM maps P. 372, 2320G.
Assessment files, Timmins.

Deception Creek Occurrence

Class: Magmatic, late deuteric.

Calder Tp. (Cont.)

Location: SE part of township, immediately east of Highway 11.
Lot 6, Conc. 1.
Lat. 49.081, Long. 81.264.
Reference: ODM map P. 372.

Description: Drilling intersected magnetite-rich zones in core lengths up to 28.7 feet with an estimated magnetite content of 80%. Zones within a pyroxenite-amphibolite host with syenitic facies and some carbonate.

Setting: Probably a differentiated alkalic intrusion in Archean metavolcanics.

History: 1964 - 1 d.d hole by INCO.

References: ODM maps P. 372, 2320G.
Assessment files, Timmins.

Lennox Creek Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Between Driftwood River and Chenier Creek, SW part of township.
Lots 19 to 24, Conc. 1.
Lat. 49.064, Long. 81.417.
Reference: ODM map P. 372.

Description: Drilling on Lot 20 intersected iron formation with a core length of 217.6 feet and containing an estimated 20% magnetite, quartz, some carbonate and chlorite, and minor pyrite and pyrrhotite. Interbedded with metavolcanics. 3/4 mile to the west, drilling intersected 26.3 feet (core length) of garnet-bearing greywacke containing an estimated 10% magnetite, 6 to 12% pyrrhotite, and minor pyrite.

Setting: Iron formations near WNW-trending contact with Archean metavolcanics to north and metagreywacke to south.

History: 1963 - 1 d.d. hole by INCO.
1965 - 1 d.d. hole by INCO.

References: ODM maps P. 372, 2320G.
Assessment files, Timmins.

CARMAN TOWNSHIP

Carman Township Occurrences

Class: Iron formation, Algoma type.

Location: S and W central parts of township.
Reference: ODM map P. 356.

Description: Narrow discontinuous bands striking NNW in W central part of township and NE to ENE in the south. Most prominent band exposed by 15-foot trench on west shore of Carman Bay. Contains pyrite and pyrrhotite.

Setting: Interbedded with Archean lavas, tuff and agglomerate.

References: ODM maps P. 356, 49h; GSC map 293G.
ODM, 1965, P.R. 1965-3, p. 49.
ODM, 1940, Volume XL, pt. 4, p. 5, 6, 10.

CARSCALLEN TOWNSHIP

Carscallen Township Occurrences

Class: Iron formation, Algoma type.

Location: 0.5 mile N of Carscallen Lake, 0.4 mile NW of Parliament Lake and 0.7 mile N of Mahoney Lake.
Reference: ODM map P. 23.

Description: Thin discontinuous beds of magnetite-quartz iron formation.

Setting: Interbedded with Archean metavolcanics.

Carscallen Tp. (Cont.)

References: ODM maps 35g, 47d, p. 23, 2299G.
ODM, 1938, Volume XLVII, pt. 4, p. 16-17.
ODM, 1926, Volume XXXV, pt. 6, p. 11.

CLAY TOWNSHIP

Clay-Howells Prospect

Class: Magmatic.

Location: NW part Clay Township.
Lat. 49.817, Long. 82.051.
Reference: ODM map P. 396.

Description: Tabular, NE-striking carbonatite body 3500 feet long and 300 feet wide composed of 10 to 80% magnetite disseminated in amphibolitic, garnetiferous carbonate. Dips are 60NW.

Economic Features: An estimated 12 million tons of ore were outlined (Mattagami Mining Co., 1955). Magnetic concentrates on a small sample assayed 70% Fe, less than 2% SiO_2, 0.06% S.

Setting: Within a stock of Late Proterozoic (?) aegirine syenite.

History: 1954 - Aeromagnetic survey by Lundberg Explorations Ltd.
1954 - 2000 feet of d.d by Lundberg Explorations Ltd.
1955 - Ground magnetic survey by Steel Co. of Canada Ltd.
1955 - 7500 feet of d.d. by Steel Co. of Canada Ltd.

Ownership: Mattagami Mining Co. Ltd.

References: ODM maps P. 396, 2286G.
ODM, 1967, Misc. Paper 10.
Assessment files, Timmins.

DELORO TOWNSHIP

Deloro Township Occurrences

Class: Iron formation, Algoma type.

Location: Occurrences scattered throughout township but mainly in N and SW parts.
Reference: ODM map P. 342.

Description: Discontinuous bands predominantly striking NNE across N part of township and NW in the SW part. (Also see Shaw Township Occurrences).

Setting: Within the Deloro Group of Archean metavolcanics.

References: ODM maps P. 342, 47a, 2046.
ODM, 1967, Open File Rpt. 5012.
OBM, 1912, Volume XXI, pt. 1.
Assessment files, Timmins.

EDWARDS TOWNSHIP

Edwards Township Occurrence

Class: Sedimentary or hydrothermal.

Location: Centre part of township near western border.
Reference: ODM map P. 153.

Description: Pyrite in two stratiform bands of garnet-amphibole-quartz gneiss.

History: 1958 - 6 d.d holes.

References: ODM map P. 153.
Assessment files, Timmins.

EGAN TOWNSHIP

Egan Township Occurrence

Class: Magmatic.

Location: South boundary of Lot 12, Conc. 2.
Reference: ODM map 31d.

Description: A small deposit of titaniferous magnetite with minor quantities of chalcopyrite occurs within a post-Archean diabase.

References: ODM map 31d.
ODM, 1922, Volume XXXI, pt. 7.

FENTON TOWNSHIP

Fenton Township Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SE half of township.
Lat. 49.017, Long. 82.500.
Reference: ODM map P. 398.

Description: Numerous, discontinuous, NE-trending bands of magnetite-quartz iron formation interlayered with hornblende schist. Bands up to 5 miles in length with maximum widths of approximately 65 feet.

Economic Features: Best intersection obtained in drilling was on Lot 2, Conc. 5 and consisted of 4 iron-rich bands, totalling 153 feet within 235 feet (core length). This included 75.0 feet (core length) assaying 25.7% Fe. A 135 lb. bulk sample, assaying 32.5% total Fe and 20.5% sol. Fe, gave a magnetic concentrate of 70.3%

Fenton Tp. (Cont.)

sol. Fe, 1.54% SiO_2 with 75.8% Fe recovery at a grind of 97.6% - 200 M, 85.1% - 325 M and a conc. ratio of 4.7:1.

Setting: Interbedded with Archean metavolcanics.

History: 1946 Stripping, trenching by Bonnie Prince Mining Syndicate.
1946 Magnetometer survey by Bonnie Prince Mining Syncidate.
1947 4 d.d. holes by Bonnie Prince Mining Syndicate.
1959 Magnetometer survey by Camflow Mattagami Mines Ltd.
1960-2 2 d.d. holes by Camflow Mattagami Mines Ltd.

References: ODM maps P. 398, 1960a, 2250G, 2251G, 2267G.
ODM, 1960, Volume LXIX, pt. 3.
ODM, 1967, Misc. Paper 10.
Assessment files, Timmins.

FERGUS TOWNSHIP

Fergus Lake Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: 0.2 miles S of Fergus Lake.
Reference: ODM map P. 397.

Description: Pyrite-pyrrhotite bearing iron formation associated with Archean metagreywacke.

References: ODM map P. 397.
ODM, 1967, Misc. Paper 10, p.56.

FOX TOWNSHIP

Boisvert Occurrence

Class: Iron formation or hydrothermal.

Location: 1.8 miles N of Noremba.
Lot 5 (N 1/2), Conc. 3.
Reference: ODM map P. 99.

Description: Iron formation or ferruginous chert striking N 85 E and bearing magnetite, pyrite and pyrrhotite over a width of approximately 110 feet. Sulphides present as pods up to 300 feet long and 35 feet wide.

Setting: Within Archean metasediments.

History: Shaft on property.
1956? 2 d.d. holes by Coprano Syndicate.

References: ODM maps P. 99, 2338G.
Assessment files, Timmins.

Sheen Lake Occurrence

Class: Iron formation or hydrothermal.

Location: 1/2 mile SE of Sheen Lake.
Lots 9, 10, Con. 3.
Reference: ODM map P. 99.

Description: Four, east-west trending sulphide zones in metasediments. The largest up to 25 feet wide with an estimated 15% sulphides including pyrrhotite-pyrite and some chalcopyrite.

Setting: Archean garnet and hornblende bearing greywacke intruded by diabase.

References: ODM maps P. 99, 2338G.
Assessment files, Timmins.

FOURNIER TOWNSHIP

Fournier-Lamarche Occurrence

Class: Iron formation, Algoma type.

Location: From Dunn Lake eastwards to 2 miles NE of Bondy Lake.
Lat. 49.030, Long. 81.050
Reference: ODM map P. 372.

Description: E-W trending iron formation traced aeromagnetically for 9 miles. Drilling on Lot 2, Conc. 5 of Fournier Township intersected 473 feet (core length) of iron formation including some garnetiferous and amphibole-rich layers. Magnetite estimated to vary from 5 to 40%.

Setting: Iron formation in Archean metavolcanics with some metagreywacke.

History: 1965 - 2 d.d holes by North Devon Mines Limited.
Bondy Lake - 2 d.d holes.

References: ODM maps P. 372, 2320G.
Assessment files, Timmins.

GALNA TOWNSHIP

Lower Lake Abitibi Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: On peninsula N of Pierce Bay and on Island No. 14 to the south.
Reference: ODM map 28b.

Description: Magnetite-quartz iron formation up to 60 feet wide in outcrop, strikes N67E.

Setting: Interbedded with Archean metagreywacke.

References: ODM map 28b.
ODM, 1923, I.O.C. Rpt., p.210.

GARRISON TOWNSHIP

Thackeray Creek Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Between Highway 101 and Thackeray Creek, NE part of township.
Reference: ODM map 1949-1.

Description: Remnants of magnetite-hematite iron formation from a few to 100 feet in width occur in an east-west direction over an interval of 2.5 miles.

Setting: Interbedded with Archean greywacke.

References: ODM map 1949-1.
ODM, 1949, Volume LVIII, pt. 4, p.7.

HARKER TOWNSHIP

Dale Occurrence

Class: Iron formation.

Location: NW part of township.
Lot 5, Conc. 5.
Reference: ODM map 1951-4.

Description: Hematite-jasper iron formation with some magnetite and sulphides occur from a few feet to 100 feet in width.

Setting: Interbedded with Archean metasediments.

References: ODM map 1951-4.
ODM, 1952, Volume LX, pt. 7, p.10.

HOGG TOWNSHIP

Grand Rapids Prospect

Class: Siderite in limestone.

Location: At Grand Rapids on the Mattagami River.
Lat. 50.401, Long. 81.840.
Reference: ODM map P. 370.

Description: Siderite, in part admixed with silica, clay, limestone and organic matter (sandy ore), of Cretaceous age occurs in solution cavities within the Devonian Abitibi River Formation. Surficially the siderite is oxidized to limonite.

Economic Features: Three areas of siderite-limonite exposures occur along the river with probable dimensions of 600 feet X 375 feet, 10,000 feet X 200 feet and 700 feet X 700 feet. Exposed thicknesses range from 10 feet to 20 feet. Chip samples of siderite gave 43.5-45.8% Fe, 0.2-3.2% SiO_2; of limonite gave 39.3-57.1% Fe, 3.6-27.0% SiO_2; of sandy ore gave 30.3-38.4% Fe, 29.1-42.5% SiO_2.

History: 1931 - Magnetometer survey by Dominion Observatory.
1933 - Magnetometer and gravity surveys by Dominion Observatory.

Hogg Tp. (Cont.)

References: ODM maps P.370, 29f, 13b, 1952-3.
ODM, 1967, Misc. Paper 10, p. 59-65.
ODM, 1928, Volume XXXVII, pt.6, p. 68-9.
ODM, 1923, I.O.C., Rpt., p. 209-210.
Can. Jour. Research, 1934, Volume X, No. 4, p. 463-478.

HOLLOWAY TOWNSHIP

Holloway Township Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: NE part of township.
Lot 4, Conc. 5.
Reference: ODM map 1953-4.

Description: A 7-foot (core length) section of jasperoidal iron formation was intersected in drilling.

Setting: Interbedded with Archean metagreywacke.

History: 1945 - Magnetometer survey by the Mining Corp. of Canada Ltd.
1949 - 1 d.d hole by the Mining Corp. of Canada Ltd.

References: ODM map 1953-4.
ODM, 1953, Volume LXII, pt. 7, p.11.

IDINGTON TOWNSHIP

Idington Township Occurrences

Class: Iron formation, Algoma type, sulphide facies.

Location: Along N boundary of township extending into Neely and Williamson townships.
Reference: ODM map P. 398.

Description: ENE trending discontinuous bands of lean iron formation bearing pyrite and pyrrhotite.

Setting: Interbedded with Archean metagreywacke.

History: Diamond drilling by Mattagami Mining Co.

References: ODM maps P. 398, 2271G.
ODM, 1966, P.R. 1966-1, p. 49.
Assessment files, Timmins.

JESSOP TOWNSHIP

Jessop Township Occurrence

Class: Sedimentary or hydrothermal.

Location: NW part of township.
Reference: ODM map P. 158.

Description: "Large" sections of barren massive and disseminated (nodular) pyrite and pyrrhotite intersected in drilling within Archean metavolcanics.

History: Airborne electromagnetic survey.
6 d.d holes by Lake Expanse Gold Mines Ltd.

References: ODM map P. 158.
Assessment files, Timmins.

KENNING TOWNSHIP

Kenning Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: 1.7 miles NW of SE corner of township.
Lat. 49.224, Long. 79.908.
Reference: ODM map P. 373.

Kenning Tp. (Cont.)

Description: Highly folded, magnetite-quartz-mica-hornblende-grunerite iron formation with a strike length of 2,400 feet and average width of 200 feet.

Economic Features: Average of 25 grab samples yielded 24.5% Fe. Tonnage estimated at 40,000 tons/vert. foot (Black, 1957). Davis magnetic tube tests at -100M on three samples between 20 to 33 percent Fe gave concentrates between 67 and 69 percent and 3 to 7 percent SiO_2 with 80 to 94 percent Fe recovery.

Setting: Interbedded with Archean metagreywacke intruded by some granitic and mafic bodies.

History: 1956 - Aeromagnetic survey by Triana Explorations Ltd.
1957 - Ground magnetometer and geological surveys by Cliffs of Canada Ltd.

References: ODM maps P. 373, 2366G.
Assessment files, Timmins.
Northern Miner, June 13, 1957.
ODM, 1967, Misc. Paper 10, p. 57,58.

KNOX TOWNSHIP

Little Couchiching Falls Occurrence

Class: Iron formation.

Location: At Little Couchiching Falls.
Lot 2, Conc. 4.
Reference: ODM map 2073.

Description: Cherty iron formation interbedded with meta-volcanics and rusty schist, now flooded by the Abitibi River.

Reference: ODM maps 28b, 2073.
OBM, 1919, Volume XXVII, pt. 2, p. 24.
ODM, 1964, G.R. No. 37, p.6.

LAMARCHE TOWNSHIP

Fournier-Lamarche Occurrence

(See Fournier Township)

LAMPLUGH TOWNSHIP

Lamplugh Township Occurrences

Class: Iron formation, Algoma type.

Location: On south shore of Lake Abitibi, between Ghost River and Lightning Bay near Points 144A, 143A, 142A and 137A. References: OBM, 1918, Volume XXVII, pt. 2, Fig. 8, p.208; and OBM map 28b.

Description: Iron formation, from 2 to 100 feet in width, containing quartz, magnetite, jasper, hematite and interlayered metagreywacke, interbedded with Archean metavolcanics.

References: OBM map 28b.
OBM, 1918, Volume XXVII, pt. 2, p.208.
OBM, 1919, Volume XXVIII, pt. 2, p.25.

LOWLAND TOWNSHIP

Lowland Occurrence

Class: Iron formation, Algoma type.

Location: NW part of township, on Lot 5, Conc. 1.
Reference: ODM map 53c.

Description: A narrow band of iron formation strikes NW and dip 60°SW. Some chalcopyrite and pyrrhotite present. Interbedded with Archean metavolcanics.

References: ODM maps 53c, P.25, 2300G.
ODM, 1946, Volume LIII, pt. 4, p. 6, 16.

MICHAUD TOWNSHIP

Caswell Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: At east boundary, near central part of township.
Lot 1, Conc. 3 (S1/2).
Reference: GSC map 295G.

Description: ENE-trending hematite-jasper iron formation with interlayered greywacke beds in some portions.

Economic Features: Iron formation was intersected for 134 and 135 feet within a 337 foot section (core lengths). Of this, 30, 33, and 52 foot sections were relatively clean iron formation. An assayed 38 feet of continuous core gave values ranging from 26.4 to 41.7% Fe.

Setting: Within Archean greywacke interbedded with meta-volcanics.

History: 1947 - 1 d.d hole by Wright-Hargreaves Mines Ltd.
1959 - Ground magnetometer survey by Wadge Mines Ltd.

References: GSC map 295G.
Assessment files, Timmins.
ODM, 1948, Volume LVII, pt. 4, p. 24-25.

MUNRO TOWNSHIP

Munro Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: SW part of township.
Lot 10, Conc. 2.

Description: Narrow, steep-dipping, magnetite-quartz iron formation interbedded with Archean meta-volcanics.

References: OBM, 1915, Volume XXIV, pt. 1, p. 176.

NEELY TOWNSHIP

Neely Township Occurrences

(See Idington Township Occurrences)

NEWMAN TOWNSHIP

Iron Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: West central part of township.
Lat. 49.376, Long. 80.264.
Reference: ODM map P. 373.

Description: Steeply-dipping iron formation, consisting of quartz-magnetite-grunerite-chlorite-hematite ?, was traced by geophysics for 11,600 feet with a strike of N50 to 60°W.

Economic Features: Of two drill holes, one intersected 178 feet (core length) of iron formation (including 9 feet of greywacke) with assays of 24.67% sol. Fe over 31 feet and 20.19% over 138 feet, the second intersected 211 feet (core length) averaging 25.1% sol. Fe.

A 6 lb. sample gave a Davis tube concentrate at -200M of 69.5% Fe, 3.95% SiO_2 with a conc. ratio of 2.78:1; and at -100M of 60.7% Fe with a conc. ratio of 2.14:1.

Setting: Iron formation interbedded with Archean, garnetiferous metagreywacke.

History: 1957 - Ground magnetometer survey by Conwest Exploration Co.
1957 - 2 d.d holes by Conwest Exploration Co.

References: ODM maps P. 373, 2357G.
Assessment files, Timmins.

OGDEN TOWNSHIP

Ogden Township Occurrences

Class: Iron formation, Algoma type.

Location: East central part of township.
Reference: ODM map P. 341.

Description: Discontinuous, east-west striking bands, up to 70 feet thick, that outline the crest of an E-W trending anticline.
(Also see Shaw Township Occurrences)

Setting: Within the Deloro Group of Archean metavolcanics.

References: ODM maps P. 341, 47a, 2046.
ODM, 1967, Open File Rpt. 5012, p. 43-44, 75-76.
ODM, 1926, Volume XXXV, pt. 6, p.11.
Assessment files, Timmins.

OTTAWAY TOWNSHIP

Calder-Ottaway Occurrence

(See Calder Township)

Deception Lake (East) Occurrence

Class: Iron formation; Algoma type.

Location: 1/4 mile east of Deception Lake.
Lat. 49.008, Long. 81.279.
Reference: ODM map P. 372.

Description: Northwest-trending, sulphide-bearing iron formation intersected by drilling.

Setting: Interbedded with Archean greywacke.

History: 1 d.d hole.

References: ODM maps P. 372, 2320G.
Assessment files, Timmins.

Deception Lake (West) Occurrence

Class: Iron formation, Algoma type.

Location: One mile NW of Deception Lake.
Lat. 49.044, Long. 81.327.
Reference: ODM map P. 372.

Description: Iron formation intersected by drilling.

Setting: Interbedded with Archean greywacke.

History: 1 d.d hole.

References: ODM maps P. 372, 2320G.
Assessment files, Timmins.

PARNELL TOWNSHIP

Shearer-Parnell Occurrence

(See Shearer Township)

RICKARD TOWNSHIP

Rickard Township Occurrence

Class: Iron formation, Algoma type.

Location: Centre of township.
Lot 7, Conc. 4.
Reference: ODM map 28b.

Parnell Tp. (Cont.)

Description: Narrow bands of cherty iron formation interbedded with Archean metavolcanics.

Reference: OBM, 1919, Volume XXVIII, pt. 2, p. 24.

SANGSTER TOWNSHIP

Sangster Lake Occurrence

Class: Iron formation (?), Algoma-type, sulphide facies.

Location: South shore of Sangster Lake.
Reference: ODM map P. 373.

Description: Heavily mineralized pyrite-pyrrhotite bearing outcrops within an amphibolitic zone interbedded with Archean metagreywacke.

References: ODM map P. 373, 2339G.
ODM, 1967, Misc. Paper 10, p. 56.

SCAPA TOWNSHIP

Scapa Occurrence

Class: Iron formation, Algoma type.

Location: 1 mile SSW of Scapa Lake.
Reference: ODM map 2018.

Description: Lean iron formation, 10 feet wide and traced for 870 feet; consists of grunerite, quartz, pyrite, and pyrrhotite.

Setting: Within Archean greywacke (Scapa metasediments).

History: Stripping.

References: ODM maps 2018, P. 373, 2366G.
ODM, 1962, G.R. 8, p. 17.

SHAW TOWNSHIP

Shaw Township Occurrences

Class: Iron formation, Algoma type.

Location: Numerous scattered occurrences mainly in NE 1/2 of township.
Reference: ODM map P. 343.

Description: Predominantly NW-trending discontinuous bands with moderate dips to the NE. In Ogden, Deloro and Shaw townships, individual zones range from less than 1 foot by 70 feet to 300 feet by 2 miles. The iron formation consists of chert, jasper, siderite, chlorite, and magnetite with numerous pyrite-pyrrhotite zones. Magnetite constitutes less than an estimated 30% of most occurrences. Concentration tests on one occurrence in Shaw township gave a 68% Fe, 6% SiO_2 concentrate at -200M from a 30% Fe crude.

Setting: Within the Deloro Group of Archean metavolcanics.

References: ODM maps P. 343, 47a, P. 425, 2046.
ODM, 1967, Open File Rpt. 5012, p. 43-44, 75-76.
OBM, 1912, Volume XXI, pt. 1, p. 213-214.
Assessment files, Timmins.

SHEARER TOWNSHIP

Shearer-Parnell Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: On Shearer-Parnell township boundary, 3 1/2 miles S of N boundary.
Reference: ODM map P. 397.

Description: Sulphide-bearing iron formation interbedded with Archean metagreywacke.

References: ODM map P. 397.
ODM, 1967, Misc. Paper 10, p. 56.

SHUEL TOWNSHIP

Savoff Prospect

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: NE part of township, centred around Savoff station.
Reference: Assessment files, Sault Ste. Marie.

Description: Two parallel zones, 3/4 miles apart, traced for 3 miles with a strike N60°E and steep dips. North zone 200 to 400 feet wide consists of pyrite and pyrrhotite with some magnetite in greywacke and quartzite. South zone, 800 to 1000 feet wide, consists of magnetite-hematite-jasper rich sections in argillite and greywacke.

Economic Features: Examples of drill data from south zone with visually estimated Fe content are as follows:

Section	True Width (ft.)	%Magnetite
DDH1 125-225	71	12.0
225-460	166	33.0
DDH2 28.5-125	66.9	17.5
125-473	246	33.2
DDH3 75-250	124	33
425-575	106	54

Setting: Interbedded with Archean greywacke, phyllite, quartzite and graphitic phyllite.

History: 1956 - Magnetometer and electromagnetic survey by Fatima Mining Co.
1956-7 - 16 d.d holes by Fatima Mining Co.

References: Prospectus, 1956, Fatima Mining Co. Ltd.
Assessment files, Sault Ste. Marie.

SLACK TOWNSHIP

Slack Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: NW corner Slack Township.
Reference: ODM map P. 398.

Description: Extensions of magnetite-quartz iron formations occurring in Fenton Township.
(See Fenton Township Prospect).

References: ODM maps 1960a, P. 398, 2267G.
ODM, 1960, Volume LXIX, pt. 3, p. 8, 15-17.

TEETZEL TOWNSHIP

Teetzel Creek Occurrence

Class: Iron formation, Algoma type.

Location: 0.8 miles south of Teetzel Creek, west centre part of township.
Reference: ODM map P. 398.

Description: ENE-trending iron formation bearing sulphides interbedded with Archean metagreywacke.

History: 2 d.d holes.

References: ODM maps P. 398, 2285G.
Assessment files, Timmins.

TISDALE TOWNSHIP

Augdome Occurrence

Class: Iron formation, Algoma type, oxide facies.

Tisdale Tp. (Cont.

Location: Extreme SE corner of township.
Lots 1,2, Conc. 1.
Reference: ODM map 2075.

Description: Narrow bands of chert and lean iron formation, 5 to 20 feet thick, in porphyritic latite.

References: ODM maps 2075, 47a.
ODM, 1964, P.R. 1964-5, p. 6.
Assessment files, Timmins.

WARDEN TOWNSHIP

Warden Township Occurrence

Class: Magmatic, late deuteric.

Location: NW part of township.
Lot 10, Conc. 1.

Description: Network of numerous veinlets of magnetite in serpentine.

Reference: OBM, 1915, Volume XXIV, pt. 1, p. 176.

WHITNEY TOWNSHIP

Whitney Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: S half of township.
Reference: ODM map 47a.

Description: Scattered, discontinuous bands of iron formation composed of magnetite, hematite and quartz. Gentle to moderate dips predominate.

Setting: Mainly interbedded with felsic volcanics.

References: ODM maps P. 425, 2046, 47a.
OBM, 1912, Volume XXI, pt. 1, p. 213.

WILLIAMSON TOWNSHIP

Williamson Township Occurrences

(See Idington Township Occurrences)

Fear Lake Occurrence

Class: Iron formation, Algoma type.

Location: 1 1/2 miles N of Fear Lake.
Reference: ODM P. 371.

Description: Drilling intersected iron formation interbedded with Archean greywacke and tuff. Sulphides noted.

History: 2 d.d holes.

References: ODM maps P. 371, 2368G.
Assessment files, Timmins.

49°45' - 79°30'

Nash Lake Occurrence

Class: Iron formation, Algoma type.

Location: 1.6 miles NW of Nash Lake.
Reference: ODM map P. 371.

Description: Drilling intersected iron formation and sulphides interbedded with Archean metavolcanics and metasediments.

Williamson Tp. (Cont.)

History: 1 d.d hole.

References: ODM maps P. 371, 2368G.
Assessment files, Timmins.

Vandette Lake Occurrence

Class: Iron formation, Algoma type.

Location: 1.3 miles NW of Vandette Lake.
Reference: ODM map P. 371.

Description: Drilling intersected iron formation interbedded with Archean greywacke and felsic volcanics.

History: 1 d.d hole.

References: ODM maps P. 371, 2368G.
Assessment files, Timmins.

50°00' - 83°30'

Pivabiska Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: 7 miles west of Scovil-Burstall township boundary.
Lat. 50.099, Long. 83.438.
Reference: ODM map P. 395.

Description: Magnetic anomalous zone 58,000 feet long by 200 to 600 feet wide striking east-west. Drilling intersected magnetite-quartz iron formation with some hematite interlayered with metagreywacke.

Williamson Tp. (Cont.)

Economic Features: Drilling indicated sufficient open pit reserves to produce 600,000 gross tons of pellets annually for 20 years.

Setting: Interbedded with Archean metagreywacke.

History: 1956 - Magnetometer survey by C.C. Huston and Associates.
1961-62 - 71 d.d. holes for 28,324 feet by Algoma Steel Corporation.

References: ODM maps P. 395, 3936G, 3959G.
Can. Mines Handbook, 1967-68.
Assessment files, Timmins.

51°30' - 86°15'

Dark River Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: At the headwaters of the Dark River, 15 miles SE of Martin Falls.
Lat. 51.336, Long. 86.335.
Reference: ODM map 1003G.

Description: Two bands of magnetite-quartz iron formation, within Archean metavolcanics, trending ENE and converging in the east. A maximum thickness of approximately 200 feet represented within the south band.

Economic Features: Clastic sedimentary layers interbedded with the iron formation.

History: 1962 - Magnetometer survey by Pickands Mather & Co.
1963 - 2 d.d. holes by Pickands Mather & Co.

References: ODM map 1003G, GSC map 6-1962.
Assessment files, Port Arthur.

FRONTENAC COUNTY

BEDFORD TOWNSHIP

Black Lake Prospect

Class: Magmatic.

Location: E 1/2 Lot 2, Conc. 9; beneath Black Lake.

Description: Disseminated and massive magnetite with some pyrite, chalcopyrite and pyrrhotite, in an mafic intrusion.

Economic Features: Drilling intersected 30 feet containing 30.0% Fe, 0.36% TiO_2, 0.97% S; 67 feet averaging 20.0% Fe; 38 feet averaging 33.9% Fe, 0.42% TiO_2, 1.45% S; 35 feet averaging 22.5% Fe, 0.21% TiO_2, 1.69% S.

History: 1958 6 d.d. holes for 1552 feet by G.W. Moore.

References: ODM map 2054
Assessment files, Toronto.

Black Lake Mine (Past Producer)

Location: Lots 7, 8, Conc. 4; Near W shore and at S end of Sangster Lake.
Reference: ODM map 1947-5

Description: Disseminations and massive magnetite with some pyrite in exposed widths from 10 to 50 feet, in quartzite, greywacke and marble. Drilling on the lake intersected widths of 150 feet.

Economic Features: Core assays averaged about 40% Fe.

History: 1882-4 3,000 to 4,000 tons mined from open cuts.
1957-8 Magnetometer survey and d.d. by New Mylamaque Explorations Limited.

References: ODM maps 1947-5, 2054.
ODM, 1947, Volume LVI, pt.6, p.65-6.
Northern Miner, 1958, Feb. 6, 13.

Glendower Mine (Past Producer)

Class: Contact metasomatic.

Location: Lot 6, Conc. 2 and 3; near W shore of Thirty Island Lake.
Reference: ODM map 1947-5.

Description: Disseminations and bands of magnetite in a NE-trending zone within and at the contact of marble and metapyroxenite. Apatite, hematite, scapolite, garnet, calcite diopside, ilmenite, chalcopyrite and pyrite have been noted within the zone.

Economic Features: Selected sections of drill core assayed from about 23 to 45% Fe, 0.9to 2.7% S and 0.4 to 0.8% TiO_2. Magnetic concentrates grading more than 62% Fe were made at - 10M and -20M grinds. Ore shipped before 1895 assayed 50 to 60 plus % Fe.

Early drilling indicated massive and disseminated ore at a depth of 500 feet.

History:
- 1873 to before 1895 50,000 tons shipped from pits shafts by Glendower Company (1883-1888) and Zanesville Company.
- 1889 Some mining, mainly apatite, by Hamilton Steel and Iron Company.
- 1951-2 Magnetometer and geological surveys and 5 d.d. holes by Trent River Iron Limited.

References:
ODM maps 1947-5, 2054.
GSC, 1958, Bull. 45, p. 38-41.
ODM, 1947, Volume LVI, pt.6, p. 64-5.

Frontenac County (Cont.)

Howse Mine (Past Producer)

Class: Contact metasomatic.

Location: Lot 4, Conc. 1; 1/2 mile S of Glendower.
Reference: ODM map 1947-5.

Description: Magnetite deposit between beds of hornblendic gneiss and marble.

History: 1869-70 150 tons shipped from open pit 100 by 30 feet Richard Howse.

References: ODM maps 2053, 1947-5.
ODM, 1947, Volume LVI, pt.6, p. 64.

Lot 3, Concession 3, Occurrence

Location: Lot 3, Conc. 3; E of Desert Lake road.
Reference: ODM map 2054.

Description: Magnetite in gneiss.

References: ODM maps 1947-5, 2054.
ODM, 1923, I.O.C. Rpt., p. 228.
ODM, 1947, Volume LVI, pt.6, p. 65.

Lot 5, Concession 2 Occurrence

Location: Lot 5, Conc. 2.

Description: Magnetite with calcite and pyrite exposed in a pit 25 by 15 feet.

Reference: ODM, 1923, I.O.C. Rpt., p. 228.

Lot 28, Concession 4 Occurrence

Location: Lot 28, Conc. 4; 4 chains NW of N end of Crow Bay on Bobs Lake.
Reference: ODM map 1947-5.

Description: Disseminations and irregular masses of magnetite with some pyrite, in greywacke.

Economic Features: Small bodies contain up to 75% magnetite.

History: 1890-1900 2 pits; one 30 feet in diameter and 10 feet deep, another 40 by 15 feet and 8 feet deep.

References: ODM maps 1947-5, 2054.
ODM, 1947, Volume LVI, pt.6, p. 66-7.

Miscellaneous Occurrences

Location: Lot 2, Conc. 7; Lots 1, 2, Conc. 14; Lots 1, 2, 3 Conc. 15; Lots 1, 2, 3, 4, Conc. 16.

Description: Patches of ochreous sandstone with small veins and stringers of hematite,or stringers and small pockets of hematite in limestone.

History: 1900 2 d.d. holes.

References: ODM, 1923, I.O.C. Rpt., p. 228-9.

Wolf Lake Occurrence

Location: Lot 21, Conc. 9

Description: Lens of magnetite 3 to 4 feet thick between beds of gneiss and marble.

References: GSC, 1895, Rpt. of Prog. 1874-5, p. 117.
GSC, 1853, Rpt. of Prog. 1852-3, p. 94-5.

HINCHINBROOKE TOWNSHIP

Eagle Lake (Blessington) Mine (Past Producer)

Class: Magmatic.

Location: E 1/2 Lot 29, Conc. 1; W of Highway No. 38.
Reference: ODM map 1947-5.

Description: Apatite and titaniferous magnetite-bearing veins with pyroxene, hornblende and calcite occur within and around the margins of a gabbro.

Economic Features: Deposit mined for apatite with magnetite recovered as a by-product.
A sample of magnetite assayed 65.55% Fe, 4.97% TiO_2.

History: 1887-1891 Mining by Boyd Smith from pits, up to 175 feet deep, with about 4,000 tons of apatite and 700 tons of magnetite recovered.

References: ODM maps 2053, 1947-5.
GSC, 1958, Bull. 45, p. 11.
GSA, 1944, Bull 55, p. 1401-30.
ODM, 1947, Volume LVI, pt.6, p. 35.

Lot 27, Concession 3 Occurrence

Location: NW 1/4 Lot 27, Conc. 3.
Reference: ODM map 1947-5

Description: Magnetite and pyrite, observed in small amounts, in mafic rocks intruding granitic gneiss.

History: Late 1800's 2 shallow pits.

References: ODM maps 1947-5, 2053.
ODM, 1947, Volume LVI, pt.6, p. 63-4.

Lot 17, Concession 11 Occurrence

Class: Contact metasomatic.

Location: Lot 17, Conc. 11.
Reference: ODM map 1947-5.

Description: Magnetite in marble as a inclusion in syenite.

History: Late 1800's 2 pits about 25 feet deep by Folger and Grady.

References: ODM map 1947-5, 2053; GSC map 69G.
ODM, 1947, Volume LVI, pt. 6, p.63.

Lot 18, Concession 10 Occurrence

Class: Contact metasomatic.

Location: Lot 18, Conc. 10.
Reference: ODM map 1947-5.

Description: Magnetite, pyrite and hornblende in marble-greywacke remnant, several hundred feet long, within syenite.

History: 2 shafts, 60 chains apart.

References: ODM map 1947-5, 2053, GSC map 69G.
ODM, 1947, Volume LVI, pt. 6, p. 62-3.

OLDEN TOWNSHIP

Lot 21, Concession 11 Occurrence

Class: Contact metasomatic.

Location: E 1/2 Lot 21, Conc. 11.
Reference: ODM map 1947-5.

Description: Magnetite with some pyrite in marble and greywacke within biotite granite. Mineralized zone up to 16 feet wide.

History: Early 1900's 2 pits less than 15 feet deep by J. Harris.

References: ODM map 1947-5, 2053; GSC map 69G.
ODM, 1947, Volume LVI, pt. 6, p. 63.

OSO TOWNSHIP

Lot 31, Concession 5 Occurrence

Class: Placer.

Location: Lot 31, Conc. 5; near N boundary.
Reference: ODM map 1947-5

Description: Hematite fragments in glacial drift.

References: ODM map 1947-5.
ODM, 1947, Volume LVI, pt.6, p. 63.

PALMERSTON TOWNSHIP

Lot 27 and 28, Concession 11 Occurrence

Class: Contact metasomatic.

Location: Lots 27, 28, Conc. 11; about 1 mile W of Lavant Station.
Reference: ODM map 1956-4.

Description: Magnetite-bearing skarn at a marble - gneiss contact.

History: Small pit, 10 by 12 feet.

References: ODM map 1956-4; GSC map 68G.
ODM, 1956, Volume, LXV, pt. 7, p. 45.

Robertsville (Mississippi) and Mary Mines (Past Producers)

Class: Contact metasomatic.

Location: Lots 3, 4, Conc. 9; 1 mile NE of Robertsville.
Reference: ODM map 1956-4.

Description: Magnetite-bearing skarn in marble included in mixed granitic and dioritic gneisses. Two zones present, the Robertsville Mine about 700 feet long and 50 feet wide and the Mary Mine 900 feet to the NW.

Economic Features: A sample assaying 28.0% Fe produced a 70.5% Fe concentrate.

History: Before 1895 7,000 tons mined by the Mississippi Mining Co.
1900-1 6062 tons shipped; 1918-9 415 tons shipped by Poe Min. Co.
Workings are open-cuts, pits and adits up to 50 by 100 feet and 200 feet deep.
1951 Dip needle survey by Minnesota-Huron Iron Co. and 2 d.d. holes by Trent River Iron Ltd.

References: ODM maps 1956-4, 2053; GSC map 69G.
GSC, 1958, Bull. 45, p. 51-3.
Mines Branch, Ottawa, 1925, Publ. 617, p. 124-5.
ODM, 1956, Volume LXV, pt. 7, p. 41-2.

PORTLAND TOWNSHIP

Miscellaneous Occurrences

Location: Lot 5, Conc. 10; Lot 7, Conc. 10; Lot 4, Conc. 9; Lot 5, Conc. 13.
Reference: ODM map 2053.

Description: Ochre or hematite as gash veins in marble, sandstone or conglomerate.

History: Early pits on Lot 5, Conc. 13 and 2 d.d. holes; 15-foot pit on Lot 7, Conc. 10.

References: ODM map 2053.
ODM, 1923, I.O.C. Rpt., p. 229.
GSC, 1899, Volume XII, pt. 1, p. 78.

SOUTH CANONTO TOWNSHIP

Longstone Lake Occurrence

Location: Lot 26, Conc. 6; near E end of Longstone Lake.
Reference: ODM map 1956-4.

Description: Magnetite zone, about 10 feet wide and 350 feet long, at marble - paragneiss contact.

Economic Features: A sample assayed 44.00% Fe, 0.044% S, 0.045% P.

History: Pit with approximately 15 tons of massive magnetite on dump.

References: ODM maps 1956-4; GSC map 68G.
ODM, 1956, Volume LXV, pt. 7, p. 46.

Summit Lake Prospect

Location: S 1/2 Lot 14, Conc. 3; 1/4 mile NW of N end Summit Lake.

Description: NE-trending, steep dipping, zone of massive and disseminated magnetite in hornblende-biotite schist adjacent to a diorite intrusion.

Economic Features: Mineralized zone is approximately 1000 feet long and averages about 100 feet in width. Three verticle holes intersected mineralization to depths of 160, 100 and 81 feet.
Two grab samples assayed 60 and 52 % Fe.

History: 1957-8 Magnetometer and gravity surveys by L.G.D. Thompson.
1962 6 d.d. holes by L.G.D. Thompson and Tomclid Iron Mines Limited.

References: ODM map 1956-4; GSC map 68G.
Assessment files, Toronto.

STORRINGTON TOWNSHIP

Lot 14, Concession 9 Occurrence

Location: Lot 14, Conc. 9; at W end Dog Lake.
Reference: ODM map 2054.

Description: An iron deposit in Paleozoic sandstone.

References: ODM map 2054.
ODM, 1964, Geol. Circular No. 12, p. 19.

Storrington Tp. (Cont.)

Lot 20, Concession 10 (Dog Lake) Mine (Past Producers)

Location: Lot 20, Conc. 10; between Dog and Crane Nest akes.
Reference: ODM map 2054.

Description: Ochre and hematite in Paleozoic sandstone. A sample assayed 51.12% Fe, 0.300% P, 22.82% insol.

History: About 1899 open cut 90 feet by 25 feet and 30 feet deep, a small shaft 20 feet deep, and 1 d.d hole for 90 feet; 600 tons shipped in 1899.

References: ODM map 2054.
GSC, 1899, Volume XII, pt. 1, p. 76-8, 93.

HALIBURTON COUNTY

CARDIFF TOWNSHIP

Joe Bay Occurrences

Location: Lot 16, Conc. 6, SE of Joe Bay on Paudash Lake.

Description: Irregular lenses of disseminated magnetite in 3 occurrences within hornblendic gneiss.

History: 1955 Magnetometer survey.

References: ODM map 1957-1; GSC map 146G.
Assessment files, Toronto.

GLAMORGAN TOWNSHIP

Pine Lake (Pusey) Mine Occurrence

Class: Magmatic.

Location: SE corner of Lot 35, Conc. 4.
Reference: ODM map 52a.

Description: Streaks and disseminations of magnetite in a zone 1,800 feet long and 70 to 300 feet wide, in a differentiated gabbro-anorthosite.

Economic Features: Magnetite forms from an estimated 1 to 30% of the rock. Two selected samples assayed 44.10 and 41.91% Fe, 13.52 and 14.91% TiO_2, 0.52 and 0.04 % V_2O_5.

History: Early pits and trenches by Toronto Iron Company.
1952 Magnetometer survey by Canada Iron Mining Co.

References: ODM maps 52a, 1957b, P.59; GSC map 146G.
ODM, 1953, Volume LII, pt.2, p.44.
Assessment files, Toronto.

Glamorgan Tp. (Cont.)

Stormy Lake (New York) Occurrence

Class: Hydrothermal.

Location: Lot 27, Conc. 15, just N of Stormy Lake.
Reference: GSC, 1958, Bull. 45, Fig.1.

Description: Vein, 150 feet long and up to 4 feet wide, containing magnetite (in part lodestone), pink calcite and some feldspar, biotite and apatite, within granitic gneiss. Up to 50% magnetite reported.

History: Circa 1880 Pit by C.J. Pusey.

References: ODM maps 1957b, 52a, P59; GSC map 146G.
ODM, 1943, Volume LII, pt.2, p.45.
GSC, 1958, Bull. 45, p. 55, Fig.1.

HARCOURT TOWNSHIP

Allen Lake Occurrences

Class: Magmatic?

Location: Lots 1, 2, Conc. 6 and Lot 2, Conc.7, S of Allen Lake.
Reference: GSC map 110G.

Description: Geophysics outlined two areas containing magnetite-rich zones, probably in a mafic intrusion.

History: 1957 Magnetometer survey by Frobisher Ltd.

References: ODM map 1957b; GSC map 110G.
Assessment files, Toronto.

LUTTERWORTH TOWNSHIP

Paxton Mine (Past Producer)

Class: Contact metasomatic.

Location: In Lot 5, Conc. 6, 28 chains N of road between Miners Bay and Kinmount.
Reference: ODM map 1957b.

Description: Two pits, 125 feet apart, which contained or contain magnetite with garnet, feldspar, quartz, calcite, scapalite and hornblende within amphibolite and marble. Pits 50 by 75 feet and 50 by 60 feet.

History: Before 1910 approximately 1,000 tons shipped from 2 pits.

References: ODM maps 52a, 1957b; GSC map 99G.
ODM, 1943, Volume LII, pt.2, p.45.
GSC, 1958, Bull. 45, p.46, Fig. 1

MINDEN TOWNSHIP

Minden Township Occurrences

Class: Contact metasomatic?

Location: Lot 11 and 12, Conc.1.

Description: Magnetite skarn deposits in gneiss and marble. On Lot 11 it is exposed for a length of 25 paces and a width of 10 paces.

References: ODM map 1957b; GSC map 99G.
GSC, 1910, Mem. 6, p. 359.

MONMOUTH TOWNSHIP

Lot 20, Concession 1 Occurrence

Description: An occurrence of magnetite, a sample of which assayed 70.5% Fe.

Reference: GSC, 1910, Mem.6, p. 359.

SHERBORNE TOWNSHIP

Loon Bay Mine (Past Producer)

Class: Bog iron.

Location: Near Loon bay of Hollow Lake, Conc. 12.

Description: Limonite (ochre) mixed for about 1/3 of its weight with sand, in drift.

History: Circa 1896 Concentrated and mined by the Peterborough Mining Co.

Reference: GSC, 1910, Mem. 6, p. 365.

SNOWDON TOWNSHIP

Howland Mine (Past Producer)

Class: Contact metasomatic.

Location: Lot 26, Conc. 4, S of Irondale River.
Reference: ODM map 1957b.

Description: Magnetite with some pyrrhotite formed a zone 25 feet in diameter at surface and larger with depth located at the contact of amphibolite gabbro and marble.

Economic Features: Ore assayed 58% Fe, 0.005% P, 0.06% S,

History: 1880-2 2 shafts and open cut, 15 feet by 120 feet, from which 1,500 tons were shipped.

References: ODM maps 52a, 1957b; GSC map 99G.
ODM, 1943, Volume LII, pt.2, p.46.
GSC, 1958, Bull. 45, p. 39-40, Fig. 1.
GSC, 1910, Mem. 6, p.361.

Imperial Mine Occurrence

Class: Magmatic.

Location: Lot 33, Conc. 5, 2 chains N of CNR bridge over the Irondale River.
Reference: ODM map 52a.

Description: Disseminated magnetite in peridotite exposed by an open cut 20 by 60 feet.

References: ODM map 52a, 1957b; GSC map 99G.
ODM, 1953, Volume LII, pt.2, p.46-7.
GSC, 1958, Bull. 45, Fig.1.

Snowdon Tp. (Cont.)

Miscellaneous Occurrences

Class: Contact metasomatic and bog iron.

Location: Lot 17, Conc.1; Lot 19, Conc. 2; Lot 25, Conc. 4; Lot 27, Conc. 4,
Reference: ODM map 52a.

Description: On Lot 17, Conc. 1, three pits exposed magnetite-amphibole-pyrrhotite skarn in marble; on Lot 19, Conc. 2, concretionary limonite occurs in sand in layers 2 to 4 inches thick; on Lots 25 and 27, Conc. 4, magnetitie occurrences have been noted.

References: ODM maps 1957b, 52a; GSC map 99G.
ODM, 1943, Volume LII, pt.2, p.45-6.

Victoria Mine (Past Producer)

Class: Contact metasomatic.

Location: Lot 20, Conc. 1, 8 miles SW of Gooderham.
Reference: ODM map 52a.

Description: Skarn zone containing magnetite, carbonate, pyroxene, hornblende and garnet at or near the contact of marble and dioritic gneiss. Deposit worked from a trench some 240 feet long and 16 feet wide. A sample assayed 58.35% Fe_2O_3, 24.87% FeO, 0.04% S, 11.17% SiO_2, 0.37% TiO_2. A second deposit, located to the south, provided some 10 carloads of ore.

History: Circa 1882 "Considerable" tonnage shipped by Parry and Mills.

References: ODM maps 52a, 1957b; GSC map 99G.
ODM, 1943, Volume LII, pt.2, p.45-6.
GSC, 1958, Bull. 45, p.55-6
GSC, 1910, Mem. 6, p.359-60.

HASTINGS COUNTY

CARLOW TOWNSHIP

Fraser Lake Occurrence

Class: Contact metasomatic.

Location: N 1/2 Lot 17, Conc. 5.
Reference: Map 193A, Mines Branch, Ottawa.

Description: A NW-trending anomalous zone, approximately 700 feet in length, contains massive and disseminated magnetite in amphibolite and biotite gneiss.

Economic Features: Drilling intersected a zone, 53 feet in core length, of which a total of 16.6 feet average 31.9 to 46.6% Fe.

History: 1950 Some d.d.

References: ODM maps 1954-3, 1957b; GSC map 15G.
ODM, 1954, Volume LXIII, pt.6, p. 56-7.

Kennedy Prospect

Class: Contact metasomatic.

Location: N 1/2 Lot 17, Conc. 6.
Reference: ODM map 1954-3.

Description: Massive and disseminated magnetite in pyroxene amphibolite striking N 30 W with a length of approximately 200 feet and widths from 10 to 40 feet.

Economic Features: Samples across zone assayed 43.70% Fe, 0.02% S, 0.12% P, and 44.22% Fe, 0.11% S, 0.27% P_2O_5, 2.88% TiO_2.
Drilling intersected 19.2 feet averaging 37.95% Fe.

History: 1950 1 d.d. hole for 81.1 feet.

References: ODM maps 1954-3, 1957b; GSC map 15G.
ODM, 1954, Volume LXIII, pt.6, p. 57-8.

CASHEL TOWNSHIP

Cashel Township Occurrence

Class: Iron formation.

Location: Lot 16, Conc. 9, on E side of road.
Reference: ODM map 2142.

Description: Deformed magnetite-quartz iron formation grading into rusty schist. Magnetite probably less than 15% of rock.

References: ODM map 2142, GSC map 16G.
ODM, 1968, G.R. 71, p. 40-1.

DUNGANNON TOWNSHIP

Hastings Road East Occurrence

Location: Lots 48, 49; Conc. 10; N of side road N of Quarry Lake.
Reference: ODM map 1955-8.

Description: Magnetite-bearing biotite schist, a sample of which assayed 37.2% Fe, was observed on a small dump near a test pit occurring on an anomaly some 1,200 feet long and 100 to 600 feet wide.

History: Test pit.
1950 Dip needle survey and some d.d. by Frobisher Limited.

References: ODM map 1955-8; GSC map 15G.
ODM, 1951, P.R. 1951-2, p.10.
ODM, 1955, Volume LXIV, pt.8, p. 47.

Miscellaneous Occurrences

Class: Magmatic and sedimentary.

Location: Throughout township
Reference: ODM, 1951, P.R. 1951-2, Fig. 1.

Description: Disseminations and streaks of magnetite in syenite gneiss, two samples of which assayed 8.93% Fe and 11.3% Fe; also in nephiline-albite gneiss, hornblende-plagioclase gneiss and amphibolite. Some rusty-weathering pyrrhotite or magnetite bearing paragneiss.

History: Before 1910 A few tons extracted from pit on Lot 30 Conc. 13.

References: ODM map 1955-8, GSC map 15G.
ODM, 1951, P.R 1951-2; p. 3,6,7,10,11.
GSC, 1910, Mem.6, p.351-2.

FARADAY TOWNSHIP

Bow Lake Occurrence

Class: Contact metasomatic.

Location: Lot 21, Conc. 10 and 11, just W of Bow Lake.
Reference: ODM map 1957-1.

Description: Irregular and lenticular occurrences of magnetite in biotite schist, amphibolite and marble. Two NE-trending zones present, some 400 feet apart, each approximately 500 feet in length.

Economic Features: A sample assayed 51.00% Fe, 9.03% SiO_2, 0.07%S, 1.94% P.

History: Several old test pits and open cuts.

References: ODM maps 1957-1, 1957b; GSC map 15G.
GSC, 1958, Bull. 45, p. 27-8.
ODM, 1957, Volume LXVI, pt.3, p.46.

Faraday Tp. (Cont.)

Carfrae Occurrence

Class: Contact metasomatic.

Location: Lot 3, Conc. 12.
Reference: ODM map 1957-1.

Description: E-trending zone of magnetite, 250 feet long and about 15 feet wide, in pyroxene skarn within metasediments.

Economic Features: A chip sample assayed 60.90% Fe, 2.13% SiO_2, 0.02% P_2O_5, 0.03% S, 0.52% TiO_2.

History: Surface trenching and test-pitting.

References: ODM maps 1957-1, 1957b; GSC map 15G.
ODM, 1957, Volume LXVI, pt.3, p.47.
ODM, 1951, P.R. 1951-2, p.10.

Whitefoot Lake Occurrence

Class: Magmatic.

Location: Midway between Whitefoot Lake and Bancroft.
Reference: ODM 1951, P.R. 1951-2, Fig.1.

Description: Disseminations and veins of magnetite in syenite gneiss within a zone 2000 feet long and 25 to 50 feet wide. A sample assayed 10.91% Fe.

References: ODM maps 1957-1, 1957b; GSC map 15G.
ODM, 1951, P.R. 1951-2, p.9.

LAKE TOWNSHIP

Ricketts Occurrence

Class: Magmatic.

Location: Lots 16, 17, Conc. 11.

Description: Pockety segregations of titaniferous magnetite in gabbro.

Economic Features: Three samples assayed 52.40% Fe, 15.31% TiO_2; 46.52% Fe, 17.53% TiO_2; and 46% Fe, 8.5% TiO_2.

References: ODM map 2106; GSC map 14G.
ODM, 1968, G.R. 54, p. 26-7.
GSC, 1958, Bull. 45, p. 15.

Tomahawk (Mag-Iron) Mine (Past Producer)

Class: Contact metasomatic?

Location: Lots 18, 19, 20, Conc. 3, 4; NE and E of Whetstone Lake.
Reference: ODM map 2106.

Description: Magnetite in amphibolite and actinolite-talc rock near sheared contact with the Whetstone Lake gabbro. On Lot 20, lenses and patches occur over a strike length of approximately 1000 feet; on Lot 18, lenses are exposed over a length of 1,300 feet.

Economic Features: A 215 lb. sample assayed 29.2% Fe, 30.6% SiO_2 and produced a concentrate with less than 0.50% SiO_2, by grinding to -200M.

A grab sample from Lot 18 assayed 50.9% Fe, 0.11% Cu.

Product sold used mainly for heavy medium separation purposes.

Lake Tp. (Cont.)

History: 1941-2 Test pits and 20 d.d. holes for 6,000 feet by Tomahawk Iron Mines Limited.
1946-58 Mining from open cut 250 feet by 25 feet and 20 feet deep. Construction of mill in 1956 and again in 1956. Shipments of 10 tons by Tomahawk Iron Mines Limited in 1947, and 2086 tons by Mag-Iron Mining and Milling Limited and Clarken Development Co. between 1950 and 1957.

References: ODM maps 2106, 1957b; GSC map 14G.
Mineral Resources Division, Ottawa, 1957, M.R. 22, p. 59-60.
GSC, 1958, Bull. 45, p. 43-4.

Whetstone Lake Prospect

Class: Contact metasomatic?

Location: Lots 16, 17, Conc. 3; just E of Whetstone Lake.
Reference: ODM map 2106.

Description: Magnetite with some chalcopyrite and pyrite in greywacke near the Whetstone Lake gabbro. Widths in the order of 40 feet and length of over 4000 feet.

Economic Features: Drilling intersected 11.5 feet assaying 0.10 to 0.15% Cu and 14.72 to 42.44% Fe, 20 feet assaying Nil to 0.40% Cu and 13.40 to 27.76% Fe, and 8 feet assaying 0.08 to 0.12% Cu and 15.04 to 18.68% Fe.

History: 1960 Magnetometer and electromagnetic surveys by Merlin Mines Limited.
1965 4 d.d. holes for 568 feet by Whetstone Lake Mines Limited.

References: ODM maps 2106, 1957b; GSC map 14G.
ODM, 1968, G.R. 54, p. 26.
Assessment files, Toronto.

LIMERICK TOWNSHIP

Miscellaneous Occurrences

Class: Iron formation.

Location: Throughout township.
References: ODM map P.176; ODM, 1951, P.R. 1951-2, Fig.2.

Description: Magnetite-bearing iron formation up to 100 feet in width within Archean metavolcanics.

Economic Features: A 8-foot channel sample from Lot 14, Conc.8 assayed 24.4% Fe; a grab sample SE of Egan Creek Siding assayed 11.83% Fe; a grab sample W of Ormsby Junction assayed 30.39% Fe.

History: Some pits.

References: ODM maps P.176, 52b, 1957b; GSC map 16G.
ODM, 1951, P.R. 1951-2, p. 13,15.
Lumbers, S.B., ODM , personal communication.

MADOC TOWNSHIP

Brennan Mine Occurrence

Class: Secondary deposit in marble.

Location: Lot 7, Conc. 6
Reference: ODM map P.369.

Description: Hematite in marble.

History: 1901 250 tons shipped from trenches.

References: ODM maps P.369, 2053.
ODM, 1967, Open File Rpt. 5000, p. 37.

Madoc Tp. (Cont.)

Cameron Mine Occurrence

Location: Lot 9, Conc. 6.
Reference: ODM map P.368.

Description: Magnetite in marble.

History: Before 1923 Pits.

References: ODM maps P.368, 2053.
ODM, 1967, Open File Rpt. 5000, p. 38.

Cook Mine Occurrence

Location: Lot 15, Conc. 5, just E of a swampy lake.
Reference: ODM map P.368.

Description: Hematite and magnetite in marble.

History: Before 1900 Mining from open pit 25 feet in diameter and 30 feet deep. Shipments in 1898 were 30 tons per day.

References: ODM maps P.368, 1957b.
ODM, 1967, Open File Rpt. 5000, p.34.

Dominion (Bankers Lake) Mine Occurrence

Location: Lot 2, Conc.2; just W of Bankers Lake.
Reference: GSC, 1958, Bull. 45, Fig. 1.

Description: Magnetite as disseminations and bands in trap, slate and marble within a shear zone. Some smaltite, epidote, carbonate, hematite and pyrite present. Zone approximately 15 feet wide.

History: Before 1900 Mining from open cut 125 by 18 feet.

References: ODM maps P.369.
GSC, 1958, Bull. 45, p. 17-8.

Dufferin Mine Occurrence

Class: Contact metasomatic.

Location: W 1/2 Lot 18, Conc. 1.
Reference: ODM map P.368.

Description: Massive to disseminated magnetite in marble adjacent to the Deloro granite. Zone is 1700 feet long and 20 to 120 feet wide.

Economic Features: Ore assayed 63.80% Fe, 0.23% S and 2.30% Mn.

History: A series of open cuts from 150 x 30 feet by 25 feet deep to 50 x 15 feet by 20 feet deep.

References: ODM maps P.368, 1957b.
ODM, 1967, Open File Rpt. 5000, p. 31.

Madoc Tp. (Cont.)

Eldorado Mine (Past Producer)

Class: Secondary deposit in sulphides.

Location: Lot 17, Conc. 5; 3/8 miles W of Eldorado.
Reference: ODM map P. 368.

Description: E-trending fissure at a marble-granite contact approximately 800 feet long. Hematite mined from upper 60 to 80 feet. Deposit subsequently mined for copper from chalcopyrite and pyrite, with some chalcocite, into which the hematite graded.

History: 1901-03 Hematite mined from 3 open pits,
1903-07 Copper ore mined from 75 foot shaft with 3 levels.

References: ODM maps P.368, 1957b.
GSC, 1958, Bull. 45, p. 60-2.
ODM, 1967, Open File Rpt. 5000, p.39-30.

Hobson, Nelson and Knob Mine Occurrences

Class: Contact metasomatic.

Location: Lot 19, Conc. 1 and Lots 18, 19, Conc. 2.
Reference: ODM map P. 368.

Description: En echelon lenses of magnetite, hematite and pyrrhotite, in marble near the Deloro granite contact, within a zone 2,400 feet long.

History: Small pits and shafts.

References: ODM maps P.368, 1957b.
GSC, 1958, Bull. 45, p.40, 42.

Lot 5, Concession 6 Occurrence

Class: Secondary deposit in marble.

Location: Lot 5, Conc. 6.
Reference: ODM map P. 369.

Description: Hematite-bearing carbonate rock with some magnetite, specularite and martite as a narrow band near a granite contact.

History: Open cut 130 by 20 feet and 30 feet deep. Another pit 600 feet to S.

References: ODM maps P. 369, 2053.
GSC, 1958, Bull. 45, p. 63-4.
ODM, 1967, Open File Rpt. 5000, p. 36.

McKinty Mine Occurrence

Location: Lot 6, Conc. 7.

Description: Hematite with some pyrite.

History: About 1877 Mining from open pit, 60 feet deep.

References: ODM maps P. 369, 2053
ODM, 1967, Open File Rpt. 5000, p. 49

Madoc Tp. (Cont.)

Miller Mine (Past Producer)

Location: Lot 12, Conc. 6.

Description: Hematite ore.

History: 1898 production from open pit 34 feet deep with 38 foot shaft. 6,823 tons shipped in 1899.

References: ODM maps P.368.
ODM, 1967, Open File Rpt. 5000, p. 40.

Seymour Mine Occurrence

Location: W 1/2 Lot 11, Conc. 5, approximately 200 feet E of road.
Reference: ODM map P.368.

Description: Disseminations, stringers and bands of magnetite with actinolite, chlorite and uraconite (?), trending east, in rhyolite and amphibolite.

History: Open cut 180 feet by 20 to 25 feet and 125-foot shaft. 115 tons shipped in 1900.

References: ODM maps P.368, 1957b; GSC map 14G.
GSC, 1958, Bull. 45, p. 53.
ODM, 1967, Open File Rpt. 5000, p. 32.

Sidmag (49 Acre Mine) Prospect

Location: Lot 10, Conc.6; 3/8 mile E of Highway No. 62.
Reference: ODM map P. 368.

Description: Hematite, siderite and magnetite in marble.

History: 1955 Geological and gravimetric surveys by Stratmat Limited.
1956 Some d.d. by Stratmat Limited.

References: ODM maps P. 368, 2053.
ODM, 1967, Open File Rpt. 5000, p. 39.
Assessment files, Toronto.

Sexsmith Mine Occurrence

Location: Lot 8, Conc. 7; near Conc. 6 line.
Reference: ODM map P. 369.

Description: Magnetite with some pyrite in marble.

History: Early pits and mining.

References: ODM maps P. 369, 2053.
ODM, 1967, Open File Rpt. 5000, p. 41.

Madoc Tp. (Cont.)

St. Charles Mine Occurrence

Location: Lot 4, Conc. 6.
Reference: ODM map P.369.

Description: Magnetite in a lens of mafic volcanics.

History: 1898 and 1899 Mining from open cut 100 by 20 feet and 30 feet deep.

References: ODM map P.369, 2053.
ODM, 1967, Open File Rpt. 5000, p. 35.

Wallbridge Mine (Past Producer)

Class: Secondary deposit in marble.

Location: Lot 12, Conc. 5; west side of Highway No. 62.
Reference: ODM maps P. 368.

Description: Hematite with specularite, magnetite, goethite, pyrite, and chalcopyrite as a pocket in dolomitic marble at and near the contact with overlying Ordovician rocks.

History: Most mining before 1900 from open pit about 150 feet in diameter, 60 feet deep, and a 35 foot shaft. 3,421 tons shipped in 1900, -01, -19, and -21.

1952 Some d.d. by Trent River Iron Ltd.

References: ODM maps P.368, 1957b.
GSC, 1958, Bull. 45, p. 65-6.
ODM, 1967, Open File Rpt. 5000, p. 33.

MARMORA TOWNSHIP

Lot 12, Concession 3 Occurrence

Class: Contact metasomatic.

Location: Lot 12, Conc. 3; approximate 900 feet from N shore Crowe Lake.

Description: Disseminated and massive magnetite in skarn, exposed for 20 to 30 feet in width and trends E for 900 feet.

References: ODM map 1957b; GSC maps 560A.
OBM, 1892, Volume 11, p. 38.

Lot 17, Concession 2 Occurrence

Location: Lot 17, Conc. 2.

Description: Magnetite disseminated in a gabbro-diorite, a sample of which assayed 34.80% Fe, 0.41% S, 0.134% P, 0.10% TiO_2.

History: 2 pits, 150 feet apart.

References: ODM map 1957b; GSC maps 560A, 14G.
ODM, 1923, I.O.C. Rpt., p. 222

Maloney Mine Occurrence

Class: Contact metasomatic.

Location: Lot 18, Conc. 1.

Description: Magnetite-bearing zone, 280 feet long and exposed over a 25 foot width, near a gabbro-diorite contact.

Economic Features: A sample assayed 47.00% Fe, 0.50% S, 0.137% P, 0.25% TiO_2.

History: 2 pits.

Marmora Tp. (Cont.)

References: ODM map 1957b; GSC maps 560A, 14G.
ODM, 1923, I.O.C. Rpt., p. 271.

Marmoraton Mine (Producer)

Class: Contact metasomatic.

Location: Lots 4 and 5, Conc. 5 and 6; 1 mile SE of Marmora.
Reference: GSC, 1958, Bull. 45, Fig. 1.

Description: Magnetite-bearing skarn, containing magnetite (50-55%), salite, hornblende, chlorite, pyrrhotite (1-5%), pyrite (1-3%) and minor amounts of calcite, apatite, sphene, epidote, clinozoisite, andradite, chalcopyrite, and sphalerite, in marble at a syenite-diorite contact over a length of 2,100 feet. The deposit was overlain by approximately 130 feet of mainly Ordovician limestone and glacial drift.

Economic Features: The deposit contains magnetite-rich zones 50 to 100 feet wide which form a tabular body up to 400 feet wide and 2,100 feet long and is known to extend to at least 750 feet below the Paleozoic strata.

Exploration drilling (1950-1) indicated more than 20 million tons available to open pit mining. Ore grades approx. 35% Fe. Mining is at a rate of approximately 500,000 tons of pellets obtained from 3.1 million tons of ore and waste per year. In 1959, 313,259 tons of concentrate, containing 66.25% Fe, was obtained from 762,785 tons of ore.

Ownership: Marmoraton Mining Company Limited.

History:
1950-1 40 d.d. holes for 37,000 feet by Bethlehem Steel Corporation.
1952-5 Removal of 22 million tons of limestone, mine and plant construction by Marmoraton Mining Co. Ltd.
1955-67 6,053,145 tons of ore shipped from open pit 1/2 mile long and 1/4 mile wide.

References: GSC map 560A, 13G.
Econ. Geol., 1965, Vol. 60, p. 1366-1379
GSC, 1958, Bull. 45, p. 44-6, Fig. 15.
GSC, 1967, Econ. Geol. Rpt. 22, p. 80-2.

Miscellaneous Deposits

Location: Lot 7, Conc. 1; Lot 13, Conc. 2; Lot 6, Conc. 9; Lot 9, Conc. 9, Lot 13, Conc. 10; Lct 9, Conc.8; Lot 16, 17 Conc. 11.

Description: Magnetite was reported to occur in the first 4 localities and hematite in the last two.

History: 1899 200 tons shipped from the Crescent Iron Mine on Lot 16, Conc. 11. 1900 511 tons shipped from the Malone Mine on Lot 16, Conc. 11, and 378 tons shipped from the malone No. 17 Mine on Lot 17, Conc. 11.

References: ODM maps 1957b; GSC map 560A.
ODM, 1899, Volume IX, p. 199, 202.
ODM, 1892, Volume 11, p.39.

MAYO TOWNSHIP

Bessemer Mine (Past Producer)

Class: Contact metasomatic.

Location: Lots 2-5, Conc. 6, and Lot 1, Conc. 7. Shaft on Lot 4, Co nc. 6, just E of Mullet Lake.
Reference: ODM map 1955-8.

Description: Lenses of magnetite-bearing skarn containing hornblende, garnet, epidote, pyroxene, pyrite, pyrrhotite and chalcopyrite in NE-trending marble, amphibolite and quartzite.

Economic Features: Mining has been carried out from 4 deposits: The No. 1 deposit contains small lenses within a length of 200 feet and a width of less than 50 feet; No.2 and No.3 deposits are en echelon, each about 700 feet long and with widths less than 100 feet; and the No.4 deposit, which is the main deposit, is about 1,400 feet long and 50 feet wide.

Representative analyses of ore shipped range from 49.30 to 61.30% Fe, up to 0.465% S, and 0.004 to 0.071% P.

Reserves were estimated at: 757,500 tons of mineable ore before dilution averaging 42.18% Fe, 0.86% S, 0.018% P, and 15.9% SiO_2 which could yield 450,000 tons of 65% Fe concentrate (Circa 1942); or 2,480,819 tons averaging 28.62% recoverable Fe (1958).

Mayo Tp. (Cont.)

History: 1902-3, 1906-7 Mining by the Mineral Range Iron Mining Co.
1908-10 Mining by the Canada Iron Furnace Co. Ltd.
1912-13 Mining by Canada Iron Mines Limited
1902-13 99,613 gross tons shipped, obtained from 4 open pits, 1 open cut, and a 236 foot shaft with 4 levels.
1941-2 14 d.d. holes by Frobisher Limited.
1957-8 Magnetometer survey by Frobisher Limited.

References: ODM maps 1955-8, 1957b, 52b; GSC map 15G
Giblin, P.E., 1960, Ph.D thesis, Univ. of Toronto.
GSC, 1958, Bull. 45, p. 20-2.
ODM, 1955, Volume LXIV, pt.8, p. 46, 48-51.
Annual Report, 1958, Frobisher Limited.
Assessment files, Toronto.

Bulpit Lake Occurrence

Class: Magmatic.

Location: 1 mile E of Bulpit Lake, NW part of township.
Reference: ODM, 1951, P.R. 1951-2, Fig. 1.

Description: Disseminations and streaks of magnetite in syenite gneiss within a zone 30 feet by 300 feet.

Economic Features: A sample assayed 25.30% Fe, 0.64%S, 0.98% TiO_2, 0.62% P_2O_5, 20.55% SiO_2.

References: ODM maps 1955-8, 1957b; GSC map 15G.
ODM, 1951, P.R. 1951-2, p.7.

Childs Mine (Past Producer)

Class: Contact metasomatic.

Location: Lots 11, 12, Conc. 9.
Reference: ODM map 1955-8.

Description: An isolated magnetite-rich zone, about 1,300 feet long and 250 feet wide, with garnet, calcite, epidote, pyroxene and hornblende, within a much larger heterogenous skarn zone. Deposit in marble near a diorite contact.

Economic Features: Reserves are estimated at 6,193,330 tons averaging 19.25% recoverable Fe (1958).
Average analysis of ore shipped in 1913 was 38.70% Fe, 0.149% S, 0.049% P.

History: 1913 9,649 tons shipped from open cuts by Canada Iron Mines Limited.
1941-58 Geophysical and geological surveys and d.d. by Frobisher Limited.

References: ODM map 1955-8, 1957b; GSC map 15G.
ODM, 1955, Volume LXIV, pt.8, p. 52-4.
GSC, 1958, Bull.45, p. 32-3.
Giblin, P.E., 1960, Ph.D. thesis, Univ. of Toronto.
Annual Report, 1958, Frobisher Limited.

Hamlyn Occurrence

Class: Contact metasomatic.

Location: N 1/2 Lot 8, Conc. 7, 100 feet W of C.N.R. tracks.

Description: A small occurrence of magnetite-bearing skarn in marble within the Bessemer pluton. Probably less than 100 feet long and 50 feet wide.

History: 1956 Geological and magnetometer surveys by Frobisher Limited.

References: ODM maps 1955-8, 1957b; GSC map 15G.
Giblin, P.E., 1960, Ph.D. thesis, Univ. of Toronto.
Assessment files, Toronto.

Mayo Tp. (Cont.)

Rankin Prospect

Class: Contact metasomatic.

Location: S 1/2 Lot 10, Conc. 9, 1/4 mile W of Bessemer Road.
Reference: ODM map 1955-8.

Description: Massive lenses and disseminations of magnetite in pyroxenic skarn and rusty schist, with some pyrite and pyrrhotite, in a NE-trending zone approximately 1900 feet feet long and 200 feet wide.

Economic Features: Reserves are estimated at 15,691,599 tons containing 15.32% recoverable Fe (1958). A lens intersected in drilling grades 34% Fe, 1.3% S, 0.15%P; a 5-ton surface sample assayed 38.25% Fe, 2.21% S, 0.15% P.

History: Before 1914 Stripping and small amount of ore mined from open pit.
1941-2 9 d.d. holes by Frobisher Limited.
Before 1954 2 d.d. holes by Trent River Iron Limited.
1956-8 Some d.d. by Frobisher Limited.

References: ODM map 1955-8, 1957b; GSC map 15G.
ODM, 1951, P.R. 1951-2, p. 3, 8.
ODM, 1955, Volume LXIV, pt.8, p. 50-2.
GSC, 1958, Bull. 45, p. 50-1.
Giblin, P.E., 1960, Ph.D. thesis, Univ. of Toronto.
Annual Report, 1958, Frobisher Limited.

Stevens Prospect

Class: Contact metasomatic.

Location: Lot 13, Conc. 9, 2400 feet NE of Childs Mine.

Description: Irregular areas of magnetite within a zone 400 feet long and less than 100 feet wide, developed in skarn.

Economic Features: A sample assayed 30.70% Fe, 23.00% insol., 0.015% S, and 0.08% P.

Mayo Tp. (Cont.)

History: Before 1914 Stripping and test pits.
1957 Magnetometer survey by Dunmayo Iron Mines Ltd.

References: ODM maps 1955-8, 1957b; GSC map 15G.
ODM, 1955, Volume LXIV, pt. 8, p.54.
Giblin, P.E., 1960, Ph.D. thesis, Univ. of Toronto.
Assessment files, Toronto.

Swordfingal Prospect

Class: Contact metasomatic.

Location: Lots 4, 5, 6, Conc. 5, 1 mile SE of the Bessemer Iron Mine.
Reference: ODM, 1951, P.R. 1951-2, Fig. 1.

Description: NE-trending lenses of magnetite-bearing skarn deposits over a strike length of 2000feet. The two main lenses do not exceed 400 feet in length and 10 feet in width.

Economic Features: A channel sample over 7 feet assayed 47.23% Fe, 0.122% S, 0.027% P; a grab sample assayed 42.69% Fe, 0.30% S, 0.07% TiO_2, 0.10% P_2O_5, 16.43% SiO_2.

History: 1951 Dip needle survey and 71-foot trench by Frobisher Limited.

References: ODM maps 1955-8, 1957b; GSC map 15G.
ODM, 1951, P.R. 1951-2, p.11.
Gibblin, P.E., 1960, Ph.D. thesis, Univ. of Toronto.
Assessment files, Toronto.

TUDOR TOWNSHIP

Baker Mine Occurrence

Class: Contact metasomatic.

Location: Lot 18, Conc. 18.
Reference: ODM map P. 146.

Description: Erratic pockets, up to 25 feet wide, of magnetite disseminations and bands at a diorite-marble contact. Pyrite, pyrrhotite and chalcopyrite also present.

Economic Features: A chip sample assayed 38.70% Fe, 3.35% S; a composite grab sample assayed 46.61% Fe, 13.48% SiO_2, 2.45% S, 0.31% P.

History: 2 open cuts and 5 trenches.

References: ODM maps P. 146, 52b, 1957b; GSC map 16G.
ODM, 1943, Volume LII, pt.3, p. 48.
GSC, 1958, Bull. 45, p. 16-7.
Lumbers, S.B., ODM, personal communication.

Emily Mine Prospect

Class: Contact metasomatic.

Location: Lot 7, Conc. 19; near SE corner.
Reference: ODM map P. 146.

Description: Magnetite-bearing skarn with some sulphides in marble near a granodiorite contact.

Economic Features: The anomalous area is approximately 400 feet long and averages 75 feet wide. Drilling indicated a shallow deposit with an estimated 16,000 to 17,000 tons of material assaying about 30% Fe.

A composite grab sample of best ore in the dump assayed 47.87% Fe, 6.64% SiO_2, 0.08% S, 0.25% TiO_2, 0.08% P.

History: Open cut 125 by 15 feet, with a 20 foot face.
1959-60 Dip needle survey and 7 d.d. holes for 687 feet by E. Barton.

References: ODM maps P. 146, 52b, 1957b; GSC map 16G.
ODM, 1943, Volume LII, pt.3, p. 49.
GSC, 1958, Bull. 45, p. 35-6.
Assessment files, Toronto.

Glanmire Lake Occurrence

Class: Contact metasomatic.

Location: Lot 26, Conc. 14; on the NW shore of Glanmire Lake.

Description: Magnetite-rich skarn over an area of about 40 square feet.

References: ODM maps P. 146, 1957b; GSC map 16G.
Lumbers, S.B., ODM, personal communications.

Hastings Road Occurrences

Class: Magmatic.

Location: Hastings Road Lots 41, 42, 54 and 55 East, and 55 West. Between Mann Lake and Little Jordon Creek.

Description: Small and lean occurrences of titaniferous magnetite in the Tudor Gabbro. A sample from Lot 42 assayed 40.75% Fe, 8.50% TiO_2; a sample from Lot 52 assayed 59.85% Fe, 13.28% TiO_2.

References: ODM maps P. 146, P. 147, 52b, 1957b; GSC map 16G.
ODM, 1943, Volume LII, pt.3, p. 49.

Tudor Tp. (Cont.)

Lee Mine Occurrence

Class: Contact metasomatic.

Location: Lot 22, Conc. 18, near boundary with Conc. 17.
Reference: ODM map P. 146.

Description: A 6-foot wide zone of massive magnetite with some pyrite, pyrrhotite and chalcopyrite at a syenite-marble contact.

Economic Features: A grab sample assayed 47.87% Fe, 6.64% SiO_2, 0.08% S, 0.25% TiO_2, 0.08% P.

History: Open cut, 60 by 10 feet.

References: ODM maps 146, 52b; GSC map 16G.
ODM, 1943, Volume LII, pt.3, p. 48-9.
Lumbers, S.B., ODM, personal communications.

Lot 8, Concession 15 Occurrence

Location: Lot 8, Conc. 15; on E side of ridge.

Description: Narrow bands of magnetite in chlorite and hornblende schist near a granite contact.

References: ODM maps P. 146, 52b, 1957b; GSC map 16G.
ODM, 1943, Volume LII, pt.3, p. 48.

Lot 13, Concession 10 Occurrence

Class: Iron formation.

Location : Lot 13, Conc. 10.

Description: Two layers of magnetite-bearing iron formation with a total width of less than 30 feet.

Economic Features: A grab sample assayed 50.98% Fe.

History: Pits.

References: ODM maps P. 146, 52b, 1957b; GSC map 16G.

Orton Mine Prospect

Class: Magmatic.

Location: Lots 56 and 57, W of Hastings road.
Reference: ODM map P. 146.

Description: Segregation of massive and disseminated ilminite, ilmenomagnetite and minor pyrite in the Tudor gabbro.

Economic Features: Segregation up to 50 feet in width and 150 feet long confined to an area 700 by 400 feet. 10 assayed samples range from 46.60 to 55.78% Fe, 8.17 to 13.89% TiO_2, Nil to 0.34 V_2O_5, trace to 0.35% S, Nil to .081% P,

History: 1912-13 A few tons mined from 3 open cuts and a 32-foot shaft by Tivani Steel Company.

References: ODM maps. P. 146, 52b, 1957b; GSC map 16G.
GSC, 1958, Bull, 45, p. 14-5.
ODM, 1943, Volume LII, pt.3, p. 50-1
Lumbers, S.B., ODM, personal communications.

Tudor Tp. (Cont.)

St. Charles Mine (Past Producer)

Class: Contact metasomatic.

Location: Lot 19, Conc. 11, approximately 700 feet W of Highway No. 62.
Reference: ODM map P. 146.

Description: E-trending, disseminated to massive, magnetite-bearing skarn in marble adjacent to the Tudor gabbro.

Economic Features: Three main deposits within an area of approximately 13,500 square feet.
3,000 tons of ore shipped ranged between 57 to 60% Fe and 0.5 to 1% S.
A composite grab sample assayed 50.69% Fe, 6.83% SiO_2 0.45% TiO_2, 0.64% S, 0.09% P.

History: About 1901 Mining from 4 small open pits by the Anglo-American Iron Company. Shipments recorded include 3000 tons in 1900, and 2,186 tons in 1901 and 1902.

References: ODM maps P.146, 1957b; GSC map 16G.
GSC, 1958, Bull. 45, p. 53-4.
ODM, 1943, Volume LII, pt.3, p. 47-48.

Wadsworth Lake Occurrence

Class: Contact metasomatic.

Location: Lot 3, Conc. 19; near NW shore of Wadsworth Lake.
Reference: ODM map P. 146.

Description: Skarn with some magnetite over a 6-foot width, in marble near a granodiorite contact.

References: ODM maps P. 146, 52b, 1957b; GSC map 16G.
Lumbers, S.B., ODM, personal communications.

TYENDINAGA TOWNSHIP

Mount Pleasant Occurrence

Class: Contact metasomatic.

Location: Near Mount Pleasant, approximately 3 miles W of Napanee.

Description: One drill hole intersected 199 feet of magnetite stringers and bands in amphibolite and pyroxenite overlain by 231 feet of Paleozoic sediments. Scapolite, diopside, epidote, carbonate, pyrite, pyrrhotite and chalcopyrite also present in mineralized zone.

History: Drilling by Trent River Iron Limited.

Reference: GSC, 1958, Bull. 45, p. 46.

WOLLASTON TOWNSHIP

Coe Hill Mine (Past Producer)

Class: Contact metasomatic.

Location: N 1/2 Lots 15, 16, Conc. 8, 500 feet S of the main street of Coe Hill.
Reference: ODM map 2020.

Description: One main and several smaller lenses, trending N50E, of magnetite with some pyrite and pyrrhotite in a pyroxene amphibolite. Main lens 600 feet long, 30 feet wide and 360 feet deep.

Economic Features: Reserves estimated in 1914 at 600,000 tons averaging 51.4% Fe, 13.00% SiO_2, 1.71% S, and .045% P. Grab sample of stockpiled material assayed 58.09 and 44.40% Fe.

Wollaston Tp. (Cont.)

History: 1884-1914 80,000 to 100,000 tons mined from open cut and 3 shafts 95 to 130 feet deep, 54,783 tons of which was shipped.
1910 6 d.d holes averaging 450 feet.

References: ODM maps 2020, 1957b; GSC map 16G.
ODM, 1962, G.R. 11, p. 53.
GSC, 1958, Bull. 45, p. 33-4, Fig. 11.

Jenkins Mine Occurrence

Class: Contact metasomatic.

Location: Lot 18, Conc. 8, 1 mile W of Coe Hill.
Reference: ODM map 2020.

Description: Irregular disseminations and stringers of magnetite in a pyroxenic amphibolite, trending NE over a length of approximately 650 feet.

Economic Features: Two average samples assayed 46.08% Fe, 0.52% S, 0.054% P and 49.50% Fe, 0.28% S, 0.036% P. A grab sample assayed 47.10% Fe, 0.26% TiO_2, 0.38% S, 0.10% P.

History: Shallow open pit 180 feet by 10-20 feet.

References: ODM maps 2020, 1957b; GSC map 16G.
ODM, 1962, G.R. 11, p. 54.
GSC, 1958, Bull. 45, p. 34, Fig. 11.
ODM, 1943, Volume LII, pt. 3, p. 52-3.

Ridge Prospect

Class: Contact metasomatic.

Location: Lots 16, 17, 18, Conc. 2, 3.
Reference: ODM map 2020.

Description: Magnetite-bearing skarn with some sulphides in volcanics amphibolite. Three, W-trending, linear zones, each approximately 500 feet long and 500 feet apart.

Economic Features: A verticle drill hole intersected 67.5 feet, in 3 sections within a 108.5 foot interval, assaying 26.74 to 39.50% Fe, 2.36 to 2.83% S. An inclined hole (50 degrees) intersected 151 feet grading 30.94% Fe, 1.75% S. Tests made on these analysized sections gave concentrates of 64.1 to 67.0% Fe at 100M with 30.7 to 50.7% weight recovery.

A grab sample assayed 37.77% Fe, 0.25% TiO_2, 0.64% P_2O_5, 8.85% S, 0.1-0.3% Co.

History: 1951 4 d.d holes 1,885 feet by W.S. Moore Company.

References: ODM maps 2020, 1957b; GSC map 16G.
ODM, 1951, P.R. 1951-2, p. 17.
ODM, 1962, G.R. 11, p. 49-50.

Ridge Extenstion Prospect

Class: Contact metasomatic.

Location: Lots 14, 15, Conc. 1, 2; just N of Murphy Corners road.
Reference: ODM map 2020.

Description: Magnetite-bearing skarn with some pyrite, pyrrhotite and chalcopyrite in mafic volcanics. Four, NW-trending zones outlined, 1 approximately 2000 feet long and the others approximately 300 feet long.

Economic Features: A sample assayed 23.3% Fe, 0.55% S, 0.56% TiO_2 0.11% P_2O_5, 20.33% SiO_2.

Two chip samples over 5 foot widths assayed 0.39 and 0.43%Cu. Drilling on N 1/2 Lot 15, Conc. 2, included a 40-foot section assaying 0.10 to 0.38 Cu.

Wollaston Tp. (Cont.)

History: 1959 Trenches, pits and some d.d. on V.A. McMurray holdings.
1960 Some d.d. by Kennco Explorations (Canada) Limited.

References: ODM maps, 2020, 1957b; GSC map 16G.
ODM, 1951, P.R. 1951-2, p. 18.
ODM, 1962, G.R. 11, p. 50.
Assessment files, Toronto.

Snow Lake Occurrence

Class: Magmatic and contact metasomatic.

Location: Approximately 1/2 mile NE of Snow Lake.
Reference: ODM, 1951, P.R. 1951-2, Fig.2.

Description: Magnetite-bearing skarn with sulphides in marble at the west contact with a gabbro body. Also disseminated magnetite occurs within the gabbro.

Economic Features: The skarn zone is 250 feet long and 7 feet wide. A sample assayed 24.66% Fe, 0.67% TiO_2.
A sample of gabbro assayed 17.06% Fe, 3.80% TiO_2.

References: ODM maps 2020, 1957b; GSC map 16G.
ODM, 1951, P.R. 1951-2, p. 14.

Umfraville Prospect

Class: Magmatic.

Location: Lots 10 and 11, Conc. 16.
Reference: ODM map 2020.

Description: Disseminated titaniferous magnetite in pyroxenic amphibolite within the Umfraville gabbro. Zone is approximately 3000 feet long and 400-750 feet wide.

Economic Features: A grab sample assayed 18.29% Fe, 0.15%S, 7.40% TiO_2, 3.70% P_2O_5, 17.91% SiO_2.
10 to 20% Fe is estimated to be present within the zone as outlined by drilling.

History: 1957 Dip needle survey by A.T. Griffis.
1957 Magnetometer and geological surveys and 7 d.d. holes for 2,218 feet by Rio Tinto Canadian Exploration Limited.

References: ODM maps 2020, 1957b; GSC map 16G.
ODM, 1962, G.R. 11, p. 54.
Assessment files, Toronto.

Vader Lake Occurrence

Class: Contact metasomatic.

Location: Near SE end of Vader Lake.
Reference: ODM, 1951, P.R. 1951-2, Fig. 2.

Description: Magnetite-bearing pyroxene skarn with some sulphides in a zone less than 400 feet long and 50 feet wide.

Economic Features: Poorly exposed. A sample assayed 18.84% Fe, 0.30% S, 3.10% TiO_2, 0.801% P_2O_5, 19.37% SiO_2.

References: ODM, 1951, P.R. 1951-2, p. 13

KENORA DISTRICT

AUBREY TOWNSHIP

Aubrey Creek Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: From Ardis Lake east to Van Horne Township border.
Reference: ODM map 48d.

Description: Poorly exposed E-trending bands of magnetite-quartz iron formation, 8-10 feet wide in Archean metasediments.

References: ODM maps 48d, 1163G.
ODM, 1939, Volume XLVIII, pt.4, p. 11.

BAIRD TOWNSHIP

Baird Township Occurrences

Class: Iron formation, Algoma type.

Location: NE part of township.
References: ODM map 2072.

Description: Discontinuous, narrow bands of lean iron formation composed of chert, magnetite or pyrite within Archean metavolcanics.

History: Some d.d.

References: ODM maps 2072, P.355, 852G.
ODM, 1965, G.R., No. 39, p. 7.
Assessment files, Red Lake.

BALL TOWNSHIP

Ball Township Occurrences

Class: Iron formation, Algoma type.

Location: West of Pipestone Lake and SW of Trout Bay.
Reference: ODM map P 338.

Description: Iron formation, in Archean volcanics and sediments.

References: ODM maps P 355, P. 338, 49a, 4012G.
ODM, 1940, Volume XLIX, pt. 2, p. 29, 212.

BALMER TOWNSHIP

Balmer Township Occurrences

Class: Iron formation, Algoma type.

Location: Scattered throughout township.
References: ODM maps 1951-3, P. 94.

Description: Discontinuous bands of lean iron formation containing chert, magnetite, pyrite, pyrrhotite, associated with carbonaceous slates within Archean volcanics and sediments. Widths up to several hundred feet.

History: Magnetometer surveys and d.d.

References: ODM maps 1951-3, P.94, P.355, 852G.
ODM, 1951, Volume LX, pt. 10, p. 9, 13.
Assessment files, Red Lake.

BATEMAN TOWNSHIP

Bateman Township Occurrences

Class: Iron formation, Algoma type.

Location: Mainly in W half of township.
References: ODM maps 2016, 49b.

Description: Lean iron formation containing quartz (chert, jasper), magnetite or sulphides in Archean volcanics. Thicknesses of up to 30 feet are recorded.

References: ODM maps 2016, P. 355, 49b, 852G.
ODM, 1962, G.R., No.6, p. 8-10, 21, 22.

BOWERMAN TOWNSHIP

Ben Lake Occurrence

Class: Magmatic?

Location: At N shore of Ben Lake.
Reference: ODM map P. 351.

Description: Magnetite-pyrite in a mafic intrusion.

References: ODM maps P.351, 881G.

CODE TOWNSHIP

Bug Lake Occurrence

Class: Iron formation, Algoma type.

Location: NW and SW of Bug Lake.
Reference: ODM map 2115.

Description: Iron formation, in Archean metasediments.

References: ODM maps 2115, 1178G.

CONNELL TOWNSHIP

Connell Township Occurrences

Class: Iron formation, Algoma type, oxide and carbonate facies.

Location: Throughout township.
References: ODM maps 47b, 4102.

Description: Discontinuous, highly folded but dominantly NE-trending, lenses and bands of iron formation containing magnetite, siderite, ankerite or quartz and locally pyrite and pyrrhotite. Within Archean volcanics. Up to 250 feet in width, in part intercalated with volcanics.

Economic Features: Carbonate varieties assayed 26.05 and 31.14% FeO in selected samples.

History: Extensive geophysical and geological surveys and diamond drilling.

References: ODM maps 47b, 4102, 923G, 924G.
ODM, 1966, Misc. Paper MP-4, p. 12-15, 27-28.
ODM, 1938, Volume XLVII, pt. 3, p. 11-15.
ODM, 1930, Volume XXXIX, pt.2, p. 7-11.

DENT TOWNSHIP

Dent Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: On Medicine Rock Island and to the N, and between Woman and Quartz lakes.
Reference: ODM map 37h.

Description: Iron formation in Archean volcanics. Stripping exposed a 25-foot width near Quartz Lake.

References: ODM maps 37h, P. 406, 872G; GSC map 58-1959.
ODM, 1928, Volume XXVII, pt. 4, p. 12.

DOME TOWNSHIP

Dome Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Scattered throughout township.
Reference: ODM map 2074.

Description: Discontinuous bands of lean magnetite-quartz (chert) iron formation up to 200 feet thick within Archean volcanics.

History: Some d.d.

References: ODM maps 2074, P. 355, 49b, 852G.
ODM, 1966, G.R., No. 45, p. 20-1.
Assessment files, Red Lake.

DRAYTON TOWNSHIP

North Pines Mine (Past Producer)

Class: Hydrothermal or sedimentary?

Location: E end of Vermilion Lake; Lot 32, Conc. 1,
Reference: ODM map P_c 408.

Description: Pyrite-pyrrhotite zone trending NE, 30 to 68 feet wide and approximately 5,200 feet in length. At Archean lava - pyroclastic contact.

Economic Features: Mining from a zone 1000 feet long, 325 feet deep and 45 feet wide produced approximately 500,000 tons of pyrite assaying 45-48% S. A grab sample assayed 42.24% Fe, 44.05% S.

Ownership: Allied Chemical Canada Limited.

History: 1905-21 2 shafts 337 and 624 feet deep and 6 levels.

References: ODM maps P. 408, 41h.
ODM, 1932, Volume XLI, pt. 6, p. 28-30.

Vermilion - Lost Lake Occurrences

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: NE part Lombard, Vermilion Add'l., NW part Jordan, and Drayton townships, and S part of I.R. No. 28.
References: ODM maps P. 336, P. 337, P. 408.

Description: Narrow discontinuous bands of magnetite and (or) pyrite and pyrrhotite iron formation locally containing minor chalcopyrite, within Archean mafic volcanics.

References: ODM maps P. 336, P. 337, P. 408, P.421, 41h, 1147G, 1138G.
ODM, 1932, Volume XLI, pt.6, p.9.

EARNGEY TOWNSHIP

Earngey Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: 4000 and 9000 feet E of S end of Lost Bay.
Reference: ODM map 47c.

Description: Iron formation up to 50 feet wide in Archean volcanics.

References: ODM maps 47c, P. 406, 872G.
ODM, 1938, Volume XLVIII, pt. 3, p. 70.

ECHO TOWNSHIP

Franciscan Lake Occurrences

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: Lots 1,2,3,4, Conc. 1 and Lot 1, Conc.2 of Echo Township and Lots 11, 12, Conc. 2 of Pickerel Township.
References: ODM maps 1950-1, P. 268.

Description: Bands of magnetite-pyrite-quartz (chert) iron formation, with thicknesses up to 200 feet or more, in Archean metasediments.

History: Circa 1899 75-foot shaft by Goldenrod Mining Co.

References: ODM maps 1950-1, P.268, 41h, 1146G.
ODM, 1949, Volume LIX, pt.5, p. 14-6.
ODM, 1966, Open File Rpt. 5003, p.20, 21, 29, 30.

FAIRLIE TOWNSHIP

Fairlie Township Occurrences

Class: Iron formation, Algoma type.

Location: Mainly in central part of township.
Reference: ODM map 49a.

Description: Iron formation, in Archean volcanics.

References: ODM maps 49a, P.355, 852G.
ODM, 1940, Volume XLIX, pt. 2, p. 29.

HEYSON TOWNSHIP

Heyson Township Occurrences

Class: Iron formation, Algoma type, sulphide facies.

Location: NW part of township.
Reference: ODM map P. 208.

Description: Chert containing differing amounts of pyrite, 5 to 10 feet thick, at a Archean basalt-rhyolite contact.

References: ODM map P. 208.

JORDAN TOWNSHIP

Vermilion - Lost Lake Occurrences

(See Drayton Township)

LOMBARD TOWNSHIP

Vermilion - Lost Lake Occurrences

(See Drayton Township)

MacQUARRIE TOWNSHIP

Mist Inlet Occurrence

Class: Iron formation, Algoma type.

Location: N shore of island in Mist Inlet.
References: ODM map 52c.

Description: "A narrow band of typical iron formation" within Archean greywacke.

References: ODM maps 52c, 2115, 1177G.
ODM, 1943, Volume LII, pt.4, p.7.

Yellow Girl Bay Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Between peninsula in Yellow Girl Bay to 3/4 miles up Black River and across outlet of Black Bay.
Reference: ODM map 2115.

Description: Magnetite iron formation interlayered with greywacke within Archean sediments. Possibly up to 200 feet in width.

References: ODM maps 2115, 1177G, 1178G.
J.C. Davies, ODM, personal communication.

McCULLAGH TOWNSHIP

McCullagh Township Occurrences

Class: Iron formation, Algoma type.

Location: NW corner of township.
Reference: ODM map 47b.

Description: Two zones of NE-trending iron formation in Archean volcanics.

History: 1937 Dip needle survey and d.d. by Crowshore Gold Mines Ltd.

References: ODM maps 47b, 934G, 924G.
ODM, 1939, Volume XLII, pt.3, p. 32, 50-51.

McDONOUGH TOWNSHIP

McDonough Township Occurrences

Class: Iron formation, Algoma type.

Location: SE quarter of township, SE of Red Lake.
Reference: ODM map P. 124.

Description: NE-trending, discontinuous bands of iron formation in Archean volcanics.

References: ODM maps P. 124, P 355, 49b, 852G.

McNEVIN TOWNSHIP

Martin Occurrence

Class: Bog iron.

Location: Near Martin.

Description: 10 feet of bog iron intersected in drilling.

History: 1 d.d. hole for 210 feet by A. McCaig.

References: Assessment files, Kenora.

MULCAHY TOWNSHIP

Mulcahy Township Occurrences

Class: Iron formation, Algoma type.

Location: NE part of township.
Reference: ODM map P.338.

Description: Iron formation in Archean volcanics and sediments.

References: ODM maps P.355, P.338, 49a, 4012G, 4011G.
ODM, 1940, Volume XLIX, pt.2, p.29, 2121.

PICKEREL TOWNSHIP

Franciscan Lake Occurrences

(See Echo Township)

PONSFORD TOWNSHIP

Ponsford Township Occurrences

Class: Iron formation, Algoma type.

Location: N of Hook Lake and SE and E central parts of township.
References: ODM maps 39a, 47b.

Description: Iron formation in Archean volcanics.

References: ODM maps 39a, 47b, 923G, 924G.
ODM, 1938, Volume XLVII, pt.3, p. 16, Fig. 3.

TEMPLE TOWNSHIP

Temple Bay Occurrences

Class: Iron formation, Algoma type.

Location: Lot 7, Conc.1 .
Reference: ODM map 48d.

Description: A thin, bluish, slaty band of magnetite at an Archean volcanic-sediment contact.

References: ODM map 48d.
ODM, 1939, Volume XLVIII, pt.4, p.11.

Vermilion Bay Occurrences

(See 49°45' - 93°15')

TODD TOWNSHIP

Todd Township Occurrences

Class: Iron formation, Algoma type.

Location: E of Rowan Lake, and SE of Sadler Bay.
Reference: ODM map 49a.

Description: Iron formation in Archean volcanics.

References: ODM maps P. 355, 49a, 4012G.
ODM, 1940, Volume, XLIX, pt. 2, p. 29.

VAN HORNE TOWNSHIP

Dryden - Thunder Lake Occurrence

(See Zealand Township)

VERMILION ADDITIONAL TOWNSHIP

Vermilion - Lost Lake Occurrences

(See Drayton Township)

WORK TOWNSHIP

Work Township Occurrences

Class: Iron formation, Algoma type.

Location: S and WSW of Hump Lake, N part of township.
Reference: ODM map 2115.

Description: Iron formation in Archean sediments.

References: ODM maps 2115, 1178G.

ZEALAND TOWNSHIP

Dryden - Thunder Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: N part Van Horne and NW and N central parts of Zealand townships.
Reference: ODM map 50e.

Description: E-trending zone of magnetite-quartz iron formation with intercalated greywacke over a strike length of 13 miles. Recorded widths of individual iron-rich layers are up to 60 feet.

History: 1961 4 d.d. holes (N 1/2 Lot 16, Conc.6) for 558 feet by G.L. Pidgeon.

References: ODM maps 50e, 2115, 1155G.
ODM, 1941, Volume L, pt.2, p. 23-4, 55-6.
Assessment files, Kenora.

Zealand Tp. (Cont.)

Wabigoon Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Thunder Lake and Hartman township boundary. Lots 5 to 8, Conc.4, Lots 2 to 5, Conc. 5, Lots 1 to 3, Conc.6 Reference: ODM map 50e.

Description: NE-trending, magnetite-quartz iron formation with intercalated greywacke, within Archean metasediments.

Economic Features: Drilling intersected up to 700 feet of interbedded iron formation and greywacke. Within a zone 8,400 feet long, located 3.5 miles NE of Wabigoon, the ratio of iron formation to sediment is estimated to range from 1:9 to 1:1. A grab sample assayed 28.8% Fe.

History: 1957 Dip needle and magnetometer surveys and 2 d.d. hole for 1,504 feet.
1966 Geological and magnetometer surveys by Algoma Steel Corp. Ltd.

References: ODM maps 50e, 2115, 1155G.
ODM, 1941, Volume L , pt. 2, p. 23-4, 55-6.
Assessment files, Kenora.

49°00' - 91°00'

Mathieu Prospect

Class: Iron formation, Algoma type, carbonate and sulphide facies.

Location: In vicinity of Keewatin and Hematite lakes. Reference: ODM map 1960g.

Description: E-trending siliceous iron formation containing pyrite, pyrrhotite, siderite and quartz up to 1,200 feet wide, associated with Archean greywacke and argillite.

Economic Features: Three zones outlined: "A" zone is 2,100 feet long, less than 50 feet wide, and contains about 40 percent sulphides; "B" zone is 3,000 feet long, contains a 55-foot zone averaging 15 to 36% S and siderite lenses samples from which assayed 27.6% Fe, 1.80% Mn, 19.63% SiO_2 and 2.03% S; and "C" zone about 400 feet long containing 15.6% S over a core length of 115 feet.

History: 1948-9 Some diamond drilling.
1950 4 d.d. holes for 2,001 feet by J.A. Mathieu.
1952 13 d.d. holes for 3,192 feet by Candela Development Co.

References: ODM maps 1960g, 2065, 1124G.
ODM, 1960, Volume LXIX, pt. 5, p. 11-18, 48-9.
Assessment files,Kenora.

Van Nostrand Lake Occurrence

Class: Iron formation, Algoma type.

Location: E and N of Van Nostrand Lake.
Reference: ODM map 1960g.

Description: Narrow bands of magnetite-quartz iron formation associated with Archean greywacke.

History: 1952 Geological survey by C.P.R.
1953 Magnetometer survey.

References: ODM maps 1960g, 2065, 1124G.
ODM, 1960, Volume LXIX, pt.5, p.11.
Assessment files, Kenora.

$49^{o}00' - 91^{o}15'$

Pinecone Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Pinecone and Spool lakes.
Reference: ODM map 1960g.

Description: E-trending magnetite-quartz iron formation with a length of 4,000 feet and up to 150 feet wide, in Archean sediments.

Economic Features: An estimated 7 million tons outlined over a length of 4,000 feet, with an average width of 90 feet, grading 23.2% Fe, calculated to a depth of 300 feet.
By grinding to -325M a concentrate averaging 70% Fe was obtained.

Ownership: Norway Lake Iron Mines, Limited.

History: 1961 Dip needle survey and 3,931 feet of d.d. by Republic Steel Corp.

References: ODM maps 1960g, 2065, 1124G.
ODM, 1960, Volume LXIX, pt.5, p. 12.
Assessment files, Kenora.

Seahorse Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Between Seahorse and Norway lakes.
Reference: ODM map 1960g.

Description: E-trending, lean magnetite-quartz iron formation associated with chert and Archean sediments.

References: ODM maps 1960g, 2065, 1124G.
ODM, 1960, Volume LXIX, pt.5, p. 10-14.

$49^{o}00' - 93^{o}30'$

Schistose Lake Occurrences

Class: Iron formation, Algoma type.

Location: S and W shores of Schistose Lake.
Reference: ODM map 42b.

Description: Bands of iron formation containing chert, magnetite, pyrite, or siderite, in Archean metavolcanics. Thicknesses of over 30 feet recorded.

References: ODM maps 42b, 44c, 2115, 1168G.
ODM, 1933, Volume XLII, pt. 4, p.92.
ODM, 1935, Volume XLIV, pt. 4, p. 11.

Pipestone Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: On two islands in NW arm of Pipestone Lake.

Description: Lean hematite-quartz (chert, jasper) iron formation interbedded with Archean slates and quartzites.

References: ODM, 1935, Volume XLIV, pt.4, p. 13.

$49^{o}15' - 92^{o}00'$

Bending Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SW part of Bending Lake.
Reference: ODM map 2115.

Description: NW-trending magnetite-quartz iron formation with differing amounts of amphibole, specularite and greywacke beds. Prospect includes 5.7 miles of a total strike length of 12 miles. Maximum width of over 1,000 feet developed through folding.

Economic Features: Main zone is 5,000 feet long and up to 1,000 feet wide which also includes substantial amounts of waste rock and lean iron formation.

Sixty-one small chip samples averaged 29.9% sol. iron. Assays from 2 drill cores of 150 and 375 feet of iron formation gave 33.7% sol. Fe or 24.3% mag. Fe and 30.0% sol. Fe or 25.0% mag. Fe, respectively.

Tests on a sample assaying 36.90% Fe gave a magnetic concentrate of 59.3% Fe for 47.17% weight recovery at -325 M.

Ownership: Jalore Mining Company Limited.

History: 1953-4 Dip needle survey by Jalore Mining Co. Ltd.
1955 7 d.d. holes for 5,788 feet by Jalore Mining Co. Ltd.
1963-5 Magnetometer and topographical surveys and 15 d.d. holes for 10,000 feet by Jalore Mining Co. Ltd.

References: ODM maps 2115, 1144G.
Assessment files, Kenora.

Stormy Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 2 miles WNW of NW part of Bending Lake.
Reference: ODM map 2115.

Description: NW-trending magnetite iron formation with interlayered Archean greywacke, as two zones one 2,000 feet long and another 3,200 feet long. Maximum width approximately 75 feet.

History: 1956-8 Trenching and dip needle survey by Stratmat Ltd.

References: ODM maps 2115, 1144G.
Assessment files, Kenora.

49°30' - 90°00'

Hardrock Bay Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: N shore of Hardrock Bay.
Reference: ODM map 48d.

Description: Thin band of magnetite-chert iron formation in Archean metavolcanics.

References: ODM map 48d.
ODM, 1939, Volume XLVIII, pt. 4, p.10.

49°30' - 93°00'

Eagle Lake Prospect

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: Between Net and Poplar islands.
Reference: ODM map 48d.

Description: Discontinuous, E-trending iron formation zone containing pyrite, magnetite and chert with some chalcopyrite. Within Archean metavolcanics.

Economic Features: On Net Island, a pyrite zone is up to 21 feet in width and at least 300 feet in length. A sample assayed 23.85% S, 53.23% Fe, 0.44% Zn, 0.05% Cu.

Between North Twin Island and Poplar Island two zones outlined, one 2,400 feet long and the other 2,000 feet long. Drilling intersected 1.5, 5.5 and 1.0 feet of magnetite, pyrite, or chert.

History: 1910-11 Some d.d and 22-foot shaft.
1955 Magnetometer survey and 4 d.d. holes for 2,460 feet by Steep Rock Iron Mines Limited.

References: ODM maps 48d, 2115, 1162G.
ODM, 1967, M.R. Circular No.5, p. 36.
Assessment files, Kenora.

49°30' - 93°15'

Eagle Lake Prospect

(See 49°30' - 93°00')

Mulcahy Lake Occurrences

Class: Magmatic.

Location: In the vicinity of Mulcahy, Snare and Straight lakes.

Description: Thin bands containing up to 50 percent magnetite, in banded norite and anorthositic gabbro.

References: ODM maps 48d, 1956-3, 2115, 1162G.
ODM, 1956, Volume LXV, pt.4, p. 11, 19.
ODM, 1939, Volume XLVIII, pt. 4, p. 24, 26.

Vermilion Bay Occurrences

(See 49°45' - 93°15')

49°30' - 93°45'

Piskegomang Creek Occurrence

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: Near outlet of Piskegomany Creek into Eagle Lake.
Reference: ODM map 1956-3.

Description: Discontinuous, NE-trending iron formation containing quartz and magnetite in the east or pyrite in the west. Magnetite content approximately 25 percent over a 20-foot section.

References: ODM maps 1956-3, 2115.
ODM, 1956, Volume LXV, pt. 4, p. 5, 19.

49°30' - 94°30'

Corkscrew Island Occurrence

Class: Iron formation, Algoma type.

Location: NW corner of Corkscrew Island.

Description: Narrow band of cherty iron formation containing traces of iron oxides which grades into massive, graphitic chert.

References: ODM map 45b.
ODM, 1936, Volume XLV, pt. 3, p. 11.

49°45' - 91°00'

Yellow and Greer Lakes Occurrences

Class: Bog iron.

Location: Between 4 and 7 miles W of first rapids on the English River above Selwyn Lake.

Description: Bog iron occurrences.

References: OBM, 1909, Volume XVIII, pt. 1, p. 180-1.
ODM, 1923, I.O.C. Rpt., p.177.

49°45' - 91°45'

Minnitaki Range Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Red Pine Bay and Southeast Bay(Minnitaki Lake).
Reference: ODM maps P.269, 41h.

Description: ENE-trending zone of magnetite-quartz iron formation with interlayered greywacke occurs over a strike length of 20 miles and is up to 800 feet in width.

Economic Features: Main zone, midway between Dallas Lake and Twin Bay, is 3,000 feet long and 800 feet wide and contains an estimated 200,000 tons per vert. foot of 18 to 19% sol. Fe. A total of 90 million tons of Fe-bearing material are indicated.

History: 1909 2 d.d. holes for 300 feet by W.S. Ritchie.
1964-5 Magnetometer survey and 11 d.d. holes for 5,125 feet by Minnitaki Iron Range Limited.

References: ODM maps 2115, P. 353, P. 269, 41h, 1146G, 1137G
ODM, 1966, Open File Rpt. 5003, p. 37.
ODM, 1932, Volume XLI, pt.6, p. 27-8.
Can. Mines Handbook, 1967-8.

49°45' - 92°00'

Minnitaki Range Prospect

(See 49°45' - 91°45')

49°45' - 93°15'

Vermilion Bay Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: East of Boat and Canoe islands, including Lot 12, Conc. 5 of Temple Township.
Reference: ODM map 48d.

Description: Iron formation in Archean sediments, mainly as inclusion in granite.

References: ODM maps 48d, 1162G, 1163G.
ODM, 1939, Volume XLVIII, pt. 4, p. 11.

50°00' - 90°45'

Sioux Lookout Occurrences

Class: Iron formation, Algoma type.

Location: E of Pelican Lake and NE end Abram Lake.
References: ODM maps P.421 and P.469.

Description: Small discontinuous bands of iron formation in Archean volcanics and sediments.

References: ODM maps P. 421, P.469, 1138G.

50°00' - 91°30'

Miscellaneous Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: In West Bay of Botsford Lake and near NW end of Marchington Lake.
Reference: ODM map 46d.

Description: Magnetite-quartz iron formation with some slate in Archean volcanics.

References: ODM maps 46d, P.353, 1138G.
ODM, 1937, Volume XLVI, pt.6, p.7.

50°00' - 92°00'

Vermilion - Lost Lake Occurrences

(See Drayton Township)

50°00' - 94°15'

Separation Lake Prospect

(See 50°15' - 94°15')

50°15' - 91°30'

Elbow Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: On Elbow Lake.
Reference: ODM map 1959-1

Description: Narrow belt of magnetite iron formation with some sulphides in Archean greywacke.

References: ODM maps 1959-1, 1139G.
ODM, 1958, Volume LXVII, pt. 4, p. 4.

50°15' - 92°45'

Miscellaneous Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: N shore of Tuktegwick Bay (Lac Seul) and between Vermilion River and Atikwa Creek, 2 miles from E shore of Lac Seul.
Reference: ODM map 1959-1.

Description: Narrow belts of magnetite iron formation with some sulphides in Archean greywacke.

References: ODM map 1959-1, 1139G.
ODM, 1958, Volume LXVIII, pt. 4, p. 4.

50°15' - 94°00'

Helder Lake Occurrence

Class: Iron formation, Algoma type.

Location: SE of Helder Lake.
Reference: ODM map P. 366.

Description: Iron formation, in Archean volcanics traced for 3.5 miles with the main occurrence 500 feet in length.

References: ODM maps P. 366, 1181G.
Northern Miner, 1958, April 10.

50°15' - 94°15'

Separation Lake Prospect

Class: Sedimentary or contact metasomatic?

Location: N and W of Separation Lake.
Reference: ODM map P.366.

Description: Irregular, tabular bodies or elongated lenses of magnetite and quartz associated with biotite gneisses. Locally pyrite, pyrrhotite and chalcopyrite may be present. Within Archean volcanics marginal to a granitic body.

Economic Features: Two main zones: one extending ENE for 6.5 miles from Separation Rapids; the other to the S extending some 8000 feet in an arc from W side of Boot Bay. Widths range from 25 to 155 feet. Samples of drill sections include 56 feet of up to 37.05% Fe, 38 feet of 32.47 to 37.52% Fe, 48 feet of 25.21 to 37.76% Fe and 44.5 feet averaging 36.91% Fe.

A small bulk sample assayed 37.58% Fe, 46.70% SiO_2, and 0.451% S with a 98.20% Fe recovery at -200 M.

50°15' - 94°15' (Cont.)

History: 1934 Pits by J. Gordon and H. Howse.
1957 Aeromagnetic and magnetic surveys and 8 d.d. holes for 4,522 feet by Tombill Gold Mines Ltd. and Glen Echo Mines Ltd.
1959 24 d.d. holes for 6,697.3 feet by Centurion Mines Ltd.

References: ODM maps 39g, P.366, 1180G, 1181G, 1189G.
Prospectus, 1957, Glen Echo Mines Limited.
Assessment files, Kenora.

50°30' - 92°00'

Wapesi Bay Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: On island, centre of Wapesi Bay.

Description: Narrow band of magnetite iron formation with some sulphides in Archean greywacke.

References: ODM map 1959-1.
ODM, 1959, Volume LXVIII, pt. 4, p. 4.

50°30' - 94°15'

Separation Lake Prospect

(See 50°15' - 94°15')

50°45' - 91°00'

Eagle and Fish Island Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SW part of Lake St. Joseph between lat. 91°00' and lat. 91°10'.
Reference: ODM maps P.298, P.229.

Description: Complexly folded zone of magnetite-hematite-quartz ironformation, up to 500 feet wide with a broad E-trend of 6.5 miles, in Archean sediments. Some siderite and pyrite is present.

Economic Features: Two main zones are outlined, one on Eagle Island and one on Fish Island.
Reserves are estimated at 240 million tons grading 35% Fe calculated to a depth of 400 feet.
Concentration tests have been carried out.

Ownership: Lake St. Joseph Iron Limited.

History: Before 1922 Trenching and drilling.
1957-58 Dip needle survey and 19 d.d. holes for 7,347 feet by Lake St. Joseph Iron Ltd.

References: ODM maps P.229, P.298, P.354, 31e, 901G.
ODM, 1922, Volume XXXI, pt.8, p.1-32.
Assessment files, Kenora.

50°45' - 91°15'

Root Bay Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: E and W of central part of Root Bay of Lake St. Joseph.
References: ODM maps P.298, P. 299.

50°45' - 91°15' (Cont.)

Description: Discontinuous, E-trending zone of magnetite-hematite - quartz iron formation in Archean greywacke. West of Root Bay the zone consists of 2 parallel bands, 800 to 1200 feet apart, with widths between 50 and 200 feet but usually less than 100 feet.

History: 1957-8 Magnetometer surveys by Tiara Mines Ltd.

References: ODM maps P.298, P.299, 31e, 901G.
Assessment files, Kenora.

50°45' - 91°30'

Root Lake Prospect

Class: Iron formation Algoma type, oxide facies.

Location: Near NE shore of Root Lake.
Reference: ODM map 891G.

Description: Crescent-shaped zone open to the NE of magnetite-quartz iron formation with some pyrite and pyrrhotite, in part interlaminated with sediment. Traced for a strike length of 9000 feet and approximately 80 feet thick. Within Archean greywacke.

History: 1957 Magnetometer and electromagnetic surveys and 5 d.d. holes for 3,240 feet by Capital Lithium Mines Ltd.

References: ODM maps P.354, 891G.
Assessment files, Kenora.

50°45' - 91°45'

Essery Lake Occurrence

Class: Iron formation, Algoma type.

Location: Near NE part of small lake, 4 miles NW of Otatakan Lake.
Reference: ODM map 891G.

Description: Crescent-shaped zone of iron formation open to the W, interpreted geophysically to be 50 to 100 feet thick, within Archean greywacke.

History: 1957 Magnetometer survey by El-Sol Gold Mines Ltd.

References: ODM map P.354, 891G.
Assessment files, Red Lake.

50°45' - 92°00'

Papaonga Lake (East) Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: At E end of Papaonga Lake.
Reference: ODM map P.406.

Description: Two E-W trending bands of magnetite-quartz iron formation coalescing to the E within Archean greywacke.

Economic Features: Main zone, in the east, is 1,300 feet long and 400 feet wide. It contains an estimated 45,000 tons per vert. foot of material averaging 31.06% Fe, or 22.69% mag. Fe.

History: Circa 1930 - Trenching.
1957 Magnetometery survey and 11 d.d.holes for 5,300 feet by Copper-Man Mines Ltd.

References: ODM maps P.406, 881G.
Assessment files, Red Lake.

50°45' - 92°00' (Cont.)

Papaonga Lake (North) Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 1 mile NE of western arm of Papaonga Lake.
Reference: ODM map P.406.

Description: NW to WNW-trending band of iron formation traced geophysically for 9,000 feet with widths probably less than 100 feet.

History: 1957 Magnetometer survey by El-Sol Gold Mines Ltd.

References: ODM map P.406, 881G.
Assessment files, Red Lake.

Papaonga River Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: On Papaonga River, 5.5 miles E of Papaonga Lake.
Reference: ODM map P.406.

Description: Two E-trending bands of magnetite-quartz iron formation approximately 2,000 feet long in Archean greywacke.

Economic Features: Drilling intersected 120 feet of iron formation (approximately 100 feet wide).

History: 1957 Magnetometer survey and 1 d.d. hole for 600 feet by El-Sol Gold Mines Ltd.

References: ODM maps P.406, 881G.
Assessment files, Red Lake.

$50^{o}45'$ - $92^{o}15'$

Kesaka Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: In the vicinity of Kesaka and Crossley lakes.
Reference: ODM map P.406.

Description: E-trending bands of magnetite-quartz iron formation in 2 main zones and several smaller ones. Larger zone, between N end Kesaka Lake and Crossley Lake, is 13,200 feet long; band at S end Kesaka Lake is 7,200 feet in length. Widths up to 280 feet are present. Within Archean greywacke.

Economic Features: The two main zones contain an estimated 312.5 million tons to a depth of 1000 feet in 2 zones averaging 31.1% Fe and could produce 127.5 million tons of concentrate averaging 68.4% Fe, 2.2% SiO_2.

Ownership: Tex-Sol Explorations Limited.

History: 1956 Geological survey by Newkirk Mining Corp.
1956-7 Magnetometer survey and 53 d.d. holes for 33,998 feet by El-Sol Gold Mines Ltd.

References: ODM maps 48g, P.406, 881G.
Can. Mines Handbook, 1967-8.
ODM, 1939, Volume XLVIII, pt.8, p.7-8.
Assessment files, Red Lake.

Papaonga Lake (West) Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: At SW part of Papaonga Lake.
Reference: ODM map P.406.

Description: E-trending zone of magnetite-quartz(chert, jasper) iron formation with some hematite and pyrite in Archean greywacke.

50°45' - 92°15' (Cont.)

Economic Features: Main zone outlined is 6,500 feet long with maximum thickness of 250 feet. Three smaller zones also present approximately 400 to 600 feet long and up to 100 feet wide.

Assay of 184.5 feet of continuous core gave 33.32% Fe.

History: 1957 Magnetometer survey and 10 d.d.holes for 4,708 feet by Continental Mining Exploration Ltd.

References: ODM maps P.406, 881G.
GSC, 1935, Paper 35-4.
Assessment files, Red Lake.

50°45' - 92°30'

Badrock Lake Occurrences

Class: Iron formation, Algoma type.

Location: Near the W shore of Badrock Lake, N and S of Papaonga River.
Reference: ODM map 871G.

Description Magnetometer survey outlined eight E-trending lenses probably representing iron formation of less than 50 feet in width and up to 2 miles in length.

History: 1957 Magnetometer survey by El-Sol Gold Mines Limited.

References: ODM maps 871G, P. 406.
Assessment files, Red Lake.

Ogani Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: 3 miles E of Ogani Lake and 2 miles N of Whitemud Lake just N of Papaonga River.
Reference: ODM map 871G.

Description: NE-trending zone of magnetite-quartz iron formation with some hematite in Archean greywacke. In the SW the zone contains two bands 50 to 100 feet wide and approximately 600 feet apart over a strike length of 7,000 feet. In the NE, the zone is up to 293 feet wide.

Economic Features: In the NE an estimated 100 million tons are present averaging 21.6% Fe.

History: 1956 Aeromagnetic survey.
1957 Magnetometer survey and 13 d.d. holes for 6,795 feet by Quebec Labrador Development Co.
1957 Magnetometer, electromagnetic and geological surveys by Massberyl Lithium Co. Ltd.

References: ODM maps 36e, P. 412, P. 406, 881G.
Prospectus, 1956, Massberyl Lithium Co. Ltd.
Assessment files, Red Lake.

Whitemud Lake Occurrences

Class: Iron formation, Algoma type.

Location: At and near the N shore of Whitemud Lake.
References: ODM maps P. 411, P.412.

Description: Iron formation in Archean greywacke over a strike length of at least 5 miles.

References: ODM maps P.411, P.412, P.406, 881G.

50°45' - 92°45'

Snakeweed Lake Occurrence

Class: Iron formation, Algoma type.

Location: On and E of Lake A, approximately 1 mile S of Snakeweed Lake.
Reference: ODM map P.349.

Description: Iron formation in Archean volcanics locally containing pyrite, pyrrhotite and disseminated chalcopyrite.

References: ODM maps P.349, P. 406, 871G.

Whitemud Lake Occurrences

(See 50°45' - 92°30')

50°45' - 93°00'

Bluffy Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: 4 miles WSW of Bluffy Lake near W shore Emarton Lake.
Reference: ODM map P.406.

Description: Magnetite-quartz iron formation in Archean greywacke intruded by numerous narrow syenetic dikes.

Economic Features: Reserves estimated at 21 million tons grading 22.8% Fe available in open pit to a depth of 500 feet. Tests indicate that a concentrate grading 67.41% Fe, 5.32% SiO_2 could be produced.

Ownership: Dome Exploration (Canada) Limited.

History: 1956-7 Aeromagnetic, dip needle and magnetometer surveys and 3 d.d. holes for 1,971 feet by Dome Exploration (Canada) Limited.

References: ODM map P.406, 861G.
Assessment files, Red Lake.

50°45' - 93°15'

Griffith Mine (Producer)

Class: Iron formation, Algoma type, oxide facies.

Location: Near W central shore of Bruce Lake.
Reference: ODM map P.379.

Description: N-trending, crescent-shaped deposit of magnetite-quartz (chert, jasper) iron formation with minor hematite and some intercalated greywacke, occurs interruptedly over a strike length of 4.5 miles within Archean greywacke. Widths of up to 1000 and 800 feet attained through folding in two zones.

Economic Features: Two main deposits outlined containing an estimated minimum of 250 million tons of crude which could produce a minimum of 100 million tons of concentrate.

The North Deposit, being mined by open pit, contains sufficient reserves to produce 1.5 million tons of concentrate per year for 25 to 30 years. Run-of-pit ore grades about 26% Fe.

A concentrate averaging 66.5% Fe and 4% SiO_2 is expected by grinding to -325M.

Ownership: Leased to The Steel Company of Canada by Calmor Iron Bay Mines Ltd.

History: Circa 1922 2 d.d. holes.
1953-60 Magnetometer and geological surveys and 29 d.d. holes for 13,062 feet by Iron Bay Mines Ltd.
1963-4 17 d.d. holes for 10,126 feet by Taconite Lake Iron Co. Ltd.
1965-8 Additional d.d. and mine and plant construction for production at rate of 1.5 million tons of pellets per year.

$50^{o}45'$ - $93^{o}15'$ (Cont.)

References: ODM maps P.370, 33f, 35e, 861G.
Annual Report, 1969, 1964, Iron Bay Mines Limited.
Northern Miner, 1968, June 20.
Assessment files, Red Lake.

$50^{o}45'$ - $94^{o}45'$

Bee and Eden Lakes Occurrences

(See $50^{o}45'$ - $95^{o}00'$)

$50^{o}45'$ - $95^{o}00'$

Bee and Eden Lakes Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: In vicinity of Bee and Eden lakes.
Reference: ODM map 2097.

Description: Two, WNW-trending, discontinuous bands of magnetite-quartz (chert, jasper) iron formation with intercalated phyllite, up to 75 feet thick with an estimated magnetite content of 5 to 15%. Within Archean volcanics and sediments.

History: 1959 Trenching and 4 d.d. holes for 385 feet by Triple Strike Mines Ltd.

References: ODM maps 2097, P.366, 4028G, 4047G.
ODM, 1967, G.R., No.47, p.9, 28, 35.
Assessment files, Kenora.

51°15' - 90°00'

Miscellaneous Occurrences

Class: Iron formation, Algoma type.

Location: N of Donna Lake 3 miles NW and 4 miles N of Jean Lake.
References: ODM map 39a, GSC map 51-1960.

Description: Iron formation in Archean volcanics. Near Donna Lake, 2 bands are present, 40 feet wide and 20 feet apart, of coarse-grained magnetite iron formation.

References: ODM maps 39a, 923G; GSC maps 51-1960, 2-1963.
ODM, 1938, Volume XLVII, pt.3, Fig.3, p. 16.

51°15' - 91°00'

Jacknife Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: N shore of Jacknife Lake.
Reference: ODM map 44f.

Description: Chert and lean iron formation trending east, 100 to 300 feet wide and 3 miles long, in Archean volcanics.

References: ODM maps 44f, 903G; GSC maps 51-1960, 2-1963.
ODM, 1935, Volume XLIV, pt. 6, p. 66.

51°15' - 91°15'

Meen Lake Occurrence

Class: Iron formation, Algoma type.

Location: On N shore Meen Lake.
Reference: ODM map 893G.

Description: Two, parallel, WNW bands of narrow, lean iron formation containing magnetic, quartz, interlayered volcanics and some pyrite. In Archean volcanics.

History: 1962 Magnetometer, electromagnetic and geological surveys by Jorsco Explorations Ltd.

References: ODM map 893G; GSC map 51-1960.
Assessment files, Red Lake.

51°15' - 92° 00'

Birch Lake Occurrences

(See 51°15' - 92°15')

51°15' - 92°15'

Birch Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: E shore of Wagner Bay, S shore Birch Lake and adjacent island, NE of Bertha Lake, NW part Birch Lake, E shore Shabumeni River and Lindsay Lake.
Reference: ODM map 45c.

Description: Slaty iron formation, or magnetite-quartz iron formation in Archean volcanics or sediments. Widths up to 400 feet reported at SE end Birch Lake.

References: ODM maps 45c, P.406, 883G; GSC map 58-1959.
ODM, 1936, Volume XLV, pt.4, p. 9-12.

Casummit Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Near N shore of Casummit Lake and a short distance to the N, NE and SE.
References: ODM map 46f.

Description: Main zone on N shore of Casummit Lake contains E-trending bands of magnetite-quartz iron formation up to 70 feet wide in Archean sediments; the remainder are interflow occurrences few of which are over 20 feet wide.

References: ODM maps 46f, P.406, 883G; GSC map 58-1959.
ODM, 1937, Volume XLVI, pt.7, p. 7,8.

51°30' - 87°00'

Goff Lake Occurrence

Class: Iron formation, Algoma type.

Location: At Goff Lake, 40 miles E of Fort Hope.
Reference: GSC map 6-1962.

Description: Drilling intersected 230 feet of magnetite-quartz iron formation with some pyrite interbedded with Archean volcanics. Anomalous zone more than 1600 feet long and up to 600 feet wide.

History: 1961 Magnetometer survey and 1 d.d. hole for 600 feet on Lilievre holdings.

References: ODM map 984G; GSC map 6-1962.
Assessment files, Red Lake.

51° 30' - 87° 45'

Fort Hope Area (East) Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: 2.5 mile N of Lornjacket Lake and 1 mile SW of Hector Lake.
Reference: ODM map 51b.

Description: Narrow bands and lenses of magnetite-quartz iron formation in Archean volcanics and sediments.

References: ODM maps 51b, 974G; GSC map 6-1962.
ODM, 1942, Volume LI, pt.3, p.14.

51°30' - 88°00'

Fort Hope Area (West) Occurrences

Class: Iron formation, Algoma type.

Location: N of Lily Pad Lakes, N of Rich Lake, and near S and N parts Opikeigen Lake.
Reference: ODM map 51b.

Description: Narrow bands of magnetite-quartz iron formation in Archean volcanics and sediments.

References: ODM maps 51b, 964G; GSC map 8-1961.
ODM, 1942, Volume LI, pt.3, p.5, 14-5.

51°30' - 88°15'

Wattam - Frond Lakes Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Between Wattam and Frond lakes.
Reference: ODM maps 48e, 51b.

Description: Two, NE-trending zones of magnetite-quartz iron formation in Archean greywacke. In the west, the iron formation contains interbedded sediment; in the east two distinct bands, with recorded widths of less than 20 feet, form each zone and the iron formation is more siliceous with local areas of sulphides.

History: Circa 1940 Trenching and d.d. by Connell Mining and and Exploration Co. Ltd.

References: ODM maps 48e, 51b, 964G; GSC map 8-1961.
ODM, 1939, Volume XLVIII, pt.6, p. 10-11.
ODM, 1942, Volume LI, pt.3, p. 5-6, 23-4.

51°30' - 88°30'

Miminiska Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: On peninsula on N shore of lake, N end Miminiska Island extending E for 4 miles.
Reference: ODM map 48e.

Description: E-trending, discontinuous bands of magnetite-quartz iron formation with interlayered greywacke in Archean metasediments.

51°30' - 88°30' (Cont.)

Economic Features: On peninsula 3 zones outlined, 5,200, 6,200, and 1 3000 feet in length. Drilling in 1 hole intersected 507 feet of iron formation, continuous sections of which assayed between 18.16 and 32.6% Fe and which gave concentrates at -325M of 59.64 to 66.11% Fe.

On N shore of Island and to the east, numerous en-echelon zones present, 50 to 250 feet wide and up to 2000 feet long. Drilling in 1 hole intersected 540 feet of iron formation, continuous sections of which assayed been 13.03 and 30.03% Fe and which gave concentrates at -325M of 64.58 to 70.41% Fe.

History: 1965 Magnetometer survey by Algoma Steel Corp. Ltd.
1966 Magnetometer survey and 4 d.d. holes for 2,942 feet by Pickands Mather and Co.

References: ODM maps 48e, 954G; GSC map 8-1961.
ODM, 1929, Volume XXXVIII, pt.2, p. 47-8.
ODM, 1939, Volume XLVIII, pt. 6, p. 10-11.
Assessment files, Red Lake.

51°30' - 88°45'

Douglas Lake Occurrence

Class: Iron formation, Algoma type.

Location: E of Douglas Lake.
Reference: ODM map 48e.

Description: Small band of iron formation in Archean volcanics.

References: ODM maps 48e, 954G.

51°30' - 89°45'

Kawinogans River Occurrence

Class: Iron formation, Algoma type.

Location: NE from NW corner of McCullagh Township.
Reference: ODM, 1938, Volume XLVII, pt.2, Fig.3, p. 16.

Description: NE- trending iron formation with small amounts of sulphides traced for approximately 4 miles within Archean volcanics.

History: 1936 Dip needle survey and d.d. by Coniagas Mines Ltd.

References: ODM map 39a, 934G.
ODM, 1938, Volume XLVII, pt.2, p. 16, 50.

51°30' - 91°15'

Lang Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: N of Lang and Andy lakes.
Reference: ODM map 39d.

Description: Discontinuous, E-trending lenses of magnetite-quartz (chert, jasper) iron formation observed up to 12 feet in width and several hundred feet in length, within Archean volcanics and sediments.

References: ODM maps 39d, 904G; GSC maps 51-1960, 2-1963.
ODM, 1930, Volume XXXIX pt.3, p.10.

51°45' - 87°15'

Norton Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 1 mile SW of Norton Lake.
Reference: GSC map 6-1962.

Description: Magnetite-quartz iron formation with observed thickness of less than 4 feet in Archean volcanics.

References: ODM map 985G; GSC map 6-1962.

51°45' - 88°15'

Brash - Keezhik Lakes Occurrence

Class: Iron formation, Algoma type.

Location: Between Brash Lake and E of Keezhik Lake.
References: ODM maps 48e, 955G.

Description: NW-trending zone, approximately 12 miles in length, of iron formation in Archean volcanics. Near Brash Lake and Keezhik Lake, 2 parallel bands are present. 2000 and 1/4 mile apart.

History: 1962 Geological, dip needle and electromagnetic survey by Denison Mines Limited.

References: ODM maps 48e, 955G, 965G; GSC map 8-1961.
ODM, 1939, Volume XLVIII, pt.6, p.6.
Assessment files, Red Lake.

51°45' - 88°30'

Brash - Keezhik Lakes Occurrence

(See 51°45' - 88°15')

North Bay Occurrence

Class: Iron formation, Algoma type.

Location: Near NW side North Bay of Keezhik Lake.
Reference: ODM map 48c.

Description: Iron formation in Archean metavolcanics traced magnetically in an NE direction for over 6 miles.

References: ODM map 48c, 955G.
ODM, 1939, Volume XLVIII, pt.6, p.7.

51°45' - 88°45'

Talbot Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: S and E of Talbot Lake.
Reference: ODM map 48e.

Description: E-trending band of magnetite-quartz iron formation approximately 10 feet wide in Archean volcanics.

References: ODM maps 48e, 955G; GSC map 8-1961.
ODM, 1939, Volume XLVIII, pt.6, p.6.

52°00' - 93°30'

McInnes Lake Occurrence

Class: Iron formation, Algoma type.

Location: Near S end McInnes Lake.
Reference: GSC map 50-1960.

Description: Iron formation in Archean sediments.

References: ODM map 856G; GSC map 50-1960.

52°15' - 91°30'

Upper Windigo Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: On islands on Upper Windigo Lake.
Reference: ODM map 48j.

Description: Magnetite-quartz iron formation in Archean volcanics, with observed widths of less than 10 feet.

References: ODM maps 48j, 897G, 898G.
ODM, 1939, Volume XLVIII, pt.9, p.15.

52°15' - 92°30'

Miscellaneous Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: W of Atikamik Lake and near N central shore of MacDowell Lake.
Reference: ODM map 47g.

Description: Magnetite-quartz iron formation in Archean volcanics and sediments. Near MacDowell Lake the band trends NE for less than 1/4 mile and is approximately 160 feet wide.

References: ODM maps 47g, 877G; GSC map 50-1960.
ODM, 1938, Volume XLVII, pt.7, p.54-6.
J.C. Davies, ODM, personal communication.

52°15' - 92°45'

MacDowell Lake Occurrence

Class: Placer.

Location: SE arm and NE part of NW arm of MacDowell Lake.

Description: Magnetite-bearing sands occurs on the shores and beneath MacDowell Lake.

History: 1967 Exploratory work by Madsen Red Lake Gold Mines Ltd.

Reference: Can. Mines Handbook, 1967-68.

52°15' - 92°45' (Cont.)

Miscellaneous Occurrences

Class: Iron formation, Algoma type.

Location: Between MacDowell and North Spirit lakes.
Reference: ODM map 47g.

Description: Scattered occurrences of magnetite-quartz or slaty, iron formation or ferruginous chert within Archean volcanics or sediments.

References: ODM maps 47g, 877G; GSC map 50-1960.
ODM, 1938, Volume XLVII, pt.7, p. 54-6.

North Spirit Lake Prospect

(See 52°30' - 92°45')

South Bay Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: NE part of South Bay (North Spirit Lake).
Reference: ODM map 47g.

Description: Folded band of magnetite-quartz iron formation with closure to the NW, within Archean sediments.

History: 1956 Electromagnetic and magnetometer surveys by Spirit Lake Mines Limited.

References: ODM maps 47g,877g; GSC map 50-1960.
ODM, 1938, Volume XLVII, pt.7, p.54-6.
Assessment files, Red Lake.

52°30' - 90°15'

Opapimiskan Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: S and SE from S end Opapimiskan Lake.
Reference: GSC map 18-1961.

Description: Magnetite-quartz iron formation in Archean volcanics and sediments. Widths between 50 and 100 feet recorded.

References: ODM maps 48h, 928g; GSC map 18-1961.
ODM, 1939, Volume XLVIII, pt.9, p. 15.

52°30' - 91°30'

Upper Windigo Lake Occurrences

(See 52°30' - 91°15')

52°30' - 92°45'

East Bay Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: On peninsula at N end of East Bay of North Spirit Lake.
Reference: ODM map 47g.

Description: Two N-trending bands of magnetite-quartz iron formation separated by 450 to 800 feet of mafic and ultramafic intrusions and lean iron formation (less than 15% Fe), within Archean volcanics. Iron formation bands between 20 and 350 feet in width.

52°30' - 92°45' (Cont.)

Economic Features: Iron formation contains an estimated 25 to 35% Fe.

History: 1961 Magnetometer and geological surveys by Upper Canada Mines Limited.

References: ODM maps 47g, 878G; GSC map 50-1960.
ODM, 1938, Volume XLVII, pt.7, p. 54-6.
Assessment files, Red Lake.

North Spirit Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SE of North Spirit Lake, between South Bay and Wapisipi Lake.
Reference: ODM map 47g.

Description: NW-trending zone of magnetite-quartz iron formation 3.2 miles long and up to 0.8 mile wide, in Archean volcanics.

Economic Features: Twelve areas outlined ranging in length from 1,100 to 8,400 feet and in width from 120 to 1,100 feet. These contain an estimated 1,300,000 long tons of crude per verticle foot.

4,400 feet of drill core assayed 33.94% total Fe and gave a satisfactory concentrate at -325M with a concentration ratio of 2.62 to 1.

Ownership: T.J. Day, J.H. Low, M.C. Gardiner Estate, and J.W. McBean.

History: 1956-7 Dip needle survey and some d.d. by Holannah Mines Ltd.
1959 Geological and magnetometer surveys and 8,139 feet of d.d. by Day, Low, Gardiner and McBean.

References: ODM maps 47g, 877G; GSC map 50-1960.
ODM, 1938, Volume XLVII, pt.7, p.54-6.
Assessment files, Red Lake.

52°45' - 89°15'

Sandborn Lake Occurrence

Class: Iron formation, Algoma type.

Location: Near N end Sandborn Lake.

Description: Iron formation encountered in drill holes within Archean volcanics.

References: ODM maps 49p, 979G; GSC map 1-1962.
ODM, 1940, Volume XLIX, pt.8, p. 13.

52°45' - 90°15'

Akow Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: N and S of Akow Lake.
Reference: GSC map 18-1961.

Description: N-trending, magnetite-quartz iron formation in in Archean volcanics and sediments.

References: ODM maps 48h, 929G, 919G; GSC map 18-1961.

52°45' - 90°30'

Akow Lake Occurrences

(See 52°45' - 90°15')

52°45' - 91°00'

Randall Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Between Randall Lake and North Caribou River.
Reference: GSC map 18-1961.

Description: NE-trending, magnetite-quartz iron formation in Archean volcanics.

References: ODM map 48h, 909G; GSC map 18-1961.

52°45' - 91°45'

Dawes Falls Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 2 miles NE of Dawes Falls.
Reference: ODM map 48j.

Description: Magnetite-quartz iron formation in Archean volcanics, observed with widths of less than 10 feet.

References: ODM map 48j, 899G.
ODM, 1939, Volume XLVIII, pt.9, p.15.

$52^{o}45'$ - $93^{o}15'$

Sandborn Bay Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: At and near S shore of Sandborn Bay.
Reference: ODM map 47f.

Description: E-trending bands of quartz-magnetite-amphibole iron formation in Archean metasediments.

References: ODM maps 47f, 869G; GSC map 50-1960.
ODM, 1938, Volume XLVII, pt.7, p.22

$52^{o}45'$ - $93^{o}30'$

Rathouse Bay Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 2 mile E of Favourable Lake, on S side Rathouse Bay.
Reference: ODM map 38a.

Description: Magnetite-quartz iron formation in Archean volcanics.

References: ODM maps 38a, 859G; GSC map 50-1960.
ODM, 1929, Volume XXXVIII, pt.2, p.59.

52°45' - 93°30' (Cont.)

South Trout Lake Occurrence

Class: Sedimentary.

Location: N shore of South Trout Lake.
Reference: ODM map 38a.

Description: Bands and dissemination of magnetite in Archean tuffs.

References: ODM map 38a, 859G.
ODM, 1929, Volume XXXVIII, pt. 2, p. 59.

53°00' - 92°30'

Sandy Lake Occurrences

(See 53°00' - 92°30')

53°00' - 92°45'

Sandy Lake Occurrences

(See 53°00'- 93°00')

53°00' -93°00'

Sandy Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: On and near N, NE and SE shores of Sandy Lake.
Reference: ODM map 47f.

Description: E-trending zone of magnetite-quartz (chert, jasper) chlorite iron formation, lean in part , interbedded with Archean volcanics. Approximately 6 bands of iron formation represented, up to 200 feet wide but averaging 20 feet.

References: ODM maps 47f, P.431, P.432, 3662G, 3670G.
ODM, 1938, Volume XLVII, pt.7, p.16-17.

53°00' - 93°15'

Sandy Lake Occurrences

(See 53°00' - 93°00')

53°00' - 93°30'

Colgrove Lake Occurrence.

Class: Iron formation, Algoma type.

Location: Near S end Colgrove Lake.
Reference: ODM map P.431.

Description: Iron formation in Archean volcanics.

References: ODM map P.431, 3662G.

53°15' - 91°00'

Menekun Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Near SW shore Menekun Lake.
Reference: ODM map P.256.

Description: Magnetite-quartz iron formation in Archean volcanics. Layers up to 50 feet thick with an estimated 20% Fe.

References: ODM maps P.256, P.433, 3699G.
ODM, 1967, Open File Rpt., No.5002, p. 32, 94.

53°15' - 91°45'

Windigo River Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: E of Windigo River, approximately 2 miles S of Muskratdam Lake.
Reference: ODM map P.256.

Description: Magnetite-quartz iron formation in Archean volcanics.

References: ODM maps P.256, P.433, 3687G.
ODM, 1967, Open File Rpt., No.5002, p. 32.

53°15' - 92°00'

Severn River Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: 6 miles N of Severn River, NW of Severn River fault.
Reference: ODM map P.256.

Description: Magnetite-quartz iron formation in Archean sediments. Individual layers less than 1 foot thick.

References: ODM maps P.256, P.432, 3679G.
ODM, 1967, Open File Rpt., No. 5002, p.32.

53°15' - 92°15'

Rottenfish River Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Near and along the Rottenfish River.
Reference: ODM map P.256.

Description: Magnetite-quartz (chert) iron formation 30 to 100 feet thick containing an estimated 20% Fe, within Archean volcanics.

References: ODM maps P.256, P.432, 3679G.
ODM, 1966, Open File Rpt. No. 5002, p.32,94.

53°30' - 82°15'

Nowashe Lake Occurrence

(See 53°30' - 83°00')

53°30' - 82°30'

Nowashe Lake Occurrence

(See 53°30' - 83°00')

53°30' - 82°45'

Nowashe Lake Occurrence

(See 53°30' - 83°00')

53°30' - 83°00'

Nowashe Lake Occurrence

Class: Iron formation, Superior type.

Location: N, NW and E of Nowashe Lake.
Reference: GSC map 17-1967.

Description: Inlier of Proterozoic iron formation.

Reference: GSC map 17-1967.

53°30' - 83°15'

Nowashe Lake Occurrence

(See 53°30' - 83°00')

53°45' - 89°30'

Big Trout Lake Occurrences

(See 53°45' - 89°45')

53°45' - 89°45'

Big Trout Lake Occurrences

Class: Magmatic.

Location: On or near NE shores of Big Trout Lake.
Reference: ODM map 2045.

Description: Segregation of magnetite-ilmenite near the base of an anorthosite body. Segregation observed to comprise up to 40% of rock.

References: ODM maps 2045, 3737G.
ODM, 1964, G.R. No.23, p.32.

$54^{o}15'$ - $84^{o}15'$

Sutton Lake Occurrence

(See $54^{o}30'$ - $84^{o}30'$)

$54^{o}30'$ - $84^{o}00'$

Aquatik River Occurrence

(See $54^{o}30'$ - $84^{o}15'$)

$54^{o}30'$ - $84^{o}15'$

Aquatik River Occurrence

Class: Iron formation, Superior type.

Location: Between Aquatik and Sutton rivers.
Reference: GSC map 17-1967.

Description: Inlier of Proterozoic iron formation.

Reference: GSC map 17-1967.

$54^{o}30' - 84^{o}30'$

Sutton Lake Occurrence

Class: Iron formation, Superior type, oxide facies.

Location: Between North Washagami Lake and 20 miles SE of N end Sutton Lake.
Reference: GSC map 17-1967.

Description: Inlier of gently dipping Proterozoic iron formation capped by Keweenawan diabase. Formation is up to 100 feet thick and composed of iron-bearing quartzite, jaspilites and slates. Magnetite and (or) hematite are the main ore minerals. Average iron content estimated as up to 30%.

References: ODM map 1958B; GSC map 17-1967.
ODM, 1925, Volume XXXIV, pt.7, p.21-5, 50.

$54^{o}30' - 84^{o}45'$

Sutton Lake Occurrence

(See $54^{o}30' - 84^{o}30'$)

$54^{o}45' - 84^{o}00'$

Aquatik River Occurrence

(See $54^{o}30' - 84^{o}15'$)

$54^{o}45' - 84^{o}15'$

Aquatik River Occurrence

(See $54^{o}30' - 84^{o}15'$)

LANARK COUNTY

BATHURST TOWNSHIP

Foley Mine Occurrence

Class: Magmatic.

Location: Lots 10, 11, Conc. 8.
Reference: ODM map 2054.

Description: Disseminated magnetite with apatite and pyrite in mafic intrusion.

History: Before 1889 Numerous pits.

References: ODM map 2054.
GSC, 1899, Volume XII, pt. 1, p. 45-6.

Lot 23, Concession 11 Occurrence

Location: Lot 23, Conc. 11

Description: Hematite in marble. Specimens of dump material assayed 30 to 60% Fe.

History: Early shaft, 100 feet deep, and 1 d.d. hole.
1964 Geological survey by Ladysmith Explorations Ltd.

References: ODM map 2054.
Can. Mines Handbook, 1967-68.

Miscellaneous Occurrences

Location: Lots 22, 23, Conc. 10; Lot 21, Conc. 11; Lot 2, Conc. 4; E 1/2 Lot 3, Conc. 4.
Reference: ODM map 2054.

Description: Occurrences of ochreous sandstone and hematite in sandstone or marble.

History: Early pits.

References: ODM map 2054.
GSC, 1899, Volume XII, pt. 1, p. 74-5.

DALHOUSIE TOWNSHIP

Miscellaneous Occurrences

Location: Lot 19, Conc. 7; E 1/2 Lot 11, Conc. 12.

Description: Bog iron and some pyrite noted on Lot 19, Conc. 7; hematite and ochreous sandstone reported on Lot 11, Conc. 12.

References: ODM, 1907, Volume XVI, pt. 1, p. 163.
GSC, 1899, Volume XII, pt. 1, p. 74.

Dalhousie Tp. (Cont.)

Playfair (Dalhousie) Mine (Past Producer)

Location: Lot 1, Conc. 4; on N side of Mississippi River
Reference: ODM map 1956-4.

Description: A main and two smaller, NE-trending lenses of hematite over a length of 1,600 feet and up to 9 feet in width, in marble.

Economic Features: An analysis of ore gave 57.6% Fe, 0.02% P.

History: 1866-71 11,100 tons of ore shipped from open cuts and 94-foot shaft.
1918 80 tons shipped by Canadian Union Iron Mines Corp.

References: ODM maps 1956-4, 2054.
ODM, 1956, Volume LXV, pt. 7, p. 40.
GSC, 1958, Bull. 45, p. 62-4.

DARLING TOWNSHIP

Fahey (Bell) Mine

Location: Lot 26, Conc. 11; 1000 feet E of White Lake.
Reference: GSC map 1064A.

Description: A N40E-trending hematite vein in marble. The vein is intersected by a shaft and 2 trenches, respectively, 40 feet to the NE and 50 feet to the SE of the shaft. Vein observed to be up to 15 feet wide.

Economic Features: A sample from stockpile assayed 34.73% Fe, 0.054% S, 0.029% P.

History: Before 1909 20-foot shaft, and 2 trenches.

References: ODM map 1956-4; GSC map 1064A.
GSC, 1952, Paper 51-27, p. 38.
GSC, 1958, Bull. 45, p. 66.
ODM, 1956, Volume LXV, pt.7, p. 55-6.

Lot 23, Concession 11 Occurrence

Location: Lot 23, Conc. 11.
Reference: ODM map 1956-4.

Description: A N35E-trending hematite vein, discontinuous over a length of 1,500 feet and up to 8 feet wide, in marble.

Economic Features: 3 selected samples assayed 62.52% Fe, 0.44% P, 0.004% S; 62.29% Fe, 0.08% TiO_2, 0.10% P; and 60.10% Fe, 0.127% P. 0.035% S.

History: Numerous pits.

References: ODM map 1956-4; GSC map 1064A.
ODM, 1956, Volume LXV, pt. 7, p. 56.
GSC, 1952, Paper 51-27, p. 37-8.

Miscellaneous Occurrences

Class: Magmatic.

Location: Lot 17, Conc. 2; Lot 20, Conc. 4, 5; Lots 21, 22, Conc. 3; Lot 22, Conc. 4,5.
Reference: ODM map 1956-4.

Description: Concentrations of magnetite in diorite.

Economic Features: A surface sample from Lot 20, Conc. 4, 5 assayed 24.21% Fe, 0.03% S, 0.468% P. A picked sample from Lot 22, Conc. 5 assayed 61.17% Fe, 0.042% S, 0.046% P.

History: Early trenches on Lot 22, Conc. 3; some pits on Lots 22, Conc. 4, 5.

References: ODM map 1956-4; GSC map 68G.
ODM, 1956, Volume LXV, pt. 7, p. 57-8.
ODM, 1923, I.O.C. Rpt., p. 230.

Darling Tp. (Cont.)

Yuill Mine (Past Producer)

Class: Contact metasomatic.

Location: E 1/2 Lot 25, Conc. 5.
Reference: ODM map 1956-4.

Description: A lens of high-grade magnetite, 6 to 10 feet wide at a diorite-marble contact.

Economic Features: A sample from the workings assayed 63.00% Fe, 0.006% S, 0.025% P; selected samples of dump material assayed 64.08% Fe, 0.10% TiO_2, 0.05% S.

History: About 1890-8 Mining from pit 90 feet by 15 to 30 feet and 80 feet deep.

References: ODM map 1956-4; GSC map 68G.
ODM, 1956, Volume LXV, pt.7, p. 57.
GSC, 1958, Bull. 45, p. 59.

LAVANT TOWNSHIP

Lot 11, Concession 1 Prospect

Class: Magmatic.

Location: Lot. 11, Conc. 1.
Reference: ODM map 1956-4.

Description: Magnetite, in part titaniferous, mineralization in diorite within a zone 2,000 feet long and 25 feet wide.

Economic Features: Largest deposit outlined contains about 50,000 tons. Assays ranged from 23 to 51% Fe with up to 1.5% TiO_2. Grinding to 100 M produced a 66% Fe concentrate. A composite sample from pit assayed 65.07% Fe, 0.14% TiO_2, 1.84% S, 0.02% P.

Lavant Tp. (Cont.)

History: 1957 Geological and magnetometer surveys and some d.d. by Lavant Iron Mines Limited.

References: ODM map 1956-4; GSC map 68G.
Prospectus, 1957, Lavant Iron Mines Limited.
Mineral Resources Division, 1959, Bull. MR 31, p. 125.
ODM, 1956, Volume LXV, pt. 7, p. 58-9.

Radenhurst and Caldwell Mines

Class: Contact metasomatic or hydrothermal.

Location: W 1/2 Lot 22, Conc. 3 and E 1/2 Lot 22, Conc. 4; 1 mile N of Flower Station.
Reference: ODM map 1956-4.

Description: Four NE-trending, en-echelon lenses of magnetite with some pyrite and silicate minerals in hornblende shists.

Economic Features: Main zone is 2,000 feet long and averages 31.3 feet in width with an indicated tonnage of 6,500 tons per slope foot averaging 32.77% Fe, 26.44% SiO_2, 1.64% S, 0.07% P. Tests indicated a concentrate grading 60% Fe, 1.46% S could be produced by grinding at 35M for a 93.3% recovery with a concentration ratio of 2.06:1.

The 3 additional zones, with a total of about 1,600 feet in length, average 17.08% Fe, 0.82% S, 0.48% TiO_2; 16.71% Fe, 0.72% S, 0.45% TiO_2; and 25.50% Fe, 1.27% S, 0.22% TiO_2, respectively.

History: Before 1899 Several pits and 2 shafts 108 and 200 feet deep.
1941-2 27 d.d. holes by Frobisher Exploration Company Limited.

References: ODM map 1956-4; GSC map 68G.
ODM, 1956, Volume LXV, pt. 7, p. 59.
GSC, 1958, Bull. 45, p. 47-9.

Lavant Tp. (Cont.)

Wilbur Mine (Past Producer)

Class: Contact metasomatic.

Location: Lot 4, Conc. 12, 13.
Reference: ODM map 1956-4.

Description: Pockets of magnetite-bearing skarn at a marble-granite contact. Of the 9 workings reported, No. 3 is 160 feet in length, No. 4 is 180 feet in length, and No. 7 had mineralized widths up to 60 feet.

Economic Features: A carload of ore shipped averaged 56.69% Fe, 6.20% SiO_2, 0.01% P.

History: Before 1900 125,000 tons shipped from 9 workings by the Kingston and Pembroke Mining Company.
About 1900 Some mining by Wm. Caldwell.
1907-8 21,892 tons shipped by Wilbur Iron Ore Company.

References: ODM map 1956-4; GSC map 68G.
ODM, 1923, I.O.C. Rpt., p. 229
GSC, 1958, Bull. 45, p. 56-7.
ODM, 1956, Volume LXV, pt.7, p. 40-1

SOUTH SHERBROOKE TOWNSHIP

Bygrove Mine Occurrence

Class: Contact metasomatic.

Location: Lot 3, Conc. 1.
Reference: ODM map 2045.

Description: Erratic ribs, veins and disseminations of magnetite with some pyrite and hematite, associated with hornblende, pyroxene, scapolite and calcite, in granitic gneiss. Two samples assayed 59.55 and 62.95% Fe.

History: Before 1870 about 140 tons stockpiled from pit 40 by 20 feet and 25 feet deep.

References: ODM map 2045.
ODM, 1923, I.O.C. Rpt., p. 231.
GSC, 1958, Bull. 45, p. 29-30.

South Sherbrooke Tp. (Cont.)

Christie Lake Mine Occurrence

Class: Contact metasomatic.

Location: Lots 18, 19, 20, Conc. 3.
Reference: ODM map 2045.

Description: Small pockets of magnetite-bearing skarn, up to 7 feet wide and 200 feet long, in pyroxenite and at a pyroxenite-marble contact.

Economic Features: Four samples assayed 59.13 to 61.32% Fe, 0.12 to 4.47% S, 0.003 to 0.009% P, 0.87 to 1.74% TiO_2.

History: Early pits and open cuts.

References: ODM map 2045.
ODM, 1923, I.O.C. Rpt., p. 232.
GSC, 1958, Bull. 45, p. 33.

Fournier Mine (Past Producer)

Location: Lot 14, Conc. 1.
Reference: ODM map 2045.

Description: Irregular ribs, veins and pockets of magnetite in granitic and dioritic gneisses. Some biotite, pyroxene, amphibole, feldspar, pyrite, chalcopyrite, and carbonate present.

Economic Features: Two samples assayed 59.59 and 60.89% Fe.

History: About 1873 600 tons mined from 110-foot shaft. Five pits also present.

References: ODM map 2045.
ODM, 1923, I.O.C. Rpt., p. 231.
GSC, 1958, Bull. 45, p. 38.

South Sherbrooke Tp. (Cont.)

Miscellaneous Occurrences

Location: Lot 16, Conc. 7; Lot 13, Conc. 8; and E and W of Maberly.
Reference: ODM map 2045.

Description: On Lot 16, Conc. 7 a small test pit, the Ritchie Mine, exposes narrow bands of magnetite in feldspathic gneiss. A picked sample assayed 67.6% Fe. To the S, about 100 feet, a magnetite vein, 2 feet by 6 feet, occurs in marble.

On Lot 13, Conc. 8, small pockets and disseminations of magnetite are exposed by a small pit, known as the Morrow Mine, in dark gneiss. A picked sample assayed 68.43% Fe, 0.067% S.

Two miles E of Maberly a band of magnetite-bearing hornblende gneiss is exposed. Magnetite occurrences were reported within a 2 mile distance W of the Morrow Mine.

History: Early pits.

References: ODM map 2045; GSC map 69G.
ODM, 1923, I.O.C., Rpt., p. 232.
GSC, 1958, Bull. 45, p. 43.

Silver Lake Mine Occurrence

Location: Lot 16, Conc. 4; on SE shore of Silver Lake.
Reference: ODM map 2045.

Description: Magnetite with some pyrite, in amphibolite and pyroxenite, is exposed in two pits. A selected sample assayed 64.15% Fe, 1.75% S.

History: Before 1899 2 pits, one 30 by 20 feet.

References: ODM map 2045.
ODM, 1923, I.O.C. Rpt., p. 232.
GSC, 1958, Bull. 45, p. 43.

LEEDS COUNTY

BASTARD TOWNSHIP

Delta Mine (Past Producer)

Location: Lot 23, 24, 25, Conc. 10; 1 mile S of Delta.
Reference: GSC map 1182A.

Description: Hematite as fracture fillings in joints and replacements in Paleozoic (Nepean) sandstone.

Economic Features: Ore shipments averaged 68% Fe.

History: About 1810 Some mining.
1918-9 125 tons shipped from pits and 3 shafts successively by Drainey Brothers and the Consolidated Iron and Steel Corp.

References: ODM map 2054; GSC map 1182A.
ODM, 1922, Volume XXXI, pt. 4, p. 16-7.
GSC, 1920, Sum. Rpt., pt. D, p. 81.
GSC, 1967, Mem. 346, p. 125-6.

Lot 13, Concession 9 Occurrence

Location: Lot 13, Conc. 9.

Description: Ochre and hematite in Paleozoic sandstone.

Reference: ODM, 1922, Volume XXXI, pt. 4, p. 16-7.

FRONT OF ESCOTT TOWNSHIP

Lot 7, Concession 2 Occurrence

Location: Lot 7, Conc. 2.
Reference: GSC map 7-1963.

Description: Veins of magnetite in quartz-feldspar gneiss exposed for 6 to 7 inches by 150 feet.

References: ODM map 2054; GSC map 7-1963.
GSC, 1852, Rpt. of Progress, 1851-2, p. 80.

NORTH CROSBY TOWNSHIP

Allan Occurrence

Class: Magmatic.

Location: Lot 27, Conc. 4.
Reference: ODM map 2054.

Description: Veins and ribs of magnetite in a mafic intrusion.

Economic Features: A sample assayed 64.90% Fe, 0.007% P, 0.120% S, 1.03% TiO_2.

References: ODM map 2054.
ODM, 1923, I.O.C. Rpt., p. 233.

Lot 24, Concession 5 Occurrence

Class: Magmatic.

Location: Lot 24, Conc. 5.
Reference: GSC map 1182A.

Description: Titaniferous magnetite, exposed in pits over a width of 15 feet, within a gabbroic body.

Reference: ODM map 2054; GSC map 1182A.
GSC, 1967, Mem. 346, p. 125.

Matthews Mine Prospect

Class: Magmatic.

Location: Lot 1, Conc. 6; 1.5 miles SW of Newboro.
Reference: GSC map 1182A.

Description: A N-trending, arcuate deposit of magnetite, with some ilmenite, hematite and pyrite, as disseminations, layers and veins in gabbroic anorthosite. The deposit has a higher-grade central core, approximately 150 to 300 feet wide and 1,900 feet long. Lower grade mineralization continues for 300 feet or more to the W but falls off rapidly to the E.
(Also see Chaffey Mine, South Crosby township).

Economic Features: Estimated reserves (1959) available for open pit mining to a depth of 400 to 500 feet are 33,727,000 gross tons averaging 25.08% Fe which includes 11,861,000 gross tons averaging 31.36% Fe. Composite assays from 11 drill holes indicated 4.62 to 9.62% TiO_2, averaging 6.60%.

Ownership: New Mylamaque Mining and Smelting Limited.

History: About 1860 to 74 Mining from open pit 300 by 100 feet, including 3,300 tons shipped in 1871.
1957-60 Magnetometer survey and 44 d.d. holes for 18,901 feet by New Mylamaque Mining and Smelting Ltd.

North Crosby Tp. (Cont.)

References: ODM map 2054; GSC map 1182A.
GSC, 1967, Econ. Geol. Rpt. 22, p. 74-6.
GSC, 1967, Mem. 346, p. 124-5.
GSC, 1958, Bull. 45, p. 12-4.
Assessment files, Toronto.

SOUTH CROSBY TOWNSHIP

Chaffey Mine Prospect

Class: Magmatic.

Location: Lot 27, Conc. 6; On island and beneath Newboro Lake, 2,500 feet SE of the Matthew Mine Prospect.
Reference: GSC map 1182A.

Description: A roughly triangular-shaped deposit, 750 by 750 by 650 feet, of titaniferous magnetite in gabbroic anorthosite.

Economic Features: Reserves estimated to a depth of 500 feet are 11,110, 000 gross tons averaging 29.76% Fe.

Ownership: New Mylamaque Mining and Smelting Limited.

History: About 1858 to 74 Mining from 3 large pits, 150 by 50 feet and 1 small pit.
1957-60 Magnetometer survey and 11 d.d. holes for 5,551 feet by New Mylamaque Mining and Smelting Limited.

References: ODM map 2054; GSC map 1182A.
GSC, 1967, Econ. Geol. Rpt. 22, p. 74-6.
GSC, 1967, Mem. 346, p. 124-5.
GSC, 1958, Bull. 45, p. 12.
Assessment files, Toronto.

Miscellaneous Occurrences

Location: Lot 4, Conc. 5; and near Jones Falls.
Reference: ODM map 2054.

Description: Ochre and hematite have been noted near Jones Falls. On Lot 4, Conc. 5 a pocket of ochre in marble provided a few tons of pure material for pigment purposes.

References: ODM maps 2054, 31c.
ODM, 1922, Volume XXXI, pt. 4, p. 17.
GSC, 1899, Volume XII, pt. 1, p. 79.

Troy Lake Occurrence

Location: Lot 6, Conc. 9; near Troy Lake.

Description: Magnetite vein with biotite and hornblende exposed by a prospect pit in biotite gneiss associated with a gabbro body.

References: GSC, 1967, Mem. 346, p. 125.

LENNOX AND ADDINGTON COUNTY

CAMDEN TOWNSHIP

Keelert Occurrence

Location: Lot 17, Conc. 8.
Reference: ODM map 2053.

Description: Iron deposit located in granitic rocks near a metasedimentary contact.

Reference: ODM, 1964, Geol. Circular 12, p. 29.

KALADAR TOWNSHIP

Lot 5, Concession 5 Occurrence

Location: SW 1/4 Lot 5, Conc. 5.

Description: Drilling intersected hematite in marble.

History: 1957 - 7 d.d. holes for 845 feet by Kaladar Iron Mines Limited.

References: ODM map 2053.
Assessment files, Toronto.

Lot 10, Concession 1 Occurrence

Location: Lot 10, Conc. 1.
Reference: ODM map 2053.

Description: An iron deposit shown to occur in metasediments.

References: ODM maps 2053, 51d.
ODM, 1964, Geol. Circular 12, p. 30.

SHEFFIELD TOWNSHIP

Miscellaneous Occurrences

Location: Lot 2, Conc. 6; Lots 4, 5, Conc. 9.
Reference: ODM map 2053.

Description: Hematite reported to occur in both localities. On Conc. 9 the hematite zone is 150 feet wide at surface and occurs in marble.

References: ODM map 2053.
Prospectus, 1949, Sheffield Iron Mines Limited.
ODM, 1892, Volume 11, p. 82.
ODM, 1964, Geol. Circular 12, p. 31.

MANITOULIN DISTRICT

KILLARNEY TOWNSHIP

Frazer Bay Occurrence

Class: Sedimentary.

Location: Between Frazer and Narrow bays.
Reference: Can. Jour. Earth Sci. 1966, Volume 3, Fig.1, p. 204.

Description: Several, east-west, zones of specularite-bearing siltstones and argillaceous rocks 3 to 70 feet thick, separated by up to 150 feet of quartzite of Proterozoic age.

Economic Features: Hematite-rich zones in bands from 1 inch to 4 feet thick and constitute less than 1/25 of the Fe bearing beds. A sample assayed 29.73% Fe, 54.88% SiO_2 0.035% S, 0.033% P.

History: 1914 Some diamond drilling.

References: ODM map P. 105.
Can. Jour. Earth Sci., 1966, Volume 3, p. 203-210
ODM, 1923, I.O.C. Rpt., p. 200.
GSC, 1925, Mem. 143, p. 132.

MUSKOKA DISTRICT

OAKLEY TOWNSHIP

Chrysler Occurrence

Class: Bog iron.

Location: Lots 27 or 28, Conc. 3.

Description: Limonite concretions, 1/4 inch to 2 inches thick, as layers in sand exposed in a trench at a depth of 1 foot to 1.5 feet.

Reference: ODM, 1942, Volume LI, pt.2, p. 47-8.

NIPISSING DISTRICT

ANGUS TOWNSHIP

O'Connor Prospect

Class: Magmatic.

Location: West centre part of township.
Reference: ODM, 1932, Volume XL, pt. 4, p.106.

Description: Two NW - trending zones of titaniferous magnetite approx. 400 feet apart within a mafic intrusion of Proterozoic age.

Economic Features: The NE or "B" zone has a length of at least 300 feet and possibly 450 feet. A grab sample assayed 43.6% Fe, 21.9% TiO_2, 0.18% V_2O_5, 0.03% S, and 0.05% P_2O_5.

History: 1947 Mapping and trenching by Titan Iron Mines Ltd.
1967 Aeromagnetic survey by Titan Iron Mines Ltd.

References: ODM map P.394, 1480G.
ODM, 1932, Volume XL, pt. 4, p.105-110.
Assessment files, Kirkland Lake.

ANTOINE TOWNSHIP

Antoine Township Occurrence

Class: Hydrothermal.

Location: West central part of township.
Reference: ODM map P. 394.

Description: A fault breccia zone with hematite and quartz up to 20 feet wide in granitic rocks.

References: ODM map P. 394.
S.B. Lumbers, ODM, personal communication.

BELFAST TOWNSHIP

Cummings Lake Prospect

(See Scholes Township)

BRIGGS TOWNSHIP

Briggs Township Occurrences

Class: Iron formation, Algoma type.

Location: N shore of NE Arm of Lake Timagami.
Reference: ODM map 51e.

Description : Iron formation approx. 1 chain in width occurs 1 1/2 to 2 1/2 miles E. of Matagama Point and is present on an island 3 miles E of the Point, and 1 mile SW of the mouth of the Tetapaga River.

Setting: Within Archean metavolcanics.

References : ODM map 51e.
ODM, 1942, Volume L1, pt. 8, p.10.

Matagama Point Occurrence

(See Joan Township)

BUTLER TOWNSHIP

Phelps - Butler Occurrence

(See Phelps Township)

CALVIN TOWNSHIP

Calvin Township Prospect

Class: Magmatic?

Location: Lot 24, Conc. 4; Lots 23, 24, Conc. 5; Lot 24, Conc. 6.
Reference: GSC map 1467G.

Description: Ilmenite - magnetite within a metagabbro - anorthosite pluton. Grade ranges from 25 - 30% Fe and 5 - 7% TiO_2.

History: 1959 - 2000 feet of d.d. by Peerless Canadian Exploration Ltd.

References: GSC map 1467G.
Can. Mineral, 1962, Volume 7, pt. 2, p.316-8.
Mineral Resources Division, Ottawa, 1961, M.I. Bull. M.R. 51, p.99.

CHAMBERS TOWNSHIP

Ko-Ko-Ko Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Kokoko and Business lakes, SE part Cynthia and SW part Chambers townships.
Reference: ODM map 51e.

Description: NW-trending , magnetite - quartz (jasper, chert) iron formation in 2 parallel zones up to 500 feet wide and 3.5 mi. long. Associated with ferruginous quartzite within Archean metavolcanics and intruded by granitic rocks in the east.

Economic Features: Geophysical survey (1952) outlined four zones with a potential of more than 25 percent magnetite. Near the west end a North zone averages 130 feet by 1100 feet and a South zone averages 360 feet by 1500 feet, a Centre zone averages 416 feet by 3000 feet, and an East zone averages 170 feet by 1400 feet.

Preliminary sampling indicated a grade of 25-40 percent Fe over a width of 500 feet (Simony, 1964).

Ownership: Jalore Mining Company, Limited.

History: 1952 Geological and magnetometer surveys by Dominion Gulf Co.
1954 4 d.d. holes for 2822 feet by Dominion Gulf Co.

References: ODM maps 51e, 2057, P.321, P.301; GSC maps 1503G, 1491G.
ODM, 1964, G.R. No.28
ODM, 1942, Volume L1, pt. 6.
Assessment files, Kirkland Lake.

Sherman Mine

(See Strathy Township)

CLEMENT TOWNSHIP

Huron Mountain Occurrence

Class: Iron formation, Algoma type.

Location: NW of Manitou Lake, NW part of township.
Reference: ODM map P.367

Description: Iron formation mainly confined to a hill 1,800 feet long and 700 feet wide. It strikes WNW and dips gently. Magnetite, quartz, calcite, and garnet are the main minerals. Magnetite zone is 1,300 ft. long with lenses up to 20 ft. wide.

Setting: Within Archean metasediments.

Economic Features: 40 samples from surface exposures ranged from 21.8 to 67.6% Fe, 4.7 to 16.2% SiO_2, 5.3 to 8.0% CaO.

History: Before 1909 Magnetometer survey and 2 d.d. holes
1955-56 Geological, magnetometer and electromagnetic surveys and 2 d.d. holes for 660 feet by Noranda Mines Limited.
1963-64 Geological, geophysical and geochemical surveys by Leger Mines (1964) Limited.

Clement Tp. (Cont.)

References: ODM map P.367; GSC map 1502G.
ODM, 1952, M.R. Circular No. 2, p.113.
Assessment files, Kirkland Lake.

CYNTHIA TOWNSHIP

Ko-Ko-Ko Prospect

(See Chambers Township)

FLETT TOWNSHIP

McDiarmid Lake Occurrence

Class: Magmatic.

Location: On McDiarmid Lake.
Reference: ODM map P.394.

Description: Titaniferous magnetite in a differentiated mafic intrusion of Proterozoic age.

History: 1956 Geological survey on C.L. Murray and J.J. Gray holdings.
1957 Extensive d.d. (115+ holes) on C.L. Murray and J.J. Gray holdings.

References: ODM map P.394, GSC map 1490G
ODM, 1932, Volume XL, pt. 4.
Assessment files, Kirkland Lake.

Nichol Occurrence

Class: Hydrothermal.

Location: At SW end of Fanny Lake, approx. 1 1/2 mi. NE of Bushnell.

Description: Drilling intersected 22 feet of magnetite - bearing quartz stringers in granitic rock.

History: 1959 - 1 d.d. hole for 85 feet by W.H. Nichol.

References: ODM map P.394.
Assessment files, Kirkland Lake.

FRENCH TOWNSHIP

French Township Occurrence

Class: Sedimentary.

Location: Near east boundary approx. 3 miles from NE corner of township.
Reference: GSC map 1478G.

Description: Disseminated magnetite in arkosic metasediment with the magnetite comprising up to 15 percent of the rock volume.

References: GSC map 1478G.
S.B.Lumbers, personal communication.

JOAN TOWNSHIP

Cummings Lake Prospect

(See Scholes Township)

Matagama Point Occurrence

Class: Iron formation?

Location: N and E of Matagama Point.

Joan Tp. (Cont.)

Description: Magnetite and pyrite in a chloritic groundmass.

History: 1898 - trenching.

References: GSC map 1520G.
ODM, 1923, I.O.C. Rpt., p.214.

LAKE NIPISSING

Iron Island Occurrence

Class: Magmatic.

Location: On Iron Island.
Reference: ODM map P.381.

Description: An alkalic complex containing disseminated magnetite in pyroxenitic facies. Numerous pockets of hematite up to 18 inches wide occur in the carbonate facies on surface. Pyrite, pyrrhotite and pyrochlore are also present within the body.

History: 1951-53 Magnetometer and gravity surveys and diamond drilling by Nipiron Mines Ltd.

References: ODM map P.381; GSC map 1488G.
ODM, 1923, I.O.C. Rpt., p.215.
Assessment files, Toronto.

MULOCK TOWNSHIP

Valin Lake Occurrence

Class: Sedimentary.

Location: Approx. 1 mi. S of Valin Lake.
Reference: ODM map P.381.

Description: Disseminated magnetite in arkosic metasediment.

References: ODM map P.381.
S.B. Lumbers, ODM, personal communication.

PAPINEAU TOWNSHIP

Brazeau (Mattawa) Prospect

Class: Magmatic.

Location: S centre part of township.
Lots 17, 18, 19, Conc. 5, 6.
Reference: ODM, 1944, Volume LIII, pt. 6, p.50.

Description: A NE - trending zone, 2000 feet long, contains numerous conformable lenses of vanadium-bearing titaniferous magnetite within a differentiated metagabbro - meta-anorthosite pluton.

Economic Features: On the basis that the largest lens is 575 feet by 12.5 feet and the second largest is 175 feet by 12.5 feet tonnage was estimated at 110,000 short tons grading 0.76% V_2O_5, 7.9% TiO_2, 35.2% Fe to a depth of 100 feet (Buckham, 1943).

Magnetic concentration test gave a concentrate assaying 1.76% V_2O_5, 4.5% TiO_2, 63.6% Fe at - 60M with a ratio of 2.15 to 1.

Maximum tonnage calculated at 950,000 tons for 6 lenses to a depth of 100 feet, based on a magnetometer survey (Keevil, 1950).

0.04% U_3O_8 was obtained from one sample.

History: 1942 Several short vertical holes.
1942 Dip needle survey and trenching by GSC.
1950 Magnetometer survey for Canus Petroleum Corp.
1966 Diamond drilling by Union Carbide Exploration Ltd.

References: GSC map 1467G.
ODM, 1944, Volume LIII, pt. 6, p.50.
Assessment files, Toronto.

PARKMAN TOWNSHIP

Green Lake Prospect

Class: Iron formation.

Location: NE end Green Lake and approx. 2,500 feet to the north.
Reference: GSC map 1480G.

Description: 2 drift-covered SE-trending anomalous zones, the S one approx. 2,500 feet long and dipping moderately to the NE, and the north zone dipping steeply.

Economic Features: Drilling on the S zone intersected approx. 540 feet of interbedded iron formation and gneisses with the gneisses making up from 50 to 75 percent of the total rock. Sampled intersections range from 10.5% sol. Fe over 12.5 feet to 34.08% sol. Fe over 24.5 feet.

Drilling on the N zone intersected 149 feet (core length) of interbedded iron formation and gneisses of which 95.5 feet represented iron formation that averaged 24.2% combined sol. Fe plus Mn.

History: To 1966 Magnetometer survey and 4 d.d. holes for 1899 feet by Iron City Mines Limited.
1966 3 d.d. holes for 2,833 feet by Iron City Mines Ltd.

References: ODM map P.394, GSC map 1480G.
Prospectus, 1966, Iron City Mines Limited.
Assessment files, Kirkland Lake.

Tyrrell Prospect

Class: Iron formation.

Location: Central part of township
Reference: ODM map P. 394.

Description: Two NNE-trending zones of magnetite-quartz and amphibole-quartz iron formation 3/4 mi. apart. Interbedded with biotite, muscovite and garnet schists, granitic gneisses and marble of pre-Grenville age.

Economic Features: The north, Opimika Creek zone is "hook" shaped with a tapering and longer western limb. It is exposed over a horizontal length of approx. 7,200 feet and averages 400 feet in width. An E-W section across the north part of the zone is estimated to contain approx. 70 percent iron formation (Hopkins, 1966) with the content of sol. Fe in iron formation sections mainly in the 10 to 20 percent range.

The south, Bishop zone is similiar in shape to the north zone but smaller. It is exposed for a strike length of approx. 2,500 feet and is composed of 2 parallel bands separated by some 200 feet of barren schist with a total overall width of 400 feet.

History: 1960 Geological and geophysical surveys and 6 d.d. holes by Ventures Ltd.
1966 Geological and geophysical surveys and some diamond drilling by Iron City Mines Ltd.

References: ODM map P.394; GSC map 1480 G.
Prospectus, 1966, Iron City Mines Limited.
Assessment files, Kirkland Lake.

Webb Lake Occurrence

Class: Iron formation.

Location: 300 feet east of centre part of North Webb Lake.
Reference: Assessment files, Kirkland Lake.

Description: Two separate anomalous zones in the vicinity of North and South Webb lakes. One drill hole intersected 361 feet of material ranging from 5.8 to 24.3 percent sol. Fe.

History: 1966 Reconnaissance magnetometer survey and 1 d.d. hole by Iron City Mines Ltd.

References: ODM map 394; GSC map P. 1480G
Prospectus, 1966, Iron City Mines Limited.
Assessment files, Kirkland Lake.

PHELPS TOWNSHIP

Phelps - Butler Occurrence

Class: Sedimentary.

Location: On Butler - Phelps township boundary, approx. 1 mi. west of E boundary of Phelps Township.
Reference: GSC map 1487G

Description: Disseminated magnetite in arkosic metasediment.

References: GSC map 1487G.
S.B. Lumbers, ODM, personal communication.

PHYLLIS TOWNSHIP

Cumming Lake Prospect

(See Scholes Township)

Skunk Lake Prospect

Class: Hydrothermal.

Location: At N side Skunk Lake on the boundary between Scholes and Phyllis townships.
Reference: ODM map P.367.

Description: East - trending lenticular lenses of massive disseminated magnetite associated with carbonate, amphibole, garnet, pyrite, chalcopyrite, pyrrhotite and apatite. Within pre-Cobalt gabbro which intrudes Archean rhyolitic metavolcanics. Amphibole-chlorite alteration of gabbro in proximity of mineralization. A thin cover of flat-lying Gowganda Formation mantles the deposit.

Economic Features: Drilling outlined 2 million tons to a depth of 350 feet below the pre-Cobalt unconformity (Simony 1964).

History: 1955-56 4 d.d. holes for 1,166 feet by North America Rare Metals Ltd.
1957 Magnetometer survey and 8 d.d. holes for 5,480 feet by Temagami Mining Co. Ltd.
1961 Magnetometer survey and 2 d.d. holes for 240 feet by Temagami Mining Co. Ltd.
1962 Magnetometer survey and 2 d.d. holes for 295 feet by Temagami Mining Co. Ltd.

References: ODM maps p. 367, 2057; GSC map 1501G.
ODM, 1964, G.R. No. 28, p.27-28.
Assessment files, Kirkland Lake.

Timagami Island Occurrence

Class: Hydrothermal?

Location: NE shore of Timagami Island.

Description: An outcrop of coarse-grained magnetite a sample from which assayed 65.8% Fe, 3.6% SiO_2.

References: GSC map 1520G.
ODM, 1923, I.O.C. Rpt., p.214.

SCHOLES TOWNSHIP

Cummings Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: NE quarter of township and parts of adjacent Belfast, Joan, and Phyllis townships with shaft approx. 1/2 mi. N W of Cummings Lake.
Reference: ODM map P.367.

Scholes Tp. (Cont.)

Description: NE-trending magnetite-quartz (jasper, chert) iron formation with some garnet and pyrite within Archean greenstone and gneisses capped by 800 to 1100 feet of Nipissing diabase and Cobalt sediments. Sill of diabase 50 to 150 feet thick intrudes the iron formation conformably and divides it into North and South zones. In Belfast and Joan townships 2 d.d. holes failed to penetrate the Archean at depths of 1317 feet and 1659 feet.

Economic Features: Estimated indicated and possible reserves in the North zone are 188.4 million tons grading 26.7 sol. Fe over a length of 7850 feet and widths of 200 to 385 feet at depths of 1100 to 1900 feet. Inferred and drilled reserves from 1900 to 2500-foot depths are 139.5 million tons of 27.2 sol. Fe for a total of 327.9 million tons grading 26.9% sol. Fe (Burns 1966).

Ownership: Eagle Rock Iron Mines Limited.

History: 1952 Geological and magnetometer surveys by Dominion Gulf Co.
1958 Magnetometer survey and 2 d.d. holes for 2976 feet by Tamicon Mines Ltd.
1956-61 Aeromagnetic and electromagnetic surveys, 29 surface d.d. holes for 45,000 feet, 19,391 feet underground drilling, 1,177-foot shaft, 2,100 feet lateral work, bulk sampling, and metallurgical testing by North American Rare Metals Ltd., The Rio Tinto Mining Co. of Canada Ltd., Rio Algom Mines Ltd., Tinto Iron Mines Ltd. and Eagle Rock Iron Mines Ltd.

References: ODM map P.367, GSC map 1502G.
Prospectus, 1966, North American Rare Metals Limited.
Prospectus, 1958, Tamicon Iron Mines Limited.
Assessment files, Kirkland Lake.

Eaglerock Lake Occurrence

Class: Iron formation, Algoma type.

Location: Approx. 1/4 mi. west of centre part Eaglerock Lake SW part of township.
Reference: Assessment files, Kirkland Lake.

Description: North-trending band of pyrrhotite - bearing siliceous iron formation in Archean metavolcanics.

History: 1955-56 Dip needle and electromagnetic surveys by Noranda Mines Ltd.

Reference: Assessment files, Kirkland Lake.

Greenrod Lake Occurrence

Class: Iron formation, Algoma type.

Location: Between Emerald and Greenrod lakes, NW part Scholes and NE part Afton townships.
Reference: ODM map P. 367.

Description: ENE - trending siliceous iron formation in at least 2 bands within Archean volcanics and sediments.

History: 1955-56 Dip needle and electromagnetic surveys by Noranda Mines Ltd.
1956 Magnetometer survey and trenching by New Athona Mines Ltd.
1961 Magnetometer survey on Cadesky holdings.

References: ODM map P.367, GSC map 1502G
ODM, 1936, Volume XLV, pt. 6, p.40-41.
Prospectus, 1960, Rachel Mines Limited.
Assessment files, Kirkland Lake.

Gull Lake Prospect

Class: Iron formation, Algoma type, oxide facies

Location: On and near Gull Lake in NE quarter of township.
Reference: ODM map P.367.

Scholes Tp. (Cont.)

Description: Archean magnetite-quartz (jasper) iron formation with some hematite overlain by Cobalt sediments and Nipissing diabase. Magnetometer survey outlined two NE-trending bands approx. 1/2 mi. apart. Drilling on north band intersected 170 feet and 100 feet iron formation in 2 holes, 50 to 100 feet below surface; drilling on south band intersected 450 feet (true width) of iron formation overlain by 350 feet of sediments.

Economic Features: Assayed continuous intersections from 3 drill holes gave 26.4% sol. Fe over 77.5 feet; 26.2% sol. Fe over 100.7 feet, and 25% sol. Fe over 122.9 feet.

A composite sample of core from 2 drill holes gave a Davis tube concentrate at - 200M of 63.0% Fe, 11.9% SiO_2.

History: 1959 Magnetometer survey and 4 d.d. holes for 1,803 feet on N zone by Gull Lake Iron Mines Ltd.

1960 Magnetometer survey and 4 d.d. holes for 3,086 feet on S zone by Gull Lake Iron Mines Ltd.

References: ODM map P.367; GSC map 1502G.
Prospectus, 1960, Gull Lake Iron Mines Limited.
Assessment files, Kirkland Lake.

Skunk Lake Prospect

(See Phyllis Township)

STRATHCONA TOWNSHIP

Sherman Mine

(See Strathy Township)

STRATHY TOWNSHIP

Sherman Mine (Producer)

Class: Iron formation, Algoma type, oxide facies.

Location: SE corner Chambers, S part Strathy and NW part of Strathcona townships.
Reference: ODM map 51e.

Description: Two ENE-trending ranges - The Vermilion iron range in the NW approx. 2.5 mi. long with an average width of 400 feet, and the Timagami iron range to the SE approx. 5 mi. long and an average width of 175 to 200 feet. Iron formation contains magnetite, quartz (chert, jaspter), tuff, and locally pyrite, and is within Archean metavolcanics.

Economic Features: Production plans call for 1 million tons of pellets per year grading about 63.5% Fe, 7% SiO_2 from four main pits (north, west, south, and east). Approx. 3.5 tons of ore required for 1 ton of concentrate. Reserves are sufficient for a minimum of 35 years of production.

Ownership: The mine is a joint venture of Dominion Foundries and Steel Ltd. and Tetapaga Mining Co. Ltd. with much of the property under lease from Voyager Explorations Ltd., Temco Mines Ltd., Canateenah Mines Ltd., Ibsen Cobalt Silver Mines Ltd. and Mayfair Mines Ltd.

History : 1904-05 Some diamond drilling by the U.S. Steel Corp. Ltd.
1913-14 Some diamond drilling and shaft sinking.
1943-59 Stripping, trenching and geophysical and geological surveys by N.E. Gough, Mayfair Mining Co., Ibsen Cobalt Silver Mines Ltd.
1959-64 Extensive diamond drilling, geological and magnetometer surveys and sampling by Strathagami Mines, Inc.
1964-68 Plant and mine construction.

References: ODM maps 51e, P.321; GSC map 1491G.
ODM, 1942, Volume LI, pt. 6.
Assessment files, Kirkland Lake.

VOGT TOWNSHIP

Austin Bay Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: At head of Austin Bay, S centre part of township.
Reference: ODM map 2048.

Description: E-W trending belt of iron formation 1 1/4 mi. long and 600 to 700 feet wide composed of a north band approx. 100 feet wide separated by approx. 300 feet of volcanics or sediments from a south band approx. 200 feet wide. Iron formation consists of quartz (chert, jasper), magnetite and amphibole.

Setting: Within Archean metavolcanics.

Economic Features: A surface sample of 16, 10-foot samples across the formation assayed 25.52% Fe, 58.53% SiO_2 and gave a Davis tube concentrate of 52.98% Fe at - 100M and 64.43% Fe at - 200M with percent recovery of 72.8 and 83.4 respectively.

History: 1935 - 9 d.d. holes.
1955-56 - 2 d.d. holes by Krefeld Graphite Gold Mines Ltd.
1958 - Magnetometer and resistivity surveys by Krefeld Graphite Gold Mines Ltd.

References: ODM maps 2048, P.367; GSC map 1502G.
ODM, 1964, G.R. No. 22, p.8, 20.
Assessment files, Kirkland Lake.

Island 364 Occurrence

Class: Iron formation, Algoma type.

Location: S end of Island 364, SW part of township.
Reference: ODM map 2048.

Description: E-W trending iron formation contains magnetite jasper, pyrite and pyrrhotite.

Economic Features: Drilling intersected 116 feet of iron formation in one hole and 139 feet in another with Fe estimated to range between 10 and 35 percent in sections 10 to 37 feet long. Parts are highly pyritic.

History: 1956-60 Trenching and 3 d.d. holes for 1,078 feet.

References: ODM maps 2048, P.367; GSC map 1502G.
ODM, 1964, G.R. No.22, p.20.
Assessment files, Kirkland Lake.

NORTHCUMBERLAND COUNTY

SEYMOUR TOWNSHIP

Allan Mills Prospect

Class: Contact metasomatic.

Location: Lots 24, 25, 26, Conc. 12.
Reference: GSC, 1958, Bull. 45, Fig. 1.

Description: Magnetite as disseminations or bands in marble, breccia and gabbro-diorite, overlain by 100 to 150 feet of Paleozoic limestone. Some pyrite, pyrrhotite, chalcopyrite, and hematite present.

History: 1951 and 1953 Magnetometer survey and 16 d.d. holes by Trent River Iron Limited.

References: GSC, 1958, Bull. 45, p. 15-6, Fig.1.

Campbellford Prospect

Location: 2 miles N of Campbellford.
Reference: GSC, 1958, Bull. 45, Fig.1.

Description: Magnetite deposit underlying Paleozoic limestone capping.

History: 1951 Dip needle survey by Lloyd Rochester.
1952 5 d.d. holes by Trent River Iron Limited.

References: GSC, 1958, Bull. 45, Fig. 1.
Northern Miner, 1953, April 23, p. 17.

PARRY SOUND DISTRICT

FOLEY TOWNSHIP

Lot 29, Concession 8, Occurrence

Location: Lot 29, Conc. 8.
Reference: ODM map 2118.

Description: Zone of magnetite with some pyrite and chalcopyrite, 4 feet wide, in granite gneiss containing amphibolite and pegmatite. A grab sample assayed 54.14% Fe, 9.63% SiO_2, 5.60% TiO_2, 2.13% S. 50 feet south a magnetite-pyrite zone, 5 feet wide, is present.

History: 1903 9 d.d. holesfor 582 feet.
17-foot shaft, trenching.

References: ODM maps 2118, 51a, 1496G.
ODM, 1967, G.R. No. 52, p.50.
ODM, 1942, Volume LI, pt. 2, p. 41-3.

LOUNT TOWNSHIP

Magnetawan Mine (Past Producer)

Class: Hydrothermal.

Location: Just N of road on boundary between Conc. 2 and 3.
Reference: ODM map 1955-4.

Description: N-trending lens, approximately 10 feet wide, of magnetite and magnetite-hornblende in amphibolite. Deposit mined out from pits 50 by 10 feet and 12 to 22 feet deep.

Economic Features: A grab sample assayed 59.55% Fe, 4.49% SiO_2, and 1.20% TiO_2.

History: 1910-2 6,000 tons mined from open pit by Cramp Steel Co. Ltd.

References: ODM maps 1955-4, 51a; GSC map 1496G.
ODM, 1955, Volume LXIV, pt. 6, p.32.

Lount Tp. (Cont.)

Miscellaneous Occurrences

Class: Magmatic and contact metasomatic.

Location: Throughout township.
Reference: ODM map 1955-4.

Description: Disseminated magnetite or lenses, seams or pods of massive magnetite in amphibolite or hornblende gneiss, in part garnetiferous.

Economic Features: On Lots 23,24, Conc. 13, drilling intersected 90 to 110 feet of disseminated magnetite; on Lot 22, Conc.14, drilling intersected 10 to 60 feet of disseminated magnetite. Five selected grab samples range from 43.88 to 55.71% Fe, 2.37 to 23.28% SiO_2, 0.36 to 11.50% TiO_2, 0.06 to 2.28% S. Two samples assayed 0.23 and 0.34% V_2O_3.

History: 14 d.d. holes for 5,136 feet, numerous pits and trenches.
1952 Aeromagnetic survey by Shenango Furnace Co.

References: ODM maps 1955-4, 51a; GSC map 1486G.
ODM, 1955, Volume LXIV, pt.6, p. 27-40.
ODM, 1942, Volume LI, pt.2, p. 41, 42-7.
Assessment files, Toronto.

McMURRICH TOWNSHIP

Lot 15, Concession 2 Occurrence

Class: Bog iron.

Location: Adjacent to road, S of Haldane Hill.
Reference: ODM map 2118.

Description: Earthy limonite assaying 50.36% Fe and limonite concretions assaying 50.95% Fe as lens or bed 1-foot thick in sand.

References: ODM maps 2118, 51a.
ODM, 1967, G.R. No.52, p.50.
ODM, 1942, Volume LI, pt.2, p. 41, 47.

NIPISSING TOWNSHIP

Dumouchel Occurrence

Class: Hydrothermal.

Location: Lots 20 to 25, Conc. 25, on the west side of south Bay just N of the mouth of South River.
Reference: ODM map P.381.

Description: E-trending zone of hematite-enriched, silicified breccia in granitic gneiss.

History: 1951-2 Geological and gravimetric survey by J.H. Dumouchel.

References: ODM map 51a, P.381.
Assessment files, Toronto.

Lot 218, Concession A Prospect

Class: Hydrothermal.

Location: 1.7 miles W of Nipissing.
Reference: ODM map 51a.

Description: Hematite and some quartz in breccia zone within granitic gneiss. A grab sample assayed 55.65 % Fe, 18.73 SiO_2. Drilling intersected 1 and 3-foot sections assaying 41.26 and 34.62% Fe, respectively.

History: 1941 Diamond drill hole for 300 feet by W. Holder.
1951-2 Geological and gravimetric surveys by J.H. Dumouchel.

References: ODM map 51a, P.381
ODM, 1942, Volume LI, pt.2, p.47.
Assessment files, Toronto.

PETERBOROUGH COUNTY

ANSTRUTHER TOWNSHIP

Anstruther Township Occurrence

Location: S 1/2 of Lots 26 and 27, Conc. 15.

Description: Bands up to 15 feet wide in a zone 1,600 feet long and up to 200 feet wide. Analyses range from 47.00 to 52.25% Fe.

History: Before 1914 2 shafts to a depth of 25 feet.

References: ODM map 1957b; GSC map 16G.
ODM, 1923, I.O.C. Rept., p.222.

BELMONT TOWNSHIP

Belmont Lake Occurrence

Class: Iron formation, oxide facies.

Location: Lot 20, Conc.4; 1/4 mile W of Belmont Lake.
Reference: GSC, 1967, Econ. Geol. Rept. 22, Fig. 8.

Description: W of Belmont Lake magnetite-hematite-quartz (chert, jasper) iron formation strikes N to NW for about 1/4 mile and is less than 60 feet thick. Within Belmont volcanics.

Economic Features: A sample assayed 24.06% Fe, 0.024% S, 0.126% P.

References: ODM map 1957b; GSC map 14G.
ODM, 1913, Volume XXII, pt.2, p. 25-6.
ODM, 1943, Volume LII, pt. 2, p. 48.
GSC, 1967, Econ. Geol. Rpt. 22, p. 84-5.

Belmont (Ledyard) Mine (Past Producer)

Class: Contact metasomatic.

Location: Lot 19, Conc. 1, 1/2 mile S of Cordova Mine.
Reference: ODM map 1957b.

Description: A skarn deposit of magnetite in marble near a a gabbro contact.

Economic Features: Magnetic survey indicates lens 500 feet long and 50 feet wide containing some 2,500 tons per vert. foot. Drilling in 1906 indicated 200,000 tons of concentrating ore. A sample from N end of No.1 pit assayed 51.20% Fe 12.10% SiO_2, 0.34% S, 0.10% TiO_2.

History: 1899-1900 2,687 tons mined from 2 pits.
1911-1913 260-foot shaft with 3 levels and 5,746 tons shipped by the Canadian Furnace Co. Ltd.

References: ODM maps 1957b, 52a; GSC map 14G.
ODM, 1923, I.O.C. Rpt., p.164.
ODM, 1943, Volume LII, pt.2, p.48.
GSC, 1958, Bull. 45, p.18-9, Fig. 1.

Blairton Mine (Past Producer)

Class: Contact metasomatic.

Location: Lots 7 and 8, Conc. 1, on S shore Crowe Lake.
Reference: ODM map 52a.

Description: Skarn deposit of magnetite with pyroxene, garnet, hornblende, epidote and carbonate at the contact of gabbro-diorite and marble. Pyrite and some pyrrhotite is present. Fragments of martite and hematite occur in younger Paleozoic rocks to the west.

Belmont Tp. (Cont.)

Economic Features: Two main lenses present. The main lens is approximately 700 feet long and 50 feet or more in width. Reserves calculated in 1914 at 1.8 million tons of 51.80% Fe, 0.824% S, 0.018% P and 0.5 million tons of 54.20% Fe, 0.340% S, 0.010% P. More recent estimates are not available.

History: 1820-1875 Some 300,000 tons shipped from 3 pits
1908 Some d.d.
1910 13 d.d. holes for 3,600 feet by Canada Iron Mines,Ltd.
1951 Some d.d. by Frobisher Limited.
1951 Magnetometer survey and 2 d.d. holes on Crowe Lake by Trent River Iron Limited.
1957 Some d.d. by W.S. Moore Company.

References: ODM map 52a; GSC map 13G.
GSC, 1958, Bull. 45, p. 22-5, Fig. 1.
ODM, 1943, Volume LII, pt.2, p. 47-8.
ODM, 1923, I.O.C., Rpt. p. 163-4.
Assessment files, Toronto.

Deer River Occurrence

Class: Iron formation.

Location: Lot 21, Conc. 3, 100 feet E of bridge that crosses Deer River N of Belmont Lake.
Reference: GSC, 1967, Econ. Geol. Rpt. 22, Fig. 8.

Description: Lean magnetite-hematite-quartz (chert, jasper) iron formation interlayered with marble exposed for 100 feet with a width of 20 feet.

Economic Features: Two samples assayed 11.8 and 15% Fe.

References: ODM map 1957b; GSC map 14G.
ODM, 1913, Volume XXII, pt.2, p.25.
GSC, 1967, Econ. Geol.Rpt. 22, p. 84.

Lot 15, Conc. 5, Occurrence

Class: Iron formation, oxide facies.

Location: Lot 15, Conc. 5, near W central part of Belmont Lake.
Reference: GSC, 1967, Econ. Geol. Rpt. No.22, Fig.8.

Description: N-trending, lean hematite-quartz iron formation with an exposed width of 20 feet.

History: 1 pit and 2 trenches.

References: ODM maps 52a; GSC map 14G.
ODM, 1943, Volume LII, pt.2, p.49.

Pushing Prospect

Class: Contact metasomatic.

Location: Lots 1 and 2, Conc. 4, 8 miles SW of Marmora.
Reference: GSC, 1958, Bull. 45, Fig. 1.

Description: Skarn deposit of magnetite with some pyrite, pyrrhotite and chalcopyrite below 133 feet of Paleozoic conglomerate.

Economic Features: 17 samples from 5 drill holes assayed 27.7% Fe, 0.12% TiO_2, 0.53% S, 0.29%,P, 0.125% Cu, 0.24% Mn. Concentrates grading 68.4 to 70.7% Fe were obtained with approximately 80% recovery.

History: 1954 Magnetometer survey and 5 d.d. holes by Trent River Iron Ltd.

References: ODM maps 53a; GSC map 13G.
GSC, 1958, Bull. 45, p. 47, Fig. 1.
Mineral Files, Mineral Resources Division, Ottawa.

Belmont Tp. (Cont.)

Round Lake Occurrence

Class: Iron formation.

Location: Lot 25, Conc. 6.
Reference: GSC, 1967, Econ. Geol. Rpt. 22, Fig.8.

Description: Iron formation in green schist. Reported to have a width of 250 feet and traced for a length of 150 feet.

References: ODM map 1957b; GSC map 14G.
ODM, 1913, Volume XXII, pt.2, p. 26.

BURLEIGH TOWNSHIP

Burleigh Township Occurrence

Location: N part of township, near Apsley Village.

Description: A deposit of granular magnetite, a sample of which assayed 63.68% Fe, 0.03% S, in a pyroxenic groundmass.

Reference: GSC, 1910, Mem. 6, p. 351.

CHANDOS TOWNSHIP

Lot 27, Concession 2 Occurrence

Location: Lots 27 and 28, Conc. 2, 50 chains SSW of East Road.
Reference: ODM map 2019.

Description: A NE-trending lens-like mass, containing up to 80 percent magnetite and approximately 15 feet thick, is overlain by magnetite-biotite paragneiss.

History: Early open cut, 53 by 21 feet.
Some d.d. by Ventures Limited.
1958 Some d.d. by Black Rock Mining Limited.

References: ODM maps 2019, 1957b; GSC map 16G.
ODM, 1962, G.R. No. 11, p. 26.

METHUEN TOWNSHIP

Twin Lake Occurrence

Class: Magmatic.

Location: Lot 8, Conc. 3 and 4, E and W of Oak Lake Road.
Reference: ODM map 1960e.

Description: Showings of ilmenite, magnetite and hematite in the Twin Lake diorite.

History: A few pits.
1956 118 feet of d.d.

References: ODM maps 1960e, 1957b; GSC map 14G.
ODM, 1960, Volume LXIX, pt.8, p. 160.

RAINY RIVER DISTRICT

BAKER TOWNSHIP

Stript Lake Occurrences

Class: Iron formation, Algoma type.

Location: On claims E140, R758, R757, SW part of township.
Reference: ODM map 48a.

Description: Iron formation bands in Archean metavolcanics.

References: ODM maps 48a, 1133G.

BENNETT TOWNSHIP

Bennett - Tanner Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Northern 2/3 of Bennett and W central part of Tanner townships and adjoining area to the west.
Reference: ODM map 1960b.

Description : Lean magnetite-chert iron formation, forming at least 2 prominent bands but usually less than 50 feet in thickness, within Archean metavolcanics.

References: ODM maps 1960b,2115, 1142G.
ODM, 1960, Volume LXIX, pt. 4, p. 10, 14-5.

CARPENTER TOWNSHIP

Emo Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: 0.5 mi. E of Emo.
Reference: ODM map 1954-2.

Description: N to NE trending magnetite-quartz iron formation, in Archean metasediments, with a strike length of 8 miles extending N from U.S.A. border. Overlain by 30 to 100 feet of lake clays.

Economic Features: Five zones outlined. North or "A" zone is 6800 feet by 40 feet and contains 31,605 tons per vert. foot of 29.51 sol. Fe.; "B" zone to south is 2,050 feet by approx. 12 feet; "C" zone is 2,800 feet long; "D" zone is 2,300 feet long; and "E" zone 2,400 feet by approx. 20 feet.

Tests indicate a concentrate grading 67.2 to 69.8% Fe could be produced by grinding to -100 M with a 83% Fe recovery.

Ownership: Property owned or leased by Great West Mining and Smelting Corp. Ltd.

History: 1959 1 d.d. hole for 600 feet by Prospectors Airways Company Ltd. and Noranda Mines Ltd.
1959-60 Magnetometer survey and 23 d.d. holes for 14,000 feet by West Range Iron Mines Limited.

References:
ODM maps 1954-2, 2115, 1166G.
ODM, 1954, Volume LXIII, pt. 5, p.25.
Prospectus, 1960, West Range Iron Mines Limited.
Prospectus, 1965, Great West Mining and Smelting Corp. Ltd.
Can. Mines Handbook, 1967-68.
Assessment files, Kenora.

CROZIER TOWNSHIP

Devlin - Crozier Occurrence

Class: Iron formation, Algoma type.

Location: W part Crozier and SE part Devlin townships.
Reference: ODM map 2115.

Description: Iron formation in Archean metavolcanics.

References: ODM maps P.286, 2115, 1166G.

DANCE TOWNSHIP

Wasaw Lake Occurrences

(See Miscampbell Township)

DEVLIN TOWNSHIP

Devlin - Crozier Occurrence

(See Crozier Township)

DOBIE TOWNSHIP

Young - Corrigan Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Lots 3 to 8, Conc. 6.
Reference: ODM map 1954-2.

Description: Two easterly-trending bands of magnetite iron formation interbedded with Archean greywacke. Bands about 40 feet wide and 4 miles long.

Economic Features: Best 100-foot section of drill core assayed 24.44% Fe, 55.75% SiO_2. Magnetic tests at -200 M gave an "excellent" concentrate with "high" recovery.

History: 1953 Magnetometer survey and 4 d.d. holes for 2344 feet by Prospectors Airways Co. Ltd.

References: ODM maps 1954-2, 2115, 1166G.
ODM, 1954, Volume LXIII, pt. 5, p.25-6.
Assessment files, Kenora.

FARRINGTON TOWNSHIP

Seine Bay Prospect

Class: Magmatic.

Location: N shore of Seine Bay to N shore of Bad Vermillion Lake including S parts of Halkirk and Farrington townships. Reference: ODM map 2115.

Description: Lenses of massive and disseminated titaniferous magnetite, within a differentiated gabbro-anorthosite, occur over a strike length of 13 miles.

Economic Features: Three zones indicated. The main zone is 3000 feet long and up to 160 feet wide. It is estimated to contain 22,000 tons per vert. foot of disseminated and massive material averaging 45.1 TiO_2 + Fe. A north zone contains 3 lenses 3400 by 140 feet, 2900 by 40 to 100 feet, and 5200 by 35 to 80 feet. A south zone contains numerous irregular lenses, two of which are 1000 feet by 20 to 45 feet.

Ten samples of massive mineralization range between 44.81 to 57.67 Fe and 10.34 to 26.03% TiO_2 for an average of 47% Fe, 20% TiO_2. Disseminated mineralization averages an estimated 37% Fe + TiO_2.

History: Early trenching, magnetometer surveys and drilling.
1956-7 Geological and magnetometer surveys and 3 d.d. holes for 468 feet by Stratmat Limited.

Farrington Tp. (Cont.)

References: ODM maps 2115, 27-1, 1150G.
Mines Branch, Ottawa, 1922, Publ. No. 579, p.83-7.
ODM, 1923, I.O.C. Rpt. p.174.
Assessment files, Port Arthur.

FREEBORN TOWNSHIP

Canadian Charleson Mine (Past Producer)

Class: Placer.

Location: Between Inland Lake and S end of East Arm.
Reference: ODM map P.348.

Description: NE-trending zone up to 3,500 feet wide, 8,500 feet long and 250 feet deep of geothite-hematite bearing Pleistocene sands and gravels.

Economic Features: Reserves estimated prior to development as 46 million tons of crude containing 7,680 tons of iron ore concentrates.

6.7 million tons of crude was mined producing 0.78 million tons of iron ore grading 54.8 - 56.3% nat. Fe, 5.09 - 6.25% SiO_2 for an average weight recovery of approx. 12%.

History: 1955-8 Diamond drilling, auger drilling and plant construction by Charleson Mining Company.
1958-64 Mining by open pit by Charleson Mining Company.

References: ODM map P.348.
Bartley, 1964, 10th Ann. Inst. on Lake Superior Geology.
Imperial Oilways, 1959, Volume 18, No. 4, p.1-3.
ODM, in preparation, Steeprock Iron Area.

Miscellaneous Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: S shore Apungsisagen Lake and on islands near S end of West Arm, Steeprock Lake.
Reference: ODM map P.348.

Description: Five to 25 feet of interbedded chert, magnetite, or pyrite with arkosic layers.

References: ODM map P.348.
ODM, in preparation, Steeprock Iron Area.

Steep Rock Iron Mine (Producer)

Class: Secondary deposit in iron formation.

Location: Along the Middle Arm of the former Steeprock Lake and the N part of the West Arm.
Reference: ODM map P.348.

Description: Deposits of geothite - hematite and pyritic iron formation within the Steeprock Group of Archean sediments and volcanics.

Economic Features: The geothite-hematite ore has a strike length of 3.8 miles and is up to 300 feet thick. Average of 1963 shipments yielded 59.6% Fe, 4.63% SiO_2, 0.03% S. Reserves estimated at 337 million tons plus 273 million tons of lean ore averaging 30% Fe calculated to a depth of 1,700 feet (Steep Rock Iron Mines, 1968).

Mining mainly by open pit with some underground mining carried out from 1953 to 1967. Pellet plant operations began in 1967 with a capacity of 1.35 million tons per year averaging 64% Fe.

Pyritic lenses occur over a strike length of 14,000 feet and are up to 250 feet wide and 1675 feet long. A weighted average of 1970 feet of drill hole intersections gave 38.6% Fe, 14.6% SiO_2, 24.3% S.

Ownership: Steep Rock Iron Mines Limited.

History: 1937-39 Geophysical surveys and d.d. holes by Steerola Exploration Company.
1939-1945 Exploration, mine and plant construction by Steep Rock Iron Mines, Limited.
1966-67 Pellet Plant construction.
1944-67 32.2 million tons of iron ore and pellets shipped.

References: ODM maps P.348, 48b, 48a, 2065, 2024.
ODM, 1939, Volume LVIII, pt. 2.
G.A.C., 1966, Spec. Paper, No. 3, p.75-98.
Annual Report, 1967, Steep Rock Iron Mines Limited.
ODM, in preparation, Steeprock Iron Area.

GRIESINGER TOWNSHIP

Boffin Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: In vicinity of Boffin Lake, central part of Griesinger Township and NW corner of Indian Reserve 16D.
Reference: ODM map P.286.

Description: Iron formation interbedded with Archean greywacke. Drilling on west side of Boffin Lake intersected 9 feet of magnetite disseminated in sediments and iron formation.

History: 1965 1 d.d. hole for 545 feet by Great River Mining and Development Syndicate.

References: ODM maps P.286, 2115, 1167G, 1159G, 1158G.
Assessment files, Kenora.

Wasaw Lake Occurrences

(See Miscampbell Township)

HALKIRK TOWNSHIP

Bear Pass Occurrence

Class: Iron formation, Algoma type.

Location: Where the C.N.R. crosses Bear Pass.

Description: A few small outcrops of quartz with magnetite in rusty gneiss.

References: ODM maps 2115, 1150G.
ODM, 1923, I.O.C. Rpt., p.174.

Seine Bay Prospect

(See Farrington Township)

HUTCHINSON TOWNSHIP

Atikokan Iron Mine (Past Producer)

Class: Hydrothermal.

Location: 1 mi. E of Sapawe, on claims E 10, E 11, and E 12 between Sapawe and Nowquabic lakes.
Reference: ODM map 38e.

Description: Irregular, lenticular magnetite-pyrite-pyrrhotite replacements of mafic dikes along the Quetico Fault. Zone is approx. 3,800 feet long and up to 300 feet wide. Part of the Atikokan Range.

Economic Features: Deposit drilled to a depth of 250 feet. Reserves calculated at 10.9 million tons of low and high sulphur ore (Atikokan Iron Company, 1915) or at 1.7 million tons grading 53.7% Fe, 0.133% P, 12.15% SiO_2, 3.96% S (C.M. Wild, 1913).

Grade of ore shipped was 59.85% Fe, 0.11% P, 8.86% SiO_2, 2.01% S.

Ownership: Atikokan Iron Company, Limited.

History: 1900-12 5 tunnels, 3 shafts with crosscuts, 2 open cuts, and 6 d.d. holes by the Atikokan Iron Company Limited.
1907-12 90,680 tons of ore mined and shipped.

References: ODM maps 38e, 2065, 1123G.
ODM, 1923, I.O.C. Rpt., p.155-8.
ODM, 1929, Volume XXXVIII, pt. 6, p.42-9.
Assessment files, Port Arthur.

E 25 and E 26 Occurrence

Class: Hydrothermal.

Hutchinson Tp. (Cont.)

Location: Claims E 25 and E 26, east of Nowquabic Lake.
Reference: Mines Branch, Ottawa, map 340A.

Description: Eastern termination of the Atikokan Iron Mine deposit extending across E 25 and NW quarter of E 26. Magnetite and iron sulphide zone in mafic dike, less than 75 feet in width.

References: ODM maps 38e, 1123; Mines Branch, Ottawa, maps 340, 340A.
ODM, 1923, I.O.C. Rpt. p.169.

Sapawe Lake Prospect

(See McCaul Township)

LASH TOWNSHIP

Emo Prospect

(See Carpenter Township)

McCAUL TOWNSHIP

Hanna - Gano Prospect

Class: Hydrothermal.

Location: Claims R 400, R 401, R 402 on the N side of Atikokan River, 2 mi. west of Sapawe Lake.
Reference: ODM map 38e.

Description: Replacements of magnetite, pyrrhotite and pyrite in mafic dikes along the Quetico Fault. Part of the Atikokan Range.

Economic Features: Two zones approx. 2000 feet long by 200 feet wide. East zone contains 2.06 million tons, indicated, which grades 52.78% Fe, 0.021% P, 12.61% SiO_2, 3.16% S. West zone estimated to contain 264,000 tons averaging 52.85% Fe, 0.053% P, 10.42% SiO_2, 10.45% S.

History: 10 trenches and 19 d.d. holes.

References: ODM maps 38e, 2065, 1123G.
ODM, 1923, I.O.C. Rpt., p.169-71.
ODM, 1929, Volume XXXVIII, pt. 6, p.42-9.
Assessment files, Port Arthur.

Pattison Prospect

Class: Hydrothermal.

Location: Claims R 403 and 212 X, located 2.6 mi. W of Sapawe Lake.
Reference: ODM map 38e.

Description: Pyrrhotite with some pyrite and magnetite in mafic dike along the Quetico Fault. Part of the Atikokan Range.

Economic Features: Zone zpprox. 2,500 feet long and up to 100 feet wide. Early reserve estimates placed at 2.5 million tons of pyrrhotite ore averaging 59.8% Fe, 0.025% P, 3.30% SiO_2, 20.5% S; later estimates at 8 million long tons averaging 59.03% Fe, 0.023% S, 3.38% SiO_2, 20.03% S.

Tests indicate a sinter grading 66.8% Fe, 0.026% P, 3.84% SiO_2, 0.05% S could be produced.

Ownership: G.E. Pattison Estate.

History: 15 trenches, 8 d.d. holes and 1 adit.

References: ODM maps 38e, 2065, 1123G.
ODM, 1923, I.O.C. Rpt., p.171.
ODM, 1929, Volume XXXVIII, pt. 6, p.42-9.
Assessment files, Port Arthur.

McCaul Tp. (Cont.)

Quinn Prospect

Class: Hydrothermal.

Location: Claims 138 X and 139 X, north of the Atikokan River and 0.5 mi. E of Olcott.
Reference: ODM map 38e.

Description: Magnetite and pyrrhotite, disseminated and in lenses, within a mafic dike. Part of the Atikokan Range.

Economic Features: Zone approx. 2,600 feet long and up to 250 feet wide. On 138 X, reserves estimated at 1.8 million tons of ore averaging 55.73% Fe, 0.037% P, 6.67% SiO_2, 20.38% S.

Ownership: M.A. Hanna Company.

History: 1908-9 Trenching, d.d., and shallow shaft.

References: ODM maps 38e, 2065, 1123G.
ODM, 1923, I.O.C. Rpt. p.171.
ODM, 1929, Volume XXXVIII, pt. 6, p.42-9.
Assessment files, Port Arthur.

Sapawe Lake Prospect

Class: Hydrothermal.

Location: Below Sapawe Lake on claims 3501 to 12, and 3729.
Reference: ODM map 1123G.

Description: Pyrrhotite, pyrite, magnetite and chalcopyrite replacements in a mafic dike following the Quetico fault zone. Part of the Atikokan Range.

Economic Features: Mineralized sections intersected in drilling range from 1 foot to 25 feet averaging 56.42% Fe, 16.17% S, 0.60% Cu, and appear to be lensoid.

History: Magnetometer survey and 5 d.d. holes by Steep Rock Iron Mines Limited.

References: ODM map 38e, 2065, 1123G.
Assessment files, Port Arthur.

MISCAMPBELL TOWNSHIP

Frog Creek Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Lots 3, 4, 5, Conc. 1, 2 of Miscampbell Township and SW part of Indian Reserve No. 16D.
Reference: ODM map 2115.

Description: Iron formation in Archean metasediments. In Miscampbell Township magnetite occurs in bands and disseminated and sediment up to 12 feet in width.

References: ODM maps P.286, 2115, 1158G.
ODM, 1923, I.O.C. Rpt., p.172-3.

Wasaw Lake Occurrences

Class: Iron formation, Algoma type.

Location: Near the Dance-Griesinger boundary, N of Wasaw Lake, and S of the lake in NW part of Miscampbell Township.

Description: Iron formation with interbedded Archean greywacke.

References: ODM maps P.286, 2115, 1166G, 1167G.

MORLEY TOWNSHIP

Morley Occurrence

Class: Iron formation, Algoma type.

Location: NE quarter of Section 27.
Reference: ODM map 1174G.

Description: Magnetite iron formation, lean in part, interbedded with Archean metasediments. Drilling intersected 379 feet (core length) of iron formation of with 128 feet contains an estimated 30 percent Fe.

Morley Tp. (Cont.)

History: 1 d.d. hole for 644 feet by D. Paquin.

References: ODM maps 2115, 1174G.
Assessment files, Kenora.

SCHWENGER TOWNSHIP

Falls Bay Mine (Producer)

Class: Secondary deposit in iron formation.

Location: Within Falls Bay of the former Steeprock Lake, 5 mi. NNE of Atikokan.
Reference: ODM map P.348.

Description: A S-shaped folded and faulted zone, 8600 feet long and up to 200 feet wide consisting of geothite (67%), hematite (21%), kaolin (5%), quartz (5%) within the Steeeprock Group of Archean age.

Economic Features: Mining by open pit from the Lime Bay, Island, Centre and Mink zones. Dry analysis of pit run ore is 57.10% Fe, 7.36% SiO_2, 0.01% S. Production at the rate of 2.5 million tons per year and includes direct shipping, dryed, screened and pelletized products. In 1966, dry analysis of pellets averaged 62.45% Fe, 7.35% SiO_2.
Reserves estimated to the 1,700 foot depth at 190 million tons (Steep Rock Iron Mines, 1968).

Ownership: Caland Ore Company on lease from Steep Rock Iron Mines Limited.

History: 1938-40 41 d.d. holes for 17,243 feet by Steerola Exploration Company.
1949-59 Exploration and mine construction by Caland Ore Company.
1964-66 Pelletizing - processing plant constructed with annual capacity of 2.5 million tons.
1960-67 14,636,579 long tons of ore shipped.

References: ODM maps P.348, 48b, 48a, 2065, 2024.
ODM, 1939, Volume XLVIII, pt. 2.
G.A.C., 1966, Spec. Paper, No. 3, p.75-98.
Annual Report, 1967, Steep Rock Iron Mines Limited.
ODM, in preparation, Steeprock Iron Area.

Miscellaneous Occurrences

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: At Greenstone Point and near the SW shore of the Southeast Arm of the former Steeprock Lake.
Reference: ODM map P.348.

Description: Well bedded pyritic layers in tuffaceous "ashrock" occur within the Steeprock Group along the Southeast Arm in thicknesses up to 25 feet. Magnetite - minnesotaite-chert-carbonate, up to 20 feet thick, occurs at Greenstone Point.

References: ODM map P.348, 48b.
ODM, in preparation, Steeprock Iron Area.

Strawhat Lake Prospect

Class: Secondary deposits in iron formation.

Location: Claims X 858 and X 857, covering most of Strawhat Lake and immediate vicinity.
Reference: ODM map P.348.

Description: Zones of geothite - hematite within a pyrite-carbonate-chert iron formation which is 4,000 feet in length and up to 200 feet wide. Part of the Steeprock Group.

Economic Features: The mean of 116 feet of drill core from iron formation assayed 41.45% Fe, 1.22% Mn, 3.16% SiO_2, 21.11% S.

The mean of 428 feet of drill core from low-silica, goethite-hematite assayed 53.62% Fe, 4.07% Mn, 5.83% SiO_2 and 0.11% S. 349 feet of siliceous geothite-hematite assayed 40.45% Fe, 4.41% Mn, 29.93% SiO_2, 0.24% S.

Ownership: Quebec Cartier Mining Company Limited.

Schwenger Tp. (Cont.)

History: 1902-3 Trenching and 4 d.d. holes for 800 feet by Oliver Mining Company.
1943 14 d.d. holes for 4,340 feet by Frobisher Limited.
1951-2 Geological survey and 81 "scout" drill holes by Quebec Cartier Mining Company.

References: ODM maps P.348, 48b.
ODM, 1939, Volume XLVIII, pt. 2, p.24.
ODM, in preparation, Steeprock Iron Area.
Assessment files, Port Arthur.

TANNER TOWNSHIP

Bennett - Tanner Occurrences

(See Bennett Township)

WATTEN TOWNSHIP

Miscellaneous Occurrences

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: Scattered throughout township.

Description: Magnetite and (or) pyrite and pyrrhotite occurring at the following locations:
Claim K200 - 2 deposits of hematite, 40 and 20 feet wide, occurs over magnetic ore, an assay of which gave 66.26% Fe.
S side of Nickel Lake - magnetite-quartz-pyrrhotite-pyrite iron formation with up to 15 feet of pyrite
NE shore of Nickel Lake - quartz-pyrrhotite-magnetite iron formation up to 300 feet wide.
S of Grassy Portage Bay on E boundary of township - magnetite with small seams of pyrite.
Lot 6, Conc. 3 - magnetite deposit 24 feet wide by 270 feet long.
Lots 11, 12, Conc. 3 - magnetite deposit 30 feet wide and several hundred feet long, a sample of which gave 49.10% Fe.
Lots 3, 4, Conc. 5 - veins and segregations of magnetite.
W side of entrance to Rocky Islet Bay - 20-foot wide lens of pyrite in banded iron formation striking N 20 E.

East Brudon Group - 20-25 foot wide band of sediments with 20 to 25% disseminated sulphides.
Lots 7, 8, Conc. 2 - Massive pyrite up to 12 feet wide in lean siliceous iron formation.
Lots 11, 12, Conc. 2 - pyrite up to 1 foot wide in iron formation.
McGiffert Property (Rocky Inlet) - Drilling intersected 5 to 78 feet of magnetite-pyrrhotite iron formation.

References: ODM maps 2115, 1158G.
ODM, 1923, I.O.C. Rpt., p.176.
ODM, 1967, M.R. Circular 5, p.42, 43, 44, 46.
Assessment files, Port Arthur.

Reef Point Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: N side of Reef Point.
Reference: ODM map 2115.

Description: E to NE trending magnetite iron formation traced for 1 mile and up to 300 feet wide. Coarse-grained magnetite exposed at west end. Some iron sulphides along the S side.

History: 1954 2,000 tons mined and stockpiled by Stanol Minerals Limited.
1956 Geophysical survey by Stanol Minerals Limited.

References: ODM maps 2115, 1158G.
ODM, 1963, P.R. 1963-2, p.41.
Assessment files, Port Arthur.

48° 00' - 91° 00'

Emerald Lake Occurrences

(See 48° 00' - 91° 00')

48°00' - 91°00' (Cont.)

Jasper - Cypress Lakes Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: In vicinity of Jasper and Cypress lakes.
Reference: ODM map 2065.

Description: Iron formation in Archean volcanics. At S end of Jasper Lake a 50-foot wide band is present, samples of which assayed 29.4 and 28.5% Fe.

On the peninsula at the SE part of Cypress Lake drilling intersected 99 and 75 feet of iron formation 226 feet apart. A grab sample assayed 26.64% Fe, 58.35% SiO_2.

History: 1957 1 d.d. hole for 400 feet by R.A. Vance and R.P. Vance.

References: ODM maps 2065, 1120G.
ODM, 1916, Volume XXV, pt. 1, p.182-4.
Assessment files, Port Arthur.

Other Man Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: NE and W of NE end of Other Man Lake.
Reference: ODM, 1916, Volume XXV, pt. 1, p.164.

Description: To the NE of the lake very lean magnetite - hematite iron formation occurs. West of the lake another band about 20 feet wide is present a sample from which assayed 15.8% FeO, 48.3% Fe_2O_3, 27.3% SiO_2.

References: ODM maps 2065, 1120G.
ODM, 1916, Volume XXV, pt. 1, p.174-5.

That Man Lake Prospect

(See 48° 00' - 91° 15')

48° 00' - 91° 15'

Emerald Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: In the vicinity of Carp, Emerald and Plough lakes.
Reference: ODM map 2065.

Description: Discontinuous, dominantly NE-trending bands of iron formation containing magnetite, hematite and quartz (chert, jasper).

Economic Features: On Carp Lake widths of 10 and 141 feet are reported, a sample of which assayed 16.12% Fe; on Emerald Lake 2 or 3 bands are present a sample from which assayed 11.27% Fe; a sample NE of Emerald Lake assayed 24.01% Fe.

References: ODM maps 2065, 1120G.
ODM, 1916, Volume XXV, pt. 1, p.178-81.

That Man Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: That Man, Agassiz and This Man lakes.
Reference: ODM map 2065.

Description: NE-trending magnetite-hematite-quartz (chert, jasper) iron formation extending about 8 miles in length and up to 300 feet in width but averaging about 75 feet.

Economic Features: In 1949 reserves were estimated at 43,752,000 tons averaging 31.06% total Fe over a length of 16,730 feet and to a depth of 300 feet.

In 1963 reserves estimated at 100 million tons of magnetite - hematite averaging slightly over 30% Fe.

Ownership: Lakehead Mines Limited.

History: 1943-44 Dip needle and geological surveys and 39 d.d. holes for 12,000 feet by Sarpedon Mines Limited.
1949 21 d.d. holes for 18,811 feet by Head of the Lakes Iron Limited.
1951 12 d.d. holes for 11,589 feet by Head of the Lakes Iron Limited.

48°00' - 91°15' (Cont.)

References: ODM maps 2065, 1120G.
OBM, 1916, Volume XXV, p.169-74, 176-7.
Mineral files, Mineral Resources Division, Ottawa.

48° 30' - 92° 30'

Seine Bay Prospect

(See Farrington Township)

Shoal Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: S and E of Shoal Lake.
Reference: ODM map 2115.

Description: Magnetite - quartz iron formation interlayered with schists and magnetic schists within Archean volcanics.

Economic Features: Drilled over a strike length of 4,800 feet with 300 to 510 feet of interbedded schists and iron formation intersected.

History: 1957 4 d.d. holes for 2,423 feet.

References: ODM maps 2115, 1150G.
Assessment files, Port Arthur.

48° 30' - 92° 45'

Seine Bay Prospect

(See Farrington Township)

48° 45' - 91° 30'

Finlayson Lake Occurrences

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: Near SW end of Finlayson Lake.

Description: N or NE trending zones of magnetite-bearing or pyrite - pyrrhotite iron formations, ranging from 5 to 35 feet in thickness, in Archean metasediments. Some chalcopyrite present.

History: 1965 Geological and magnetometer surveys by Bankfield Consolidated Mines Ltd.
1966 EM and magnetic surveys by Cypress Exploration Corp. Ltd.

References: ODM map 48a.
ODM, 1965, P.R. 1965-3, p.64-5.
Assessment files, Port Arthur.

Little Falls Prospect

Class: Hydrothermal.

Location: On claims E 110 and E 111, near Little Falls, 2.5 miles E of Atikokan Station.
Reference: ODM map P.348.

Description: Disseminated and massive replacements of magnetite and pyrite in a metagabbroic dike along the Quetico Fault. Part of the Atikokan Range.

Economic Features: Main mineralized zone approx. 1000 feet in length and consists of irregular pockets less than 50 feet in width. Assays range from 37.59 to 55.91% Fe, 1.73 to 9.05% S over core or surface widths from 7 to 45 feet.

Ownership: Northern Iron Ore Mines Limited.

History: 1909 4 trenches and 2 d.d. holes for 483 feet.
1914 Magnetometer and geological survey by Mines Branch, Ottawa.

48°45' - 91°30' (Cont.)

References: ODM maps P.348, 48a, 1133G.
ODM, 1923, I.O.C., Rpt., p.172.
Assessment files, Port Arthur.

Miscellaneous Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: 2000 and 3500 feet NNE of Little Falls.
Reference: ODM map P.348.

Description: Magnetite-chert-minnesotaite iron formation up to 30 feet wide within tuffaceous "ashrock" of the Steeprock Group.

References: ODM map P.348.
ODM, in preparation, Steeprock Iron Area.

48° 45' - 92° 15'

Bennett - Tanner Occurrences

(See Bennett Township)

49° 45' - 91° 45'

Boyce Rapids Occurrence

Class: Iron formation, Algoma type.

Location: Near S shore of Seine River on former claims 159 to 164.

Description: Thin band of chert and limonite.

History: Before 1912 12 pits, 30-foot shaft and 5 d.d. holes.

References: ODM, 1923, I.O.C. Rpt., p.175.

RENFREW COUNTY

BAGOT TOWNSHIP

Bluff Point Mine (Past Producer)

Class: Contact metasomatic.

Location: Lot 16, Conc. 10 and 11, near N shore of Grassy Bay.
Reference: GSC map 1064A.

Description: Magnetite-bearing zones, striking NE over a length of 1,400 feet, at or near a marble-hornblende gneiss contact. Two main lenses present each about 500 feet long and up to 40 feet wide.

Economic Features: A sample of ore shipped assayed 59.50% Fe, 9.10% SiO_2, 4.80% Al_2O_3, 0.160% S.

Ownership: The Algoma Steel Corp. Ltd.

History: 1881-1901 Mining from a 500 foot-deep incline shaft, and several open pits in part by the Canada Iron Furnace Co. Together with the Campbell Mine, about 9000 tons shipped.

References: ODM map 53b; GSC maps 1046A, 67G.
GSC, 1952, Paper 51-27, p.43.
GSC, 1958, Bull. 45, p.25.
ODM, 1955, Volume LIII, pt.4, p.56-7.

Bagot Tp. (Cont.)

Calabogie, Main (Campbell and Caldwell Mines)
Prospect (Past Producers)

Class: Contact metasomatic.

Location: Lot 16, Conc. 8 and 9, approximately 1 mile E of Calabogie.
Reference: GSC map 1046A.

Description: NE-trending zone of magnetite-bearing skarn 100 to 400 feet wide, 3,000 feet or more long, dipping 40 to 45 SE,, and plunging 50 NE. The skarn consists of magnetite, chlorite, pyroxene, hornblende and less than 1% pyrite, pyrrhotite and chalcopyrite, and occurs in hornblende gneisses interlayered with marble.

Economic Features: Drilling outlined a body 2,100 to 2,300 feet long, 150 feet wide, averaging 25% Fe to a depth of 500 feet and 28% Fe to 1000 feet.

Average grade calculated at 26% Fe, 25.40% SiO_2, 10.15% CaO, 8.26% MgO, 0.27% S, 0.21% P, 0.38% Mn, 6.04% Al_2O_3, 0.37% TiO_2.

Reserves estimated at 45 million tons.

Ownership: The Algoma Steel Corp. Ltd.

History: 1883-1901 Approximately 10,000 tons shipped from numerous pits up to 60 feet deep by Mr. Coe, Hamilton Steel and Iron Co., and Mr. T.B. Caldwell from Caldwell (Coe) Mine.

Before 1902 A few thousand tons shipped from 55-foot open cut (Campbell or No.4 Mine) by the Calabogie Mining Company.

1951-2 35 d.d. holes for approximately 15,000 feet by the Algoma Steel Corp. Ltd.

References: ODM map 53b; GSC maps 1046A, 67G.
GSC, 1952, Paper 51-27, p.40-3.
GSC, 1958, Bull. 45, p.30-2.
Canadian Mines Handbook, 1967-8.
Assessment files, Toronto.

Culhane Mine Occurrence

Class: Contact metasomatic.

Location: Lot 21, Conc. 7, near SE end of Norway Lake.
Reference: ODM map 53b.

Description: NE-trending zone of magnetite-bearing lenses in amphibolite or marble near a diorite gneiss contact. Lenses occur over a strike length of 2,000 feet and are 10 to 15 feet wide. Magnetite present as disseminations and narrow bands with some calcite, quartz, pyroxene, amphibole, pyrrhotite and pyrite.

Economic Features: A sample assayed47.70% Fe, 1.65% S, 0.179% P.

History: 1880-90 3 open cuts, 2 with shafts 15 and 70 feet deep.

References: ODM maps 53b; GSC maps 1046A, 67G.
GSC, 1951, Paper 51-27, p.47.
GSC, 1958, Bull. 45, p. 35-6.
ODM, 1944, Volume LIII, pt.3, p. 51-3.

Lerond Occurrence

Location: Lot 23, Conc.9, 125 feet S of W end of Norway Lake.
Reference: ODM map 53b.

Description: Probably a small lens of magnetite in marble. Dump contains disseminated magnetite (50 percent) in bands with calcite and actinolite.

History: Shaft possibly 50 feet deep.

References: ODM map 53b; GSC maps 1046A, 67G.
ODM, 1944, Volume LIII, pt.3, p.55.
GSC, 1952, Paper 51-27, p.49.

Bagot Tp. (Cont.)

Lot 18, Concession 9 Occurrence

Class: Hydrothermal?

Location: Lot 18, Conc. 9, approximately 1 mile NE of Calabogie.
Reference: GSC map 1046A.

Description: NE-trending zone 2 to 3 feet thick mainly containing magnetite in marble with some pyrite and chlorite. Locally it is brecciated serpentinized hornblende rock with magnetite and hematite.

History: 2 shafts, an open cut and a trench.

References: ODM map 53b; GSC maps 1046A, 67G.
ODM, 1944, Volume LIII, pt.3, p.55.
GSC, 1952, Paper 51-27, p.48.

Lot 23, Concessions 5 and 6 Occurrences

Location: Lot 23, Conc. 5 and 6, approximately 1 mile NE of Norway Lake.
Reference: GSC map 1046A.

Description: Two, E-trending zones occur 130 feet apart and are approximately 150 and 165 feet long. The S zone contains disseminated magnetite (up to 50%) over widths of 2 feet, with a few narrow bands of massive magnetite, in hornblende schist.

Economic Features: A composite sample assayed 31.02% Fe, 37.08% insol., 0.167% S, 0.312% P

History: Numerous pits.

References: GSC maps 1046A, 67G.
GSC, 1952, Paper 51-27, p.46.
ODM, 1944, Volume LIII, pt.3, p.51-2.

Lot 28, Concession 6 Occurrence

Location: Lot 28, Conc. 6, 1,100 feet S of road.
Reference: GSC map 1046A.

Description: Massive and disseminated magnetite 8 feet thick at and near a marble-hornblende gneiss contact.

Economic Features: An average pit sample assayed 42.81% Fe, 38.00% insol., 0.006% P, 0.068% S, 1.37% TiO_2.

History: 18-foot pit and open cut.

References: ODM map 53b; GSC maps 1046A, 67G.
ODM, 1944, Volume LIII, pt.3, p.52.
GSC, 1952, Paper 51-27, p.46.

Martel (Wilson) Mine (Past Producer)

Class: Contact metasomatic?

Location: Lots 13, 14, Conc. 10, 1 3/4 mile SE of Calabogie
Reference: GSC map 1046A.

Description: Magnetite with some quartz, calcite and pyrite occurred in amphibolite near a syenite stock. The body was 20 feet thick and dipped 60 SE. Mining was from 2 pits 55 and 60 feet in length located 350 feet apart.

Economic Features: A sample assayed 58.71% Fe, 7.10% SiO_2 0.230 S, and a trace of TiO_2. A grab sample assayed a possible 0.1 to 0.2% vanaduim.

Ownership: The Algoma Steel Corp. Ltd.

History: Before 1890 Approx. 2,000 tons shipped from 2 pits.

References: ODM map 53b; GSC maps 1064A, 67G.
GSC, 1952, Paper 51-27, p. 44.
ODM, 1944, Volume LIII, pt.3, p.56.

Bagot Tp. (Cont.)

Miscellaneous Occurrences

Location: Lot 22, Conc. 3, 4, 7; Lot 10, Conc. 10; Lot 18, Conc 11.

Description: Occurrences of magnetite were mapped or reported to be present in Lot 22, Conc 3 and 4; Lot 22, Conc. 7; and Lot 10, Conc. 10. Geophysical anomalies are attributed to magnetite in Lot 18, Conc. 11.

References: GSC maps 1046A, 67G.
ODM, 1944, Volume LIII, pt.3, p.57.
GSC, 1952, Paper 51-27, p.46, 48, 49.

Williams (Black Bay) Mine

Class: Contact metasomatic.

Location: Lot 22, Conc. 11, 2 miles NW of Calabogie.
Reference: ODM map 53b.

Description: Two, NE-trending zones 675 apart, up to 20 feet wide, and approximately 800 and 240 feet long, contain magnetite disseminations and bands with pyroxene, hornblende and carbonates, at a marble-diorite contact.

Economic Features: Two samples assayed 51.89% Fe, 0.016% P, and 51.50% Fe, 15.85% insol.

History: 1880-90 25,000 tons mined from open cut with 4 incline drifts to depths of 10 to 80 feet.

References: ODM maps 53b; GSC maps 1046A, 67G.
GSC, 1958, Bull. 45, p.57-8.
ODM, 1944, Volume LIII, pt.3, p.57-8.
GSC, 1952, Paper 51-27, p.44-5.

BLITHFIELD TOWNSHIP

Blithfield Prospect

Class: Magmatic and contact metasomatic?

Locations: Lot 13, Conc. 1, exposed in cut on CPR 3 miles S of Calabogie.
Reference: GSC map 1046A.

Description: A lens of massive titaniferous magnetite, 6 feet thick and at least 62 feet long in metagabbro. Some magnetite intersected in drilling within adjacent marble.

Economic Features: A sample assayed 38.80% Fe, 0.013% P, 0.179% S, 4.96% TiO_2

History: 1952 Some d.d. by Algoma Ore Properties Ltd.

References: ODM map 53b; GSC maps 1046A, 67G.
GSC, 1952, Paper 51-27, p.45.
GSC, 1958, Bull. 45, p. 11-2.

BROUGHAM TOWNSHIP

Blackbird Lake Occurrence

Location: Lot 22, Conc. 12, approximately 1,000 feet SW of Blackbird Lake.
Reference: GSC map 1046A.

Description: NW-trending zone of disseminated to massive magnetite and pyrrhotite, up to 8 feet wide and 400 feet or more long, into hornblende or pyroxene bearing hybird gneisses. Grades into rusty paragneiss to NW.

History: 2 pits and 5 trenches.

References: GSC map 1046A; GSC map 67G.
GSC, 1952, Paper 51-27, p. 49-50

Brougham Tp. (Cont.)

Miscellaneous Occurrences

Location: Lot 7, Conc 10; Lot 9, Conc. 12; Lot 13, Conc. 19 (Range D South, Lot 25), Lot 14, Conc. 18.

Description: On Lot 7, Conc. 10; 6-inch seams of magnetite occur at a granitic gneiss-marble contact.
On Lot 13, Conc. 19; disseminated magnetite and some massive magnetite and pyrite in amphibolite.
On Lot 9, Conc 12: Disseminated magnetite in pink granite-pegmatite, locally forms 10 or 15 percent of rock.

History: Pits on Lot 7 and Lot 13 occurrences.

References: ODM map 53b; GSC maps 1046A, 67G.
ODM, 1944, Volume LIII, pt.3, p.58-9
GSC, 1952, Paper 51-27, p. 49-50.

GRATTAN TOWNSHIP

Big Jim Occurrence

Location: Lot 17, Conc. 10

Description: Magnetite, similar in occurrence to the Radnor Mine.

History: 1901-2 Some diamond drilling and stockpiling of 180 tons mined from open pit.

References: ODM map 53b; GSC map 100G.
GSC, 1958, Bull. 45, p.49.
ODM, 1944, Volume LIII, pt.3, p.60.

Parks Occurrence

Location: Lot 16, Conc. 8.

Description: Banded magnetite, similiar to the Radnor Mine, up 50 feet wide and traced for 1,300 feet,in gneiss.

References: ODM map 53b; GSC map 100G.
GSC, 1958, Bull. 45, p. 49.
ODM, 1944, Volume LIII, pt.3, p.59.

Radnor Mine (Past Producer)

Location: Lot 16, Conc. 9; approximately 8 miles SE of Eganville.
Reference: ODM map 53b.

Description: Disseminations and bands of massive magnetite within an arcuate zone of hornblende-feldspar gneiss more than 1,300 feet in length occurring as a remnant in granitic rocks.

Economic Features: The deposit is reported to have contained lenses of coarse magnetite 4 to 25 feet thick. An average analysis of ore shipped gave 47.50 % Fe, 19.5% SiO_2 and 0.25% S.

History: 1900 and 1904 Some diamond drilling.
1901 to 1907 18,824 net tons shipped from 7 open pits 30 to 340 feet long, 10 to 35 feet wide and 15 to 40 feet deep by the Canada Iron Furnace Company.

References: ODM map 536; GSC map 100G.
ODM, 1944, Volume LIII, pt.3, p.51, 59-60.
GSC, 1958, Bull. 45, p.49-50, Fig.17.

HORTON TOWNSHIP

Horton Township Occurrence

Class: Magmatic.

Location: Conc. 6, just west of Ottawa River.

Description: Several small deposits of titaniferous magnetite in gabbro. A sample contained 43.72% Fe, 17.23% TiO_2, 7.82% SiO_2, 0.63% V_2O_3, 0.43% NiO, 0.1% P., 0.06% S.

References: ODM map 53b; GSC map 222G.
ODM, 1944, Volume LIII, pt.3, p.60.

LYNDOCH TOWNSHIP

Lot 1, Range B Occurrence

Location: Lot 1, Range B, just W of lumber camp road.
Reference: ODM map 1953-2.

Description: A zone, 6 feet wide, is mineralized with magnetite and hematite, with some pyrite, chalcopyrite, specularite, garnet and biotite, in hornblendite cut by pegmatite.

History: Small pit.

References: ODM map 1953-2; GSC map 96G.
ODM, 1953, Volume LXII, pt.5, p.71.

McNAB TOWNSHIP

McNab Mine (Past Producer)

Class: Hydrothermal.

Location: Lot 7, Conc. 13, and Lot 6, Conc. 14, in the western part of town of Arnprior.
Reference: ODM map 53b.

Description: Six deposits of hematite or hematite-calcite as vein filling in fracture and fault zones within Precambrian (Arnprior) marble and Paleozoic (Beekmantown) dolomite.

Economic Features: Deposits range from 15 to 250 feet in length and 5 to 12 feet in width.
Ore mined averaged approximately 68% Fe. A sample assayed 59.09% Fe, 0.065% S, 0.03% P.

History: 1873 or 1874 10,000 to 15,000 tons mined by Peter Bell Iron Company.

References: ODM map 53b; GSC map 1739.
ODM 1944, Volume LIII, pt.3, p. 61.
GSC, 1924, Mem. 136, p. 112-4.

RAGLAN TOWNSHIP

Keller Occurrence

Class: Magmatic.

Location: Lot 26, Conc.7.
Reference: ODM map 1953-2.

Description: Stringers of magnetite, up to 4 inches in width, in metagabbro.

References: ODM map 1953-2; GSC map 96G.
ODM, 1953, Volume LXII, pt. 5, p.71.

SUDBURY DISTRICT

AFTON TOWNSHIP

Emerald Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: On island and east shore Emerald Lake, E centre part of township.
Reference: ODM, 1936, Vol. XLV, pt. 6, p.40.

Description: Two E-W striking bands of iron formation approx. 1/4 mile apart. Iron formation contains quartz (chert, jasper), magnetite, hematite and pyrite (in quartz-rich portions) with an iron content between 5 and 30 percent.

Setting: Within Archean metasediments.

Economic Features: On the island of Emerald Lake, the iron formation is 3,000 feet long and 50 to 300 feet wide and contains a high grade zone (Fe - 20% plus) 1500 feet long and 100 to 300 feet wide.
The north band is the host rock for the New Golden Rose (Afton) Mine gold deposit.

History: 1900-41 Discovery, development and operation of the New Golden Rose (Afton) mine.
1952-53 Geophysical and geological surveys by Abex Mines Limited.
1953 Diamond drilling by Abex Mines Limited.
1956 8 d.d. holes for 6,288 feet by Geoscientific Prospectors Ltd.
1956 Geophysical survey and 7 d.d. holes by Wabico Mines Ltd.
1962-63 Magnetometer and geological surveys, stripping and sampling by The Hanna Mining Co. Ltd.

References: ODM map P.367; GSC Map 1502G.
ODM, 1936, Vol. XLV, pt. 6, p.40-41, 46-48.
Assessment files, Sudbury.

ARBUTUS TOWNSHIP

Little Rush River - Canoe Lake Occurrence

(See Huffman Township)

BENTON TOWNSHIP

Northeast Benton Township Occurrence

Class: Iron formation, Algoma type.

Location: Extreme NE corner of township.
Reference: ODM map 44g.

Description: Southern termination of Woman River Iron Range. Here the formation is non-magnetic, alternating chert and jasper bands which strikes N67 W and is approx. 20 feet wide.

Setting: Within Archean metavolcanics.

References: ODM maps 44g, 1933a.
ODM, 1935, Vol. XLIV, pt. 7, p.11.

Southeast Benton Township Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: 2 miles west and 1 1/4 mile N of SE corner of township.
Reference: ODM map 44g.

Description: Quartz (chert) and pyrite iron formation within Archean metavolcanics. The formation strikes N 60 W and is exposed for a width of 12 feet.

References: ODM map 44g, 1933a.
ODM, 1935, Vol. XLIV, pt. 7, p.10.

Arbutus Tp. (Cont.)

Wakami River Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: S shore of Wakami River, 1.3 miles east of west boundary of township.
Reference: ODM Map 44g.

Description: Lean quartz (jasper, chert) - pyrite iron formation within Archean metasediments (Ridout Group). Formation strikes N47 W and is exposed for a width of 150 feet.

References: ODM maps 44g, 1933a, 2261G.
ODM, 1935, Vol. XLIV, pt. 7, p.15.

BLEWETT TOWNSHIP

Blewett Township Occurrence

Class: Iron formation, Algoma type.

Location: Approx. 1 mile SW of Tekwa Lake, SE quarter of township.
Reference: ODM map P.300.

Description: NW-trending, magnetite-jasper iron formation in Archean migmatitic rocks.

References: ODM map P.300; GSC map 179A, 1527G.
ODM, 1923, I.O.C. Rpt., p.205.

BOTHA TOWNSHIP

Botha Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Occurrences in east and west part of township, including: west of N end Sandfly Lake, extending into

Rhodes Township, NE of South Lake, and between McCrindle and Venetian lakes.
Reference: GSC map 1519G.

Description: Discontinuous zones of magnetite-quartz iron formation within Archean metavolcanics and migmatitic rocks: zone NE of South Lake 2,000 feet long, 50 feet wide, and strikes WNW; zone west of Sandfly Lake approx. 1200 feet long, 20 feet wide and strikes E-W.

Economic Features: An assay of 32.63% Fe was obtained from character samples taken at 10-foot intervals from a 120 foot trench in E part of township; a 200-pound character sample from one of three zones in the west part of township assayed 39.72% Fe. (Holmes, 1962).

History: 1957 Magnetometer survey by Explorers Alliance Ltd.
1959 Magnetometer survey by Assembly Mines Ltd.

References: GSC map 1519G.
Prospectus, 1962, Ironco Mining and Smelting Ltd.
ODM, 1923, I.O.C. Rpt., p.206.
Assessment files, Sudbury.

BURROWS TOWNSHIP

McKay Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SW quarter of township.
Reference: GSC map 286G.

Description: Quartz (jasper) - magnetite iron formation with some pyrite and pyrrhotite, occurs as two parallel bands striking N35 E and up to 3,000 feet in length.

Economic Features: Drilling intersected 30, 157 and 104 feet (core lengths) of iron formation. Three character samples from surface exposures assayed 28 to 36 percent soluble Fe.

Setting: Within Archean metavolcanics.

Burrows Tp. (Cont.)

History: 1947 to 49 Aeromagnetic survey by Dominion Gulf Co.
1960 Reconnaissance geological and geophysical surveys by Rio Tinto Limited.
1961 Magnetometer survey.
1962 Magnetometer survey by Pickands Mather and Co. Ltd.
1962 3 d.d. holes by Pickands Mather and Co. Ltd.

References: GSC map 286G.
Assessment files, Timmins.

CHURCHILL TOWNSHIP

Okawakenda - Michiwakenda Lakes Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: On island and shore SE Okawakenda Lake, and on E central shore Michiwakenda Lake.
Reference: ODM map 43c.

Description: Lean hematite-magnetite iron formation with interlayered "greenish slate" less than 100 feet thick occur within Archean metasediments (Ridout Group).

References: ODM map 43c.
ODM, 1934, Vol. XLIII, pt. 3, p.51-2.
GSC, 1917, Mem. 95. p.39.

Perkins Lake Occurrence

Class: Iron formation, Algoma type.

Location: SE from SE corner Perkins Lake.
Reference: ODM map 43c.

Description: Iron formation with "black aphanitic material", pyrite and quartz, strikes NW over a length of 2 miles.

Setting: Within Archean metavolcanics.

References: ODM map 43c.
ODM, 1934, Vol. XLIII, pt. 3, p.47.

CONNAUGHT TOWNSHIP

Burns Lake Occurrence

Class: Iron formation, Algoma type.

Location: 2/5 mile N of Burns Lake.
Reference: ODM map 43c.

Description: Two E-W trending bands of iron formation, within Archean metasediments (Ridout Group), contain quartz, limonitic material, and massive pyrite.

References: ODM map 43c.
ODM, 1934, Vol. XLIII, pt. 3, p.67.

COTTON TOWNSHIP

Burwash Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: E and W of S end of Burwash Lake, south half of township.
Reference: ODM maps P.300, 301.

Description: Magnetite - quartz - amphibole iron formation has a sinuous strike length of 7.2 miles and is up to 500 feet in width.

Setting: Associated with ferruginous chert bearing 2 to 10 percent sulphides and intruded in places by diabase, diorite and granitic pegmatite dikes. Within Archean metavolcanics.

Economic Features: 15 possible pit areas outlined containing indicated or inferred reserves of 450,000 tons per vert. foot, averaging 20.7 percent Fe. Potential tonnage estimated to be more than 100 million tons. Preliminary concentration tests indicate a concentrate grading 68.2% Fe, 5.0% SiO_2 can be made with a recovery of 93 percent.

Cotton Tp. (Cont.)

Ownership: Ironco Mining and Smelting Limited.

History: Before 1923 some diamond drilling by Mackenzie and Mann Ltd.
1953 Aeromagnetic survey by M.A. Hanna Co.
1954 Geological and magnetometer surveys by M.A. Hanna Co.
1955 62 d.d. holes by M.A. Hanna Co.
1964 Geological and magnetometer surveys by Ironco.
1964 11 d.d. holes for 5,029 feet by Ironco.

References: ODM maps P.300, 301; GSC maps 179A, 1513G, 1520G.
GSC, 1917, Mem. 95, p.125-26.
Assessment files, Sudbury.

Cotton Township (North Half) Occurrence

Class: Iron formation, Algoma type.

Location: NE quarter of township, 3 mi. west of east boundary and 2 1/2 mi. S of north boundary.
Reference: ODM map P.301.

Description: Iron formation in Archean migmatitic rocks.

References: ODM map P.301, GSC map 179A.

CRAIG TOWNSHIP

Craig Township Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: 45 mi. NW of Sudbury.

Description: Magnetite-bearing iron formation intersected at a depth of 500 feet.

Economic Features: Concentration tests produced a product grading 68.9% Fe, 4% SiO_2 at 200M from a sample grading 35% Fe.

History: 1959 Drilling by Min-Ore Mines Limited.

References: ODM map P. 287.
Mineral Resources Division, Ottawa, 1961, M.I. Bull. MR51, p. 98.

CUNNINGHAM TOWNSHIP

Edwards and Mink Lakes Occurrences

Class: Iron formation, Algoma type, sulphide facies.

Location: West central and central parts of township, 1/2 mi. S of Mink Lake and 3/4 mi. south of Edwards Lake.
Reference: ODM map 51f.

Description: Lean iron formation and chert trend easterly for 1 3/4 miles with widths from 50 to 800 feet in the area south of Mink Lake, and has an arcuate NNE to W trend in the area south of Edwards Lake. Formation contains pyrite, pyrrhotite, sphalerite, galena, chalcopyrite and lenses of argillite and graphitic material. Extensively prospected for base metals.

Setting: Within Archean metavolcanic flows and tuff.

History: 1904-7 trenching by Ridout Mining Company.
1954 Electromagnetic survey by Cominco.
1954 4 d.d. holes by Cominco.
1955-7 74 d.d. holes by Shunsby Gold Mines Limited.
1960-61 Geological survey by Nipiron Mines Ltd.
1960-61 9 d.d. holes by Nipiron Mines Ltd.

References: ODM maps 51f, 2116, 2245G; GSC map 230A.
ODM, 1944, Vol. LI, pt. 7, p.11-13, 20-22.
GSC, 1929, Mem. 157, p.21-24.
Prospectus, 1955, 1961, 1962, Shunsby Gold Mines Ltd.
Assessment files, Sudbury.

Peter Lake Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: 1/4 mi. south of Peter Lake, SW quarter of township.
Reference: ODM map 51f.

Description: Lean iron formation and chert, trends northerly, over a length of 9,000 feet and 300 to 600 feet thick. Formation contains chert, pyrite, sphalerite, galena and chalcopyrite. Three lenses 50 to 100 feet long and 10 to 30 feet wide contain approx. 25 percent pyrite.

Setting: Within Archean metavolcanics.

Cunningham Tp. (Cont.)

History: 1927 Trenching.
Before 1937 Trenching by Gold Chief Mines Limited.
1952 Some diamond drilling by Anglo-Sudbury Mining and Metals Corp. Ltd.

References: ODM maps 51f, 2116, 2245G, GSC map 230A.
ODM, 1942, Vol. LI, pt. 7, p. 11-13, 19-20.
GSC, 1927, Mem. 157, p. 21-24.

Yarwood Lake Occurrence

(See Garnet Township)

DORE TOWNSHIP

Dore Township Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: S shore of Bayly Lake, 1/4 mi. east of west boundary of township. Reference: ODM map 2070.

Description: Chert (90 percent) - magnetite (10 percent) iron formation 10 feet in width is intercalated with mafic volcanics within an Archean felsic volcanic unit.

References: ODM maps 2070, 2116.
ODM, 1965, G.R. No.33, p.10.

EMO TOWNSHIP

Emo Township Occurrence

Class: Hydrothermal.

Location: Near east boundary, approx. 2 miles S of N boundary of township.
Reference: Assessment files, Sudbury.

Description: Hematite, with local concentrations of magnetite or pyrite, occurs along brecciated zones and as scattered patches within quartz veins or silicified areas in Archean granitic rocks.

Economic Features: Main breccia zone trends northerly and is at least 200 feet long and up to 20 feet wide. Drill intersections of 7 feet with an estimated 40 percent hematite, and of 18 feet with an estimated 30 to 40 percent hematite were obtained.

History: 1952: Gravimetric and magnetometer surveys and 8 d.d. holes for 2,785 feet by Head of the Lakes Iron Ltd.

References: Assessment files, Sudbury.

ENGLISH TOWNSHIP

Cropsey Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 1½ to 2 mi west of Muskrat Lake at and near north boundary.
Reference: ODM map 35j.

Description: Quartz (jasper) - magnetite-hematite iron formation interlayered with "green rock material" and in part pyritic. Strikes northerly with widths of 50 and 100 feet recorded.

Setting: Within Archean metavolcanics.

References: ODM map 35j, GSC map 291G.
ODM, 1926, Vol. XXXV, pt.6, p.72.
ODM, 1967, Misc. Paper 11, p. 58-59.

English Lake Occurrence

(See Semple Township)

Ferrier Creek Occurrence

Class: Iron formation, Algoma type.

Location: 1 1/2 mi. NE of Ferrier Lake.
Reference: ODM map 35j.

Description: Siliceous iron formation interbedded with Archean metavolcanics. May be an extension of the Cropsey occurrence.

References: ODM map 35j; GSC map 291G.
ODM, 1926, Vol. XXXV, pt. 6, p.72.
ODM, 1967, Misc. Paper 11, p.58-9.

GARNET TOWNSHIP

Fawn Creek Occurrence

Class: Iron formation, Algoma type.

Location: 2 mi. west and 1/2 mi. N of SE corner of township.
Reference: ODM map 2116.

Description: Iron formation traced for 1 mi. in length within Archean metavolcanics.

References: ODM maps 2116, 1933a; GSC map 230A; GSC, 1929, Mem. No. 157, p.27.

Southwest Garnet Township Occurrence

Class: Iron formation, Algoma type.

Location: 3/4 mi. south of Travel Lake.
Reference: ODM map 51f.

Description: NNW striking, lean iron formation 1 mile in length and 20 to 120 feet in width. Drilling intersected 58 feet of cherty material bearing pyrite and pyrrhotite.

Setting: Within Archean metavolcanics.

History: 1966 - 4 d.d. holes by Canadian Nickel Co. Ltd.

References: ODM maps 2116, 51f; GSC map 230A.
GSC, 1929, Mem. 157, p.26.
Assessment files, Sudbury.

Yarwood Lake Occurrence

Class: Iron formation, Algoma type.

Location: East from east central shore of Yarwood Lake.
Reference: ODM map 51f.

Description: E-W striking, lean iron formation, 12,000 feet long and up to 200± feet wide (drilling intersected 225 feet in core length). Contains chert, jasper, ferruginous argillite, magnetite, hematite and in the eastern part lenses up to 75 feet long and 12 feet wide of pyrite, pyrrhotite and trace amounts of chalcopyrite.

Setting: Within Archean metavolcanics.

History: 1966 - 5 d.d. holes by Canadian Nickel Co. Ltd.

References: ODM maps 2116, 51f, 2245G; GSC map 230A.
ODM, 1942, Vol. LI, pt. 7, p.12.
GSC, 1929, Mem. 157, p.25-26.
Assessment files, Sudbury.

GENOA TOWNSHIP

Northcott Bay Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: N of Rush Lake and W of Northcott Bay, N part of township.
Reference: ODM map 2067.

Description: Thin, lenticular bands of quartz-magnetite-silicate iron formation strike E-W over 2 miles. Bands up to 200 feet thick but generally much less and have an Fe content in the order of 15 percent.

Setting: Within Archean metavolcanics.

References: ODM maps 2067, 2116, 2262G.
ODM, 1965, G.R. 38, p.14, 15.

Stackpool (East) Prospect

(See Marion Township)

GREENLAW TOWNSHIP

North Greenlaw Township Occurrences

Class: Iron formation, Algoma type.

Location: Near and along N shore Ridout Lake, between Ridout Lake and Sylvanite Creek; between Hatstone Lake and Sylvanite Creek; and near southwest shore Lee Lake. Reference: ODM map 2121.

Description: Discontinuous, easterly trending lenses of rusty-weathering lean iron formation and chert in part containing hematite and limonite up to 20 percent of the rock. Some lenses up to 400 feet wide and 1 mi. long.

Setting: Within Archean metavolcanics and metasediments.

References: ODM maps 2121, p.324, 43b; GSC map 230A.
GSC, 1929, Mem. 157, p.24-25.
ODM, 1934, Vol. XLIII, pt. 3, p.11-13.
ODM, 1968, G.R. 63, p.17-19.

South Greenlaw Township Occurrences

Class: Iron formation, Algoma type, sulphide? facies.

Location: Between Ridout and Wakami rivers 1/4 to 1/2 mi. N of south boundary, and 1 mi. to NE of Wakami River. Reference: GSC map 230A.

Description: Easterly trending, poorly exposed lean iron formation or chert composed of chert and thin limonitic bands with some vein sulphides. Observed in widths of 60 to 120 feet. Offset to east of Wakami River is 20 to 120 feet wide and 700 feet long.

Setting: Within Archean metavolcanics.

References: ODM maps 2121, 2245G; GSC map 230A.
GSC, 1927, Mem. 157, p.24-25.
ODM, 1968, G.R. 63, p.18.

GRIGG TOWNSHIP

Grigg Township Occurrence

Class: Iron formation, Algoma type.

Location: 2 mi. NE of Knight Lake, on Knight Creek.
Reference: ODM map P.301.

Description: Iron formation in Archean migmatitic rocks.

References: ODM map P.301; GSC map 179A.

GROVES TOWNSHIP

Pensyl Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Near S shore Pensyl Lake.
Reference: ODM map 43c.

Description: Quartz-magnetite iron formation less than 50 feet wide and traced east-west for ¾ mi. occurs within Archean greywacke of the Ridout Group.

References: ODM map 43c, 1933a.
ODM, 1934, Vol. XLIII, pt. 3, p.52, 65, 66.

HALCROW TOWNSHIP

Halcrow Township Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: SE corner of township. Reference: ODM map 2120.

Description: Quartz (chert)-magnetite iron formation in Archean metavolcanics.

References: ODM map 2120.
ODM, 1968, G.R. Rpt.63, p.17.

HALLIDAY TOWNSHIP

(See Other Midlothian Township Occurrences)

HART TOWNSHIP

Hart Township Occurrence

Class: Hydrothermal.

Location: Lots 7, 8, Conc. 5.

Description: Magnetite within Espanola limestone adjacent to diabase was traced for 400 feet in one locality and outcrops sporadically over 1,000 feet.

References: ODM map P.287, 38h.
ODM, 1929, Vol. XXXVIII, pt.7, p.66.

HEENAN TOWNSHIP

Woman River Iron Prospect

Class: Iron formation, Algoma type.

Location: SE quarter Heenan Township and west of Woman River in Marion Township.
Reference: ODM map 2067.

Description: NE-trending iron formation composed of chert, jasper and magnetite with siderite and pyrite locally. Thickness ranges from 2 to 1,400 feet. Iron content (estimated) is approx. 30 - 40 percent near base and 5 - 10 percent near top.

Setting: Part of the Woman River Iron Range, underlain by Archean felsic metavolcanics and overlain by mafic to intermediate metavolcanics.

Economic Features: Two zones outlined:
Zone No. 1 (Claims W.S. 11 and 12) - 30 to 60 feet wide and 300 to 700 feet long, composed of chert, magnetite and hematite averaging approximately 30 percent Fe, 0.018 percent P, and 0.9 percent S with local areas containing up to 56 percent Fe. Zone No. 2 (Claim W.S.8) - approx. 400 feet wide and 1500 feet long, is composed of quartz, magnetite, and minor siderite and pyrite; averages approx. 26.3 percent Fe, 0.013 percent P, and 1.18 percent S with local areas up to 43 percent Fe.

Davis tube tests on 5 samples ranging between 25 and 45 percent Fe gave concentrates ranging from 54 to 65 percent Fe with percent recovery between 70 and 98 at - 100 M and gave concentrates ranging from 57 to 66 percent Fe with percent recovery between 70 and 97 at - 200M.

Ownership: C.K. Leith Estate.

History: 1907 - 9344.2 linear feet of trenching and pitting.

References: ODM maps 2067, 2116, 1933a, 41c, 2262G.
ODM, 1965, G.R. 38, p.22-24, 46-53.
ODM, 1932, Vol. XLI, pt. 3.

HESS TOWNSHIP

Geneva Lake Prospect

(See Munster Township)

Hess Lake Prospect

Class: Hydrothermal.

Location: 350 feet S of SW part of Hess Lake, Lot 11, Conc. 1. SW corner of township.

Description: Magnetite skarn replacement of Bruce Limestone.

Hess Tp. (Cont.)

Economic Features: Deposit approx. 600 feet long and up to 120 feet in width. Assayed drill intersections are mainly in the 31 to 57% sol. Fe range accompanied in part by Tr to 0.65% Cu.

History: 1966 Magnetometer survey and 8 d.d. holes for 524 feet by Jaybee Landry Exploration and Mining Co. Ltd.

References: ODM map 38h.
Assessment files, Sudbury.

Miscellaneous Hess Township Occurrences

Class: Hydrothermal.

Location: At a number of localities, including one near the end of the SE arm of Geneva Lake.

Description: Small specularite or magnetite bodies in Huronian rocks.

Reference: ODM, 1929, Vol. XXXVIII, pt. 7, p.67.

HOWEY TOWNSHIP

Howey Township Occurrence

Class: Iron formation, Algoma type.

Location: Near S boundary, 1 1/2 mi. E of west boundary of township.
Reference: ODM map P.301.

Description: Iron formation in Archean migmatitic rocks.

References: ODM map P.301; GSC map 179A, 1513G.

HUFFMAN TOWNSHIP

Little Rice Lake Occurrence

Class: Iron formation, Algoma type, sulphide? facies.

Location: 0.4 mi. NE of Little Rice Lake, on portage to Rice Lake.
Reference: ODM map 44g.

Description: A 15-foot band of rusty weathering, strongly magnetic cherty iron formation within Archean metavolcanics.

References: ODM map 44g, 1933a.
ODM, 1935, Vol. XLIV, pt. 7, p.9.

Little Rush River - Canoe Lake Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: South central and SE parts Huffman Township, NE corner Arbutus Township and NW corner Yeo Township.
Reference: ODM map 2116.

Description: Lean iron formation up to 600 feet wide occurs interruptedly over 5 miles in a E-W direction. It contains quartz (jasper, chert), pyrite, pyrrhotite, and intercalated argillite. Prominent pyrite lenses locally. An assay on a specimen from one lens on east shore of Canoe Lake gave 45 percent Fe.

Setting: Within Archean metasediments (Ridout Group) in east and transitional to metavolcanics in the west.

History: Pits, trenches and dip needle survey.

References: ODM maps 2116, 44g, 1933a, 41d, 2261G; GSC map 231A.
GSC, 1929, Mem. 157, p.26, 27.
ODM, 1932, Vol. XLI, pt. 3, p.25.
ODM, 1935, Vol. XLIV, pt. 7, p.9.

HUTTON TOWNSHIP

Fraser Lake Occurrence

Class: Iron formation, Algoma type.

Location: SE part of township on Lot 1, Conc. 3, approx. 1/4 mi. E of Fraser Lake.
Reference: ODM map P.399.

Description: Iron formation in Archean metavolcanics.

Reference: ODM map P.399; GSC map 512G.

Moose Mountain Mine (Producer)

Class: Iron formation, Algoma type, oxide facies.

Location: NW part of township, Lots 6, 7, 8, 9, Conc. 3; Lots 7, 8, 9, 11, Conc. 4; Lots 11, 12, Conc. 5; Lot 12, Conc. 6; also in Lot 1, Conc. 6 of Kitchener Township.
Reference: ODM map P.399.

Description: Discontinuous lenses of iron formation aligned in a general northwesterly direction over a strike length of 4 1/2 miles. Eleven main bodies outlined which range in length from 300 to 4000 feet and have an average width of 150 feet. The iron formation consists of quartz and magnetite with lesser amphibole and minor amounts of hematite and pyrite. It is interbedded with Archean metavolcanics.

Economic Features: 80 percent of the reserves assay approx. 33% Fe or 28% magnetic Fe and yield a concentrate of 68% Fe with 40% wt. recovery. The other 20 percent of the reserves assay approx. 28% Fe or 21% magnetic Fe and yield a concentrate of 66% Fe with 31% wt. recovery.

Reserves in 1966 were estimated at 14 million tons of siliceous magnetite grading 30 to 35% Fe.

Production is at the rate of 600,000 long tons per year producing a concentrate grading 66.4% Fe by grinding to 12% + 325M.

Ownership: National Steel Corporation of Canada Limited.

History: 1901 - 1920 Moose Mountain Ltd. undertook exploration and operated a small crushing plant (1907 - 1909), and a Crondal concentrating and briquetting plant (1909-11, 1912-14, 1916 - 1920). Mining was by open pit and a 3-compartment shaft.
1954-56 Geological mapping, geophysical surveys and diamond drilling by Lowphos Ore Limited.
1956-57 Plant construction with initial shipment made in June 1959.
1963 Pelletizing section added capable of producing over 600,000 long tons annually.

Production: 1908 - 1924: 472,229 tons.
1959 - 1966: 4,266,888 tons.

References: ODM maps P.399, P.287, 41e; GSC map 1519G.
ODM, 1968, Open File Rpt. No. 5015.
CIMM, 1966, Vol. 69, p.50-61.
ODM, 1932, Vol. XLI, pt. 4, p.39-41.
ODM, 1923, I.O.C. Rpt. p.161-63.
Assessment files, Sudbury.
ODM, 1967, Misc. Paper 17, p.103.

KEITH TOWNSHIP

Groundhog River Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Palomar Lake and east boundary within NE quarter of township.
Reference: ODM map 1950-4.

Description: One continuous and several discontinuous E-W zones of iron formation locally more than 200 feet thick containing chert, jasper, magnetite and hematite with some intercalated tuff, pyrite, pyrrhotite, and amphibole.

Setting: Associated with metasediments within Archean metavolcanics.

Economic Features: In three diamond drillholes, core lengths of 68, 107, and 186 feet of iron formation were intersected with sections estimated to contain between 0 and 25 percent Fe.

A groove surface sample across 15 feet assayed 37% Fe, 46% SiO_2. A 20-ton sample assayed 34.41 percent Fe.

Keith Tp. (Cont.)

History: Before 1923 Trenching and bulk sampling.
1946 Geological survey by Cominco.
1959 Some diamond drilling.
1960 Ground magnetometer survey by Algoma Ore Properties Ltd.
1960 2 d.d. holes by Algoma Ore Properties Ltd.
1966 2 d.d. holes by Kukatush Mining Corp. Ltd.

References: ODM maps 1950-4, 2116, 46a, 2263G.
ODM, 1950, Vol. LIX, pt. 7, p.11, 12.
ODM, 1937, Vol. XLVI, pt. 2.
ODM, 1923, I.O.C. Rpt., p.204.
Assessment files, Timmins.

Mackeith Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: West of Mackeith Lake in central and west central part of township.
Reference: ODM map 1950-4.

Description: One main band of iron formation and several smaller ones strike E-W, over 3 miles in length. Width ranges from 30 to 160 feet, averaging approx. 70 feet. Iron formation contains quartz, magnetite, amphibole and some pyrite, and in part is invaded by mafic intrusions.

Setting: Within Archean metavolcanics.

Economic Features: Intersections in three drill holes were 37 and 24 feet, 12 and 40 feet, and 17 and 37 feet. Assayed sections range from 17 to 32 percent sol. Fe, and 10 to 29 percent mag. Fe.
Based on interpretation of a magnetic survey, 17 million gross tons per 100 feet have been estimated (Gearson, 1961).

History: 1947 Geological survey by Garnet Gold Mines Ltd.
1958 Magnetometer survey by Kukatush Mining Corp. Ltd.
1962 5 d.d. holes by Kukatush Mining Corp. Ltd.
1966 Electromagnetic, magnetometer, and geological surveys by Keevil Mining Group.

References: ODM maps 1950-4, 2116, 46a, 2263G.
ODM, 1950, Vol. LIX, pt. 7, p.11, 12.
ODM, 1937, Vol. XLVI, pt. 2.
Assessment files, Timmins.

Slaterock Lake Occurrence

Class: Iron formation, Algoma type.

Location: 3,000 feet south of Slaterock Lake.
Reference: ODM map 1950-4.

Description: Small band of iron formation in Archean metavolcanics.

References: ODM map 1950-4.
ODM, 1950, Vol. LIX, pt. 7, p.12.

KENOGAMING TOWNSHIP

Crawford Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 1/2 mi. S of Crawford Lake, west central part of township.
Reference: ODM, P.465, Kenogaming Tp.

Description: Two bands of iron formation 250 feet apart, trending NE for approx. 1/4 mile and up to 35 feet thick occur within Archean metavolcanics. The formation consists of chert, magnetite, amphibole, chlorite, and secondary pyrrhotite and chalcopyrite.

History: 1956-8 d.d. holes by Dunvegan Mines Ltd.

References: Assessment files, Timmins.

Nat River Prospect

(See Penhorwood Township)

KITCHENER TOWNSHIP

Moose Mountain Mine

(See Hutton Township)

LACKNER TOWNSHIP

Falconbridge Prospect

Class: Magmatic.

Location: Approx. 1 mi. east of Lackner Lake, SW quarter of township.
Reference: ODM map 2008.

Description: Irregular areas of massive, brecciated, disseminated or stringer magnetite-apatite occur within an area approx. 2200 feet in diameter within an intermediate ring of alkalic silicate rocks within the Lackner alkalic complex.

Economic Features: In one zone 200, 128, 90, and 43 feet of "ore zone" material intersected over a strike length of approx. 1,000 feet, in a second zone 66 feet intersected; in a third 10 feet intersected.

A 200-foot section averaged 39.0% sol. Fe, 5.0% P, and 0.15% Nb_2O_5 (Parsons, 1961).

Ownership: Falconbridge Nickel Mines Limited.

History: 1951 Aeromagnetic survey by Dominion Gulf Co.
1952 Geological and magnetic surveys by Dominion Gulf Co.
1954 3 d.d. holes for 1,988 feet by Dominion Gulf Co.
1959 Geological and magnetometer surveys and 11 d.d. holes by Falconbridge Nickel Mines Limited.
1963 3 d.d. holes by Falconbridge Nickel Mines Limited.

References: ODM maps 2008, 2116, 2232G.
ODM, 1961, G.R. No. 3, p.60-61.
Assessment files, Sudbury.

Hebden Lake Occurrence

Class: Magmatic.

Location: NE of Hebden (Portage) Lake, NW part of township.
Reference: ODM map 2008.

Description: Zones of massive and disseminated magnetite within the Hebden (Portage) Complex composed mainly of ijolite.

Economic Features: Outcrops of magnetite up to 100' by 8' occur over an area of approx. 2400' by 1000'. Drilling intersected up to 6 feet (core length) of massive magnetite and larger sections of disseminated magnetite.

History: 1950 Dip needle survey by Chyka Mines Ltd.
1951 Trenching and magnetometer surveys and 3 d.d. holes for 517 feet by Chyka Mines Ltd.
1954 29 d.d. holes for 8,069 feet by Chyka Mines Ltd.

References: ODM maps 2008, P.284, 2232G.
ODM, 1961, G.R. No. 3, p.68-69.
Prospectus, 1954, Chyka Mines Limited.
Assessment files, Sudbury.

LANG TOWNSHIP

Missinaibi Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SW side of Missinaibi Lake, NW part of township.
Reference: ODM map 2116.

Description: Magnetite-quartz iron formation, with minor pyrite, within Archean hornblende schists and gneisses.

Economic Features: Drilling intersected 26 feet of magnetite in 80 feet of core length in one hole, and an estimated 20 percent Fe over 205 feet in another.

History: 1959 4 d.d. holes by Algoma Ore Properties Ltd.

Lang Tp. (Cont.)

References: ODM maps 2116, 2220G, 2219G.
Assessment files, Sault Ste. Marie.

MALLARD TOWNSHIP

Opeepeesway River Occurrence

Class: Iron formation, Algoma type, sulphide-carbonate facies.

Location: On W shore Opeepeesway River, 0.2 mi. N of Satterly Creek.
Reference: ODM map 44g.

Description: A lens, 10 feet wide, of pyrite-carbonate iron formation within quartz-sericite schist.

References: ODM map 44g.
ODM, 1935, Vol. XLIV, pt. 7, p.9.

MARION TOWNSHIP

Stackpool (East) Prospect

Class: Iron formation, Algoma type, carbonate-sulphide facies.

Location: Between Rush River, central part of Marion Township, to 1 mi. east of Smithette Lake, NW corner Genoa Township.
Reference: ODM map 2067.

Description: Iron formation, as part of the Woman River Iron Range, strikes NE, interruptedly over 4 1/2 miles, and consists mainly of an upper (north) band of chert with minor siderite, magnetite, pyrite and pyrrhotite separated by up to 500 feet of volcanics from the lower (south) band of pyrite, siderite, magnetite, pyrrhotite, chert and silicate minerals.

Setting: Overlain by mafic and underlain by felsic Archean metavolcanics.

Economic Features: Three main zones within the south band are 7,000 feet long and 11 to 79 feet wide, 6,000 feet long and 0 to 102 feet wide, and 18,000 feet long with thin discontinuous lenses. Drilling indicated 51,580,000 tons averaging 34% Fe, 13.9% S, and 0.05% Mn (Can. Mines Handbook) or 5,100,000 tons per 100 feet of depth (Goodwin 1965). Davis tube tests on 3 samples at -150M, -200M and -325M produced a concentrate assaying 62.6 to 66.9 percent sol. Fe and 9.20 to 9.90S with total weight recovery of 22.8 to 25.6 percent.

Ownership: Excelsior Mines Limited.

History: 1910 4,000 feet of diamond drilling.
1928-29 Diamond drilling.
1950-51 23 d.d. holes and magnetometer survey by Central Sudbury Lead-Zinc Mines Ltd.
1957-58 27,747 feet of d.d. and electromagnetic survey by Stackpool Mining Company Ltd.

References: ODM maps 2067, 1933a, 2262G.
ODM, 1965, G.R. 38, p.14-22, 35-43.
Canadian Mines Handbook, 1967-68.
Assessment files, Sudbury.

Stackpool (West) Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: West central part of township, between the Woman and Rush rivers.
Reference: ODM map 2067.

Description: Quartz (chert, jasper) - magnetite iron formation, as part of the Woman River Iron Range, strikes NE over 2 1/2 miles. The east half contains 3 discontinuous bands up to 50 feet thick and 50 to 300 feet apart; the west half contains one continuous band 50 to 500 feet thick.

Economic Features: Drilling intersected 10 to 140 foot (horiz. width) sections ranging from 12 to 25 percent Fe.

Setting: Underlain by felsic and overlain by mafic Archean metavolcanics.

Ownership: Stackpool Mining Company Limited.

History: 1906-07 Trenching.
1958-59 Magnetometer survey by Stackpool Mining Co. Ltd.
1959(?) 12 d.d. holes by Stackpool Mining Co. Ltd.

Marion Tp. (Cont.)

References: ODM maps 2067, 2116, 1933a, 2262G.
ODM, 1965, G.R. 38, p.15, 43-45.
Assessment files, Sudbury.

MARSHAY TOWNSHIP

Marshay Township Occurrence

Class: Iron formation, Algoma type.

Location: SW quarter of township.
Reference: GSC, 1917, Mem. 95, Fig. 3, p.25.

Description: Iron formation within dominantly Archean granitic rocks.

Reference: GSC map 1520G.
GSC, 1917, Mem. 95, Fig. 3, p.25.

MacMURCHY TOWNSHIP

Big Four Lake Occurrence

Class: Iron formation, Algoma type.

Location: At Big Four Lake, approx. 7 miles NW of Shining Tree Lake.
Reference: ODM, 1923, I.O.C. Rpt., p.205.

Description: Chert and lean iron formation consisting of quartz (chert, jasper), magnetite, hematite and pyrite occurs over a length of 2,800 feet and is 200 to 300 feet wide.

Reference: ODM, 1923, I.O.C. Rpt., p.205.

Shining Tree Lake Occurrence

(See Tyrell Township, Timiskaming District)

McNAMARA TOWNSHIP

McNamara Township Occurrence

Class: Iron formation.

Location: NW corner of township.
Reference: GSC, 1917, Mem. 95, Fig. 3, p.25.

Description: Iron formation within Archean migmatitic rocks.

Reference: GSC, 1917, Mem. 95, Fig. 3, p.25.

McNAUGHT TOWNSHIP

Multi - Minerals Prospect

Class: Magmatic.

Location: 1/4 to 3/4 of a mile west of Lackner Lake, SE corner of township.
Reference: ODM map 2008.

Description: Magnetite-apatite deposits with minor amounts of pyroxene and pyrochlore and fragments of ijolite and nepheline syenite occur in foliated alkalic silicate rocks that form circular, inward dipping zones within nepheline syenite.

Setting: Within the Lackner alkalic complex.

McNaught Tp. (Cont.)

Economic Features: Two main Fe-bearing zones outlined.
No. 3 - 4 zone: Within an anomalous area approx. 3,000 feet long, 37.0 million tons averaging 13.7 percent titaniferous magnetite, 21.3 percent apatite, and 0.198 percent Nb_2O_5 are outlined in drilling to a depth of 1,000 feet.
No. 6 zone: Within an area 800 feet long and up to 200 feet wide 5.0 million tons grading 69.6 percent titaniferous magnetite, 21.9 percent apatite, and 0.173 percent Nb_2O_5 are indicated to a depth of 500 feet. In addition 2.72% rare earth - thorium - yttrium oxide present.

Ownership: Multi - Minerals Limited.

History: Before 1910 Trenching, pits and approx. 125 tons shipped.
1951 Aeromagnetic survey by Dominion Gulf Co.
1954-59 Magnetic and geological surveys and extensive diamond drilling by Multi - Minerals Limited.

References: ODM maps 2008, 2116, 2232G.
ODM, 1961, G.R. No. 3, p.51-69.
GSC, 1961, Bull. 70.
Assessment files, Sudbury.
Can. Mines Handbook, 1967-68.

MUNSTER TOWNSHIP

Geneva Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Straddles common boundary of Munster and Hess townships, approx. 3 miles west of east boundary.
Reference: ODM map P.287.

Description: Magnetite-quartz and some hematite in a chlorite schist host within Archean metavolcanics.

Economic Features: West deposit 340 feet by 60 feet and east deposit 140 feet by 120 feet as outlined by magnetometer survey. Drilling intersected up to 86 feet (core length) of iron formation. Assayed intersections in DDH No. 1 gave 17.85% Fe over 6.5 feet, 45.59% Fe over 8.5 feet and 32.72% Fe over 5.0 feet taken within a 72-foot interval.

History: 1909 Some diamond drilling and trenching.
1951 Magnetometer survey on Barry and Holland Group.
1956 2 d.d. holes for 887 feet by B and M Explorations Ltd.
1958 8 d.d. holes for 721 feet by B and M Explorations Ltd.

References: ODM map P.287; GSC map 1525G.
ODM, 1923, I.O.C. Rpt., p.208.
Assessment files, Sudbury.

NORMAN TOWNSHIP

Post Creek Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: NE corner of township, Lots 3, 4, Conc. 6.
Reference: GSC map 1512G.

Description: Numerous outcrops of siliceous iron formation containing magnetite and some sulphides within Archean metavolcanics.

References: GSC map 1512G.
ODM, 1923, I.O.C. Rpt. p.207.

OSWAY TOWNSHIP

Miscellaneous Osway Township Occurrences

Class: Iron formation, Algoma type.

Location: 2,500 feet SW of Cipway Point, 8,000 feet SW of Monella Point; 8,000 feet south of Jerome; and 8,500 feet SSW of Jerome.
Reference: ODM map 1949-2.

Description: Minor occurrences of lean cherty iron formation, some with recorded pyrite and pyrrhotite.

Osway Tp. (Cont.)

Setting: Within Archean metavolcanics and metasediments (Ridout Group).

References: ODM map 1949-2.
ODM, 1949, Vol. LVIII, pt. 5, p.6.

Ramsay Creek Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: On Ramsay Creek near S boundary of township.
Reference: ODM map 44g.

Description: A 4-foot band of quartz-pyrite iron formation within Archean metavolcanics.

References: ODM maps 1949-2, 44g.
ODM, 1935, Vol. XLIV, pt. 7, p.9.

Southwest Osway Township Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: SW quarter of township, 5000 feet SE of Opeepeesway Lake.
Reference: ODM map 1949-2.

Description: Discontinuous, NW-striking bands up to 600 feet wide of lean iron formation occur over a distance of 9000 feet. The formation consists of quartz (chert, jasper) with some disseminated and massive pyrite and pyrrhotite.

Setting: Within Archean metavolcanics.

References: ODM maps 1949-2, 2116, 44g.
ODM, 1949, Vol. LVIII, pt. 5, p.6.
GSC, 1929, Mem. 157, p.26.

PARKIN TOWNSHIP

Parkin Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: SE part of township; lot 3, conc. 1.
Reference: ODM map P.400.

Description: Small lenses of magnetite-quartz iron formation in Archean metavolcanics.

References: ODMmaps P.400, P.367; GSC map 1512G.
ODM, 1923, I.O.C. Rpt., p.207.

PENHORWOOD TOWNSHIP

Nat River Prospect

Class: Iron formation, Algoma type.

Location: Between Nest Lake, Kenogaming Township, and 1/2 mi. west of Nat River, Penhorwood Township.
Reference: ODM map P.419, P.465.

Description: NE to E-W trending lenses of iron formation from a few hundred to over 5000 feet long occur over a strike length of approx. 7 miles, and consists of quartz, pyrite, pyrrhotite, magnetite and silicate minerals up to 150 feet wide.

Setting: Within Archean metavolcanics.

Economic Features: 30 million gross tons per 100 feet of depth estimated on basis of magnetometer survey (Gerson, 1961).

History: 1946-7 Geological surveys and 2 d.d. holes by Little Long Lac Gold Mines Ltd.
1959-60 Dip needle and magnetometer survey by Kukatush Mining Corp. Ltd.
1959 5 d.d. holes by Kukatush Mining Corp. Ltd.
1962 5 d.d. holes by Kukatush Mining Corp. Ltd.

Penhorwood Tp. (Cont.)

References: ODM maps P.419, P.465, 33G, 2116, 2046, 2263G.
ODM, 1924, Vol. XXXIII, pt. 4.
Assessment files, Timmins.

Radio Hill Prospect

Class: Iron formation, Algoma type, oxide-carbonate facies.

Location: 2 mi. NE of Kukatush, NW quarter of township.
Reference: ODM map P.419.

Description: Iron formation, consisting of quartz (jasper, chert), magnetite, carbonate, minnesotaite and minor secondary pyrite, trends E-W. Main zone is 7,000 feet long and 300 to 1,500 feet wide, thickened in part through folding.

Setting: Underlain by tuffaceous rocks and overlain by pyritic slates and tuff within an Archean metavolcanic sequence.

Economic Features: 158 million tons of potential ore outlined averaging 20.8 percent magnetic Fe or 27.8 soluble Fe. Two types are present - E type, representing 78.6 million tons of 23.9 percent magnetic Fe; and F type - representing 79.6 million tons averaging 17.9 percent magnetic Fe.
Concentration tests indicate a 63 - 64 percent iron pellet could be made at -325M with a ratio of 3.2 tons of ore per long ton of pellet produced.

Ownership: Kukatush Mining Corp. (Ontario) Ltd.

History: 1947 Geological and magnetometer survey and 1 d.d. hole by Transhorwood Mines Ltd.
1957 Geological and magnetometer survey by Canadian Johns-Mansville Ltd.
1959 Trenching, and geological and magnetometer surveys by Kukatush Mining Corp. Ltd.
1959 52,952 feet of diamond drilling by Kukatush Mining Corp. Ltd.

References: ODM maps P.419, 2116, 2263G.
ODM, 1924, Vol. XXXIII, pt. 6.
Assessment files, Timmins.

RATHBUN TOWNSHIP

Wanapitei Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: NW of Wanapitei Lake, Lots 22, 23, 24, Conc. 6.
Reference: ODM map P.367.

Description: Outcrops of magnetite-quartz iron formation with some jasper and hematite and further northwest a ridge 1,500 feet long and 125 to 600 feet wide of lean quartz-magnetite iron formation. Total anomalous zone 4,000 feet long with 3 character samples from north end reported to contain 19.9, 22.5 and 31.3 percent Fe (Holmes, 1962).

Setting: Within Archean metavolcanics.

History: 1908-09 Several d.d. holes.
1961 Dip needle survey by Ironco Mining and Smelting Ltd.

References: ODM maps P.367, P.405; GSC map 1512G.
ODM, 1923, I.O.C. Rpt., p.207.
Prospectus, 1962, Ironco Mining and Smelting Ltd.

RHODES TOWNSHIP

Bennet Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: N shore of Bennet Lake, SE part of township.
Reference: GSC map 1519G.

Description: Two irregular lenses of quartz-magnetite iron formation with a combined width of 400 feet and total length of 1800 feet.

Economic Features: A grab sample assayed 28.5% Fe.

History: 1962 Magnetometer survey by Ironco Mining and Smelting Ltd.

Rhodes Tp. (Cont.)

References: GSC map 1519G.
Prospectus, 1962, Ironco Mining and Smelting Limited.
Assessment files, Sudbury.

Richardson Lake Prospect

Class: Iron formation, Algoma type.

Location: 1 mi. west of north part Richardson Lake, west-central part of township.
Reference: GSC map 1519G.

Description: Two, discontinuous, NW-trending bands approx. 1/2 mi. apart, NE zone traced for 6,500 feet with lenses of iron formation averaging 500 feet long and 75 feet wide; SW zone traced for 700 feet with widths up to 70 feet. Iron formation consists of massive magnetite and magnetite-quartz.

Setting: Within Archean metavolcanics.

Economic Features: Three diamond drill intersections of 17, 12 and 23 feet assayed 62.2, 46.72 and 49.2 percent Fe_2O_3, respectively. Surface samples range from 60 to 30 percent soluble Fe. Bulk sampling suggests an average grade of approx. 45 percent Fe.

History: 1962 Magnetometer survey and trenching by Ferco Mines Ltd.
1966 4 d.d. holes for 419 feet by H.E. Smith.

References: ODM map P.287; GSC map 1519G.
Prospectus, 1961, Ferco Mines Limited.
Assessment files, Sudbury.

ROBERTS TOWNSHIP

Morin Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: At S end Morin Lake, and on west side of lake.

Reference: GSC map 1519G.

Description: Quartz-magnetite iron formation, 12 to 15 feet thick at west side Morin Lake with an estimated Fe content of less than 30 percent and 1,400 feet long by approx. 150 feet wide at S end of Lake with a very low Fe content.

Setting: Within Archean metavolcanics.

Reference: ODM, 1923, I.O.C. Rpt., p.206.

Roberts River Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Lots 3, 4, Conc. 4, east-central part of township.
Reference: GSC map 1519G.

Description: Gently dipping, magnetite-quartz iron formation 15 to 20 feet thick was observed in two outcrops 1/4 mile apart. Average Fe content estimated between 30 and 35 percent.

References: ODM map P.287, GSC maps 179A, 1519G.
ODM, 1923, I.O.C. Rpt. p.206.
GSC, 1917, Mem. 95, p.126.

SEMPLE TOWNSHIP

English Lake Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: 3/4 mi. west of English Lake.
Reference: ODM map 35j.

Description: North-striking, pyritic - cherty iron formation within Archean metavolcanics.

References: ODM maps 35j, 2046.
ODM, 1926, Vol. XXXV, pt. 6, p.73-4.
ODM, 1967, Misc. Paper 11, p.58-9.

STOVER TOWNSHIP

Stover Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: NW and N-central parts of township.
Reference: ODM map 51g.

Description: Numerous, discontinuous NW-trending bands of magnetite-quartz iron formation up to 30 feet wide but mainly between 1 foot and 10 feet.

Setting: Within Archean metavolcanics.

References: ODM maps 51g, 2220G.
ODM, 1942, Vol. LI, pt. 8, p.30.

SUDBURY MINING AREA

Falconbridge Nickel Mines Limited (Producer)

Class: By-product of Ni, Cu, etc. sulphide ore.

Location: Several mines in the Sudbury area.
Reference: ODM map P.405.

Description: Pyrrhotite, pentlandite, chalcopyrite, etc. as breccia, massive and disseminated ores at or near the Sudbury norite contact.

Economic Features: Iron oxide calcine produced from nickeliferous pyrrhotite by leaching and roasting. Production is at the rate of approx. 100,000 tons per year of calcine grading 66 percent Fe.

Plans are underway for construction of an iron plant by late 1969 to handle 500,000 tons of pyrrhotite per year that would produce in excess of 300,000 tons of reduced iron ore pellets containing about 90% Fe and 1.5% Ni.

Production: 1962-1966: 258,010 tons.

References: ODM map P.405.
ODM, 1957, M.R. Circular No. 2, p.89, 90.
Northern Miner, 1968, Feb. 1.

International Nickel Company of Canada Ltd., The (Producer)

Class: By-product of Ni, Cu, etc. sulphide ore.

Location: Several mines in the Sudbury area.
Reference: ODM map P.405.

Description: Pyrrhotite, pentlandite, chalcopyrite, etc. as breccia, massive, stringer and disseminated ore at or near the Sudbury norite contact.

Economic Features: Pelletized iron oxide grading about 68.0 percent Fe is recovered as a by-product of nickeliferous pyrrhotite at the rate of approx. 900,000 long tons per year. Work in progress to expand annual capacity of plant by 30% with anticipated completion early in 1970.

Production: 1956 - 1966: 2,016,575 tons.

References: ODM map P.405.
ODM, 1957, M.R. Circular No. 2, p.93, 94.
CIMM, 1956, Vol. 49, No. 529.

SWAYZE TOWNSHIP

Bayly Lake Occurrence

Class: Iron formation, Algoma type.

Location: 1/2 mi. S of Bayly Lake, SE corner of township.
Reference: ODM map 2070.

Description: E-W trending iron formation composed of magnetite layers alternating with mafic volcanics with minor pyrite and chert. Drilling intersected a core length of 53 feet.

Setting: Within Archean mafic metavolcanics.

Swayze Tp. (Cont.)

History: 1966 - 4 d.d. holes by Canadian Nickel Co. Ltd.

References: ODM map 2070.
ODM, 1965, G.R. No. 33, p.11.
Assessment files, Sudbury.

Cree Lake Occurrence

Class: Iron formation, Algoma type.

Location: 1/4 to 1 mi. S of SE part Cree Lake and 1/4 mi. N of Bayly Lake.
Reference: ODM map 2070.

Description: E-W lenses of iron formation 500 feet to 1/2 mi. in length and up to 200 feet wide composed of chert, jasper and magnetite with minor pyrite and siderite.

Setting: Within Archean intermediate to mafic metavolcanics.

References: ODM maps 2070, 43b, 51f, 2116.
ODM, 1965, G.R. No. 33, p.10-11.
ODM, 1934, Vol. XLIII, pt. 3, p.12.

TOOMS TOWNSHIP

Betty Lake Occurrence

Class: Iron formation, Algoma type.

Location: South shore Betty Lake, NE quarter of township.
Reference: ODM map 2121.

Description: 5-foot wide band of rusty weathered iron formation within Archean metavolcanics.

Reference: ODM maps 2121, P.323.

TURNER TOWNSHIP

Turner Township Occurrence

Class: Iron formation.

Location: Near S end Bull Lake, SE quarter of township.
Reference: ODM map P.301.

Description: Archean iron formation surrounded by Huronian rocks of the Gowganda Formation.

References: ODM map P.301, GSC map 1513G.

ULSTER TOWNSHIP

Gaudaur Occurrence

Class: Iron formation, Algoma type.

Location: Southeast part of township.
Reference: GSC map 1525G.

Description: Lean iron formation in fine-grained greywacke 75 feet wide.

Reference: ODM, 1923, I.O.C. Rpt., p.208.

WISNER TOWNSHIP

Wisner Township Occurrence

Class: Iron formation.

Location: A short distance S of Clear (Kumska?) Lake.

Description: Interbanded quartz and magnetite with some pyrite up to 24 feet wide and 100 feet long.

References: GSC map 1519G.
ODM, 1923, I.O.C. Rpt., p.207.

YEO TOWNSHIP

Little Rush River - Canoe Lake Occurrence

(See Huffman Township)

Schist Lake Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: Immediately south of Schist Lake.
Reference: ODM map 41d.

Description: Iron formation strikes E-W and occurs interruptedly over 3 miles. In the east it is approx. 50 feet wide and mainly a ferruginous chert; in the west it contains some massive pyrite lenses and is approx. 150 feet wide.

Setting: Within Archean metasediments (Ridout Group).

History: Trenching.
1950 Geological survey by Central Manitoba Mines Ltd.

References: ODM maps 41d, 1933a, 2116; GSC map 231A.
ODM, 1932, Vol. XLI, pt. 3, p.17, 25.
GSC, 1929, Mem. 157, p.27.
Assessment files, Sudbury.

TOWNSHIP 22, RANGE 16

Batchawana River Occurrence

(See Tp. 23 - R. 16)

TOWNSHIP 23, RANGE 15

Lizard Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: East of Emerson Creek, NE part of township.
Reference: ODM map 2108.

Description: Magnetite-quartz (chert, jasper) iron formation, strikes N60 E over a length of 4,000 feet. Width ranges from 25 to 85 feet and averages 50 feet over a length of 2,200 feet. Intruded by diabase dikes.

Setting: Archean mafic metavolcanics to N and metasediments and felsic metavolcanics to the S.

Economic Features: Indicated tonnage calculated at 12,000 tons per vertical foot (Venn, 1964).

History: 1955 Dip needle and geological surveys by Algoma Ore Properties Ltd.
1964 Geological and magnetometer surveys by Algoma Steel Corp. Ltd.
1965 4 d.d. holes for 404 feet by Algoma Steel Corp. Ltd.

References: ODM maps 2108, 2216G.
Assessment files, Sault Ste. Marie.

TOWNSHIP 23, RANGE 16

Batchawana River Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: At the intersection of Batchawana River and township boundary between Tp.23 - R. 16 and Tp.22 - R. 16, near south boundary of townships.
Reference: ODM map 2216G.

Description: Lenses of iron formation up to 50 feet wide trending ENE over a strike length of 1,800 feet. Iron formation interbedded with Archean metavolcanics and intruded by diabase dikes.

Tp. 23, R. 16 (Cont.)

History: 1964: Geological survey by Algoma Steel Corp. Ltd.

References: ODM map 2216G.
Assessment files, Sault Ste. Marie.

THUNDER BAY DISTRICT

ABREY TOWNSHIP

Northern Long Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: N part Coltham and S part Abrey townships, eastwards to Laponen Lake (N of N end McKay Lake).
Reference: ODM map 46b.

Description: E-trending zone of interlayered magnetite, chert, and Archean metagreywacke with minor amounts of jasper and hematite.

References: ODM map 46b, 2150G, 2160G.
ODM, 1938, Volume XLVI, pt. 3, p.9.

ADRIAN TOWNSHIP

Adrian - Commee Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: SE quarter of Adrian and Lot 12, Conc. 1, 2 of Commee townships.
Reference: ODM map 2065.

Description: 16 zones, ranging from 200 to 1700 feet in length, of lean magnetite-quartz iron formation and iron-bearing sediments within Archean volcanics.

History: 1956 Aeromagnetic survey by New Fortune Mines Limited.
1962 Magnetometer and geological surveys by The Hanna Mining Co. Ltd.

References: ODM maps 2065, 2096; GSC maps 2069, 276A.
Assessment files, Port Arthur.

Adrian Tp. (Cont.)

Stephens Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: NE third of township
Reference: GSC map 2069.

Description: Numerous discontinuous NW-trending magnetite-quartz quartz (chert, jasper) iron formation segments within Archean metavolcanics.

References: ODM maps 2065, 2096G; GSC map 2069.
GSC, 1924, Summ. Rpt., pt. C, p. 8.

ALDINA TOWNSHIP

Aldina Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: NE part of Aldina Township.
Reference: ODM map 2065.

Description: Seven NE-trending, discontinuous zones of magnetite quartz (jasper) iron formation with some amphibole and intercalated amphibolite and greywacke. Lengths from 300 to 2,400 feet. Within Archean volcanics and intruded by mafic bodies.

History: 1956 Aeromagnetic survey by New Fortune Mines Limited.
1957 Magnetometer survey and 3 d.d. holes for 1,031 feet by New Fortune Mines Limited.
1962 Magnetometer and geological surveys by The Hanna Mining Company.

References: ODM maps2065, 2096G.
Assessment files, Port Arthur.

ASHMORE TOWNSHIP

Ashmore Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Across S part of township.
Reference: ODM map 1951-2.

Description: Numerous bands of iron formation, composed of magnetite, hematite, quartz (chert, jasper), and interlayered greywacke, strike WNW, are up to 6 miles in length, and are usually less than 75 feet wide but attain widths of 200 feet. Iron rich beds make up to 50% of the rock.

References: ODM maps 1951-2, 2102, 2150G.
ODM, 1951, Volume LX, pt.5, p. 14.

BEGIN TOWNSHIP

Begin Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: E part of township.
Reference: ODM map P. 223.

Description: Numerous discontinuous bands of magnetite-quartz iron formation, up to 50 feet wide, in Archean metavolcanics. A sample assayed 26.1% Fe.

References: ODM maps P.223, 2065, 1102G; GSC map 338A.
ODM, 1923, I.O.C., Rpt., p. 177.

BLACKWELL TOWNSHIP

Miscellaneous Shebandowan River Occurrences

(See Horne Township)

BOOTH TOWNSHIP

Nipigon Occurrence

Class: Placer.

Location: At mouth of Nipigon River.

Description: Fe-bearing sands believed to contain 10% magnetite.

Reference: OBM, 1904, Volume XIII, pt. 1, p. 73.

COLLIVER TOWNSHIP

Niblock Occurrences

Class: Bog iron.

Location: Several locations N, W, and E of Niblock.
Reference: ODM, 1909, Volume XVIII, pt. 1, p.182.

Description: Areas of bog iron.

References: ODM, 1923, I.O.C. Rpt., p. 177.
ODM, 1909, Volume XVIII, pt. 1, p. 182-3, 190-1.

COLTER TOWNSHIP

Turkey Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Across N central part of township, between Partridge and Wildgoose lakes.
Reference: ODM map 2102.

Description: E-trending zone of iron formation probably composed of magnetite and hematite interlayered with greywacke. Main anomalous zone 6,600 feet long and 325 feet wide.

History: 1966 Magnetometer survey by Algoma Steel Corp. Ltd.

References: ODM maps 2102, 45a, 2142G.
Assessment files, Port Arthur.

COLTHAM TOWNSHIP

Northern Long Lake Occurrence

(See Abrey Township)

CONANT TOWNSHIP

Kashaweogama Lake Prospect

(See McCubbin Township)

Conant Tp. (Cont.)

Savant Lake Occurrences

(See Poisson Township)

CONMEE TOWNSHIP

Adrian - Conmee Occurrences

(See Adrian Township)

Brule Creek Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: West central part of township.
Reference: GSC map 2069.

Description: Numerous, NW-trending magnetite-quartz iron formation segments within Archean metavolcanics.

History: 1956 Aeromagnetic survey by New Fortune Mines Ltd.
1962 Geological and magnetometer survey (Lot 8, Conc.5) by The Hanna Mining Company Limited.

References: ODM maps 2065, 2096G; GSC map 2069.
GSC, 1924, Sum. Rpt., pt.C. p.8.
Assessment files, Port Arthur.

Conmee 2 Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: S 1/2 Lot 5, Conc. 2.
Reference: ODM map 2065.

Description: N-trending bands of magnetite-quartz iron formation with a maximum length of 11,000 feet converging to the south, within Archean metavolcanics.

Economic Features: Magnetite content estimated at 25 to 30 percent. Maximum possible width of 200 feet.

History: 1956 Aeromagnetic survey by New Fortune Mines Limited.
1962 Magnetometer and geological surveys by the Hanna Mining Company.

References: ODM maps 2065, 2096G.
Assessment files, Port Arthur.

Hume Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: SE part of township including Lots B,C,E, Conc.2.
Reference: GSC map 2069.

Description: Discontinuous bands of iron formation in Archean metavolcanics.

References: ODM map 2096G; GSC map 2069.

Conmee Tp. (Cont.)

Kaministikwia Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Extreme NE corner of Conmee and SW corner of Ware townships, including locations ICM, 41 T.B., 411R, 7H, 8H, 333R, 382R, 342R.
Reference: GSC map 2069.

Description: Discontinuous E to NE trending magnetite-hematite quartz (chert, jasper) iron formation with some siderite and intercalated tuff, within Archean metavolcanics.

Economic Features: Reserves estimated at 190 million tons which could produce 47.5 million tons of concentrate grading 62.8% Fe (dry), 9.3% SiO_2 at -325M for an estimated recovery of 25.1%

Three zones outlined - The Skelton (Ware Township) which is 2,100 feet by 400 to 500 feet; and the Conware deposits with a A zone 5,800 feet by 380 to 700 feet, and a B zone 1,800 feet by 400 to 600 feet, which lies 800 feet N of the E end of the A zone.

Ownership: Inland Steel Company.

History: 1957-8 Magnetometer survey and 16 d.d. holes for 9,431 feet by Inland Steel Company.

References: ODM maps 2065, 2097G; GSC map 2069.
ODM 1923, I.O.C. Rpt., p. 180.
GSC, 1924, Sum. Rpt., pt.C, p. 7, 8, 22.
Assessment files, Port Arthur.

Mokomon Occurrences

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: NE and SE of Mokomon including Lots A,B,C, Conc. 4,5, and locations 745R, 702R, 878X, 879X, 880X.
Reference: GSC map 2069.

Description: Discontinuous zones of magnetite-quartz and pyrite-pyrrhotite-quartz iron formation in Archean metavolcanics. Pyritic zones up to 75 by 800 feet.

History: Early stripping, shafts and drilling.

References: ODM maps 2065, 2096G; GSC map 2069.
GSC, 1924, Sum. Rpt., pt. C., p. 7,9-11, 23-25.
ODM, 1967, M.R. Circular 5, p. 52, -3, -7.

DANFORD TOWNSHIP

Danford Township Occurrence

Class: Iron formation, Algoma type.

Location: NW part of township. Reference: ODM map 2102

Description: Iron formation in Archean metavolcanics.

References: ODM maps 2102, 40f, 2144G.

DOROTHEA TOWNSHIP

Lake Nipigon North Range Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SE corner of township, N of Sturgeon River.
Reference: ODM map 45a.

Description: NE-trending, magnetite-hematite-quartz (chert, jasper) iron formation with some interbedded greywacke, usually less than 50 but up to 240 feet in width, and 1¼ miles in length.

Dorothea Tp. (Cont.)

References: ODM maps 45a, 2102, 2128G.
ODM, 1936, Volume XLV, pt. 2, p.76, 87.
ODM, 1923, I.O.C. Rpt. p.184.

DUCKWORTH TOWNSHIP

Matawin Iron Range Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: N part of Duckworth, central part Laurie and W central part of Horne townships.
Reference: ODM map 2065.

Description: E-trending segments of slaty, magnetite, hematite cherty iron formation in Archean (Windigokan) sediments, steep dipping but in part synclinally folded and in part as en-echelon segments. Width up to 900 feet.

Economic Features: Reserves estimated at 120 million tons grading 29.56% Fe.

Best section (Duckworth Township) is 10,275 feet long and 50 to 433 feet wide (averaging 217 feet) with a weighted average of 29.56% soluble iron.

Another section (Laurie Township) is about 1200 feet long and 100 to 500 feet wide averaging 26% soluble Fe.

Exploitation dependent upon establishing suitable metallurgy treatment of the crude.

Ownership: Monpre Mining Company Limited.

History: Early trenching, 1 shaft.
1914-5 Geological and magnetometer survey by G.S.C.
1943-6 2,800 feet of d.d. by Gunflint Iron Mines Limited.
1956-64 Geological and geophysical surveys and extensive d.d. (approximately 20,000 feet) by Monpre Mining Co.Ltd.

References: ODM maps 2065, 1102G, 2097G; GSC map 2069, 416
GSC, 1924, Sum. Rpt., pt.C, p.1-27.
ODM, 1923, I.O.C. Rpt., p. 177-9
Can. Mines Handbook, 1967-68.
Assessment files, Port Arthur.

ERRINGTON TOWNSHIP

Errington Township Deposits

Class: Iron formation, Algoma type, oxide facies.

Location: East and west central parts of township. Reference: ODM map 1951-7.

Description: Numerous NWN-trending bands of iron formation within Archean metagreywacke. Iron formation composed of magnetite, hematite, quartz (chert, jasper), and interlayered greywacke and chloritic schist. Bands usually less than 100 feet thick and rarely exceed 250 feet except through folding.

Economic Features: Main zone on island of Kenogamisis Lake containing hematite and magnetite and magnetite with a visually estimated content of 40% Fe. Drilling results reported as "satisfactory" as to grade and tonnage.

History: 1965 - 1 d.d. hole by Algoma Steel Corporation Ltd. 1967 - 5000 feet of d.d. by The Little Long Lac Gold Mines Ltd.

References: ODM maps 1951-7, 2142, 2150G.
ODM, 1951, Volume LX, pt.6, p. 20-21.
Assessment files, Port Arthur.
Annual Report, 1967, The Little Long Lac Gold Mines Ltd.

EVA TOWNSHIP

Lake Nipigon Central Range Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: E central part of Eva and W central part of Summers townships, between mining locations A.L. 414 and H.F. 5, S and E of Eva Lake. Reference: ODM map 45a.

Description: Four main and several smaller lenses over a distance of three miles, composed of quartz (jasper)-hematite iron formation with minor magnetite.

Eva Tp. (Cont.)

Economic Features: On A.L. 414, a deposit 1,200 feet long and and 50 feet wide contains an estimated 3.5 million tons to a depth of 600 feet that averages 33.5% Fe, 0.118% P, 0.01% S, 43.5% SiO_2.

On A.L. 416, 5 million tons averaging 30% Fe were indicated in 2 separate bodies.

History: 1901 1 d.d. hole by U.S. Steel Corp.Ltd.
1902 2 d.d. holes by Algoma Commercial Company.
1919-20 18 d.d. holes for 7,274 feet by S.F. Walsh.
1922 5 d.d. holes by Bethlehem Steel Company.

References: ODM maps 45a, 2102, 2128G, 2135G.
ODM, 1936, Volume XLV, pt. 2, p.76, 87
Mineral Resource files, Ottawa.

Lake Nipigon South Range Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: E central part of Eva Township (1 mile S of Central Range) and across central part of Summers Township.
Reference: ODM map 45a.

Description: Discontinuous bands of iron formation striking N 70 E up to 2 miles in length with widths up to 550 feet but averaging about 60 feet. Formation composed of magnetite-hematite-quartz with magnetite dominant. Associated rocks are Archean greywackes.

Economic Features: Average sample over 82 feet assayed 30.06% Fe; four selected samples assayed 34.0 to 38.1% Fe.

References: ODM maps 45a, 2102, 2128G, 2135G.
ODM, 1936, Volume XLV, pt. 2, p. 76-7, 87.
ODM, 1923, I.O.C. Rpt., p. 185.

GEMMELL TOWNSHIP

Manitouwadge Occurrences

(See Mapledoran Township)

GILLIES TOWNSHIP

Gunflint Range Occurrences

(See McIntyre Township)

GZOWSKI TOWNSHIP

Marshall Creek Occurrences

(See 50°51' - 87°30')

North Onaman Range Prospect

(See Kowkash Township)

HAGEY TOWNSHIP

Hagey Township Occurrences

Class: Iron formation, Algoma type.

Location: SW shore of Southwest Bay (Lower Shebandowan Lake).
Reference: ODM map P. 223.

Description: Iron formation in Archean volcanics.

References: ODM maps P. 223, 1102G.

HANNIWELL TOWNSHIP

Firesteel River Occurrence

Class: Iron formation, Algoma type.

Location: Centre part of township, N of Firesteel River.
Reference: ODM map 2065.

Description: Iron formation in Archean rocks.

References: ODM map 2065, 1114G.

HARDWICK TOWNSHIP

Gunflint Range Occurrences

(See McIntyre Township)

Mink Mountain Prospect

Class: Iron formation, Superior type, oxide facies.

Location: Between Sandstone Lake and Sun Mountain, NW part of Hardwick and SW part Jean townships as well as adjacent area to the west.
Reference: ODM, 1960, Volume LXIX, pt.7, p. 47.

Description: Gently dipping (3 to 5 degrees) Gunflint iron formation.

Economic Features: In the Upper Gunflint a magnetite taconite zone 50 to 60 feet thick 300 to 400 feet wide and 3000 feet long was outlined with an average of 28 to 35% Fe.

Beds up to 1.5 feet thick were intersected in the Lower Gunflint containing 50 to 60% Fe as hematite.

A sample from the magnetite taconite assaying 33.9% Fe gave a concentrate of 56.8% Fe at -200M with a 40.9% weight recovery.

Samples of magnetite taconite from the Lower Gunflint assayed between 22.2 and 26.9% Fe and gave concentrates at -200M between 54.5 and 62.3% Fe with 11.5 to 15.1% weight recovery.

History: 1943 10 d.d. holes for 2,973 feet by Gunflint Iron Mines Limited.
1952 1 d.d. hole for 485 feet by L.K. Johnson Explorations.

References: ODM maps 2065, 1960i.
ODM, 1960, Volume LXIX, pt. 7.
Assessment files, Port Arthur.

HOMER TOWNSHIP

Edy Occurrence

Class: Iron formation, Algoma type.

Location: 1 1/2 N of mouth of Pukaskwa River.
Reference: ODM map 14a.

Description: Highly ferruginous but non-magnetic banded cherts and rusty sugary cherts, 825 feet long and up to 150 feet wide, in Archean metavolcanics.

Homer Tp. (Cont.)

Reference: ODM map 14a.
OBM, 1905, Volume XIV, pt. p. 1, p. 316, 337.

Julia River Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: S of the mouth of the Julia River.
Reference: ODM map 14a.

Description: 10 bands of chert, jasper, hematite-jasper, and pyritic chert were traced for 125 feet in length and have an overall thickness of 42 feet within a 293-foot section. A selected sample assayed 46.4% Fe.

References: ODM map 14a.
OBM, 1905, Volume,XIV, pt. 1, p. 333-4.

HORNE TOWNSHIP

Matawin Iron Range Prospect

(See Duckworth Township)

Miscellaneous Shebandowan River Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: NW part Horne, NE part Laurie and S part Blackwell townships.
References: ODM map 2065, GSC map 2069.

Description: Numerous, discontinuous bands of magnetite-quartz iron formation in Archean metavolcanics.

References: ODM maps 2065, 2097G; GSC map 2069.
GSC, 1924, Sum. Rpt., pt. C, p. 6-7.

Shabaqua Prospect

Class: Iron formation, Algoma type, oxide facies.

Location : 2 miles SE of Shabaqua.
Reference: ODM map 2065.

Description: Two, WNW-trending zones of magnetite-quartz iron formation in Archean volcanics invaded by mafic intrusions.

Economic Features: Zones are 9000 by 150 to 500 feet and 3000 by 100 to 250 feet. A 500 lb sample assayed 31.2% Fe, 48.9% SiO_2. Concentration tests gave a 61.05% Fe concentrate at 80% -325M and 20% +325M with a weight recovery of 26.6%

History: 1945 Dip needle survey by Andowan Mines Limited.
1945-6 2,002 feet of d.d. by Pickands Mather and Co.

References: ODM map 2065, 2097G; GSC map 2069.
ODM, 1923, I.O.C. Rpt. p. 179.
GSC, 1924, Sum. Rpt., p. 6, 7.
Assessment files, Port Arthur.

HOUCK TOWNSHIP

Houck Township Occurrence

Class: Iron formation, Algoma type.

Location: NW and N central part of township.
Reference: ODM map 2102.

Description: Iron formation in Archean greywacke. Drilling 1/2 mile W of Houck Lake intersected 100 feet of lean iron formation intercalated with greywacke. It has a strike length of 8000 feet.

Houck Tp. (Cont.)

History: 1961-2 Magnetometer survey and 1 d.d. hole by Algoma Steel Corp. Ltd.

References: ODM maps 2102, 2151G.
Assessment files, Port Arthur.

IRWIN TOWNSHIP

Still Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Spawn and Still lakes, E central part of township.
Reference: ODM map 45a.

Description: Two, east-trending bands of hematite-quartz (chert, jasper) iron formation, one 12 feet and the other 100 feet wide, spaced 500 feet apart. Within Archean metasediments.

Economic Features: Estimated 40-50 percent hematite; a grab sample assayed 36.8% Fe.

History: 1966 3 d.d. holes for 1045 feet by Algoma Steel Corporation Ltd.

References: ODM maps 45a, 2102, 2135G.
ODM, 1923, I.O.C. Rpt., p. 186.
ODM, 1965, P.R. 1965-3, p. 63.

Watson Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Near N shore of Watson Lake.
Reference: ODM map 45a.

Description: NE-trending, interlaminated magnetite-hematite iron formation with some jasper traced for a length of 4 miles, at the contact of Archean metavolcanics and metasediments.

Economic Features: Drilling intersected widths of 60 to 150 feet. A selected grab sample assayed 48.9% Fe but the estimated apparent grade is 32% Fe.

History: 1917 Trenching and 36-foot shaft by International Mining Development Company.
1957 3 d.d. holes by Central Manitoba Mines, Ltd.

References: ODM maps 45a, 2102, 2135G.
ODM, 1936, Volume XLV, pt. 2, p. 77.
Company Report, 1917, A.D. Little Limited.
Assessment files, Port Arthur.

Windigokan Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: West of Windigokan Lake.
Reference: ODM map 45a.

Description: Narrow bands of hematite-quartz (jasper) - slate in Archean metavolcanics. Two grab samples assayed 35.7 and 36.6% Fe.

References: ODM maps 45a, 2102.
ODM, 1923, I.O.C. Rpt., p. 185.
ODM, 1936, Volume XLV, pt. 2, p. 77.

JEAN TOWNSHIP

Gunflint Range Occurrences

(See McIntyre Township)

Mink Mountain Prospect

(See Hardwick Township)

Mount Edna Prospect

Class: Iron formation, Superior type, oxide facies.

Location: 1.5 miles N of Whitefish Lake including Mount Edna and W part of Divide Ridge, Jean and Strange townships. Reference: ODM map 1960i.

Description: Gunflint iron formation bearing magnetite and hematite dips gently to the S and is overlain by up to 75 feet of Keweenawan diabase.

Economic Features: Estimated that 270 million tons averaging 26.29% Fe are contained in an area 6000 by 1500 feet to a depth of 300 feet.

Samples from the NW face of Divide Ridge assayed 34.1% and 33.9% Fe and gave concentrates of 54.0 and 50.9% Fe at -200M with 30.2 and 35.2% weight recovery.

History: 1952 1 d.d. hole for 329 feet by L.K. Johnson Explorations.

1960 7 d.d. holes for 2,010 feet by Flint Rock Mines Ltd.

References: ODM maps 2065, 1960i.
ODM, 1960, Volume LXIX, pt.7, p. 46-8, 57, 62.
Prospectus, 1962, Flint Rock Mines Limited.
Assessment files, Port Arthur.

JUTTEN TOWNSHIP

Savant Lake Occurrences

(See Poisson Township)

KIRBY TOWNSHIP

Kirby Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Centre part of township, N and NW of Kirby Lake
Reference: ODM map 2102.

Description: Local, narrow bands of quartz-magnetite iron formation in Archean metavolcanics.

References: ODM maps 50f, 2102, 2143G.
ODM, 1941, Volume L, pt. 3, p. 5.

KOWKASH TOWNSHIP

North Onaman Range Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Near the eastern part of the boundary between Gzowski and Oboshkegan townships in the west and near the western part of Suni-Kowkash boundary in the east.
Reference: ODM map 2102.

Kowkash Tp. (Cont.)

Description: E-trending discontinuous zone over 10 miles in length containing differing amounts of quartz (chert, jasper), magnetite, greywacke, slate, rhyolite and green schist. Within Archean metavolcanics.

Economic Features: One zone 6000 feet long, 330 feet wide contains interbedded iron formation and waste with the latter making up 43 percent of the unit.

Average sampled grade is 21.3% Fe with narrow zones up to 37.7% Fe. Tests indicate a 37.2% Fe, 13.4% SiO_2 concentrate can be obtained from a 31.7% crude by grinding to -270M with a 37.5% weight recovery.

History: 1906 - 2 d.d holes for 490 feet by R. H. Flaherty Syndicate.
1952 - Aeromagnetic survey.
1953 - Magnetometer and geological surveys by Cliffs of Canada Ltd.
1957 - 6 d.d. holes for 2,942 feet and magnetic and geological surveys by Can-Fer Mines Limited.
1959 - 3 d.d. holes for 1000 feet by Can-Fer Mines Limited.

References: ODM maps 18c, 40f, 2102, 2144G, 2145G.
Annual Report, 1960, Can-Fer Mines Limited.
Prospectus, 1958, Can-Fer Mines Limited.
ODM, 1923, I.O.C. Rpt., p. 183-4.
Assessment files, Port Arthur.

LAKE SUPERIOR

South Slate Island Occurrence

Class: Iron formation.

Location: Near S shore of South Slate Island.
Reference: OBM, 1918, Volume XXVII, pt. 1, p. 155.

Description: An outcrop of iron formation in Archean metavolcanics.

Reference: OBM, 1918, Volume XXVII, pt. 1, p. 162.

LAMPORT TOWNSHIP

Lamport Township Occurrences

Class: Iron formation, Algoma type.

Location: NE and W central parts of township.
References: ODM maps 2065, P. 223.

Description: Iron formation in Archean volcanics and sediments.

References: ODM maps 2065, P. 223, 1102G.

LAURIE TOWNSHIP

Matawin Iron Range Prospect

(See Duckworth Township)

Miscellaneous Shebandowan River Occurrences

(See Horne Township)

LEDUC TOWNSHIP

Leduc Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Across S central part of township.
Reference: ODM map 45a.

Description: ENE-trending discontinuous zone of hematite-magnetite quartz (chert, jasper) iron formation with interbedded greywacke. Lean in part. Widths of 30 and 50 feet are reported.

References: ODM maps 45a, 2102, 2135G.
ODM, 1936, Volume XLV, pt. 2, p. 15.

LEGAULT TOWNSHIP

Partridge Lake Occurrence

Class: Iron formation, Algoma type.

Location: NE part of township.
Reference: ODM map 2102.

Description: E-trending zone of iron formation in Archean metagreywacke.

References: ODM maps 2102, 2142G.

Patsy Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Near S boundary of township.
Reference: ODM map 45a.

Description: E-trending discontinuous bands of magnetite-quartz (chert, jasper) iron formation, less than 50 feet thick, within Archean metavolcanics.

References: ODM map 45a, 2142G.
ODM, 1936, Volume XLV, pt.2, p.11.

LINDSLEY TOWNSHIP

Lindsley Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Across central part of township.
Reference: ODM map 2102.

Description: Iron formation in Archean greywacke as discontinuous E-W zones.

Economic Features: East of St. Croix Creek at S end of Wildgoose Lake, a zone 5000 feet long and a smaller one, 1,250 feet long, to the SE were outlined. Drilling intersected hematite-magnetite iron formation interlayered with chloritic schists.

History: 1966 Magnetometer survey and 1 d.d. hole for 452 feet by Algoma Steel Corporation, Ltd.

References: ODM maps 2102, 2142G.
Assessment files, Port Arthur.

LYBSTER TOWNSHIP

Gunflint Range Occurrences

(See McIntyre Township)

Nolalu Occurrence

Class: Iron formation, Superior type.

Location: 1.5 miles, N.W. of Nolalu.
Reference: ODM map 1960j.

Description: Gently dipping Gunflint iron formation. Drilling intersected for 170.1 feet confined to the Lower Gunflint.

History: 1952 1 d.d.hole by L.K. Johnson Explorations.

References: ODM maps 1960j, 2065.
ODM, 1960, Volume LXIX, pt. 7, p. 46-7.
Assessment files, Port Arthur

MacGREGOR TOWNSHIP

Beulah Mine (Past Producer)

Class: Iron formation with secondary enrichment.

Location: Near Knobel Point, E part of township, on mining location No.5.
Reference: ODM map 2137.

MacGregor Tp. (Cont.)

Description: Greenalite-chert-siderite facies of the Lower Gunflint formation capped by up to 6 feet of hard hematite and goethite-hematite.

Economic Features: Analysis of stock pile samples gave 44.3 and 37.6%Fe. Two grades mined: one more than 55% Fe, the other less.

History: 1909 6,720 tons shipped by Dominion Bessemer Ore Company.

References: ODM maps 1960p, 2137.
ODM, 1923, I.O.C. Rpt., p. 181-2.
ODM, 1960, Volume LXIX, pt.7.
GSC, 1931, Mem. 167, p. 197-8.

Gunflint Range Occurrences

(See McIntyre Township)

MAPLEDORAM TOWNSHIP

Manitouwadge Occurrences

Class: Iron formation, Algoma type.

Location: S part Gemmell and E part Mapledoram townships.
Reference: ODM map 1957-8.

Description: Beds and lenses of lean iron formation up to 100 feet or more thick composed of quartz, magnetite, silicate minerals and carbonate, within Archean gneisses and schists. One sample assayed 16.04% Fe_2O_3 and 9.88% FeO; another assayed 2.52% Fe_2O_3, 11.94% FeO.

References: ODM maps 1957-8, 2169G.
ODM, 1957, Volume LXVI, pt. 8, p. 21-5.

MARKS TOWNSHIP

Gunflint Range Occurrences

(See McIntyre Township)

Marks Creek Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: NE corner of township; Lots 1, 2, 3, 4, Conc. 6, 7
Reference: ODM map 2065.

Description: Magnetite-quartz (jasper) iron formation with some specularite, amphibole, garnet, and intercalated andesite associated with lean iron formation and quartzite within Archean metavolcanics.

Economic Features: Two main areas: one 2,100 by 175 feet, another 700 by 70 feet. Iron content estimated at 25%.

History: 1956 Aeromagnetic survey by New Fortune Mines Ltd.
1957 Magnetometer survey by New Fortune Mines Ltd.
1958 7 d.d. holes for 2,946 feet.
1962 Magnetometer and geological surveys by The Hanna Mining Co. Ltd.

References: ODM maps 2065, 2096G.
GSC, 1924, Sum. Rpt., pt. C, p. 10.
Assessment files, Port Arthur.

Marks Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SE of Marks Lake, Lots 4,5,6, Conc. 6,7
Reference: ODM map 2065.

Marks Tp. (Cont.)

Description: Magnetite-quartz iron formation, outlining a crude M-shaped pattern, is associated with lean iron formation and quartzite containing some disseminated pyrite. In Archean metavolcanics.

Economic Features: Two main areas of iron formation; one 1,400 by 86 feet, the other 700 by 80 feet. Estimated iron content up to 30 percent.

History: 1956 Aeromagnetic survey by New Fortune Mines Limited.
1958 Magnetometer survey and 1 d.d. hole for 428 feet by New Fortune Mines Ltd.
1962 Magnetometer and geological surveys by The Hanna Mining Co. Ltd.

References: ODM maps 2065, 2096G.
Assessment files, Port Arthur.

McCOMBER TOWNSHIP

Beardmore - Blackwater Lake Occurrences

(See Vincent Township)

Miscellaneous Occurrences

Class: Iron formation, Algoma type oxide facies.

Location: NW part of township.
Reference: ODM map 45a.

Description: Small discontinuous bands of magnetite-hematite-quartz iron formation in Archean metasediments.

References: ODM map 45a, 2102, 2135G.
ODM, 1936, Volume XLV, pt. 2, p. 76.

McCUBBIN TOWNSHIP

Kashaweogama Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: On and S of Kashaweogama Lake, including NW corner of Conant and SW corner of McCubbin townships.
Reference: ODM map P 354.

Description: E-trending, fold-structure(?), with closure to the east, outlined by magnetite-quartz (jasper, chert) iron formation with some actinolite and interlayered greywacke, within Archean metasediments. The N band has a width of 400 to 700 feet in the E and 200 feet or less in the west. Up to 270 feet (core length) of fairly continuous iron formation has been intersected here. The south zone appears to be interbedded iron formation and greywacke.

Economic Features: Magnetometer survey interpretations suggests 500 million tons of open pit reserves.
Preliminary bulk samples assayed 33.6 and 37% Fe
Preliminary tests produced a premium grade concentrate by grinding to-270M and flash roasting to magnetize the specularite.

History: 1908-9 Pits and 2 shafts, 15 or 20 feet deep.
1965 Dip needle survey and 4 d.d. holes for 138 feet by Pershland Gold Mines Ltd.
1957 Magnetometer survey and some d.d. by Pershland Gold Mines Ltd.
1960 4 d.d. holes for 2,262 feet by Caland Ore Co. Ltd.
1967 Magnetometer and geological surveys by Algoma Steel Corp. Ltd.

References:
ODM maps P.354, 37 j, 1119G.
Prospectus, 1957, Pershland Gold Mines Limited.
ODM, 1928, Volume XXXVII, pt. 4, p.82.
ODM, 1923, I.O.C. Rpt., p. 182-183.
Assessment files, Kenora.

Savant Lake Occurrences

(See Poisson Township)

McGILLIS TOWNSHIP

Savant Lake Occurrences

(See Poisson Township)

McINTYRE TOWNSHIP

Gunflint Range Occurrences

Class: Iron formation, Superior type.

Location: Trends NE from Gunflint Lake to Loon Lake including townships of Hardwick, Jean, Strange, Marks, Lybster, O'Connor, Gillies, Oliver, Paipoonge, Neebing, McIntyre, MacGregor, and McTavish.
Reference: ODM maps 2065, 2137.

Description: A gently dipping, heterogenous unit averaging about 400 feet in thickness, containing conglomerate, ferruginous carbonate, chert, jasper, algal cherts, hematite, magnetite taconite, silicate taconite, argillite, tuff, and carbonate. The mineralogy includes quartz, chert, chalcedony, magnetite, hematite, goethite, limonite, calcite, dolomite, ankerite, siderite, greenalite, stilpnomelane, minnesotaite, chamosite and chlorite. Recognizable facies include basal conglomerate, algal reef, taconite, carbonate, chert-carbonate, and argillite-tuff.

References: ODM maps 1960i to 1960p, 2065, 2137.
ODM, 1960, Volume LXIX, pt.7, 67p.
Roy. Soc. Can., 1957, Spec. Publ., No. 2, p. 67-76.
Econ. Geol., 1956, Volume 51, No. 6, p. 565-595.
GSC, 1931, Mem. 167.
OBM, 1916, Volume XXV, pt. 1, p.185-190.

McIntyre Tp. (Cont.)

McIntyre Township Occurrence

Class: Iron formation, Superior type.

Location: In Lot D along creek crossing Oliver Road.

Description: Gently dipping Gunflint iron formation. "No iron ore was found".

History: 1924 8 d.d. holes for 2,800 feet by A. Johnson.

References: ODM maps 2065, 1960m; GSC map 213A.
GSC, 1931, Mem. 167, p. 196.

McKELVIE TOWNSHIP

Eldee Lake Occurrence

Class: Iron formation, Algoma type.

Location: NE part of township.
Reference: ODM map 2102.

Description: NW-trending zone, 4800 feet long, containing lean iron formation consisting of iron formation interbedded with Archean greywacke and porphyry. Over 152 feet intersected inone drill hole.

History: 1966 Magnetometer survey and 1 d.d. hole by Algoma Steel Corp. Ltd.

References: ODM maps 2102, 2150G.
Assessment files, Port Arthur.

McQUESTEN TOWNSHIP

McQuesten Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: E and W central part of township.
Reference: ODM map 50f.

Description: ENE-trending zone of lean magnetite-bearing iron formation bands intercalated with greywacke. Individual bands seldom more than 20 feet with width.

Economic Features: Main zone 1000 feet by 400 feet. Drilling intersected 72.6 feet of iron formation interbedded with 193.7 feet of metasediment in one hole, and 290 feet of interbedded iron formation and greywacke in another.

History: 1965 2 d.d. holes for 597 feet by Algoma Steel Corp.Ltd.

References: ODM maps 50f, 2102, 2151G.
ODM, 1941, Volume L, pt. 3, p. 5-6.
Assessment files, Port Arthur.

McTAVISH TOWNSHIP

Deception Lake Occurrences

Class: Iron formation with secondary enrichment.

Location: N and E of Deception Lake to Sheen Lake.
Reference: ODM map 2137.

Description: Small irregular bodies of hematite enrichment along fault zones in the Gunflint formation.

References: ODM maps 1960p, 2137.
ODM, 1960, Volume LXIX, pt. 7, p. 38-9.

McTavish Tp. (Cont.)

Gunflint Range Occurrences

(See McIntyre Township)

Welsh Hematite Prospect

Class: Hydrothermal.

Location: 1.5 miles S of Bowker Station.
Reference: ODM map 2137.

Description: Porous, massive and botryoidal hematite, 4 feet wide, exposed in 2 trenches 40 feet apart along a fault zone within Sibley sediments.

History: 1923 2 trenches by J.G. Cross.

References: ODM map 2137.
GSC, 1931, Mem. 167, p. 170.

MOSS TOWNSHIP

Obadinaw River Occurrence

Class: Iron formation, Algoma type.

Location: SW form S end Moss Lake.
Reference: ODM map P. 393.

Description: NE-trending band of magnetite iron formation traced for 2.5 miles and generally less than 20 feet thick, in Archean metavolcanics.

References: ODM maps P. 393, 1112G.

NEEBING TOWNSHIP

Gunflint Range Occurrences

(See McIntyre Township)

OBOSHKEGAN TOWNSHIP

Central Onaman Range Prospect

(See Suni Township)

Lac Ste. Marie Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: In the vicinity of Lac Ste. Marie.
Reference: ODM map 40f.

Description: Quartz-pyrite iron formation in Archean felsic metavolcanics. Trenching revealed 3-foot pyrite band.

References: ODM map 40f, 2137G.
ODM, 1931, Volume XL, pt.4, p. 77.

North Onaman Range Prospect

(See Kowkash Township)

O'CONNOR TOWNSHIP

Gunflint Range Occurrences

(See McIntyre Township)

O'Connor Occurrence

Class: Iron formation, Superior type, oxide facies.

Location: SE corner Lot 8,9, Conc. 2.
Reference: GSC map 213A.

Description: Hematite-rich layers, a few inches thick, alternating with chert and shaly layers in an outcrop of the Gunflint iron formation.

History: 1926 3 d.d. holes by F.H.Keefer and associates.

References: ODM map 19601; GSC map 213A.
GSC, 1931, Mem. 167, p. 197.

OLIVER TOWNSHIP

Gunflint Range Occurrences

(See McIntyre Township)

Miscellaneous Occurrences

Class: Iron formation, Algoma type.

Location: Lots 15, 16, Conc. 7 and Lot 12, Conc. 8
Reference: GSC map 2069.

Description: Iron formation in Archean volcanics, some containing irregular areas of pyrite.

References: ODM map 2096G; GSC map 2069.
GSC, 1924, Sum. Rpt., pt.C., p. 24.

PAIPOONGE TOWNSHIP

Gunflint Range Occurrences

(See McIntyre Township)

PIC TOWNSHIP

Pic River Occurrences

(See 48°45' - 86°15')

POISSON TOWNSHIP

Savant Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: In the vicinity of Savant and Neverfreeze lakes including Poisson, McGillis, Savant, Jutten, Conant and McCubbin townships.
Reference: ODM map 37j.

Poisson Tp. (Cont.)

Description: Zones containing numerous bands of magnetite-hematite-quartz iron formation interlayered with metasediments, within Archean greywacke, conglomerate and volcanics. Bands range from an inch to more than 50 feet in thickness.

References: ODM maps 37j, P.352, 1109G, 1119G, 910G, 920G. ODM, 1928, Volume XXXVII, pt. 4, p. 62,82.

SACKVILLE TOWNSHIP

Miscellaneous Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Near central N and S boundaries, of township.
Reference: GSC map 2069.

Description: Iron formation in Archean volcanics.

References: ODM map 2096G; GSC map 2069.

SANDRA TOWNSHIP

Sandra Township Occurrence

Class: Iron formation, Algoma type.

Location: NE corner of township.
Reference: ODM map 45a.

Description: Iron formation in Archean metavolcanics.

References: ODM maps 45a, 2102.

SAVANT TOWNSHIP

Savant Lake Occurrences

(See Poisson Township)

STRANGE TOWNSHIP

Divide Ridge Prospect

Class: Iron formation, Superior type, oxide facies.

Location: N face of Divide Ridge.
Reference: ODM map 1960j.

Description: Gently dipping Gunflint iron formation capped by Keweenawan diabase.

Economic Features: Drilling intersected 338.9 feet of the Gunflint Formation. Samples from the N face assayed 26.9 and 29.9% Fe, and gave concentrates of 54.1 and 54.8% Fe at -200M with 14.4 and 33.5% weight recovery.

History: 1952 1 d.d. hole by L.K. Johnson Explorations.

References: ODM map 1960j, 2065.
ODM, 1960, Volume LXIX, pt.7.
Assessment files, Port Arthur.

Gunflint Range Occurrences

(See McIntyre Township)

Strange Tp. (Cont.)

Mount Edna Prospect

(See Jean Township)

North River Occurrence

Class: Iron formation, Superior type.

Location: 2 miles N of Whitefish River and 1.5 miles W of North River, NE part of township.
Reference: ODM map 1960j.

Description: Gently dipping Gunflint iron formation. Drilling intersected 252.7 feet, including 18 feet of the Upper and the remainder of the Lower parts of the formation.

History: 1952 1 d.d. hole by L.K.Johnson Explorations.

References: ODM map 1960j, 2065.
ODM, 1960, Volume LXIX, pt.7, p. 46-7.
Assessment files, Port Arthur.

Suomi Prospect

Class: Iron formation, Superior type, oxide facies.

Location: Near NE corner of Whitefish Lake.
Reference: ODM map 2065.

Description: Gently dipping, Gunflint iron formation composed of magnetite, jasper, silica and slate capped by 60 to 100 feet of Keweenawan diabase.

Economic Features: Drilling intersected 73 to 380 feet of iron formation, including a 75-foot section of magnetite-jasper.

Previous sampling from Silver Bluff and the E face of Divide Ridge which assayed 26.4, 30.4 and 32.3% Fe gave concentrates of 43.4, 53.6 and 50.4% Fe at -200 M with weight recovery of 39.6, 47.2 and 27.1%.

Strange Tp. (Cont.)

History: 1958(?) 5 d.d. holes for 1,306 feet by Seaway Iron Mines Ltd.

References: ODM map 2065, 1960j.
ODM, 1960, Volume LXIX, pt.7.
Assessment files, Port Arthur.

SUNI TOWNSHIP

Central Onaman Range Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Castor and Jeffries lakes, W central part of Suni and E central part of Oboshkegan townships.
Reference: ODM map 18c.

Description: Two parallel bands, striking N75W, of magnetite-quartz (jasper, chert) iron formation with intercalated greywacke, each 100 to 350 feet wide and separated by 100 to 1000 feet of greywacke. Within Archean metavolcanics. North band made up of the West, Middle and Jeffries zones, the south band includes the Jeffries zone and the 'C' zone to the west.

Economic Features: The central range contains100 million tons proved and 100 million tons of indicated reserves. This includes an orebody 3,200 feet long and 800 feet wide, with an "island" of waste 1,300 by 300 feet, outlined in the Jeffries zone which contains 60 million tons to a depth of 600 feet averaging 22.5% mag.Fe. Composite bulk samples from 2 pits grade 29.7% Fe. By wet magnetic methods and grinding to 88.90% -325M, a concentrate assaying 66.5% Fe, 6% SiO_2 has been produced with a mag. Fe recovery of 94% (i.e. 3.14 tons crude : 1 ton of concentrate).

Ownership: Can-Fer Mines Limited on lease to Algoma Steel Corporation Limited.

Suni Tp. (Cont.)

History: 1957 Aeromagnetic survey.
1958-63 Extensive diamond drilling, magnetometer and geological surveys by Can-Fer Mines Limited.
1966 Diamond drilling by Algoma Steel Corp. Ltd.

References: ODM maps 40f, 18c, 2102, 2144G.
Annual Report, 1960, Can-Fer Mines Limited.
Prospectus, 1958, -9, -61, -63, Can-Fer Mines Limited.
Can. Mines Handbook, 1967-68.
Assessment files, Port Arthur.

North Onaman Range Prospect

(See Kowkash Township)

South Onaman Range Occurrences

Class: Iron formation, Algoma type.

Location: Between Jeffries and Cavell lakes, centre and E central parts of township.
Reference: ODM map 2102.

Description: Iron formation in Archean metavolcanics including the Cavell Lake, "A", "B", and East Extension zones.

History: 1957-63 Magnetometer surveys and some diamond drilling by Can-Fer Mines Limited.

References: ODM maps 2102, 2144G.
Annual Report, 1960, Can-Fer Mines Limited.
Assessment files, Port Arthur.

SUMMERS TOWNSHIP

Lake Nipigon Central Range Prospect

(See Eva Township)

Lake Nipigon South Range Occurrence

(See Eva Township)

VINCENT TOWNSHIP

Beardmore - Blackwater Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Between Beardmore and Blackwater Lake including McComber and Vincent townships.
Reference: ODM map 2135G.

Description: ENE-trending, lean iron formation as numerous discontinuous bands usually 10 feet in width, but up to 50 feet, within Archean metavolcanics. Iron formation is composed of magnetite, quartz, actinolite, jasper, chloritic layers and pyrrhotite.

References: ODM map 2102, 45a, 2135G.
ODM, 1936, Volume XLV, pt. 2, p. 11.
ODM, 1928, Volume XXXVII, pt. 4, p. 91-2.

WALTERS TOWNSHIP

Walters Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Between Doris and Nissiamkikam lakes, S part of township; and in W central part of township.
Reference: ODM map 45a.

Description: Small narrow bands of jasper and iron formation recorded north of Nora Lake, along the S shore of Pasha Lake and between Hallow and Bush lakes. A discontinuous zone of magnetite-hematite iron formation, striking E, crosses the S part of township.

References: ODM maps 45a, 2102, 2135G.
ODM, 1923, I.O.C. Rpt.,p. 186.

WARE TOWNSHIP

Kaministikwia Prospect

(See Conmee Township)

Town Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Lots 8, 9, Conc. 1, 2, northwest of Town Lake.
Reference: ODM map 48c.

Description: Magnetite-quartz iron formation, with some hematite and in part slaty, within Archean volcanics and sediments.

References: ODM map 48c, 2107G.
ODM, 1939, Volume XLVIII, pt. 3, p.8.

TOWNSHIP 75

Pic River Occurrences

(See 48°45'-86°15')

TOWNSHIP 76

Pic River Occurrences

(See 48°45' - 86°15')

TOWNSHIP 80

Jackfish - Middleton Occurrences

Class: Iron formation, Algoma type, sulphide facies.

Location: Within townships 80, 81, and 82.
Reference: ODM map 2107.

Description: Scattered, dominantly E-W trending, narrow bands of chert, ferruginous chert, lean pyritic iron formation and siliceous graphitic schist, in part pyritic.

Economic Features: 1 1/2 miles N of Ripple (Township 80) approximately 30% of rock is disseminated or massive pyrite in a zone 40 feet wide.
1/2 mile S of mouth of Steel River (Township 81) massive and disseminated pyrite occur in a zone 100 feet wide.

References: ODM maps 2107, 2147G.
ODM, 1967, G.R. No. 50, p. 18-9, 36.

Tp. 80 (Cont.)

Middleton Occurrence

Class: Magmatic.

Location: Between Middleton and Little Pic River.
Reference: ODM map 2107.

Description: Flat dipping zones of titaniferous magnetite within gabbro and syenite facies of the Port Coldwell alkalic complex. Zones intermittently exposed over lengths up to 1700 feet with disseminated widths to 75 feet.

Economic Features: High grade zones up to 20 feet in width, 7 assays of which range from 33.13 to 45.17% Fe, 4.5 -13.5% TiO_2.

History: 1951 Geological survey on Renshaw-Tripp holdings.

References: ODM maps 2107, 2137, 2147G.
ODM, 1967, G.R. No. 50, p. 36.
Assessment files, Port Arthur.

TOWNSHIP 81

Jackfish - Middleton Occurrences

(See Township 80)

TOWNSHIP 82

Jackfish - Middleton Occurrences

(See Township 80)

TOWNSHIP 83

Township 83 Occurrences

Class: Iron formation, Algoma type.

Location: Mainly in the vicinity of Bews Lake.
Reference: ODM map 47j.

Description: Short, narrow bands of iron formation in Archean metavolcanics.

Reference: ODM map 47j.

TOWNSHIP 84

Township 84 Occurrences

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: Throughout township but especially in the vicinity of Schreiber.
Reference: ODM map 47j.

Description: Numerous bands of quartz-magnetite iron formation with interbedded chloritic schist, in Archean metavolcanics. Widths range from 10 to 330 feet. Local lenses of massive and disseminated pyrite.

References: ODM maps 47j, 2137, 2139G.
ODM, 1938, Volume XLVII, pt. 9, p.9, 10, 27-8.

$48^{\circ}00' - 85^{\circ}15'$

Iron Lake Range (West) Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Between East Pukaskwa River and Algoma-Thunder Bay District boundary.
Reference: ODM map 14a.

Description: ENE-trending magnetite-quartz iron formation up to 40 feet in width from the western extension of the Iron Lake Range.
(Also See Township 33, Range 26).

References: ODM maps 14a, 2176G.
OBM, 1905, Volume XV, pt. 1, p. 313.

Maple - Cameron Lakes Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Between Maple and Cameron lakes.
Reference: ODM map 14a.

Description: E-W trending lenses of magnetite-quartz iron formation and rusty and banded chert over a strike length of 8 miles. Individual widths up to 75 feet have been recored. A selected sample assayed 29.2% Fe.

References: ODM maps 14a, 2164G, 2175G, 2176G.
OBM, 1905, Volume XIV, pt. 1, p. 316, 336.

48°00' - 85°30'

East Pukaskwa River Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: S of East Pukaskwa River, between Pukaskwa River to the W and Maple Creek to the E.
Reference: ODM map 14a.

Description: Discontinuous E-W trending lenses of iron formation over a strike length of 8 miles. Lenses scattered over widths of 1/4 mile with observed individual widths of up to 115 feet. Lenses composed of chert or magnetite-quartz iron formation. Selected samples assayed 46.4, 36.2, 38.4 and 43.6 percent Fe.

References: ODM maps 14a, 2165G.
OBM, 1905, Volume XIV, pt.1, p. 316, 334-6

Maple - Cameron Lakes Occurrences

(See 48°00' - 85°15')

48°00' - 85°45'

East Pukaskwa River Occurrence

(See 48°00' - 85°30')

48°00' - 85°45' (Cont.)

McDougall Lake Occurrence

Class: Iron formation?

Location: At McDougall Lake.
Reference: ODM map 14a.

Description: Hornblendic and micaceous schist striking N55E to N75E and containing magnetite, pyrite, chalcopyrite and pyrrhotite over a width of 144 feet and a length of 435 feet. Selected samples assayed 25.7% Fe, 0.07%S; 40.92 Fe, 3.30% S, 40.17% Fe, 9.39% S.

References: ODM map 14a.
OBM, 1905, Volume XV, pt.1, p. 337-8.

48°00' - 90°00'

Gunflint Range Occurrences

(See McIntyre Township)

Sandstone Lake Prospect

Class: Iron formation, Superior type.

Location: South shore, near the S W corner, of Sandstone Lake.
Reference: ODM map 2065.

Description: Gently dipping Gunflint iron formation. Drilling intersected 278.3 feet, including 59.4 feet of the Upper Gunflint and 218.9 feet of the Lower Gunflint.

Economic Features: Not known.

History: 1952 1 d.d. hole by L.K. Johnson Explorations.

References: ODM map 2065.
ODM, 1960, Volume LXIX, pt. 7, p.46-7.
Assessment files, Port Arthur.

$48^{\circ}00' - 90^{\circ}15'$

Iron Range Lake Prospect

Class: Iron formation, Superior type, oxide facies.

Location: South of Iron Range Lake.
Reference: ODM map 2065.

Description: Gently dipping Gunflint iron formation.

Economic Features: Drilling intersected 349 feet of magnetic taconite interbedded with some cherty, slaty and jasper sections.

History: 1952 1 d.d. hole for 431 feet by L.K. Johnson Explorations.
1957-9 3 d.d. holes for 1,048 feet on J.K. Orlich holdings.

References: ODM map 2065.
Assessment files, Port Arthur.

Gunflint Range Occurrences

(See McIntyre Township)

Mink Mountain Prospect

(See Hardwick Township)

48°00' - 90°15' (Cont.)

North Lake Prospect

Class: Iron formation, Superior type, oxide facies.

Location: Between North Lake and Addie Lake.
Reference: ODM map 2065.

Description: Gently dipping Gunflint iron formation.

Economic Features: Drill data not known. Samples from S and SW shores of Addie Lake assayed 32.2 and 26.9% Fe, and gave a magnetic concentrate of 55.5 and 51.9% Fe at -200M with 36.5 and 29.0% weight recovery.

History: 4 d.d. holes by Sheritt-Gordon Mines Limited.

References: ODM map 2065.
ODM, 1960, Volume LXIX, pt. 7, p. 57, 62.
Assessment files, Port Arthur.

Sandstone Creek Prospect

Class: Iron formation, Superior type, oxide facies.

Location: Between Iron Range and Sandstone lakes.
References: ODM map 2065.

Description: Gunflint iron formation dipping 5°SE containing a cherty magnetite slate with hematite and amphiboles.

Economic Features: Three areas outlined 8,200 by 400 to 1000 feet, 1600 by 500 to 1600 feet, 1,300 by 100 to 600 feet within which 94, 104 and 81 feet of magnetite taconite were intersected in drilling.

Trench samples assayed 29.1 to 38.3% Fe and 94 feet of drill core assayed 28% total Fe or 24% sol.Fe.

Tests on a 20lb. sample containing 43.5% Fe gave a 62.6% Fe concentrate at -325M with 75.6% Fe recovery.

History: 1952 1 d.d. hole for 111.7 feet by L.K.Johnson Explorations.
1954 Dip needle survey and trenching by Parozan Iron Mines and Exploration Limited.
1958 Geological and magnetometer surveys and 3 d.d. holes for 779 feet by Parozan Iron Mines and Exploration Limited.

48°00' - 90°15' (Cont.)

References: ODM map 2085; GSC map 276A.
ODM, 1960, Volume LXIX, pt. 7, p. 46-7.
Prospectus, 1958, Parozan Iron Mines and Explorations Ltd.
Assessment files, Port Arthur.

48°00' - 90°30'

Gunflint Range Occurrences

(See McIntyre Township)

48°15' - 90°00'

Gunflint Lake Occurrences

48°15' - 90°45'

Saganagons Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Between Bemar and Saganagons lakes, and near S shore of Saganagons Lake.
Reference: ODM map 2149.

Description: Discontinuous, E to NE trending bands of magnetite quartz (chert, jasper) iron formation up to 25 feet wide and 500 feet long, within Archean metavolcanics.

Economic Features: Two samples assayed 31.5 and 33.8% Fe.

References: ODM maps 2149.
ODM, 1968, G.R., No. 66, p. 8, 22, 25.

$48^{o}30' - 88^{o}45'$

Gunflint Lake Occurrences

(See McIntyre Township)

McConnell Prospect

Class: Iron formation with secondary enrichment

Location: From Loon Lake to 3 miles west.
Reference: ODM map 1960p.

Description: Gently dipping Gunflint iron formation containing cherty carbonate, taconite, and argillite capped by 10 to 35 feet of Keweenawan diabase. Areas of hematite enrichment in the taconite facies.

Economic Features: Drilling the iron formation outlined a zone 40 feet deep and 1500 feet in length averaging between 20 to 30 % Fe. Intersections sampled include 12.5% Fe over 5 feet, 41.9% Fe over 11.9 feet and 31.7% Fe over 25.8 feet. Samples from enriched portions in outcrops or adits range from 19.66% Fe to 65.26% Fe. One drill hole intersected 6.5 and 1.75-foot zones.

History: Early trenching and adits.
1923 6d.d. holes for 1,500 feet by M.A. Hanna Company.
1956 26 shallow d.d. holes by Seaway Iron Mines Limited.

References: ODM maps 1960p, 2137.
ODM, 1923, I.O.C. Rpt., p. 181.
ODM, 1960, Volume LXIX, pt. 7, p. 37-40
Assessment files, Port Arthur.

48°30' - 89°00'

Kingfisher Lake Occurrence

Class: Iron formation, Algoma type.

Location: Between Beaverlodge Lake and E of Kingfisher Lake
Reference: ODM map 2065.

Description: Iron formation in Archean metasediments.

References: ODM maps 2065, 2107G.

48°30' - 90°15'

Greenwater Lake Occurrences

Class: Iron formation, Algoma type.

Location: NW of Greenwater Lake.
Reference: ODM map P. 223.

Description: Discontinuous bands of magnetite-quartz iron formation, locally pyritic, within Archean volcanics.

References: ODM maps P. 223, 1102G; GSC map 338A.
Assessment files, Port Arthur.

48°30' - 90°30'

Grouse and Squeers Lakes Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: N and W of Grouse and Squeers lakes.
Reference: ODM map 2036.

Description: Zones of intercalated tuff and magnetite-quartz amphibole iron formation up to 60 feet thick and 300 feet in length. Within Archean metavolcanics.

References: ODM maps, 2036, 112G.
ODM, 1964, G.R., No. 19, p. 10, 23.

48°45' - 85°45'

Amwri Lake Occurrence

Class: Iron formation, Algoma type.

Location: Between Amwri Lake and Black River.
Reference: ODM map P. 334.

Description: Iron formation in Archean metavolcanics.

References: ODM maps P. 334, 2168G.

48°45' - 86°00'

Pic River Occurrences

(See 48°45' - 86°15')

$48^{\circ}45'$ - $86^{\circ}15'$

Bamoos Lake Prospect

Class: Magmatic.

Location: Near NE end of Bamoos Lake.
Reference: ODM map 2099.

Description: Lenses of titaniferous magnetite associated with apatite, chalcopyrite, pyrrhotite and pyrite within olivine gabbro facies of the Port Coldwell alkalic complex.

Economic Features: Mineralized zones strike N-S within an area 1 3/4 miles long and up to 2000 feet wide.
Best intersections from 5 drill holes are 22.4 to 29.06% Fe with 0.10 to 0.10% V_2O_5, 1.71 to 2.70% P_2O_5, 0.09 to 0.14 Cu, sampled at 10-foot intervals; and 0.12 to 0.33% Cu and 0.02 to 0.05% Ni over 23 feet sampled at 5-foot intervals. A chip sample over 125 feet assayed 40% Fe, 7.35% TiO_2, 0.56% S, 0.33%P.

History: 1929 Trenching by H. England.
1951 Test pits by B. and Z. Renshaw and E.C. Tripp.
1954 5 d.d. holes for 6000 feet by Bamoos Mines Limited.
1963-4 Magnetic, self potential and geological surveys by Empire Explorations Limited.

References: ODM map 2099, 2147G.
ODM, 1967, G.R. No. 43, p. 48.
Prospectus, 1954, Bamoos Lake Mines Limited.
Assessment files, Port Arthur.

Coubran Lake Prospect

Class: Magmatic.

Location: In the vicinity of Coubran and Wullie lakes.
Reference: ODM map 2024.

48°45' - 86°15' (Cont.)

Description: Lenses and sheets of titaniferous magnetite, pyrite, pyrrhotite and chalcopyrite, striking N10W and dipping 35S, within a gabbroic facies of the Port Coldwell alkalic complex. Lenses from a few inches to tens of feet thick and up to 1/2 mile long.

Economic Features: Main zones estimated to contain about 50,000 tons/vertical foot averaging 30% Fe, 0.22% Cu, Tests on a sample containing 39.46% Fe, 3.74% TiO_2 gave a concentrate assaying 55.16% Fe, 23.48% TiO_2.

History: 1954 7 d.d. holes for 3,925 feet and geological survey by Head of the Lakes Iron Limited.
1959 17 d.d. holes for 3,765 feet and aeromagnetic and E.M. surveys by Head of the Lakes Iron Limited.
1961 Geological and geophysical surveys by Denison Mines Ltd.
1962 E.M. survey and 37 d.d. holes for 3,765 feet by Head of the Lakes Iron Co. Ltd.
1963 49 d.d. holes for 6,319 feet by Lakehead Mines Limited.

References: ODM maps 2157G, P.114, 2024.
Assessment files Port Arthur.

Pic River Occurrences

Class: Iron formation, Algoma type.

Location: Along, to the E, and to the W of Pic River between 48°40' and 48°58' including townships 75, 76 and Pic.
References: ODM maps 2098, 2099, 40d.

Description: Scattered exposures of iron formation interbedded with slate and felsic tuff or as interflow sediments in mafic volcanic flows.

References: ODM maps 40d, 2098,2099.
ODM, 1967, G.R. No. 43, p. 10.

48°45' - 89°15'

Whitefin Lake Occurrences

(See 49°00' - 89°15')

48°45' - 89°30'

Vande Lake Occurrences

(See 49°00' - 89°30')

48°45' - 90°00'

Glen Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Between Henderson and Peterkin lakes in Block No. 2.
Reference: ODM map 2105.

Description: E-trending zone of magnetite quartz iron formation at least 4 miles in length and approximately 200 feet thick, within Archean metasediments.

References: ODM maps 2105, 1103G.
ODM, 1967, G.R., No. 48, p.9.

48°45' - 90°15'

Glen Lake Occurrence

(See 48°45' - 90°00')

49°00' - 87°15'

Big Duck Lake Occurrences

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: Between Shy and Big Duck lakes.
Reference: ODM map 2023.

Description: Two narrow, ENE-trending bands of lean iron formation in Archean metagreywacke. North band was traced for 2 miles and is composed of magnetite disseminated in garnet gneiss; south band, traced interruptedly over 5 miles, contains quartz, pyrite and pyrrhotite, within a biotite gneiss, and locally exceeds 50 feet in thickness.

Economic Features: N band contains up to 19% Fe with a thickness in one drill hole of 125 feet.

History: 2 d.d. holes by Canabel Syndicate.

References: ODM map 2023, 2140G.

49°00' - 89°15'

Geddes Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 1,000 feet NW of Geddes Lake.
Reference: ODM map 2136.

Description: Magnetite-quartz iron formation with some amphibole and pyrite up to 5 feet wide and 800 feet in length, within Archean metavolcanics.

References: ODM map 2136, 2109G.
ODM, 1968, G.R., No. 64, p. 16.

Mawn Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: NW shore of Mawn Lake.
Reference: ODM map P. 462.

Description: Two bands of hematite-quartz (jasper) iron formation with some magnetite, epidote and amphibole separated by 50 feet of Archean sediments. Bands 30 and 25 feet thick.

History: 1965 Trenching and 1 d.d. hole for 550 feet by H. Brayshaw.

References: ODM maps P. 462, 2109G.
ODM 1968, G.R., No. 64, p. 16.
Assessment files, Port Arthur.

Vande Lake Occurrences

(See 49°00' - 89°30')

49°00' - 89°15' (Cont.)

Whitefin Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: S of Whitefin Lake, between Whitefin Creek and Peevy Lake.
Reference: ODM map P.340.

Description: Narrow, discontinuous, NE-trending bands of magnetite-greywacke iron formation in Archean metavolcanics.

References: ODM maps P. 340, 2109G, 2108G.

49°00' - 89°30'

Vande Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Between Riviere de Iles and Block Lake.
References: ODM maps P. 339, P. 340.

Description: Interlayered magnetite-quartz (jasper) iron formation with minor hematite and greywacke trends NE over a strike length of 17 miles. Iron formation observed in widths up to 300 feet. Within Archean greywacke and some volcanics.

References: ODM maps P. 339, P. 340, 2109G, 2099G, 2098G, 2065.
GSC, 1933, Sum. Rpt., pt. D, p. 14.

49°00' - 89°45'

Eileen Lake Occurrence

Class: Hydrothermal.

Location: SE of Eileen Lake.
Reference: ODM map P. 462.

Description: Boulders of limestone up to 18 feet in diameter contain up to 70 percent magnetite probably of Keweenawan age.

Reference: ODM map P. 462, 2118G.

49°15' - 85°30'

Hillsport Creek Occurrence

Class: Magmatic.

Location: Along the Marathon Corporation road, S of Hillsport Creek.
Reference: ODM map 2047.

Description: Magnetite-bearing lenses in granitic pegmatite containing an estimated total magnetite content of less than 5 percent but areas 2 by 3 feet may contain up to 30 percent magnetite.

References: ODM map 2047.
ODM, 1966, G.R., No. 21, p. 16-7.

$49^{o}15'$ - $88^{o}45'$

Black Sturgeon Lake Occurrences

Class: Placer.

Location: On north and west central shores of Black Sturgeon Lake.
Reference: ODM map P. 462.

Description: Dark, medium to coarse grained titaniferous magnetite-bearing beach sands.

Economic Features : A sample from 50 feet of drill core from the north occurrence hade a head assaying 9.92% Fe, 0.75% TiO_2, 40.3% SiO_2 and a concentrate assaying 26.6% Fe, 7.48% TiO_2, 29.2% SiO_2. A grab sample assayed 9.91%Fe, 1.01% TiO_2, 50.37% SiO_2. Two grab samples from the west occurrence assayed 4.46 and 10.8% sol.Fe.

History: 1959 6 d.d. hole for 330 feet by Territory Mining Company Limited.

References: ODM maps P. 462, 2137.
Assessment files, Port Arthur.
M.E. Coates, personal communication.

Sturgeon Escarpment Occurrence

Class: Hydrothermal.

Location: 3/4 miles E of S end Black Sturgeon Lake.
Reference: ODM map P 462.

Description: Specularite fillings in tension fractures about 1/2 inch wide and up to 2 feet long within Archean mafic volcanics along the Black Sturgeon fault.

References: ODM maps P. 462, 2137.

49°15' - 90°45'

Little Petry (Bear) Lake Occurrences

Class: Bog iron.

Location: At Little Petry Lake, 4 miles E of Quorn Station
Reference: ODM, 1909, Volume XVIII, pt. 1, p. 181.

Description: Scattered, shallow occurrences by bog iron along S and NE shores of the lakes.

Reference: ODM, 1923, I.O.C. Rpt., p. 177.
ODM, 1909, Volume XVIII, pt. 1, p. 180-1, 188-90.

49°30' - 85°30'

Gort Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: SE end Gort Lake.
Reference: 2171G.

Description: Iron formation in Archean volcanics and sediments.

History: 1963 Some d.d. by Algoma Steel Corporation Ltd.

References: ODM map 2171G.
Assessment files, Port Arthur.

49°30' - 85°45'

Little Chowder Lake Occurrence

Class: Iron formation, Algoma type.

Location: 3/4 miles N of Kassagimini Lake.
Reference: ODM map 2171G.

Description: Iron formation interlayered with quartz and garnet-chlorite schist.

History: 1963 Some d.d. by Algoma Steel Corp. Ltd.

References: ODM map 2171G.
Assessment files, Port Arthur.

$49^{\circ}30' - 86^{\circ}00'$

Pagwachuan Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Laponen Lake (N of N end McKay Lake) and N of E end of Pagwachuan Lake.
Reference: ODM map 466.

Description: ENE-trending magnetite-quartz iron formation interbedded with and within Archean metagreywacke. Minor amounts within metavolcanics.

Economic Features: Two iron formation zones outlined N and NW of S end of Pagwachuan Lake. N zone 50 to 200 feet wide and 5,100 feet long from which 3 samples over a width of 110 feet gave 27.7%, 27.1% 21.8% Fe; S zone 8,800 feet long, composed of 3 segments the main one 4,800 feet in length, and mostly between 225-275 feet in width with a maximum of 400 feet.

History: 1958 Aeromagnetic survey by Can-Fer Mines Ltd.
1966 Magnetometer survey and some d.d. by Algoma Steel Corp. Ltd.

References: ODM maps 46b, 2160G.
ODM, 1937, VolumeXLVI, pt. 3, p. 27-8
J.W. McBean, 1938, thesis, Queen's University.
Prospectus, 1958, Can-Fer Mines, Ltd.
Assessment files, Port Arthur.

Peterson Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between McKay and Pagwachuan lakes, crossing Highway 625. 1 mile SW of Pagwachuan Lake.
Reference: ODM map 2160G.

49°30' - 86°00' (Cont.)

Description: Two E-W zones of iron formation with Archean metagreywacke. North zone contains magnetite-quartz -amphibole intersected for a core length of 50 feet in one drill hole; south zone traced for 3 miles, contains magnetite-quartz iron formation, intersected in widths of 25 to 325 feet interlayered with greywacke and with minor amount of lean iron formation and granite.

History: 1962 Some d.d. by The Hanna Mining Co. Ltd.
1966 Some d.d. by Algoma Steel Corp. Ltd.

References: ODM maps 2160G, 46b.
ODM, 1937, Volume XLXII, pt. 3. p. 30.
Assessment files, Port Arthur.

49°30' - 86°15'

Northern Long Lake Occurrence

(See Abrey Township)

Pagwachuan Lake Prospect

(See 49°30' - 86°00')

49°45' - 87°30'

Onaman Lake (South) Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: In the vicinity of Grasser and Pontoon lakes, and on Con Creek about 1 mile west of Provincial Forest boundary.

49°45' - 87°30' (Cont.)

Description: At least 3 discontinuous bands of magnetite -quartz iron formation, up to 50 feet thick, in Archean metavolcanics.

References: ODM maps 47h, 2102, 2136G.
ODM, 1938, Volume XLVII, pt. 8, p. 8.

49°45' - 89°30'

Puddy Lake Prospect

Class: Magmatic.

Location: At Puddy Lake.
Reference: ODM map P. 416.

Description: Veins and disseminations of nickeliferous magnetite within serpentinite.

Economic Features: Largest concentration of magnetite is in an area 2,800 feet long and 300 feet wide.
Magnetic concentrates from 12 consecutive samples from one drill hole averaged 53.9% Fe, 1.24% Ni.

History: 1965 Geophysical surveys and 5,500 feet of d.d. by Commerce Nickel Mines Limited
1966 Some d.d. by Commerce Nickel Mines Limited.

References: ODM maps P. 416, 39-2.
ODM, 1965, P.R. 1965-3, p.65.
ODM, 1930, Volume XXXIX,pt. 2, p. 51 -60.
Assessment files, Port Arthur.

49°45' - 90°15'

Sassafras Lake Prospect

(See 50°45' - 90°30')

$49^{o}45'$ - $90^{o}30'$

Post - Add Lakes Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Between Post and Add lakes.
Reference: ODM map 2044.

Description: WNW-trending zone of narrow, lean magnetite-quartz iron formation intercalated with and within Archean metasediments. Trace over a strike length of 3 miles.

References: ODM maps 2044, P. 353, 1117G.
ODM, 1964, G.R. No. 24, p. 15-6, 45.

Sassafras Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: From W of Div Lake to Scruffy Lake.
Reference: ODM map 2044.

Description: Discontinuous, easterly-trending magnetite-quartz iron formation bands with a strike length of 14 miles in Archean metasedimentary schists and gneiss intruded by syenite. Some pyrite and pyrrhotite locally.

Economic Features: West of Sassafras Lake, preliminary reserve estimates of possible open pit ore, 200 to 500 feet in width and 300 feet in depth, range from 22.3 million tons capable of producing 7.4 million tons of concentrate grading 69% Fe, 3-4% SiO_2, to 44 milion tons, grading 23-24% mag. Fe, capable of producing 15 million tons of concentrate grading 66% Fe, 5% SiO_2.

History: 1957 Aeromagnetic and electromagnetic, magnetometer and dip needle surveys and 8 d.d. holes for 4,366 feet by N.A. Timmins Explorations (Ontario) Ltd.
1960 Geological survey by C.H. Hopper.
1961 Magnetometer survey by Steep Rock Iron Mines Ltd.

49°45' - 90°30' (Cont.)

References: ODM map 2044, P.326, P.353, 1107G, 1117G.
ODM, 1964, G.R. No. 24, p. 15-6, 45, 47-8.
Assessment files, Kenora.

49°45' - 90°45'

Post-Adds Lakes Occurrence

(See 49°45' - 90°30')

50°00' - 87°30'

Miscellaneous Occurrences

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: Near Tashota, and west of the Tashota Nipigon Mine.
Reference : ODM map 40f.

Description: Magnetite or pyrite iron formation in Archean metavolcanics.

References: ODM maps 40f, 2137G.
ODM, 1936, VolumeXL, pt. 4, p. 76-7.

50°00' - 89°30'

Kearns Lake Occurrence

Class: Iron formation, Algoma type.

Location: On island near E shore Kearns Lake.
Reference: ODM map 2058.

Description: A minor occurrence of alternating rusty quartz and magnetite-bearing greywacke bands.

References: ODM map 2058, 1106G.
ODM, 1964, G.R., No. 25, p.12.

50°15' - 86°45'

Conlon Bay Occurrence

Class: Iron formation, Algoma type.

Location: Between Conlon Bay and Muly Lake.
Reference: ODM map 1955-2.

Description: A small occurrence of magnetic iron formation in Archean metavolcanics.

References: ODM maps 1955-2, 2153G.
ODM, 1955, Volume LXIV, pt. 4, p. 10.

$50^{o}15'$ - $87^{o}30'$

Marshall Creek Occurrences

Class: Iron formation, Algoma type, sulphide and oxide facies.

Location: S and E of Marshall Creek in the vicinity of Suicide Pond, Albert Little Marshall and Marshall lakes, includes the NW corner of Gzowski Township.
Reference: ODM map 1958-1.

Description: Numerous, WNW to NE trending bands of lean iron formation in Archean metasediments composed of quartz (chert) alternating with anthophyllite layers, the latter containing some magnetite, and containing disseminated to massive pyrite and pyrrhotite on S shore Marshall Lake, near Suicide Pond and N of Willet Lake.

References: ODM maps 1958-1, 2102, 2138G.
ODM, 1958, Volume LXVII, pt. 3, p. 8-9, 19.

Summit Lake Prospect

Class: Iron formation Algoma type, oxide facies.

Location: 4 miles NNE of Summit Lake.
Reference: ODM map 2102.

Description: E-trending, magnetite-quartz iron formation with a strike of 4.5 miles in Archean metasediments.

Economic Features: Main zone 2,400 feet long, intersected in 3 holes between 60 and 120 feet in width with a grade from 31 to over 33% Fe.
Reserves estimated at 40 million tons averaging 30% Fe to a depth of 1000 feet (Newman, 1962).

History: 1957 Aeromagnetic and magnetometer surveys by Panther Mining Co. Ltd.
1958 3 d.d. holes for 1,013 feet by Panther International Mining Co. Ltd.
1959 Magnetometer survey by Stewart Lake Iron Mines Ltd.
1962 3 d.d. holes for 1,060 feet by Stewart Lake Iron Mines Limited.

References: ODM maps 2102, 2138G.
Prospectus, 1958, 1959, Panther International Mining Co. Ltd.
Prospectus, 1962, Stewart Lake Iron Mines Limited.
Assessment files, Port Authur.

50°15' - 88°00'

Funnel Lake Occurrence

Class: Sedimentary.

Location: Near W end of Funnel Lake, 3 1/2 miles E of Zigzag Lake.
Reference: ODM map 2100.

Description: E-trending band of Archean metagreywacke with magnetite-rich bands over an exposed width of 10 feet.

References: ODM maps2100, 2102, 2131G.
ODM map 1968, G.R, No. 55, p. 11.

North Lamaune Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: West and SE of North Lamaune Lake.
Reference: ODM map 2100.

Description: At least 2 bands of ESE-trending iron formation repeated by folding, up to 200 feet thick with surface widths of up to 500 feet at nose of folds. Iron formation contains quartz, magnetite, pyroxene, amphibole, and garnet with minor pyrrhotite and pyrite.

$50^{o}15'$ - $88^{o}00'$ (Cont.)

Economic Features: Five deposits outlined on basis of a magnetometer survey estimated to contain over 50 million tons of beneficating ore.

Tests on one sample gave a magnetic concentrate at -100M grading 65.36% Fe, 6.58% SiO_2

History: 1958-60 Trenching, magnetometer surveys and 1 d.d. hole by J. Zmudzinski, W. Tomlinson, Sogemines Development Co. Ltd. and R.V. Oja.

References: ODM maps 2100, 2102, 2131G.
ODM, 1968, G.R. No. 55, p. 12, 45-7.
Assessment files, Port Arthur.

$50^{o}15'$ - $88^{o}15'$

Crescent Lake Occurrences

Class: Iron formation, Algoma type, sulphide facies.

Location: SW of Toset Lake and in the vicinity of Crescent, Zigzag and Chappias lakes.
Reference: ODM, 1968, G.R. No.55, Fig. 9, p. 61.

Description: Zones of massive to disseminated pyrite and pyrrhotite in Archean graphitic metasediments and metavolcanics from 1.5 to 147 feet in core widths.

History: 1959 some d.d. by Panther International Mining Co. Ltd.

References: ODM maps 2102, 2100.
ODM, 1968, G.R. No. 55, p. 60-2.
Assessment files, Port Arthur.

Talbot Lake Occurrence

Class: Iron formation, Algoma type.

Location: 0.4 miles S of Talbot Lake.
Reference: ODM map 2100.

Description: Quartz-amphibole-magnetite-garnet iron formation in Archean metavolcanics.

References: ODM maps 2100.
ODM, 1966, G.R. No. 55, p. 11.

Zigzag Lake Occurrence

Class: Iron formation, Algoma type.

Location: At S end Zigzag Lake.
Reference: ODM map 2100.

Description: Two bands, 10 to 15 feet thick, 50 feet or more long composed of quartz, amphibole, magnetite, and garnet within Archean metavolcanics.

References: ODM maps 2100, 2131G.
ODM, 1968, G.R., No. 55, p. 11.

50°15' - 88°30'

Haystack Mountain Occurrence

Class: Magmatic.

Location: At Haystack Mountain, 4.5 miles east of Green.
Reference: ODM map 2114G.

Description: Ilmenite or titaniferous magnetite as segregations in Keweenawan diabase.

References: ODM maps 2114G, 2102.
ODM, 1923, I.O.C. Rpt. p. 183.

Pikitigushi Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 1/3 mile N of Pikitigushi (Round) Lake.
Reference: ODM map 2114G.

Description: E-trending bands of magnetite-hematite-quartz iron formation traced for 1 mile and exposed over widths up to 8 feet.

Reference: ODM map 2114G.
ODM, 1923, I.O.C. Rpt., p. 183.

50°15' - 90°30'

Kashaweogama Lake Prospect

(See McCubbin Township)

50°15' - 90°30'

North Kashaweogama Prospect

(See 50°15' - 90°45')

50°15' - 90°45'

Armit Lake Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: At S shore Armit Lake and 1.5 miles to N on E shore of lake.
Reference: ODM map 2064.

Description: Magnetite-quartz-amphibole iron formation in Archean volcanics at least 1 mile in length. A grab sample assayed 35.1% Fe.

References: ODM maps 2064, P. 354, 1119G.
ODM, 1965, G.R. No. 32, p.8, 22.

North Kashaweogama Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Hill and Kashaweogama lakes, near 50°30'-90°45'
Reference: ODM map P. 354.

Description: Two, discontinuous, SE to NE trending bands of magnetite-quartz iron formation, 50 to 400 feet wide and 500 to 800 feet apart, with a strike length of over 3 miles, within Archean metavolcanics.

50°15' - 90°45' (Cont.)

Economic Features: Estimated 405,000 tons per vertical foot in 4 zones grading 28% Fe which can be concentrated to 65% Fe with 93% recovery on grinding to -325M.

Ownership : Northern Canada Mines Limited.

History: 1958 5,100 feet of d.d. by Northern Canada Mines Ltd.
1961 Magnetometer and geological surveys by Northern Canada Mines Limited.
1966-7 Diamond drilling by The Hanna Mining Co. Ltd.

References: ODM maps P. 354, 1119G, 910G.
Can. Mines Handbook, 1967-68.
Assessment files, Kenora.

50°30' - 86°30'

Skibi Lake Prospect

(See 50°30' - 86°45')

50°30' - 86°45'

Colpitts Lake Occurrences

Class: Iron formation, Algoma type, sulphide facies.

Location: Between Kapikotongwa and Bury lakes, including Colpitts Lake.
Reference: ODM map 2102.

Description: E-trending, discontinuous bands of iron formation containing pyrite, pyrrhotite and quartz in Archean schist and gneisses. A 18-foot wide zone of massive pyrite and pyrrhotite occurs on the S shore of Colpitts Lake.

References: ODM maps 2102, 40f.
ODM, 1931, Volume XL, pt.4, p. 103-4.

Skibi Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Fron Percy Lake to west of Melchett Lake, including Chaucer, Briarcliffe, Nass, Saga, and Jungfrau lakes. Reference: ODM map 2102.

Description: Two discontinuous, E-trending bands of iron formation separated by ± 2000 feet of sediment, isoclinally folded within Archean metasediments. Iron formation interrupted over a strike length of 22 miles and is composed of magnetite-quartz with minor amphibole and biotite usually grading 25-30% Fe or magnetite-schist-quartz which ranges from 10-30% Fe.

Economic Features: Two potential orezones outlined: The Briarcliffe zone which is on a Z-type fold with widths to 500 feet, and the Two Mile Lake zone which contains two areas 2,600 and 2,400 feet in length and up to 260 feet wide on the nose of a regional anticline.

Reserves are estimated at in excess of 335 million tons of open pit ore averaging 26.2% acid sol. Fe.

Tests indicate concentrates containing 70% Fe could be produced, resulting in pellets containing 67% Fe(dry) and 2% SiO_2.

Ownership: Anaconda Iron Ore (Ontario), Limited.

History: 1954 Aeromagnetic and dip needle surveys by Lake Superior Iron Limited.

1955 40 d.d. holes for 20,000 feet by Lake Superior Iron Limited.

1956-7, -61 Extensive d.d. by Anaconda Co (Canada) Limited.

References:
ODM maps 2102, 980G, 990G.
A.I.M.E., 1960, Trans., Volume 217, p.451-8.
Eng. and Min. Jour., 1966, Volume 37, Jan. 17,p.3.
Inst. Lake Superior Geol., 1964, Abstracts, p. 17-20.
Assessment files, Port Arthur.

$50^{\circ}30' - 87^{\circ}00'$

Skibi Lake Prospect

(See $50^{\circ}30' - 86^{\circ}45'$)

Stewart Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: From 1.5 miles W of Melchett Lake, to Tennant Lake, to 3 miles N of Stewart Lake.
Reference:ODM map 2102.

Description: E-trending zone of magnetite-quartz lenses over a strike of 15 miles, within Archean metavolcanics invaded by some granite. Lenses range from 40 to 250 feet in width.

Economic Features: An estimated 21.6 million tons of indicated and 27.9 million tons of possible reserves, averaging 30% Fe, are present to a depth of 1000 feet.
A 500 lb. sample gave a concentrate averaging 62 to 64% Fe, 7% SiO_2 at a grind of 100 to 150 M by combined wet magnetic and flotation techniques. A concentration ratio of 2.3 to 1, to 2.5 to 1 was indicated.

History: 1957 Aeromagnetic survey by Panther Mining Co. Ltd.
1958 6 d.d. holes for 2,656 feet by Panther International Mining Co. Ltd.
1961 4,846 feet of d.d. by Stewart Lake Iron Mines Ltd.

References: ODM maps 2102, 980G.
Prospectus, 1958, 1959, Panther International Mining Co.Ltd.
Prospectus, 1962, Stewart Lake Iron Mines Ltd.
Assessment files, Port Arthur.

50°30' - 88°15'

Toset Lake Occurrence

Class: Iron formation, Algoma type.

Location: 1 1/2 mile NW of Toset Lake.
Reference: ODM map 2100.

Description: Pyroxene-magnetite-amphibole-garnet iron formation in Archean metagreywacke.

References: ODM maps 2100, 960G.
ODM, 1968, G.R., No. 55, p. 11.

50°30' - 88°45'

Fletcher Lake Occurrence

Class: Iron formation, Algoma type.

Location: Between Caribou and Howie lakes.
Reference: ODM map 2102.

Description: Iron formation in Archean metavolcanics.

References: ODM maps 49g, 2102, 950G.
ODM, 1940, Volume XLIX,pt. 6, p. 10.

Hollingsworth - Linklater Lakes Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: From SE end Campbell Lake to SE end Linklater Lake.
Reference: ODM map 49g.

50°30' - 88°15' (Cont.)

Description: WNW-trending, discontinuous band of magnetite quartz iron formation with minor hematite, within Archean greywacke and arkosic quartzite. Iron formation is mainly approximately 100 feet wide except east of Hollingsworth Lake were a 1/2 mile length has widths to 600 feet.

History: 1956-7 Trenching by C. Menifee.

References: ODM maps 49g, 2102, 950G.
J.C. Davies, ODM, personal communication.

50°30' - 89°00'

Caribou Lake Occurrences

Class: Iron formation, Algoma type.

Location: On island west of Kellar Island, Caribou Lake.

Description: Iron formation in Archean metavolcanics.

References: ODM maps 49g, 930G.
ODM, 1940, Volume XLIX, pt. 6, p. 10.

50°30' - 90°15'

Savant Lake Occurrences

(See Poisson Township)

50°30' - 90°30'

Miniss River Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: NE from intersection of 50°30' - 90°45' to 3 miles W of Highway 599.
Reference: ODM map 910G.

Description: Two NE-trending bands of magnetite-bearing iron formation separated by 200 to 600 feet of mafic volcanics in SW 1.75 miles; to NE, lenses of iron formation in volcanics.

Economic Features: Iron formation as lenses several hundred to several thousand feet long and 50 to 100 feet thick in the SW. To the NE numerous lenses less than 20 feet thick and 1000 feet long.

History: 1957 Magnetometer survey by Northern Canada Mines Ltd.
1966 Some d.d. by The Hanna Mining Co.
1967 Magnetometer survey by The Hanna Mining Co.

References: ODM maps P. 354, 910G.
Assessment files, Port Arthur.

Savant Lake Occurrences

(See Poisson Township)

50°15' - 90°45')

North Kashaweogama Prospect

(See 50°15' - 90°45')

50°45' - 90°15'

Thelma Lake Occurrence

Class: Iron formation, Algoma type.

Location: NW shore at N end of Thelma Lake.
Reference: ODM map 2094.

Description: Iron formation in Archean metasediments.

Reference: ODM map 2094, 921G.

50°45' - 90°30'

Doran Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: NW shore and west half of Doran Lake.
Reference: ODM map 2095.

Description: E-trending, magnetite-quartz iron formation with some hematite, amphibole and intercalated greywacke, within Archean greywacke.

Economic Features: The North zone is 1,600 feet long and 250 feet wide, the South zone is 15,900 feet long and 300 to 1,500 feet wide.

The two deposits contain to a depth of 500 feet 171 million tons of 22.3% mag. Fe, 205 million tons of 16.7% mag. Fe and 103 million tons of intraformational waste.

Tests indicated a concentrate averaging 68.1% Fe, 4.8% SiO_2 can be made by grinding at -325M for a weight recovery of 27.9%

Ownership : Belcher Mining Corp. Ltd. and Lun-Echo Gold Mines Ltd.

History: 1955-58 Dip needle and geological surveys and 3,403 feet of d.d. by Oglebay Norton Co. Ltd.
1960 8 d.d. holes for 4,100 feet and geophysical surveys by Belcher Mining Corp. Ltd.

References: ODM maps 2095, P. 354, 911G.
ODM, 1965, G.R., No. 42, p. 50-4.
Assessment files, Port Arthur.

50°45' - 90°45'

Day Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: S of Day Lake.
Reference: ODM map P.231.

Description: Magnetite-bearing iron formation in Archean metasediments.

Reference: ODM maps P. 231, 911G.

51°00' - 88°45'

Kilbarry Lake Occurrence

Class: Iron formation, Algoma type.

Location: S and E of Kilbarry Lake.
Reference: GSC map 2-1963.

Description: Magnetite-bearing iron formation in Archean metasediments.

History: Some diamond drilling.

References: ODM map 952G; GSC maps 8-1961, 2-1963,3-1963.

51°00' - 89°00'

Beavis Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: South of Beavis Lake.
Reference: GSC map 8-1961.

Description: Magnetite-quartz iron formation with some hematite and local areas of pyrrhotite and pyrite, interbedded with Archean metasediments. "Indicated tonnages were not economic."

History: 1966-7 Diamond drilling by Algoma Steel Corporation Ltd.

References: ODM map 942G; GSC maps 8-1961, 2-1963, 3-1963.
Assessment files, Port Arthur.

51°00' - 89°15'

Greenmantle Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Between Greenmantle and Murrell lakes.
Reference: GSC map 2-1963.

Description: Iron formation composed of quartz, muscovite, biotite and differing amounts (up to 70 percent) of magnetite as disseminated grains or bands (up to 6 feet in width) and 10 to 15 percent hematite. Width ranges from 300 to 1000 feet. Within Archean migmatitic complex.

History: 1962 Magnetometer survey and 7 d.d. holes for 949 feet by Standard Iron Mines Limited.
1966 5 d.d. holes for 3,328 feet by Algoma Steel Corp. Ltd.

References: ODM map 942G; GSC maps 8-1961, 2-1963, 3-1963.
Assessment files, Port Arthur.

51°00' - 89°30'

Miscellaneous Occurrences

Class: Iron formation, Algoma type.

Location: NW end August Lake and West of Misehkow River.
Reference: GSC map 2-1963.

Economic Features: 1.5 mi. E of August Lake two zones outlined, 5200 by 200 feet and 2,800 by 150 feet, underlain by narrow bands of lean iron formation.

History: 1967 Magnetometer survey by Algoma Steel Corp.

Description: Iron formation in Archean volcanics and sediments.

References: ODM map 932G; GSC maps 2-1963, 3-1963, 8-1961.
Assessment files, Port Arthur.

51°00' - 89°45'

Miscellaneous Occurrences

Class: Iron formation, Algoma type.

Location: In the vicinity of Rockcliff Lake, and N of Woodilee Lake.
Reference: GSC map 2-1963.

Description: Iron formation in Archean volcanics and sediments.

References: ODM map 932G; GSC maps 2-1963, 3-1963, 8-1961.

51°00' - 90°00'

Miscellaneous Occurrences

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: Between Soules Bay and Ace Lake, N part of Pashkokogan Lake, SE shore of Lake St. Joseph and N and S shores of Pedlarpath Bay.
Reference: ODM maps 2094, 2096.

Description: Quartz, magnetite and (or) pyrite iron formation in Archean volcanics and sediments.

References: ODM maps 2094, 2096, 922G.
ODM, 1965, G.R., No. 42, p. 14-20.

51°00' - 90°15'

Broadrib Bay Occurrence

Class: Iron formation, Algoma type, oxide and sulphide facies.

Location: SE shore of Broadrib Bay.
Reference: ODM map 2095.

Description: Iron formation bearing magnetite and pyrite in Archean metavolcanics.

References: ODM map 2095, 912G.
ODM, 1965, G.R., No.42, p. 14-20.

Lake St. Joseph Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: Near SE shore of Lake St. Joseph, west of Soules Bay.
Reference: ODM maps 2094, -5, -6.

Description: An S-shaped pattern, with extended north and S limbs, is outlined by complexly folded magnetite-quartz iron formation with some intercalated schists within Archean volcanics and sediments.

Economic Features: A North zone, 10,600 feet by 490 to 1,180 feet, and a South zone, 12,000 feet by 320 feet, are outlined.

Estimated open pit reserves to a depth of 550 feet are 616 million tons grading 23.0% sol.Fe. Davis tube tests indicate a concentrate grading 67.6% sol.Fe can be produced with a weight recovery of 29.3% of crude.

Ownership: Steep Rock Iron Mines Limited.

History: 1956-61 Aeromagnetic, geological and magnetometer surveys and 28,290 feet of d.d. by Steep Rock Iron Mines Ltd.

References: ODM maps 2094, 2095, 2096, 922G, 902G.
ODM, 1965, G.R. No. 42, p. 40-50.
Can. Mines Handbook, 1967-68.
Assessment files, Kenora.

51°15' - 89°00'

Snowdrift Lake Occurrence

Class: Iron formation, Algoma type.

Location: SW of Snowdrift Lake on the Albany River.
Reference: GSC map 2-1963.

Description: Iron formation in Archean metavolcanics.

References: ODM maps 943G, 944G; GSC maps 8-1961, 2-1963, 3-1963.

TIMISKAMING DISTRICT

BARTLETT TOWNSHIP

McArthur Lake Occurrence

(See McArthur Township)

Scott Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 1/2 mile east of N end Scott Lake.
Reference: ODM map 35h.

Description: Magnetite-quartz iron formation, stripped for 200 feet by 100 feet.

References: ODM map 35h, GSC map 291G
ODM, 1926, Volume XXXV, pt. 6.

BEST TOWNSHIP

Mountain Lake Occurrence

Class: Magmatic.

Location: On Mountain Lake, 6 miles S of Latchford. Location uncertain, may be Brigstocke Tp.

Description: Segregations of titaniferous magnetite in mafic intrusions up to 45 feet in length and 15 feet in width.

Reference: ODM, 1923, I.O.C. Report, p. 212.

BOSTON TOWNSHIP

Adams Mine (Producer)

Class: Iron formation, Algoma type, oxide facies.

Location: NE quarter of township, and a two claim group 5000 feet east of Helent Lake in NW quarter of township.
Lat. 48.087 Long. 79.922
Reference: ODM map 2046.

Description: Eight orebodies outlined within a quartz (chert, jasper)-magnetite iron formation which contains minor hematite, garnet, amphibole, chlorite and pyrite. The orebodies range from 3000 feet by 600 feet to 1800 feet by 200 feet. Widths represent thickening through folding of an original thickness of 100 to 150 feet.

Economic Features: Ore grade ranges from 16 to 26 percent magnetic iron and averages approximately 22 percent. Total open pit crude tonnage from the 8 orebodies is approximately 100 million tons or the equivalent of approximately 30 million tons of concentrate (Dubuc, 1966). Concentrates averaging 66.5 percent Fe are produced by grinding to -325M and result in a hematitic pellet grading 64.5 percent Fe. Production at a rate of approximately 1 million tons of pellets per year.

Setting: The iron formation is part of the Boston Township Iron Range which extends in an arcuate pattern from east to west across the north half of the township. The iron formation is associated with ferruginous chert (containing quartz, magnetite, graphite, amphibole, pyrite and pyrrhotite) and Archean metavolcanics.

Ownership: Jones and Laughlin Steel Corporation.

History: 1948-54, Airborne magnetometer, ground magnetometer and geological surveys, and diamond drilling by Dominion Gulf Company.
1954 - Magnetometer and geological surveys, and extensive diamond drilling by Jones and Laughlin Steel Corporation.
1962-64. Mine construction.
Dec. 1964. Initial shipment made with 1,943,303 tons shipped to end of 1966.

Boston Tp. (Cont.)

References: ODM maps 1957-4, 2046; GSC map 47G.
CIMM, 1966, Volume 59, p. 176-81.
ODM, 1957, Volume LXVI, pt. 5.
ODM, 1964, M.R. Circular 3, p. 88.

Boston Creek Prospect

Class: Iron formation (with metamorphic enrichment?), Algoma type, oxide facies.

Location: 3500 feet NE of Helent Lake, NW quarter of township. Reference: ODM map 1957-4.

Description: Lenticular bodies of magnetite-quartz iron formation interbedded with some metavolcanics.

Economic Features: Samples of drill intersections include:
63-1: 135 feet (core length approximately true width) grading 36.37% mag. Fe.
63-2: 225 ft. (core length greater than true width) grading 38.98% mag. Fe.
65-1: from 39 to 49 ft. grading 27% sol. Fe.
from 59 to 89 ft. grading 24% sol. Fe.
from 99-199 ft. grading 34.2% sol. Fe.

Setting: Part of the Boston Township Iron Range within a band of Archean metavolcanics, intruded by the Lebel Syenite stock.

History: 1952 Magnetometer and geological surveys for M. Lunge by Dominion Gulf Co.
1964 Geological survey by Marshall Boston Iron Mines Ltd.
1963,-65 Diamond drilling by Marshall Boston Iron Mines Ltd.

References: ODM map, 1957-4.
ODM, 1959, Volume LXVI, pt. 5.
Prospectus, 1965, Marshall Boston Iron Mines Ltd.
Assessment files, Kirkland Lake.

Western Boston Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: NW quarter Boston Township.
Reference: ODM map 1957-4.

Description: Exclusive of the Boston Creek prospect and the western group of the Adams Mine, numerous discontinuous bodies of magnetite-quartz iron formation outline the western extensions of the Boston Township Iron Range. One lens, 1 mile south of Fox Lake, on Marshall holdings, is 900 feet by 100 feet with an estimated 20 to 25% Fe; another lens, 3000 feet east of Helent Lake, on Evoy holdings, has an exposed width of over 200 feet. Most lenses, however, are much smaller.

Setting: Associated with ferruginous chert and Archean metavolcanics.

History: 1948 - Airborne magnetometer survey by Dominion Gulf Co.
1948 - Local magnetometer, dip needle and geological surveys.

References: ODM map 1957-4, GSC map 47G.
CIMM, 1966, Volume 59, p. 176-81.
ODM, 1957, Volume LXVI, pt. 5.
Assessment files, Kirkland Lake.

BRIGSTOCKE TOWNSHIP

Mountain Lake Occurrence

(see Best Township)

BRYCE TOWNSHIP

Bryce Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: North part Lots 6, 7, Conc. 6: NE corner Lot 5, Conc. 5.
Reference: ODM map 50j.

Bryce Tp. (Cont.)

Description: On Conc. 6, a discontinuous 2-foot band of quartz (chert, jasper)-hematite-magnetite iron formation strikes E-W over 1 mile or more. On Conc. 5, a little iron formation occurs, consisting mainly of banded chert and tuff.

Setting: Within Archean metavolcanics.

References: ODM map 50j.
ODM, 1941, Volume L., pt. 4, p.7.

BURT TOWNSHIP

Burt Township Occurrence

Class: Iron formation, Algoma type.

Location: S. central part of township.
Lots 4,5,6, Conc. 1.
Reference: ODM map 2078.

Description: ENE-striking thin bands of quartz, magnetite (?), sulphides and tuff traced for 6700 feet.

Setting: Within Archean metavolcanics.

References: ODM maps 2078, 44b: GSC map 289G.
ODM, 1966, G.R. 44, p. 5.
ODM, 1935, Volume XLIV, pt. 2, p. 12.

CLEAVER TOWNSHIP

Little Night Hawk Lake Occurrence

Class: Iron formation, Algoma type.

Location: W central part of township.
Reference: ODM, 1924, Volume XXXIII, pt. 3.

Description: Altered iron formation containing pyrite, arsenopyrite, galena, sphalerite, Cu-sulphide, quartz and calcite.

Setting: Interbedded with Archean metavolcanics.

Reference: ODM, 1924, Volume XXXIII, pt. 3, p. 40.

CAIRO TOWNSHIP

Fox Rapids Occurrence

Class: Iron formation, Algoma type.

Location: East and west of Fox Rapids.
Reference: ODM map 44b.

Description: Siliceous iron formation containing pyrite within Archean metavolcanics.

References: ODM, 1935, Volume XLIV, pt. 2, p. 12.
OBM, 1918, Volume XXVII, pt. 1.

Northwest Cairo Township Occurrences

Class: Iron formation, Algoma type.

Location: 1 mile SE of Fort Matachewan and E of Narrow Lake.

Description: Narrow bands of dark chert, greenstone and a little pyrite and pyrrhotite within Archean metavolcanics.

Reference: ODM, 1935, Volume XLIV, pt. 2, p. 12.

DENTON TOWNSHIP

Cripple Creek Occurrence

Class: Iron formation, Algoma type.

Location: 1/2 mile SW of Carlton Lake, NW quarter of township.
Reference: ODM map p. 28.

Description: NE-striking band of iron formation interbedded with Archean metavolcanics.

References: ODM maps p. 28, 2046, 47d.

EBY TOWNSHIP

Eby Township Prospect

Class: Iron formation, Algoma type.

Location: Central part Eby Township.
Lot 5, Conc. 3.
Reference: GSC map 389G.

Description: Main magnetic zone 3000 by 1200 feet, striking E-W to N60E, composed of cherty sediment containing pyrite, pyrrhotite, magnetite, graphite and minor chalcopyrite.

Economic Features: Magnetite concentrated in three local sections estimated as 375 ft. wide averaging 14% magnetite, 260 ft. wide averaging 13% magnetite, and 320 ft. wide averaging 12% magnetite. Best drill section assayed 18.8% sol. Fe over 70 ft. (core length) including 22.8% over 40 ft.

Setting: Interbedded with Archean felsic metavolcanics and metasediments.

History: 1964-Magnetometer survey by Keevil Consultants Ltd.
1965-Electromagnetic survey by Keevil Consultants Ltd.
1966-3 d.d. holes by Keevil Consultants Ltd.

References: GSC map 289G.
ODM, 1935, Volume XLIV, pt. 2.
Assessment files, Kirkland Lake.

Kenogami Lake Occurrence

Class: Iron formation, Algoma type.

Location: Near south shore Kenogami Lake.
Lots 6 and 7, Conc. 6.
Reference: ODM map 1946-1.

Description: NW-striking, thin beds of tuff and iron formation in Archean metavolcanics.

References: ODM map 1946-1; GSC map 289G.
ODM, 1948, Volume LVII, pt. 5, p. 7.

ELDORADO TOWNSHIP

Eldorado Township Occurrences

Class: Iron formation, Algoma type.

Location: W central part of township.
Reference: ODM map 47d.

Description: Iron formation in two small outcrops, one of which contains pyrrhotite.

Setting: Within Archean metavolcanics.

References: ODM map 47d.
ODM, 1938, Volume XLVII, pt. 4.

FLAVELLE TOWNSHIP

Flavelle Creek Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: NE part of township.
Lots 1,2, Conc. 5.
Reference: ODM map 2078.

Description: NE-striking iron formation approximately 5000 ft. long and up to 800 ft. wide composed of alternating quartz, magnetite and tuffaceous layers.
(Also see Gross Township)

Setting: Within Archean metavolcanics.

References: ODM map 2078; GSC map 1506G.
ODM, 1966, G.R. 44, p. 5.

FRIPP TOWNSHIP

Sandrelli Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: On border of Fripp and McArthur townships, 2¼ miles from N border.
Reference: ODM map 2046.

Description: Iron formation containing quartz, pyrrhotite and some pyrite and chalcopyrite, strikes NW, and is 16 feet wide in surface showing.

References: ODM map 2046.
Assessment files, Timmins.

GAUTHIER TOWNSHIP

Gauthier Township Occurrences

Class: Iron formation, Algoma type.

Location: SW quarter of township: 6000 ft. and 10,000 ft. NE, 5500 feet E of Lake Mousseau; SE corner of township: west shore Fork Lake, and 4000 ft. NW of Fork Lake.
Reference: ODM map 50c.

Description: Thin beds of chert and iron formation interbedded with Archean metavolcanics. Pyrite abundant in occurrences in the SE corner of township.

References: ODM map 50c, 32b.
ODM, 1941, Volume L, pt. 8, p. 8.
ODM, 1923, Volume XXXII, pt. 4, p. 59.

GROSS TOWNSHIP

Flavelle Creek Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: NW part of township.
Lots 11,12, Conc. 5.
Reference: ODM map 2078.

Description: Two NE-striking bands of iron formation traced for up to 2500 feet in length and up to 400 feet in width composed of alternating layers of quartz, magnetite-hematite(?), and tuff.
(Also see Flavelle township)

Setting: Within Archean metavolcanics.

References: ODM map 2078; GSC map 1506G.
ODM, 1966, G.R. 44, p.5.
ODM, 1935, Volume XLIV, pt. 2.

HARRIS TOWNSHIP

Lake Timiskaming Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 1/2 mile NW of Dawson Point, Conc. A.
Reference: ODM map 2066.

Description: Quartz-magnetite-hematite iron formation interbedded with metagreywacke which strikes ENE and dips approximately 35° was intersected in drilling (vertical hole) at depth of 846 feet.

Economic Features: Best intersection obtained was 117 feet (core length) containing an estimated 60 to 95 percent iron formation. The best 26 foot section of this assayed 15% iron, 42% silica.

Setting: Within Archean metagreywacke, overlain by Huronian sediments.

History: 1947 to -49 Aeromagnetic survey by Dominion Gulf Company.
1963 1 d.d hole for 1388 feet.

References: ODM map 2066; GSC map 511G.
ODM, 1965, G.R. No. 36.

HEARST TOWNSHIP

Hearst Township Occurrence

Class: Iron formation, Algoma type.

Location: East of the SE arm of Larder Lake, 4000 feet S of Martin-Bird Mine.
Reference: ODM 1947-1.

Description: Lean iron formation consisting of interbedded magnetite and greywacke, within Timiskaming metasediments.

Reference: ODM map 1947-1; GSC map 47G.
ODM, 1947, Volume LVI, pt. 8, p. 9.

KEEFER TOWNSHIP

Warren Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 1/4 mile N of Keefer Lake between Boom Lake and E border of township.
Reference: ODM map 2046.

Description: Discontinuous, east-west trending, magnetite-quartz iron formation with some argillite, is interbedded with Archean metavolcanics. Iron formation has maximum surface width of 65 feet and lengths up to to 1000 feet.

History: 1959 Dip needle survey by F. Galata and E. Galata.
1964 2 d.d holes by F. Galata and E. Galata.

References: ODM maps 2046, P. 27; GSC map 292G.
ODM, 1938, Volume XLVII, pt. 4.
ODM, 1923, Volume XXXII, pt. 3.
Assessment files, Timmins.

LANGMUIR TOWNSHIP

Langmuir Township Occurrences

Class: Iron formation, Algoma type, sulphide(?) facies.

Langmuir Tp. (Cont.)

Location: Between Carman Bay and south part of west border, and in extreme NW part of township.
Reference: ODM map P.444.

Description: Discontinuous bands of siliceous iron formation up to 150 feet wide containing quartz, pyrite, pyrrhotite, magnetite(?), marcasite and minor chalcopyrite.

Setting: Within Archean metavolcanics.

History: Pits, trenches, and some diamond drilling.

References: ODM map 49h, GSC map 293G.
ODM, 1940, Volume XLIX, pt. 4.
ODM, 1967, Misc. Paper 11, p. 62.
Assessment files, Timmins.

LEBEL TOWNSHIP

Roach Prospect

Class: Iron formation, Algoma type, oxide facies.

Location: SE corner of township.
Reference: ODM map 2046.

Description: Two bands of N-striking magnetite-quartz iron formation up to approximately 2500 feet in length.

Setting: Northeast extremity of Boston Township Iron Range which adjoins the Adams Mine to the south. Iron formation associated with ferruginous chert and interbedded with Archean metavolcanics.

Ownership: P. Roach.

History: Magnetometer survey and d.d. by Jalore Mining Company Limited.

References: ODM map 2046, 53a; GSC map 47G.
CIMM, 1966, Volume 59, p. 176-81.

Southwest Lebel Township Occurrences

Class: Iron formation, Algoma type.

Location: Between Bostebel Lake and Lake Shore Slimes Basin in SW corner of township.
Reference: ODM map 53a.

Description: Discontinuous N-S striking bands of iron formation composed of tuff, quartz and magnetite occur within Archean metavolcanics.

References: ODM map 53a, 32e; GSC map 289G.
ODM, 1923, Volume XXXII, pt. 4, p. 59.

LEITH TOWNSHIP

Leith Township Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: Southwest of Elkhorn Lake.
Reference: GSC map 284G.

Description: Quartz-magnetite iron formation less than 30 feet thick in Archean metavolcanics.

References: GSC map 284G.
ODM, 1921, Volume XXX, pt. 4, p. 7.

LEONARD TOWNSHIP

Fournier Lake Prospect

Class: Iron formation, Algoma type, oxide facies.

Leonard Tp. (Cont.)

Location: South from east shore Fournier Lake.
Reference: ODM map 36c.

Description: Several parallel bands of iron formation alternating with chlorite and sericite schists strike NNW over a length of 1 1/4 miles and the zone is up to 350 feet wide. Iron formation consists of quartz (chert, jasper), magnetite and minor siderite and hematite.

Setting: Within Archean metavolcanics.

Economic Features: Systematic sampling outlined a zone 10 to 50 feet wide and 4000 feet long containing 40.6% Fe, 15.4% SiO_2, 2.7% S. Selected samples attained 52% Fe.

History: 1910 trenching at 40-foot intervals by Mackenzie and Mann Ltd.

References: ODM map 36c; GSC maps 179A, 284G, 285G.
ODM, 1927, Volume XXXVI, pt. 2.
ODM, 1923, I.O.C. Rpt., p. 211.
GSC, 1917, Mem. 95, p. 124-125.

Shining Tree Lake Occurrence

(See Tyrrell Township)

MAISONVILLE TOWNSHIP

Maisonville Township Occurrence

Class: Iron formation, Algoma type.

Location: Centre of township.
Lot 7, Conc. 3.

Description: Iron formation containing pyrite, pyrrhotite and a little copper sulphide.

Reference: ODM map 23b.
ODM, 1914, Volume XXIII, pt. 2, p. 35.

MARTER TOWNSHIP

Marter Township Occurrences

Class: Iron formation, Algoma type.

Location: Near junction of Misema and Blanche rivers.
Lot 12, Conc. 5.
Reference: ODM map 2043.

Description: Iron formation with pyrite and jasper striking N15E and interbedded with Archean metavolcanics.

References: ODM map 2043.
ODM, 1963, G.R. No. 18, p. 16.

McARTHUR TOWNSHIP

McArthur Lake Occurrence

Class: Iron formation, Algoma type.

Location: 1/2 mile SW of McArthur Lake.

Description: Two discontinuous bands of iron formation a few hundred feet apart and striking NW, occur over an interval of 4 miles. In Bartlett Township, the SW band contains magnetite-quartz and the NE band contains pyrite-quartz.

McArthur Tp. (Cont.)

Setting: Within Archean metavolcanics.

References: ODM maps 2046, 35h; GSC map 291G.
ODM, 1926, Volume XXXV, pt. 6.

Triple Lake Occurrence

Class: Iron formation, Algoma type.

Location: 3/4 mile NE of Triple Lake.
Reference: ODM map 2046.

Description: NW-trending zone across SW quarter of township containing several bands of quartz-magnetite-sulphide (?) iron formation. Main anomalous zone 3/4 mile by 300 feet.

Setting: Within Archean metavolcanics.

History: 1966 Aeromagnetic and electromagnetic survey by Acme Gas and Oil Co.

References: ODM maps 2046, 35h; GSC map 291G.
ODM, 1926, Volume XXXV, pt. 6.
Assessment files, Timmins.

McELROY TOWNSHIP

McElroy Township Occurrences

Class: Iron formation, Algoma type.

Location: S central part of township, west of Blanche River.
Reference: ODM map 30d.

Description: Narrow bands of iron formation, some of which contain abundant pyrite.

References: ODM map 30d.
ODM, 1921, Volume XXX, pt. 4, p. 6.

McGARRY TOWNSHIP

McGarry Township Occurrence

Class: Iron formation, Algoma type.

Location: Near west boundary, 1/4 mile S of mile post V and 800 feet to east.
Reference: ODM map 50a.

Description: Bedded chert and iron formation up to 75 feet wide interbedded with Archean metavolcanics.

References: ODM map 50a; GSC map 47G.
ODM, 1941, Vol. L, pt. 7, p. 9.

McVITTIE TOWNSHIP

McVittie Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: Between Diamond Lake - Pancake Lake - Tournene Lake in S part of township.
Reference: ODM map 50b.

Description: Magnetite interbedded with Timiskaming meta-greywacke with minor amounts of jasper. Individual beds less than 3 feet thick.

References: ODM maps 50b, 32e; GSC map 47G.
ODM, 1941, Volume L, pt. 7, p. 12.
ODM, 1923, Volume XXXII, pt. 4, p. 59.

MIDLOTHIAN TOWNSHIP

Other Midlothian Township Occurrences

Class: Iron formation, Algoma type, sulphide facies.

Midlothian Tp. (Cont.)

Location: 1/4 mile SW of Wood Lake to Campbell Lake; between Strange and Mavis lakes.
Reference: ODM map P. 386.

Description: Zones of disseminated to massive marcasite-graphite schist up to 2 1/2 miles long and 100 feet wide.

References: ODM map P. 386.
ODM, 1966, P.R. 1966-1, p. 53.

Strange Lake Occurrence

Class: Bog iron.

Location: Between Mavis and Strange lakes, centre of township
Reference: ODM map 1947-4.

Description: An area of bog iron, a selected specimen from which contained 71.19% Fe_2O_3, 18.94% H_2O, 6.67% carbon.

Reference: ODM 1947, Volume LVI, pt. 5, p. 21.

MONTROSE TOWNSHIP

Montrose Township Occurrences

Class: Iron formation, Algoma type.

Location: Near NE shore Hutt Lake, 1/2 mile NE of Seveninch Lake, 2 3/8 miles north of Mount Sinclair Lake, and 2 occurrences 1 1/2 miles west of the NE corner of township.

Description: Small, narrow bands of iron formation consisting of quartz, iron oxides, carbonate, and pyrite.

Setting: Interbedded with Archean metavolcanics.

References: ODM map 41a.
ODM, 1932, Volume XLI, pt. 2, p. 6.

NICOL TOWNSHIP

Banker Bay Occurrence

Class: Iron formation, Algoma type, sulphide facies.

Location: 1/2 mile east of Banker Bay.
Reference: ODM map P. 374.

Description: Lean iron formation bearing pyrite within Archean felsic volcanics.

References: ODM map P. 374.
ODM, 1955, Volume LXIV, pt. 5.

OTTO TOWNSHIP

Otto Township Occurrences

Class: Iron formation.

Location: Lot 12, Conc. 4; Lots 8, 9, 10, Conc. 5; Lots 4, 5, Conc. 6.
Reference: ODM map P. 330.

Description: Small lenses of lean iron formation containing tuff, quartz, magnetite, pyrite and pyrrhotite.

Setting: Interbedded with felsic metavolcanics.

References: ODM map P. 330.
ODM, 1925, Volume XXXII, pt. 4.

PRICE TOWNSHIP

Northwest Price Township Occurrence

Class: Iron formation, Algoma type.

Location: West of Grassy River in NW part of township.
Reference: ODM map P. 30.

Description: Magnetite-quartz iron formation striking N60W, was traced for 4000 feet and is less than 50 feet in width.

Setting: Interbedded with Archean metagreywacke.

History: 1946 Magnetometer survey by Bruin Yellowknife Mines Ltd.

References: ODM maps 2046, P. 30; GSC map 293G.
Assessment files, Timmins.

Southwest Price Township Occurrences

Class: Iron formation, Algoma type.

Location: West of Grassy River, 3/4 mile NW and 1/4 mile west of Katashaskepeko Lake, and 1/4 mile west of Latimer Lake.
Reference: ODM map P. 30.

Description: Discontinuous bands of iron formation, up to 7000 feet long (west of Grassy Lake), containing magnetite, quartz and local sulphides.

Setting: Interbedded with Archean metavolcanics and metagreywacke.

History: Magnetometer survey and 3 d.d holes.

References: ODM maps P. 30, 2046; GSC map 293G.
ODM, 1938, Volume XLVII, pt. 4.
Assessment files, Timmins.

TECK TOWNSHIP

Teck Township Occurrences

Class: Iron formation, Algoma type, oxide facies.

Location: 1500 feet NNW and 2200 feet E of Lois Lake; and east of Murdock Creek in the SE part of township.
Reference: ODM map 1945-1.

Description: Narrow bands of quartz, magnetite and tuff interbedded with Archean metavolcanics.

Reference: ODM map 1945-1; GSC map 289G.
ODM, 1948, Volume LVII, pt. 5, p. 7.

THORNELOE TOWNSHIP

Tatachikapika River Occurrence

Class: Iron formation, Algoma type.

Location: Due west of N end Kenogamissi Lake in NW part of township.
Reference: ODM map p. 29.

Description: Two east-west bands of magnetite-pyrrhotite-quartz iron formation coalesing to the west. North band traced for 8000 feet, south band for 7600 feet.

Setting: Interbedded with Archean metavolcanics.

History: 1951 - 4 d.d holes by Dominion Gulf Company.
1961 - Magnetometer and electromagnetic surveys by Hollinger Consolidated Gold Mines Ltd.
1962-63 - 3 d.d holes by Hollinger Consolidated Gold Mines Ltd.
1966 - Airborne geophysical survey by Acme Gas and Oil Ltd.

References: ODM maps P. 29, 2046; GSC map 292G.
Assessment files, Timmins.

TYRRELL TOWNSHIP

Shining Tree Lake Occurrence

Class: Iron formation, Algoma type, oxide facies.

Location: 1/2 mile E of N end Shining Tree Lake.
Reference: ODM map 41b.

Description: Lean jasper-chert-magnetite (locally) iron formation with minor pyrite occurs interruptedly over a length of 2 miles striking NNW across the SW corner of the township into Macmurchy and Leonard townships. Widths of 300 feet are reported.

Setting: Within Archean metavolcanics.

References: ODM maps 41b, 36c.
ODM, 1923, I.O.C. Rpt. p. 205, 211.
ODM, 1932, Volume XLI, pt. 2, p. 36.
GSC, 1917, Mem. 95, p. 124.

YARROW TOWNSHIP

Welsh (La Brosse) Prospect

Class: Hydrothermal.

Location: Approximately 1/4 mile NW of N end Sisseney Lake, E central part of township.
Lat. 47.891; Long. 80.675
Reference: ODM map 2046.

Description: Quartz vein striking N72E from 5 to 30 feet wide with lenses of botryoidal hematite and specularite one of which is 60 feet long, another is 25 feet long.

Economic Features: Diamond drilling intersected 7 to 10 feet massive hematite and 4 to 7 feet of hematite and quartz.

Setting: Within Cobalt conglomerate and quartzite.

History: 1953 - 3 d.d holes.

References: ODM, 1923, I.O.C. Rpt. p. 211.
OBM, 1918, Volume XXVII, pt. 1, p. 238.
Assessment files, Kirkland Lake.
Prospectus, 1949, Kimberly Iron Mines, Limited.

INDEX

(Townships, Mining Companies, Owners, and Deposits)